**AQUA PENNSYLVANIA, INC. & AQUA PENNSYLVANIA WASTEWATER, INC.**

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**AQUA PENNSYLVANIA, INC.**
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**G. Rate of Return**

RR1. Provide capitalization and capitalization ratios for the last 5-year period and projected through the next 2 years (with short-term debt and without short-term debt) for the company, parent and consolidated system.

a. Provide year-end interest coverages before and after taxes for the last 3 years and at the latest date, including indenture and Securities and Exchange Commission (SEC) bases, for the company, parent and consolidated system.

b. Provide year-end preferred stock dividend coverages for the last 3 years and at latest date, including charter and SEC bases.

A. Please see attached Schedule RR1(a) that shows the capitalization and capitalization ratios for the last five-year period (2013-2017) with short-term debt and without short-term debt for the Company, Parent and consolidated system. The forecasts for the Company for 2018 and 2019 is also included. The next two year period, 2018 and 2019, is not available for the Parent and consolidated system at the present time.

a. Please see attached Schedule RR1(b) that provides year-end interest coverage before and after taxes for the last three years (2015-2017) and at latest date (3/31/18), including Indenture and SEC Bases, for the Company, Parent and consolidated system.

b. There is no preferred stock outstanding for the Company, Parent and consolidated system for the last three years.

Schedule RR1(a)

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**CAPITALIZATION RATIOS**

| | Actual 12/31/2013 | | Actual 12/31/2014 | | Actual 12/31/2015 | | Actual 12/31/2016 | | Actual 12/31/2017 | | Forecast 12/31/2018 | | Forecast 12/31/2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % |
| **Aqua Pennsylvania, Inc.** | | | | | | | | | | | | | | |
| Long-term debt (incl. current portion) | 955,120 | 44.3% | 1,006,671 | 44.4% | 1,129,503 | 46.2% | 1,203,859 | 45.8% | 1,336,761 | 46.4% | 1,459,307 | 46.9% | 1,608,177 | 47.7% |
| Short-term debt | 30,000 | 1.4% | 13,658 | 0.6% | 7,281 | 0.3% | 5,545 | 0.2% | 3,650 | 0.1% | 5,000 | 0.2% | 5,000 | 0.1% |
| | 985,120 | 45.7% | 1,020,329 | 45.0% | 1,136,784 | 46.5% | 1,209,404 | 46.0% | 1,340,411 | 46.6% | 1,464,307 | 47.1% | 1,613,177 | 47.8% |
| Preferred Equity | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Common Equity (incl. minority int.) | 1,169,261 | 54.3% | 1,249,419 | 55.0% | 1,308,793 | 53.5% | 1,419,693 | 54.0% | 1,538,172 | 53.4% | 1,645,658 | 52.9% | 1,759,779 | 52.2% |
| | 2,154,381 | 100.0% | 2,269,748 | 100.0% | 2,445,577 | 100.0% | 2,629,097 | 100.0% | 2,878,583 | 100.0% | 3,109,965 | 100.0% | 3,372,956 | 100.0% |
| Excl short-term debt | | | | | | | | | | | | | | |
| Long-term debt (incl. current portion) | 955,120 | 45.0% | 1,006,671 | 44.6% | 1,129,503 | 46.3% | 1,203,859 | 45.9% | 1,336,761 | 46.5% | 1,459,307 | 47.0% | 1,608,177 | 47.7% |
| Preferred equity | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Common Equity (incl. minority int.) | 1,169,261 | 55.0% | 1,249,419 | 55.4% | 1,308,793 | 53.7% | 1,419,693 | 54.1% | 1,538,172 | 53.5% | 1,645,658 | 53.0% | 1,759,779 | 52.3% |
| | 2,124,381 | 100.0% | 2,256,090 | 100.0% | 2,438,296 | 100.0% | 2,623,552 | 100.0% | 2,874,933 | 100.0% | 3,104,965 | 100.0% | 3,367,956 | 100.0% |
| **Aqua America, Inc. (Parent)** | | | | | | | | | | | | | | |
| Long-term debt (incl. current portion) | 351,400 | 18.6% | 396,400 | 19.3% | 436,400 | 20.2% | 509,867 | 21.6% | 528,758 | 21.3% | N/A | N/A | N/A | N/A |
| Short-term debt | - | 0.0% | - | 0.0% | - | 0.0% | - | 0.0% | - | 0.0% | N/A | N/A | N/A | N/A |
| | 351,400 | 18.6% | 396,400 | 19.3% | 436,400 | 20.2% | 509,867 | 21.6% | 528,758 | 21.3% | N/A | N/A | N/A | N/A |
| Preferred Equity | - | - | - | - | - | - | - | - | - | - | N/A | N/A | N/A | N/A |
| Common Equity (incl. minority int.) | 1,534,835 | 81.4% | 1,655,343 | 80.7% | 1,725,927 | 79.8% | 1,850,068 | 78.4% | 1,957,621 | 78.7% | N/A | N/A | N/A | N/A |
| | 1,886,235 | 100.0% | 2,051,743 | 100.0% | 2,162,327 | 100.0% | 2,359,935 | 100.0% | 2,486,379 | 100.0% | N/A | N/A | N/A | N/A |
| Excl short-term debt | | | | | | | | | | | | | | |
| Long-term debt (incl. current portion) | 351,400 | 18.6% | 396,400 | 19.3% | 436,400 | 20.2% | 509,867 | 21.6% | 528,758 | 21.3% | N/A | N/A | N/A | N/A |
| Preferred equity | - | - | - | - | - | - | - | - | - | - | N/A | N/A | N/A | N/A |
| Common Equity (incl. minority int.) | 1,534,835 | 81.4% | 1,655,343 | 80.7% | 1,725,927 | 79.8% | 1,850,068 | 78.4% | 1,957,621 | 78.7% | N/A | N/A | N/A | N/A |
| | 1,886,235 | 100.0% | 2,051,743 | 100.0% | 2,162,327 | 100.0% | 2,359,935 | 100.0% | 2,486,379 | 100.0% | N/A | N/A | N/A | N/A |
| **Aqua America, Inc. (Consolidated)** | | | | | | | | | | | | | | |
| Long-term debt (incl. current portion) | 1,554,871 | 49.7% | 1,619,270 | 49.2% | 1,779,205 | 50.5% | 1,910,633 | 50.7% | 2,143,127 | 52.2% | N/A | N/A | N/A | N/A |
| Short-term debt | 36,740 | 1.2% | 18,398 | 0.6% | 16,721 | 0.5% | 6,535 | 0.2% | 3,650 | 0.1% | N/A | N/A | N/A | N/A |
| | 1,591,611 | 50.9% | 1,637,668 | 49.7% | 1,795,926 | 51.0% | 1,917,168 | 50.9% | 2,146,777 | 52.3% | N/A | N/A | N/A | N/A |
| Preferred Equity | - | 0.0% | - | 0.0% | - | 0.0% | - | 0.0% | - | 0.0% | N/A | N/A | N/A | N/A |
| Common Equity (incl. minority int.) | 1,535,043 | 49.1% | 1,655,383 | 50.3% | 1,725,930 | 49.0% | 1,850,068 | 49.1% | 1,957,621 | 47.7% | N/A | N/A | N/A | N/A |
| | 3,126,654 | 100.0% | 3,293,051 | 100.0% | 3,521,856 | 100.0% | 3,767,236 | 100.0% | 4,104,398 | 100.0% | N/A | N/A | N/A | N/A |
| Excl short-term debt | | | | | | | | | | | | | | |
| Long-term debt (incl. current portion) | 1,554,871 | 50.3% | 1,619,270 | 49.4% | 1,779,205 | 50.8% | 1,910,633 | 50.8% | 2,143,127 | 52.3% | N/A | N/A | N/A | N/A |
| Preferred equity | - | - | - | - | - | - | - | - | - | - | N/A | N/A | N/A | N/A |
| Common Equity (incl. minority int.) | 1,535,043 | 49.7% | 1,655,383 | 50.6% | 1,725,930 | 49.2% | 1,850,068 | 49.2% | 1,957,621 | 47.7% | N/A | N/A | N/A | N/A |
| | 3,089,914 | 100.0% | 3,274,653 | 100.0% | 3,505,135 | 100.0% | 3,760,701 | 100.0% | 4,100,748 | 100.0% | N/A | N/A | N/A | N/A |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**INTEREST COVERAGES - INDENTURE & SEC BASIS**

**Schedule RR1(b)**

| | YTD | \|----------------Yr Ended---------------\| | | |
|---|---|---|---|---|
| | 3/31/2018 | 2017 | 2016 | 2015 |
| **Aqua Pennsylvania, Inc.** | | | | |
| Interest Coverage - Indenture Basis - Before Tax | 3.66 | 3.86 | 4.60 | 4.83 |
| Interest Coverage - SEC Basis - Before Tax | 3.25 | 3.66 | 4.07 | 4.32 |
| Interest Coverage - Indenture Basis - After Tax | 4.01 | 4.30 | 4.86 | 4.90 |
| Interest Coverage - SEC Basis - After Tax | 3.56 | 4.07 | 4.29 | 4.39 |
| **Aqua America, Inc. (Parent)** | | | | |
| Interest Coverage - Indenture Basis - Before Tax | N/A | N/A | N/A | N/A |
| Interest Coverage - SEC Basis - Before Tax | (1.23) | 0.30 | (0.44) | 0.87 |
| Interest Coverage - Indenture Basis - After Tax | N/A | N/A | N/A | N/A |
| Interest Coverage - SEC Basis - After Tax | (0.70) | 0.12 | 0.24 | 1.43 |
| **Aqua America, Inc. (Consolidated)** | | | | |
| Interest Coverage - Indenture Basis - Before Tax | 4.34 | 5.15 | 6.12 | 5.97 |
| Interest Coverage - SEC Basis - Before Tax | 2.95 | 3.72 | 4.04 | 4.18 |
| Interest Coverage - Indenture Basis - After Tax | 4.47 | 4.89 | 5.73 | 5.69 |
| Interest Coverage - SEC Basis - After Tax | 3.04 | 3.54 | 3.80 | 4.00 |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR2. Provide latest prospectus for the company and the parent.

A. There is no Prospectus for the Company. Please see the attached for the latest Prospectus for the Parent, Aqua America, Inc.

**As filed with the Securities and Exchange Commission on July 28, 2017**

**Registration No. 333-**

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

# FORM S-3
# REGISTRATION STATEMENT
***UNDER***
***THE SECURITIES ACT OF 1933***

# AQUA AMERICA, INC.
**(Exact name of registrant as specified in its charter)**

| | |
|---|---|
| **Pennsylvania**<br>**(State or other jurisdiction of incorporation or organization)** | **23-1702594**<br>**(I.R.S. Employer Identification No.)** |

**762 W. Lancaster Avenue**
**Bryn Mawr, PA 19010-3489**
**(610) 527-8000**
**(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)**

**Christopher P. Luning**
**Aqua America, Inc.**
**Senior Vice President, General Counsel and Corporate Secretary**
**762 W. Lancaster Avenue**
**Bryn Mawr, PA 19010-3489**
**(610) 527-8000**
**(Name, address, including zip code, and telephone number, including area code, of agent for service)**

***Copy of all communications to:***

**Mary J. Mullany, Esquire**
**Ballard Spahr LLP**
**1735 Market Street, 51st Floor**
**Philadelphia, PA 19103**
**(215) 864-8500**

**Approximate date of commencement of proposed sale to the public:** From time to time after this registration statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ☐

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ☒

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a registration statement filed pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☒

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| Large accelerated filer ☒ | Accelerated filer ☐ |
| Non-accelerated filer ☐ (Do not check if a smaller reporting company) | Smaller reporting company ☐ |
| | Emerging growth company ☐ |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act. ☐

**CALCULATION OF REGISTRATION FEE**

| Title of Each Class Of Securities to be Registered | Amount to be Registered(1) | Proposed Maximum Offering Price Per Security | Proposed Maximum Aggregate Offering Price(2) | Amount of Registration Fee(3) |
|---|---|---|---|---|
| Common stock, par value $0.50 per share . . . . . . . . . . . . . . . . . . . . | 6,000,000 shares | $33.24 | $199,440,000 | $23,115.10 |

(1) Pursuant to Rule 416 under the Securities Act of 1933, the number of shares being registered shall be adjusted to include any additional shares that may become issuable as a result of stock splits, stock dividends, or similar transactions.

(2) Pursuant to Rule 457(c) under the Securities Act of 1933, the offering price is computed on the basis of the average of the high and low prices of the common stock of Aqua America, Inc., as reported on the New York Stock Exchange on July 25, 2017.

(3) Pursuant to Rule 415(a)(6) of the Securities Act of 1933, this registration statement carries over 3,125,000 unsold shares of common stock previously registered on a Registration Statement on Form S-3 (File No. 333-197805) filed with the Securities and Exchange Commission on August 1, 2014 (the "2014 Registration Statement"). The filing fee of $13,463.77 being paid herewith relates to the 2,875,000 newly registered shares of common stock. As a result, the offering of unsold securities registered under the 2014 Registration Statement will be deemed terminated as of the date of effectiveness of this registration statement.

**PROSPECTUS**

# Aqua America, Inc.

## Dividend Reinvestment and Direct Stock Purchase Plan

## 6,000,000
## Shares of Common Stock

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- The Plan gives you a convenient, systematic way to purchase or invest in our common stock.
- You can increase your ownership by reinvesting dividends at a discount of between 0% and 5.0%, as designated from time to time in our sole discretion, and by making optional cash investments with brokerage fees and commissions paid by us.
- You do not need to be one of our existing shareholders to participate in the Plan.
- You can own and transfer shares without holding certificates.
- You can purchase shares through an IRA with a portion of the annual maintenance fee paid by us.

**IMPORTANT NOTE: Sales of shares through the Plan are subject to fees and commission charges for which you will be responsible. Please see the "Costs" section of this prospectus for further details regarding these fees and commission charges.**

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**Our common stock is listed on the New York Stock Exchange under the symbol "WTR." Our principal executive office is located at 762 W. Lancaster Avenue, Bryn Mawr, Pennsylvania 19010-3489 and our telephone number is 610-527-8000.**

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**Investing in our common stock involves risk. See "Risk Factors" on page 2 for certain risks to consider before participating in the Plan or purchasing shares of our common stock.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

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**The date of this prospectus is July 28, 2017.**

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**As used in this prospectus, the words “we,” “us,” “our,” and “Aqua America” refer to Aqua America, Inc. and its subsidiaries unless otherwise indicated or the context otherwise requires.**

## PLAN OVERVIEW

The Aqua America, Inc. Dividend Reinvestment and Direct Stock Purchase Plan (the “Plan”) provides you with a convenient and economical way to purchase shares of our common stock and to reinvest your cash dividends in additional shares. The Plan has various features and you can select those features that meet your investment needs.

The Plan is designed for long-term investors who wish to invest and build their share ownership over time. Unlike an individual stock brokerage account, the timing of purchases and sales is subject to the provisions of the Plan.

Please read this prospectus and the documents incorporated by reference herein carefully. If you are a shareholder of record of at least 5 shares of Aqua America common stock and wish to participate in the Plan, please sign and execute a Dividend Reinvestment and Direct Stock Purchase Plan Enrollment Form (the “Enrollment Form”). If your shares of Aqua America common stock are registered in a nominee name (such as in the name of a bank, broker or other nominee), please see the “Participation and Enrollment” section below for instructions on how to have such shares participate in the Plan. Investors wishing to make an initial investment of not less than $500 should complete the Dividend Reinvestment and Direct Stock Purchase Plan Initial Enrollment Form (the “Initial Enrollment Form”). When completed, the form should be mailed to Computershare Trust Company, N.A. (the “Administrator”). Employees of Aqua America who wish to pay for their investment by having a portion of their compensation withheld and applied to the investment should complete the Employee Enrollment Form provided by the Company.

You can also enroll in the Plan and access your Plan account through the Internet at the Administrator’s web site, *www.computershare.com/investor*, at any time. In addition, you can authorize one-time initial and subsequent optional cash investments or establish recurring automatic withdrawals from your U.S. bank account.

## RISK FACTORS

*Investing in our common stock involves risks. Please see the risk factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed with the Securities and Exchange Commission (the "SEC"), which are all incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information contained or incorporated by reference in this prospectus.*

## FORWARD-LOOKING STATEMENTS

Certain statements in this prospectus, or incorporated by reference into this prospectus, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue" "in the event" or the negative of such terms or similar expressions. Forward-looking statements in this prospectus, or incorporated by reference into this prospectus, include, but are not limited to, statements regarding:

- recovery of capital expenditures and expenses in rates;
- projected capital expenditures and related funding requirements;
- our capability to pursue timely rate increase requests;
- the availability and cost of capital financing;
- developments, trends and consolidation in the water and wastewater utility and infrastructure industries;
- dividend payment projections;
- opportunities for future acquisitions, the success of pending acquisitions and the impact of future acquisitions;
- the capacity of our water supplies, water facilities and wastewater facilities;
- the impact of geographic diversity on our exposure to unusual weather;
- the impact of conservation awareness of customers and more efficient plumbing fixtures and appliances on water usage per customer;
- our authority to carry on our business without unduly burdensome restrictions;
- the continuation of investments in strategic ventures;
- our ability to obtain fair market value for condemned assets;
- the impact of fines and penalties;
- the impact of changes in and compliance with governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the impact of decisions of governmental and regulatory bodies, including decisions to raise or lower rates;
- the development of new services and technologies by us or our competitors;

- the availability of qualified personnel;
- the condition of our assets;
- the impact of legal proceedings;
- general economic conditions;
- acquisition-related costs and synergies;
- the sale of water and wastewater divisions;
- the impact of federal and/or state tax policies and the regulatory treatment of the effects of those policies; and
- the amount of income tax deductions for qualifying utility asset improvements and the Internal Revenue Service's ultimate acceptance of the deduction methodology.

Because forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including but not limited to:

- changes in general economic, business, credit and financial market conditions;
- changes in governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- changes to the rules or our assumptions underlying our determination of what qualifies for an income tax deduction for qualifying utility asset improvements;
- the decisions of governmental and regulatory bodies, including decisions on rate increase requests;
- our ability to file rate cases on a timely basis to minimize regulatory lag;
- abnormal weather conditions, including those that result in water use restrictions;
- changes in, or unanticipated, capital requirements;
- changes in our credit rating or the market price of our common stock;
- changes in valuation of strategic ventures;
- our ability to integrate businesses, technologies or services which we may acquire;
- our ability to manage the expansion of our business;
- our ability to treat and supply water or collect and treat wastewater;
- the extent to which we are able to develop and market new and improved services;
- the effect of the loss of major customers;
- our ability to retain the services of key personnel and to hire qualified personnel as we expand;
- labor disputes;
- increasing difficulties in obtaining insurance and increased cost of insurance;
- cost overruns relating to improvements to, or the expansion of, our operations;
- increases in the costs of goods and services;
- civil disturbance or terroristic threats or acts;
- the continuous and reliable operation of our information technology systems, including the impact of cyber security attacks or other cyber-related events;

- changes in accounting pronouncements;
- litigation and claims; and
- changes in environmental conditions, including the effects of climate change.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this prospectus and the documents that we incorporate by reference into this prospectus completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this prospectus. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. As you read this prospectus and the documents that we incorporate by reference into this prospectus, you should pay particular attention to the "Risk Factors" included in our most recent Annual Report on Form 10-K and in any filing we make with the SEC after the date of such Annual Report on Form 10-K that is incorporated by reference into this prospectus. We qualify all of our forward-looking statements by these cautionary statements.

## A SUMMARY OF IMPORTANT PLAN FEATURES

- *Participation*. You may participate in the Plan if you own at least 5 shares of Aqua America common stock that are registered in your name. You may also participate by making an initial minimum investment of at least $500 through automatic withdrawal from your U.S. bank account, by check or by a one-time online bank debit through the Administrator's web site, *www.computershare.com/investor*. Employees of Aqua America who wish to pay for their investment by having a portion of their compensation withheld and applied to the investment should complete the Employee Enrollment Form provided by the Company. All U.S. citizens are eligible to join the Plan, whether or not they are currently shareholders. Foreign citizens are eligible to participate as long as their participation would not violate any laws in their home countries or other non-U.S. laws. If your shares of Aqua America common stock are registered in a nominee name (such as in the name of a bank, broker or other nominee), please see the "Participation and Enrollment" section below for instructions on how to have such shares participate in the Plan.

- *Automatic Dividend Reinvestment*. You can reinvest all or a portion of the cash dividends received on your first 100,000 shares toward the purchase of additional shares of our common stock, without paying trading fees or commissions. For purposes of the Plan, the term "full dividend reinvestment" means the reinvestment of dividends on all shares held by you in your name under the Plan up to a maximum of 100,000 shares.

- *Electronic Deposit of Cash Dividends*. You can authorize the Administrator to deposit your cash dividends directly into your U.S. bank account.

- *Optional Cash Investments*. As a shareholder, you can buy additional shares of our common stock at any time for as little as $50. The maximum optional cash investment you may make in any calendar year is $250,000. You can pay by check or by a one-time online bank debit through the Administrator's web site, *www.computershare.com/investor*, or have your payment automatically withdrawn from your U.S. bank account. Employees of Aqua America who wish to make optional cash investments should complete the Employee Enrollment Form provided by the Company.

- *IRAs*. You may establish a traditional IRA, a Roth IRA or a Coverdell Education Savings Account, which invests in common stock through the Plan. IRA contributions and rollovers do not count against a participant's $250,000 annual investment limitation. There is an annual maintenance fee of forty-five dollars ($45.00) charged by the IRA and Coverdell Education Saving Account Trustee, which we will pay for the first calendar year in which you participate. In all subsequent years, twenty-five dollars ($25.00) of this annual fee will be charged to you, with the balance paid by us.

- *Full Investment*. Full investment of your funds is possible because any initial investment and optional cash investments will be used to buy whole and fractional shares. In addition, the full dividend earned on your shares (up to the first 100,000 shares you own), including fractional shares, will be reinvested or paid out as you designate.

- *Safekeeping of Certificates*. Shares purchased through the Plan for which you request certificates to be issued will be held by the Administrator for safekeeping. You may also deposit any Aqua America, or previously named Philadelphia Suburban Corporation, stock certificates that you hold for safekeeping, at no charge.

- *Transaction Reporting*. You will receive a statement following each transaction showing the details of, and your share balance in, your Plan account.

- *Internet Account Access*. You can also enroll in the Plan and access your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*, at any time. In addition, you can authorize one-time initial and subsequent optional cash investments or establish recurring automatic withdrawals from your U.S. bank account.

## ADMINISTRATION

Computershare Trust Company, N.A., administers the Plan and acts as Agent for the participants. Computershare, Inc. acts as service agent to Computershare Trust Company, N.A. in performing certain services for the Plan. These companies purchase and retain shares of our common stock for Plan participants, keep records, send statements and perform other duties required by the Plan.

For information about the Plan, you can contact the Administrator by calling toll-free:

| | |
|---|---|
| Computershare Trust Company, N.A. | 800-205-8314 |
| Outside the United States call collect: | 781-575-3100 |
| web site address: | www.computershare.com/investor |

All written correspondence and optional cash investments submitted without a proper investment coupon, should be submitted to:

| | |
|---|---|
| By mail: | Computershare Trust Company, N.A.<br>Attn.: Aqua America, Inc. Dividend Reinvestment<br>and Direct Stock Purchase Plan<br>P.O. Box 505000<br>Louisville, KY 40233-5000 |
| By courier: | Computershare Trust Company, N.A.<br>Attn.: Aqua America, Inc. Dividend Reinvestment<br>and Direct Stock Purchase Plan<br>462 South 4th Street, Suite 1600<br>Louisville, KY 40202 |

You can contact the Aqua America, Inc. IRA Program Administrator by calling toll free 1-800-597-7736. All written correspondence concerning the IRA Program, should be submitted to:

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| By mail: | The IRA Program<br>C/O Computershare Trust Company, N.A.<br>P.O. Box 2175<br>Milwaukee, WI 53201-2175 |
| By courier: | The IRA Program<br>C/O Computershare Trust Company, N.A. Attn.:<br>Aqua America, Inc. IRA<br>235 W. Galena Street<br>Milwaukee, WI 53212-3948 |

Make checks payable to "Computershare-Aqua America" in U.S. dollars and drawn on a U.S. bank. The Administrator will not accept cash, traveler's checks, money orders or third party checks for optional cash investments. Please use the cash investment form at the bottom of your statement.

## INTERNET ACCESS

You can also obtain information about your account via the Internet at the Administrator's web site, *www.computershare.com/investor*. At the web site, through Investor Center, you can access your share balance, enroll in the Plan, purchase shares (either as a one-time online bank debit or by recurring automatic monthly withdrawals from your U.S. bank account), sell shares, request a stock certificate, change dividend payment options and obtain online forms. To obtain access, click Create Log In, fill in the required information, accept the Terms & Conditions and select a User ID and password.

## PARTICIPATION AND ENROLLMENT

If you already own at least 5 shares of our common stock, you are eligible to participate in the Plan.

- If your shares are registered in your name, you can enroll in the Plan through the Internet at the Administrator's web site, *www.computershare.com/investor*, or you can fill out the Enrollment Form and return it to the Administrator.
- If your shares are registered in a nominee name but you wish to participate in the Plan you should instruct your bank, broker or other nominee to have some or all of your shares registered in your name. Simply instruct your bank, broker or other nominee to transfer at least 5 of your shares of our common stock electronically through the Direct Registration System from your brokerage account to a new book-entry account at the Administrator. Please contact your bank, broker or other nominee for more information. Once at least 5 of your shares of our common stock are moved from your brokerage account to a new book-entry account registered in your name with the Administrator, you may then participate in the Plan by enrolling in the Plan as set forth above. Alternatively, you may instruct your bank, broker or other nominee to arrange to have a paper stock certificate issued to you for at least 5 of your shares of our common stock. Once at least 5 shares are registered in your name, you may participate in the Plan by enrolling in the Plan as set forth above. If the shares that you hold are in certificated form, you can deposit these certificated shares in your Plan account for safekeeping. In each instance, any fees or charges assessed by your bank or broker are your responsibility and will not be paid by us.
- If your shares are held through our retirement plans or any of our other employee benefit plans (each, an "employee benefit plan") that participate in the Plan, your participation in the Plan will be through the administrator or trustee of the applicable employee benefit plan and you will be limited to the automatic dividend reinvestment feature of the Plan only. Please contact the administrator or trustee of the employee benefit plan to determine if the plan participates in the Plan. Your participation in the Plan will be subject to the terms and conditions of the applicable employee benefit plan and the administrator or trustee of such plan.

If you do not own any shares of our common stock, or if you wish to establish a separate account, you can go to the Administrator's website, *www.computershare.com/investor*, and follow the instructions provided. You may enroll in the Plan by authorizing a one-time online bank debit from your U.S. bank account for an initial investment of at least $500 or by establishing recurring automatic withdrawals from your U.S. bank account for a minimum of $50 per transaction for at least ten consecutive months. Automatic withdrawal is further described in the "Optional Cash Investments" section of this prospectus. You can also fill out the Initial Enrollment Form and return it to the Administrator. Enclose a check, in U.S. dollars, for at least $500 or, if you are an employee of Aqua America and wish to pay for your purchases through the withholding of compensation, fill out the Employee Enrollment Form provided to you by the Company. You can receive an Initial Enrollment Form by contacting the Administrator through the channels outlined in the "Administration" section of this prospectus. If you wish to make your initial investment through automatic withdrawals, you must agree to continue with the withdrawals until the $500 minimum initial investment is reached. Please note, such automatic withdrawals continue indefinitely beyond the initial investment until you notify the Administrator through the Internet, by telephone or in writing to stop such automatic withdrawals.

If you open an account for another person by transferring stock from your account, you must transfer a minimum of 5 shares into that account.

## DIVIDEND REINVESTMENT

You may choose to reinvest all or a portion of the dividends paid on your first 100,000 shares of our common stock held in your Plan account or participating in the Plan through our employee benefit plans. Your dividends will be used to buy additional shares of our common stock at a discount between 0% and 5.0%, as designated from time to time by us prior to the purchase of the shares with the reinvested dividends, from the prevailing market price. You have the following options for your dividends:

- *Full Dividend Reinvestment*. Your cash dividends received on shares you own up to 100,000 shares will be used to buy additional shares for you.
- *Partial Dividends Paid in Cash*. If you do not want full dividend reinvestment, select a lower number of full shares on which you want your dividends to be paid in cash. The balance of your dividends will be reinvested.
- *All Dividends Paid in Cash (no dividend reinvestment)*. Your dividends on all of your shares will be paid in cash.

If you do not indicate which reinvestment option you want on the enrollment form, you will be automatically enrolled in full dividend reinvestment.

You may change your reinvestment option at any time by completing and returning a new Enrollment Form (which can be obtained by contacting the Administrator), by accessing your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*, by calling the Administrator at 1-800-205-8314 or by providing written instructions to the Administrator. Dividends will be reinvested or paid on cash in accordance with your most recent instructions received by the Administrator prior to the dividend record date applicable to such dividend.

The 100,000 share reinvestment limitation does not apply to our employee benefit plans.

## ELECTRONIC DEPOSIT OF CASH DIVIDENDS

If you are receiving all or a portion of your dividends in cash, you may have them electronically deposited into your U.S. bank account by completing an Authorization for Electronic Direct Deposit Form or by mailing a voided check or deposit slip to the Administrator. Contact the Administrator to receive an Authorization for Electronic Direct Deposit Form. You may also authorize electronic deposit through the Internet at the Administrator's web site, *www.computershare.com/investor*. This feature may be changed or discontinued at any time by notifying the Administrator. If you change your U.S. bank account and fail to notify the Administrator of the change, a check for your dividends will be issued and mailed only after the funds have been returned from the receiving bank.

## OPTIONAL CASH INVESTMENTS

Participants in the Plan may buy additional shares of our common stock at any time by investing at least $50. Your total optional cash investment may not exceed $250,000 in a calendar year. Interest will not be paid on amounts held pending investment. Optional cash investments may be made by:

- *One-time online bank debit*. At any time, you may make optional cash investments by going to the Administrator's web site, *www.computershare.com/investor*, and authorizing a one-time online bank debit from your U.S. bank account. Please refer to the online confirmation for your bank account debit date and investment date.

- *Check*. Mail your check with the cash investment form from the bottom of your account statement to the address on the cash investment form. Do not send cash, traveler's checks, money orders or third party checks. All checks should be in U.S. funds and drawn from a U.S. bank. All payments should be made payable to "Computershare-Aqua America".
- *Recurring automatic withdrawals from a U.S. bank account*. You can establish recurring automatic withdrawals through the Internet at the Administrator's web site, *www.computershare.com/investor*, or by filling out a Direct Debit Authorization Form for automatic withdrawals. You can receive a Direct Debit Authorization Form by contacting the Administrator through the channels outlined in the "Administration" section of this prospectus. All automatic withdrawal enrollment information must be received at least 30 days prior to the first debit date. Funds will be deducted from your bank account on the first business day of each month. These funds may be commingled with other optional cash investments. All funds automatically withdrawn from your bank account will be invested on the next optional cash investment date. Automatic withdrawals will continue at the level you set until you instruct the Administrator otherwise. You can change or stop automatic withdrawals by accessing your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*, by calling the Administrator at 1-800-205-8314, by completing and returning a new Direct Debit Authorization Form or by giving written instructions to the Administrator. You must contact the Administrator at least 7 business days prior to the debit date to change or terminate automatic withdrawal.
- In the event that a one-time bank debit, check or an automatic withdrawal is not honored for any reason, the Administrator will consider the request for investment of that money null and void and shall immediately remove from the participant's account the shares, if any, purchased upon the prior credit of such money. A fee of $25 will also be assessed against the participant's account. The Administrator will then be entitled to sell those shares to satisfy any uncollected balance. If the net proceeds of the sale of those shares are insufficient to satisfy the balance of such uncollected amounts, the Administrator will be entitled to sell additional shares from the participant's account to satisfy the uncollected balance. Employees of Aqua America who wish to pay for their investment by having a portion of their compensation withheld and applied to the investment should complete the Employee Enrollment Form provided by the Company.

## PURCHASE AND SOURCE OF SHARES

Shares of our common stock needed to meet the requirements of the Plan will either be purchased in the open market or issued directly by us. We will pay transaction fees and per share fees (which will include any brokerage commissions the Administrator is required to pay) incurred for the purchase of shares. The Administrator will invest your funds for the optional cash investments as promptly as practicable, at least once each week. However, funds automatically withdrawn from your U.S. bank account will be invested as specified above in "Optional Cash Investments – By automatic recurring withdrawals from a U.S. bank account." Funds may not be returned once they have been submitted to the Administrator. In the unlikely event that, due to unusual market conditions, the Administrator is unable to purchase shares of our common stock within 30 days (in the case of reinvested dividends) or within 35 days after receipt (in the case of cash investments), the funds will be returned to you by check. No interest will be paid on funds held by the Administrator pending investment. All dividends will be invested independently from optional cash investments. Please note that you will not be able to direct the Administrator to purchase shares at a specific time or at a specific price or through a specific broker or dealer.

## PRICE OF SHARES

Open market purchases for initial, optional and IRA investments will be at a price equal to 100% of the weighted average per share price of shares purchased by the Administrator to satisfy Plan requirements. If the

Administrator purchases shares to meet the dividend reinvestment requirement in the open market, your price per share will be 95% to 100% of the weighted average price of shares purchased, as designated from time to time by us prior to the purchase of the shares with the reinvested dividends. We will pay all transaction fees and per share fees in connection with open market purchases.

For original issue or treasury shares purchased from Aqua America for initial, optional and IRA investments (including investments made by employees through compensation withholding), the price per share will be 100% of the average of the daily high and low trading prices quoted on The New York Stock Exchange on the day of purchase (the investment date).

For original issue or treasury shares purchased from Aqua America to meet the dividend reinvestment requirement under the Plan, the price per share will be 95% to 100% of the average of the daily high and low trading prices quoted on The New York Stock Exchange for the five trading days preceding the dividend payment date, as designated from time to time by us prior to the dividend payment date.

The discount between 0% and 5.0% on the shares purchased or issued to meet the dividend reinvestment requirement will be designated by us in our sole discretion prior to the purchase or issuance of such shares. We reserve the right to change, reduce or discontinue any discount at any time without notice. We will provide the Administrator with notice of the applicable discount and any change in such discount. Please contact the Administrator with any questions about the discount then in effect. We may also provide notice on our website, but have no obligation to do so. As of the date of this prospectus, the discount is 5.0%.

## SALE OF SHARES

You can sell some or all of the shares held in your Plan account by contacting the Administrator. You have choices when making a sale, depending on how you submit your sale request, as follows:

- *Market Order*: A market order is a request to sell shares promptly at the current market price. Market order sales are only available at *www.computershare.com/investor* through Investor Centre or by calling the Administrator directly at 1-800-205-8314. Market order sale requests received at *www.computershare.com/investor* through Investor Centre or by telephone will be placed promptly upon receipt during market hours (normally 9:30 a.m. to 4:00 p.m. Eastern time). Any orders received after 4:00 p.m. Eastern time will be placed promptly on the next day the market is open. The price shall be the market price of the sale obtained by the Administrator’s broker, less applicable fees. The Administrator will use commercially reasonable efforts to honor requests by participants to cancel market orders placed outside of market hours. Depending on the number of shares being sold and current trading volume in the shares, a market order may only be partially filled or not filled at all on the trading day in which it is placed, in which case the order, or remainder of the order, as applicable, will be cancelled at the end of such day. To determine if your shares were sold, you should check your account online at *www.computershare.com/investor* or call the Administrator directly at 1-800-205-8314. If your market order sale was not filled and you still want the shares to be sold, you will need to re-enter the sale request. For a market order sale, you will be charged a transaction fee of $25, plus $0.12 per share.
- *Batch Order*: A batch order is an accumulation of all sales requests for a security submitted together as a collective request. Batch orders are submitted on each market day, assuming there are sale requests to be processed. Sale instructions for batch orders received by the Administrator will be processed no later than five business days after the date on which the order is received (except where deferral is required under applicable federal or state laws or regulations), assuming the applicable market is open for trading and sufficient market liquidity exists. Batch order sales may only be submitted in writing. All sales requests received in writing will be submitted as batch order sales, including sale requests for IRA Plan accounts and Coverdell Education Savings Accounts, will be submitted as batch order sale.

The Administrator will cause your shares to be sold on the open market within five business days of receipt of your request. To maximize cost savings for batch order sale requests, the Administrator will seek to sell shares in round lot transactions. For this purpose the Administrator may combine each selling Plan participant's shares with those of other selling Plan participants. In every case of a batch order sale, the price to each selling Plan, participant shall be the weighted average sale price obtained by the Administrator's broker for each aggregate order placed by the Administrator and executed by the broker, less applicable fees. For a batch order sale, you will be charged a transaction fee of $15, plus $0.12 per share.

- *Day Limit Order*: A day limit order is an order to sell shares of our common stock when and if they reach a specific trading price on a specific day. The order is automatically cancelled if the price is not met by the end of that day (or, for orders placed aftermarket hours, the next day the market is open). Depending on the number of shares of our common stock being sold and the current trading volume in the shares, such an order may only be partially filled, in which case the remainder of the order will be cancelled. The order may be cancelled by the applicable stock exchange, by the Administrator at its sole discretion or, if the Administrator's broker has not filled the order, at your request made online at *www.computershare.com/investor* or by calling the Administrator directly at 1-800-205-8314. For a day limit order sale, you will be charged a transaction fee of $25, plus $0.12 per share.
- *Good-Till-Cancelled ("GTC") Limit Order*: A GTC limit order is an order to sell shares of our common stock when and if the shares reach a specific trading price at any time while the order remains open (generally up to 30 days). Depending on the number of shares being sold and current trading volume in the shares, sales may be executed in multiple transactions and over more than one day. If shares are traded on more than one day, a separate fee will be charged for each such day. The order (or any unexecuted portion thereof) is automatically cancelled if the trading price is not met by the end of the order period. The order may be cancelled by the applicable stock exchange, by the Administrator at its sole discretion or, if the Administrator's broker has not filled the order, at your request made online at *www.computershare.com/investor* or by calling the Administrator directly at 1-800-205-8314. For a GTC limit order sale, you will be charged a transaction fee of $25, plus $0.12 per share

General: All sales requests processed over the telephone by a customer service representative entail an additional fee of $15.00. All per share fees include any brokerage commissions the Administrator is required to pay. Any fractional share will be rounded up to a whole share for purposes of calculating the per share fee. Fees are deducted from the proceeds derived from the sale. The Administrator may, under certain circumstances, require a transaction request to be submitted in writing. Please contact the Administrator to determine if there are any limitations applicable to your particular sale request. Proceeds are normally paid by check, which are distributed within 24 hours of after your sale transaction has settled.

The Administrator reserves the right to decline to process a sale if it determines, in its sole discretion, that supporting legal documentation is required. In addition, no one will have any authority or power to direct the time or price at which shares for the Plan are sold, and no one, other than the Administrator, will select the broker(s) or dealer(s) through or from whom sales are to be made.

If you elect to sell shares online at *www.computershare.com/investor*, you may utilize the Administrator's international currency exchange service to convert the sale proceeds to your local currency prior to being sent to you. Receiving sales proceeds in a local currency and having your check drawn on a local bank avoids the timely and costly "collection" process required for cashing U.S. dollar checks. This service is subject to additional terms and conditions and fees, which you must agree to online. We are not responsible for any costs or fees associated with your use of this service.

If your holdings in any account fall below 5 shares, the Administrator may close that account out of the Plan as described in the "Minimum Account" section of this prospectus.

## INDIVIDUAL RETIREMENT ACCOUNTS ("IRA")

You may establish a Traditional IRA, Roth IRA or Coverdell Education Savings Account of our common stock by returning completed Enrollment Forms together with your contribution to the IRA and Coverdell Education Savings Account Trustee. If you are already a shareholder of at least 5 shares, you may open an IRA or Coverdell Education Savings Account with as little as $50. If you are not a shareholder, the minimum contribution to open an account is $500.

You may also open an IRA or Coverdell Education Savings Account to receive a cash rollover or a transfer of Aqua America shares from another IRA or qualified retirement plan. The IRA and Coverdell Savings Account Trustee will invest the cash rollovers into shares of our common stock.

There is an annual maintenance fee of $45.00 charged by the IRA and Coverdell Education Savings Account Trustee, which we will pay for the first calendar year in which you participate. In all subsequent years, twenty- five dollars ($25.00) of this annual fee will be charged to you, with the balance paid by us.

IRA and Coverdell Education Savings Account contributions and rollovers will not count against the $250,000 maximum investment limit under the Plan.

If you are interested in opening a Traditional IRA, Roth IRA or Coverdell Education Savings Account, you may obtain the enrollment and a disclosure statement from Computershare Trust Company, N.A., which will administer the IRA and Coverdell Education Savings Account. For information, call the Computershare IRA Department at its toll-free number, 1-800-597-7736.

## SAFEKEEPING OF CERTIFICATES AND BOOK ENTRY

For your convenience, shares purchased under the Plan will be maintained by the Administrator in your name in book-entry form. You may, however, request a stock certificate by accessing your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*, by calling the Administrator at 1-800-205-8314 or by providing written instructions to the Administrator. There is a $25 fee for certificate issuance.

If you are holding certificates for Aqua America, Inc., or previously named Philadelphia Suburban Corporation common stock, you may use the Plan's "safekeeping" service to deposit those stock certificates at no cost. Safekeeping protects your shares against loss, theft or accidental destruction and provides a convenient way for you to keep track of your shares. Only shares held in safekeeping or in book-entry form may be sold through the Plan.

To use the safekeeping service, send your certificates to the Administrator at the address listed on page 6 of this prospectus by registered or certified mail, with a return receipt requested or some other form of traceable mail, and properly insured. **YOU SHOULD NOT ENDORSE THE STOCK CERTIFICATE BEFORE YOU SEND IT IN.**

## TRACKING YOUR INVESTMENT

The Administrator will send a statement confirming the details of each transaction you make. For market order transactions, the time of sale will be provided. If you continue to be enrolled in the Plan, but have no transactions, the Administrator will mail you an annual statement reflecting your holdings. For shares acquired in the Plan after January 1, 2011, specific cost basis information will be included in your statement in accordance with applicable law.

You should notify the Administrator promptly of any change in address since all notices, statements and reports will be mailed to your address of record.

Please retain your statements to establish the cost basis of shares purchased under the Plan for income tax and other purposes. A $20 flat fee per year requested will be charged for all prior year duplicate statement requests.

You may also view year-to-date transaction activity in your Plan account for the current year, as well as activity in prior years, by accessing your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*.

## OBTAINING A STOCK CERTIFICATE

To obtain a stock certificate for all or a portion of your full shares, you can contact the Administrator by accessing your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*, by calling the Administrator at 1-800-205-8314, by making a written request of the Administrator or by completing the transaction form at the bottom of your statement and submitting it to the Administrator. There is a $25 fee for certificate issuance. No fractional shares of common stock will be issued; instead, the then-current market value of any fractional share sold, less any transaction fees and per share fees, will be paid in cash.

If you want the certificate issued in a name other than your Plan account registration, the Administrator may require you to have your signature guaranteed by a financial institution in the Medallion Guarantee program.

## TRANSFERS

You may transfer or give our common stock to anyone you choose by:

- Making an initial $500 cash investment to establish a new account in the recipient's name; or
- Making an optional cash investment on behalf of an existing shareholder in the Plan in an amount not less than $50 nor more than $250,000 in one calendar year; or
- Transferring at least 5 shares from your account to the recipient.

If you would like transfer instructions please visit the Administrator's Transfer Wizard at www.computershare.com/transferwizard. The Transfer Wizard will guide you through the transfer process, assist you in completing the transfer form, and identify other necessary documentation you may need to provide.

## DIVIDEND PAYMENT AND RECORD DATES

Normal dividend payment dates are expected to be on the first day of March, June, September and December. The record date usually precedes the dividend payment date by 10 business days.

In order to be the owner of record and eligible to receive the quarterly dividend, your shares must have been purchased and the transaction settled three trading days prior to the record date (the ex-dividend date). We can give no guarantee whatsoever that we will declare dividends in the future.

## TERMINATION OF PARTICIPATION

If you wish to stop reinvesting your dividends or to stop automatic monthly investments, please use the transaction form attached to your statement or contact the Administrator by accessing your Plan account through the Internet at the Administrator's web site, *www.computershare.com/investor*, by calling the Administrator at 1-800-205-8314 or by providing written instructions to the Administrator.

In the event you have been reinvesting your dividends and your notice of termination is received by the Administrator near a record date for a dividend payment, the Administrator, in its sole discretion, may either distribute that dividend in cash or reinvest it in shares on your behalf. In the event the dividend is reinvested, the Administrator will process your withdrawal from the Plan as soon as practicable, but in no event later than five business days after the purchase is completed.

## MINIMUM ACCOUNT

After you have made your initial contribution of $500 by automatic withdrawals, check or one-time online bank debit, or had at least 5 shares transferred into an account registered in your name under the Plan, you must, at all times you are enrolled in the Plan, keep a minimum number of 5 shares of our common stock in your account. If you keep less than 5 shares in your account, the Administrator will code the account for future dividends to be paid in cash.

## COSTS

We pay for all transaction fees and per share fees (which include any brokerage commissions the Administrator is required to pay) associated with the reinvestment of dividends and the making of optional cash investments.

For each batch order sale of whole shares from your Plan account, you will be charged a $15.00 transaction fee and a per share fee of $0.12.

For each market order sale of whole shares from your Plan account, you will be charged a $25.00 transaction fee and a per share fee of $0.12.

For each limit order sale of whole shares from your Plan account, you will be charged a $25.00 transaction fee and a per share fee of $0.12.

For each GTC limit order sale of whole shares from your Plan account, you will be charged a $25.00 transaction fee and a per share fee of $0.12.

All sales requests processed over the telephone by a customer service representative entail an additional fee of $15.00.

There is an annual maintenance fee of $45.00 charged by the IRA and Coverdell Education Savings Account Trustee, which we will pay for the first calendar year in which you participate. In all subsequent years, twenty-five dollars ($25.00) of this annual fee will be charged to you, with the balance of the annual fee paid by us. Fees are collected by the Administrator from your account.

## TAXES

All dividends paid to you – whether or not they are reinvested – are considered taxable income to you in the year they are paid. The total amount will be reported to you, and to the Internal Revenue Service, shortly after the close of each year. If you are reinvesting your dividends, the value of the applicable discount from the purchase price of the shares (the calculated fair market value) will also be reported as taxable income.

If you are an employee of Aqua America and are paying for shares by having compensation withheld, the amounts withheld will be subject to taxation as ordinary income on the same basis as the portion of your compensation that is not withheld.

All shares of stock that are sold through the Administrator will also be reported to the IRS as required by law. Any profit or loss you incur should be reflected when you file your income tax returns.

In addition, the Internal Revenue Service may require that any per share fees (which include any brokerage commissions the Administrator is required to pay incurred in the purchase of shares and paid by us on your behalf be treated as dividend income to you, in which case such amounts can be included in your cost basis of shares purchased.

Be sure to keep your statements of account for income tax purposes. A fee of $20.00 per year requested may be incurred to furnish historical information. If you have questions about the tax basis of any transactions, please consult your own tax advisor.

## VOTING

We will forward to you, either electronically or by mail based on your preference, a proxy for shares of our common stock for which you hold certificates and shares of our common stock credited to your Plan account. The Administrator shall not vote shares of our common stock that it holds for your Plan account except as directed by you.

## HANDLING OF STOCK SPLITS AND OTHER DISTRIBUTIONS

In the event we issue a stock dividend or declare a stock split, your Plan account will be adjusted to reflect the receipt of shares paid or distributed. Any stock dividend or stock split shares of our common stock issued with respect to both certificated and book-entry (whole and fractional) shares will be credited automatically to your Plan account in book-entry form.

In the event of a stock subscription or other offering of rights to shareholders, your rights will be based on your total registered holdings (the shares held in the Plan and outside of the Plan). A single set of materials will be distributed that will allow you to exercise your rights.

## CHANGES TO THE PLAN

We may add to or modify the Plan at any time. Similarly, we may, at any time, waive, suspend or terminate the Plan, or any provision of the Plan. We will send you written notice of any significant changes, suspensions or termination. The current prospectus is filed with the SEC and available on our website *at http://ir.aquaamerica.com/divreinvest.cfm* and modifications to the Plan will be reflected in an updated prospectus on our website.

Any modification made to, or waiver, suspension or termination of, the Plan will apply to a participant's holdings in the Plan at the time the modification, waiver, suspension or termination becomes effective and to transactions occurring thereafter, regardless of when or how the shares were acquired. However, any modification, waiver, suspension or termination of the Plan will not affect your rights as a shareholder in any way, and any book-entry shares you own will continue to be credited to your account with the Administrator unless you specifically request otherwise.

We and the Administrator reserve the right to change any administrative procedure of the Plan.

## INTERPRETATION OF THE PLAN

We may interpret and regulate the Plan as deemed necessary or desirable in connection with the operation of the Plan and resolve questions or ambiguities concerning the various provisions of the Plan.

## RESPONSIBILITIES OF AQUA AMERICA AND THE ADMINISTRATOR

Neither we nor the Administrator shall be liable for any act performed in good-faith or for any good-faith omission to act, including, without limitation, any claims or liability: (a) for failure to terminate your account upon your death prior to receiving written notice of such death or (b) with respect to the prices at which shares of our common stock are purchased or sold for your Plan account and the times when such purchases or sales are made or (c) for any fluctuation in the market value after purchases or sale of shares of our common stock.

Neither we nor the Administrator can assure you a profit or protect you against a loss on the shares you purchase under the Plan.

## USE OF PROCEEDS

The proceeds from the sale of newly-issued or treasury shares offered by us will be used for general corporate purposes. All other shares of common stock acquired under the Plan will be purchased in the open market, not from us, and we will not receive any proceeds from such purchases.

## EXPERTS

The consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting), incorporated in this prospectus by reference to our Annual Report on Form 10-K for the year ended December 31, 2016, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Ballard Spahr LLP, our outside counsel, has given its opinion regarding the validity of the common stock covered by this prospectus.

## ANTIDILUTION PROVISION

The aggregate number of shares of common stock registered for issuance and purchase under the Plan, as provided in the Registration Statement, of which this prospectus forms a part, the maximum number of shares that may be purchased by a participant and the calculation of the purchase price per share may be appropriately adjusted by us to reflect any increase or decrease in the number of issued shares of common stock resulting from a subdivision or consolidation of shares or other capital adjustment, or the payment of a stock dividend, or other increase or decrease in such shares, if effected without receipt of consideration by us.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 100 F Street N.E., Washington, D.C. 20549. Copies of such materials can be obtained by mail at prescribed rates from the public reference room. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. You may also obtain our SEC filings from the SEC's web site at www.sec.gov or from our web site at *http://ir.aquaamerica.com/*.

This prospectus is part of a Registration Statement on Form S-3 that we filed with the SEC to register the stock offered under the Plan. As allowed by SEC rules, this prospectus does not contain all information you can find in the Registration Statement or the exhibits to the Registration Statement. The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus and later information filed with the SEC will update and supersede this information. Any statement so updated or superseded shall not be deemed, except as so updated or superseded, to constitute a part of this prospectus. We incorporate by reference the documents listed below and any future filings made with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, until our offering is completed.

- Our Annual Report on Form 10-K for the year ended December 31, 2016, including portions of our definitive Proxy Statement for our 2016 Annual Meeting of Shareholders incorporated therein by reference;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017;
- Our Current Reports on Form 8-K filed with the SEC on May 5, 2017 and June 29, 2017; and
- The description of our common stock set forth in our Registration Statement on Form 8-A, including any amendments or reports filed for the purpose of updating such description.

You may request a copy of any documents that we incorporate by reference at no cost by telephoning 1-610-527-8000 or writing us at the following address:

Aqua America, Inc.
Investor Relations
762 W. Lancaster Avenue
Bryn Mawr, PA 19010

You should rely only on the information contained or incorporated by reference into this prospectus. We have authorized no one to provide you with different information. You should not assume that the information in the prospectus or incorporated by reference into this prospectus is accurate as of any date other than the date on the front of this prospectus or the date of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

## PART II

## INFORMATION NOT REQUIRED IN PROSPECTUS

### ITEM 14. Other Expenses of Issuance and Distribution.

The following table sets forth an estimate of the costs and expenses payable by the Registrant in connection with the offering described in this registration statement. All of the amounts shown are estimates except the Securities and Exchange Commission registration fee.

| | |
|---|---|
| Securities and Exchange Commission registration fee | $23,115 |
| Printing and Engraving | 5,000 |
| Accounting fees and expenses | 12,000 |
| Legal fees and expenses | 12,000 |
| Miscellaneous | 2,885 |
| Total | $55,000 |

### ITEM 15. Indemnification of Directors and Officers.

The Registrant is a Pennsylvania corporation. Sections 1741 and 1742 of the Pennsylvania Business Corporation Law of 1988, as amended (the "PBCL"), provide that, unless otherwise restricted in its bylaws, a business corporation may indemnify directors and officers against liabilities they may incur as such, provided that the particular person acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. In general, the power to indemnify under these sections does not exist in the case of actions against a director or officer by or in the right of the corporation if the person otherwise entitled to indemnification shall have been adjudged to be liable to the corporation unless it is judicially determined that, despite the adjudication of liability, but in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnification for specified expenses. Section 1743 of the PBCL requires a business corporation to indemnify directors and officers against expenses they may incur in defending actions against them in such capacities if they are successful on the merits or otherwise in the defense of such actions.

Section 1713 of the PBCL permits the shareholders to adopt a bylaw provision relieving a director (but not an officer) of personal liability for monetary damages except where (i) the director has breached the applicable standard of care, and (ii) such conduct constitutes self-dealing, willful misconduct or recklessness. This Section also provides that a director may not be relieved of liability for the payment of taxes pursuant to any federal, state or local law or of liability or responsibility under a criminal statute. Section 4.01 of the Registrant's bylaws limits the liability of any director of the Registrant to the fullest extent permitted by Section 1713 of the PBCL.

Section 1746 of the PBCL grants a corporation broad authority to indemnify its directors, officers and other agents for liabilities and expenses incurred in such capacity, except in circumstances where the act or failure to act giving rise to the claim for indemnification is determined by a court to have constituted willful misconduct or recklessness. Article VII of the Registrant's bylaws provides indemnification of directors, officers and other agents of the Registrant, which is broader than the indemnification permitted by Section 1741 of the PBCL and pursuant to the authority of Section 1746 of the PBCL.

Article VII of the Registrant's bylaws provides, except as expressly prohibited by law, an unconditional right to indemnification for expenses and any liability paid or incurred by any director or officer of the Registrant, or any other person designated by the board of directors as an indemnified representative, in connection with any actual or threatened claim, action, suit or proceeding (including derivative suits) in which he or she may be involved by reason of being or having been a director, officer, employee or agent of the Registrant or, at the request of the Registrant, of another corporation, partnership, joint venture, trust, employee benefit plan or other entity. The bylaws specifically authorize indemnification against both judgments and amounts paid in settlement of derivative suits, unlike Section 1742 of the PBCL which authorizes indemnification only of expenses incurred in defending and in settlement of a derivative action. In addition, Article VII of the bylaws also allows indemnification for punitive damages and liabilities incurred under the federal securities laws.

Unlike the provisions of PBCL Sections 1741 and 1742, Article VII does not require the Registrant to determine the availability of indemnification by the procedures or the standard of conduct specified in Sections 1741 or 1742 of the PBCL. A person who has incurred an indemnifiable expense or liability has a right to be indemnified independent of any procedures or determinations that would otherwise be required, and that right is enforceable against the Registrant as long as indemnification is not prohibited by law. To the extent indemnification is permitted only for a portion of a liability, the bylaw provisions require the Registrant to indemnify such portion. If the indemnification provided for in Article VII is unavailable for any reason in respect of any liability or portion thereof, the bylaws require the Registrant to make a contribution toward the liability. Indemnification rights under the bylaws do not depend upon the approval of any future board of directors.

Section 7.04 of the Registrant's bylaws also authorizes the Registrant to further effect or secure its indemnification obligations by entering into indemnification agreements, maintaining insurance, creating a trust fund, granting a security interest in its assets or property, establishing a letter of credit, or using any other means that may be available from time to time. Section 1747 of the PBCL also enables a business corporation to purchase and maintain insurance on behalf of a person who is or was serving as a representative of the corporation or is or was serving at the request of the corporation as a representative of another entity against any liability asserted against that representative in his capacity as such, whether or not the corporation would have the power to indemnify him against that liability under the PBCL. The Registrant maintains, on behalf of its directors and officers, insurance protection against certain liabilities arising out of the discharge of their duties, as well as insurance covering the Registrant for indemnification payments made to its directors and officers for certain liabilities. The premiums for such insurance are paid by the Registrant.

**ITEM 16. Exhibits.**

A list of exhibits filed herewith or incorporated by reference is contained in the Exhibit Index to this prospectus, which is incorporated herein by reference.

**ITEM 17. Undertakings.**

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*Provided, however*, that paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(A) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

(5) That, for the purpose of determining liability of the Registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Bryn Mawr, Commonwealth of Pennsylvania, on the 28th day of July, 2017.

**AQUA AMERICA, INC.**

By: /s/ Christopher Franklin
Christopher Franklin
President & Chief Executive Officer

## POWER OF ATTORNEY

Each person whose signature appears below hereby appoints David P. Smeltzer, Chief Financial Officer of Registrant, and Christopher P. Luning, Senior Vice President, General Counsel and Corporate Secretary of Registrant, and each of them acting individually, as his or her true and lawful attorneys-in-fact, with full power of substitution and resubstitution, with the authority to execute in the name of each such person, and to file with the Securities and Exchange Commission, together with any exhibits thereto and other documents therewith, any and all amendments to this registration statement (including post-effective amendments and all other related documents) necessary or advisable to enable the registrant to comply with the Securities Act of 1933, and any rules, regulations and requirements of the Securities and Exchange Commission in respect thereof, which amendments may make such changes in the registration statement as the aforesaid attorney-in-fact executing the same deems appropriate.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed below by the following persons on behalf of the Registrant and in the capacities indicated, as of July 28, 2017.

| Signature | Title |
| --- | --- |
| /s/ Christopher Franklin<br>Christopher Franklin | President, Chief Executive Officer and Director (Principal Executive Officer) |
| /s/ David P. Smeltzer<br>David P. Smeltzer | Executive Vice President and Chief Financial Officer (Principal Financial Officer) |
| /s/ Robert A. Rubin<br>Robert A. Rubin | Senior Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer) |
| /s/ Nicholas DeBenedictis<br>Nicholas DeBenedictis | Chairman and Director |
| /s/ Carolyn J. Burke<br>Carolyn J. Burke | Director |
| /s/ Richard H. Glanton<br>Richard H. Glanton | Director |

| Signature | Title |
| --- | --- |
| /s/ Lon R. Greenberg<br>Lon R. Greenberg | Director |
| /s/ William P. Hankowsky<br>William P. Hankowsky | Director |
| /s/ Daniel J. Hilferty<br>Daniel J. Hilferty | Director |
| /s/ Wendell F. Holland<br>Wendell F. Holland | Director |
| /s/ Ellen T. Ruff<br>Ellen T. Ruff | Director |

## EXHIBIT INDEX

| Exhibit Number | Description of Exhibit |
|---|---|
| 3.1 | Aqua America, Inc., Amended and Restated Articles of Incorporation (filed as Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on May 11, 2012 and incorporated herein by reference). |
| 3.2 | Amended and Restated Bylaws of Aqua America, Inc., effective as of May 10, 2012 (filed as Exhibit 3.2 to Registrant's Current Report on Form 8-K filed on May 11, 2012 and incorporated herein by reference). |
| 5 | Opinion of Ballard Spahr LLP.* |
| 23.1 | Consent of Ballard Spahr LLP (included in Exhibit 5 hereto).* |
| 23.2 | Consent of PricewaterhouseCoopers LLP.* |
| 24 | Power of Attorney (included on signature pages hereto).* |

* Filed herewith.

**Exhibit 5**

Ballard Spahr LLP

1735 Market Street, 51st Floor
Philadelphia, PA 19103-7599
TEL 215.665.8500
FAX 215.864.8999
www.ballardspahr.com

July 28, 2017

Aqua America, Inc.
762 W. Lancaster Ave.
Bryn Mawr, Pennsylvania 19010-3489

RE: Aqua America, Inc.—Registration Statement on Form S-3, Filed on July 28, 2017, relating to the Aqua America, Inc. Dividend Reinvestment and Direct Stock Purchase Plan

Ladies and Gentlemen:

We have acted as counsel to Aqua America, Inc., a Pennsylvania corporation (the "Company"), in connection with the filing of the referenced Registration Statement (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), with the Securities and Exchange Commission (the "SEC"). The Registration Statement relates to the proposed offering and sale of up to 6,000,000 shares of common stock, par value $0.50 per share, of the Company (the "Shares") pursuant to the Company's Dividend Reinvestment and Direct Stock Purchase Plan (the "Plan").

In connection with this opinion, we have examined the Registration Statement and originals, or copies certified or otherwise identified to our satisfaction, of the Company's Amended and Restated Articles of Incorporation, the Company's Amended and Restated Bylaws, resolutions adopted by the Company's Board of Directors on July 25, 2017, the Plan as described in the prospectus, and such other documents, records and other instruments as we have deemed appropriate for purposes of the opinion set forth herein.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile or photostatic copies and the authenticity of the originals of all documents submitted to us as copies.

Based upon the foregoing, we are of the opinion that the Shares (i) have been duly authorized by the Company and, (ii) when issued and sold by the Company and delivered by the Company against receipt of the purchase price therefor, in the manner contemplated by the Registration Statement, will be validly issued, fully paid and non-assessable.

The opinions expressed herein are limited to the laws of the Commonwealth of Pennsylvania.

We hereby consent to the use of this opinion as Exhibit 5 to the Registration Statement and to the reference to us under the caption "Experts" in the prospectus included in the Registration Statement. In giving such consent, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the SEC thereunder.

Very truly yours,

/s/ Ballard Spahr LLP

EXHIBIT 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated February 24, 2017 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Aqua America Inc.'s Annual Report on Form 10-K for the year ended December 31, 2016. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania

July 28, 2017

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR3. Supply projected capital requirements and the sources of company, parent and consolidated system for the historic test year and each of 3 comparable future years.

A. Please see the Company's historic and projected capital requirements for 3/31/2018, 3/31/2019, and 3/1/2020 below. Please note that projected capital requirements are not yet available for 3/31/2021.

| | 3/31/2018 | 3/31/2019 | 3/31/2020 |
|---|---|---|---|
| Debt | $ 1,335,295,633 | $ 1,511,288,934 | $ 1,629,139,074 |
| Preferred | $ - | $ - | $ - |
| Equity | $ 1,562,180,646 | $ 1,774,399,400 | $ 1,838,327,600 |
| | $ 2,897,476,279 | $ 3,285,688,334 | $ 3,467,466,674 |

**<u>AQUA PENNSYLVANIA, INC.</u>**
**<u>2018 RATE CASE</u>**
**<u>FILING REQUIREMENTS</u>**

**G. Rate of Return**

RR4. Provide a schedule of debt and preferred stock of company, parent and consolidated system as of historic test year-end and latest date, detailing for each issue (if applicable):

a. Date of issue.

b. Date of maturity.

c. Amount issued.

d. Amount outstanding.

e. Amount retired.

f. Amount required.

g. Gain on reacquisition.

h. Coupon rate.

i. Discount or premium at issuance.

j. Issuance expenses.

k. Net proceeds.

l. Sinking fund requirements.

m. Effective interest rate.

n. Dividend rate.

o. Effective cost rate.

p. Total average weighted effective cost rate.

A. There is no preferred stock for the Company, Parent or consolidated system. Please refer to the direct testimony of Paul R. Moul and the accompanying Exhibit 4 for the Company's schedule of debt, including the details requested in items (a) through (p). Please see the attached for the debt for the Parent as of March 31, 2018.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**AQUA AMERICA LTD - AS OF MARCH 31, 2018**

| Subsidiary | Structure | Interest Rate | Issue Date | Maturity Date | Original Amount | LT (excl. CP) Balance @ | Due 04/01/18 to 03/31/19 | LT (incl. CP) | Weighted Average Interest | Unamortized Debt | Annual Amortization | Effective Interest Rate | Sinking Fund Req't | Issuance Prem/(Disc) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aqua America, Inc. | PNC Revolving Credit Facility | 2.51% | 03/28/12 | 02/23/21 | 250,000,000 | 117,000,000 | 0 | 117,000,000 | 2,939,040 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 4.72% | 12/17/09 | 12/17/19 | 50,000,000 | 50,000,000 | 0 | 50,000,000 | 2,360,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 4.87% | 07/31/03 | 07/31/18 | 10,800,000 | 0 | 10,800,000 | 10,800,000 | 525,960 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 4.87% | 07/31/03 | 07/31/20 | 16,200,000 | 16,200,000 | 0 | 16,200,000 | 788,940 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 4.87% | 07/31/03 | 07/31/23 | 10,800,000 | 10,800,000 | 0 | 10,800,000 | 525,960 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.20% | 02/03/05 | 02/03/20 | 12,000,000 | 12,000,000 | 0 | 12,000,000 | 624,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.40% | 05/20/08 | 05/20/21 | 2,250,000 | 2,250,000 | 0 | 2,250,000 | 121,500 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.40% | 05/20/08 | 05/20/22 | 2,250,000 | 2,250,000 | 0 | 2,250,000 | 121,500 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.54% | 12/27/06 | 12/27/18 | 10,000,000 | 0 | 10,000,000 | 10,000,000 | 554,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.63% | 02/28/07 | 02/28/22 | 15,000,000 | 15,000,000 | 0 | 15,000,000 | 844,500 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.83% | 02/28/07 | 02/28/37 | 15,000,000 | 15,000,000 | 0 | 15,000,000 | 874,500 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 4.62% | 06/24/10 | 06/24/21 | 15,000,000 | 15,000,000 | 0 | 15,000,000 | 693,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 4.83% | 06/24/10 | 06/24/24 | 20,000,000 | 20,000,000 | 0 | 20,000,000 | 966,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 5.22% | 06/24/10 | 06/24/28 | 35,000,000 | 35,000,000 | 0 | 35,000,000 | 1,827,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 06/14/12 | 06/14/27 | 12,300,000 | 12,300,000 | 0 | 12,300,000 | 439,110 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 06/14/12 | 06/14/27 | 4,700,000 | 4,700,000 | 0 | 4,700,000 | 167,790 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 06/14/12 | 06/14/27 | 16,500,000 | 16,500,000 | 0 | 16,500,000 | 589,050 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 06/14/12 | 06/14/27 | 500,000 | 500,000 | 0 | 500,000 | 17,850 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 06/14/12 | 06/14/27 | 13,000,000 | 13,000,000 | 0 | 13,000,000 | 464,100 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 06/14/12 | 06/14/27 | 3,000,000 | 3,000,000 | 0 | 3,000,000 | 107,100 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.59% | 05/20/15 | 05/20/30 | 70,000,000 | 70,000,000 | 0 | 70,000,000 | 2,513,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.01% | 11/03/16 | 11/03/31 | 35,000,000 | 35,000,000 | 0 | 35,000,000 | 1,053,500 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.19% | 11/03/16 | 11/03/34 | 30,000,000 | 30,000,000 | 0 | 30,000,000 | 957,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.25% | 11/03/16 | 11/03/35 | 25,000,000 | 25,000,000 | 0 | 25,000,000 | 812,500 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.41% | 11/03/16 | 11/03/38 | 10,000,000 | 10,000,000 | 0 | 10,000,000 | 341,000 | N/A | N/A | N/A | N/A | - |
| Aqua America, Inc. | Senior Unsecured Notes | 3.57% | 11/03/16 | 11/03/41 | 25,000,000 | 25,000,000 | 0 | 25,000,000 | 892,500 | N/A | N/A | N/A | N/A | - |
| **Total Aqua America** | | | | | | **555,500,000** | **20,800,000** | **576,300,000** | **22,120,400** | **1,866,043** | **279,268** | **3.899%** | | **-** |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR5. Supply financial data of company and/or parent for last 5 years:

a. Earnings-price ratio (average).

b. Earnings-book value ratio (per share basis) (average book value).

c. Dividend yield (average).

d. Earnings per share (dollar).

e. Dividends per share (dollars).

f. Average book value per share yearly.

g. Average yearly market price per share (monthly high-low basis).

h. Pre-tax funded debt interest coverage.

i. Post-tax funded debt interest coverage.

j. Market price-book value ratio.

A. Please refer to the direct testimony of Paul R. Moul and the accompanying Exhibit 4 for the Company's financial data, including the details requested in items (a) through (j).

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR6. Provide AFUDC charged by company at historic test year-end and latest date, explain method by which rate was calculated and provide workpaper showing derivation of the company's current AFUDC rate.

A. AFUDC is $10,107,463 for the twelve months ended March 31, 2018. The Company utilizes the short-term debt rate for cost of capital used during construction. However, when CWIP exceeds short-term debt, a blended rate reflecting both debt and equity is utilized. The current monthly AFUDC debt rate is 0.185121% and the current monthly AFUDC equity rate is 0.288667%.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR7. Set forth provisions of company's and parent's charter and indentures, if applicable, which describe coverage requirements, limits on proportions of types of capital outstanding, and restrictions on dividend payouts.

A. Please see the attached.

Prepared by and Return to:
Mary T. Tomich, Esq.
Dilworth Paxson LLP
1500 Market Street
Suite 3500E
Philadelphia, PA 19102
215-575-7000

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**FIFTY-THIRD SUPPLEMENTAL**

**INDENTURE**

DATED AS OF JUNE 1, 2018

TO

INDENTURE OF MORTGAGE

DATED AS OF JANUARY 1, 1941

AQUA PENNSYLVANIA, INC.

TO

THE BANK OF NEW YORK MELLON TRUST COMPANY, N. A., as Trustee

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SECTION 3. All cash deposited with the Trustee as part of any Maintenance or Improvement Deposit provided for in Section 1 of this Article, may, at the option of the Company, be applied to the purchase of bonds under the provisions of Section 2 of Article X of the Original Indenture or to the redemption of bonds under the provisions of Section 3 of Article X of the Original Indenture or may be withdrawn by the Company at any time to reimburse the Company for the cost of a Net Amount of Available Permanent Additions (excluding, however, from any such Available Permanent Additions all Permanent Additions included in any certificate delivered to the Trustee for the purpose of obtaining a credit against any Maintenance or Improvement Deposit provided for in Section 1 of this Article to the extent that such Permanent Additions have been used for any such credit). The Trustee shall pay to or upon the written order of the Company all or any part of such cash upon the receipt by the Trustee of:

(a) A Resolution requesting such payment; and

(b) The documents specified in paragraphs 2, 5, 6 and 7 of subdivision (B) of Section 3 of Article IV of the Original Indenture, with such modifications, additions and omissions as may be appropriate in the light of the purposes for which they are used.

## ARTICLE III.

### Covenants of the Company

SECTION 1. The Company hereby covenants and agrees with the Trustee, for the benefit of the Trustee and all the present and future holders of the Bonds, that the Company will pay the principal of and premium, if any, of and interest on all bonds issued or to be issued as aforesaid under and secured by the Original Indenture as hereby supplemented, as well as all bonds which may be hereafter issued in exchange or substitution therefor, and will perform and fulfill all of the terms, covenants and conditions of the Original Indenture and of this Fifty-third Supplemental Indenture with respect to the additional bonds to be issued under the Original Indenture as hereby supplemented.

SECTION 2. The Company covenants and agrees that so long as any of the Bonds are outstanding (a) the Company will not make any Stock Payment if, after giving effect thereto, its retained earnings, computed in accordance with generally accepted accounting principles consistently applied, will be less than the sum of (i) Excluded Earnings, if any, since December 31, 2017, and (ii) $20,000,000; (b) Stock Payments made more than forty (40) days after the commencement, and prior to the expiration, of any Restricted Period shall not exceed 65% of the Company's Net Income during such Restricted Period; and (c) the Company will not authorize a Stock Payment if there has occurred and is continuing an event of default under subsections (a) or (b) of Section 1 of Article XI of the Original Indenture.

For the purposes of this Section 2 the following terms shall have the following meanings:

"Capitalization" shall mean the sum of (i) the aggregate principal amount of all Debt at the time outstanding, (ii) the aggregate par or stated value of all capital stock of the Company of all classes at the time outstanding, (iii) premium on capital stock, (iv) capital surplus, and (v) retained earnings.

"Debt" means (i) all indebtedness, whether or not represented by bonds, debentures, notes or other securities, for the repayment of money borrowed, (ii) all deferred indebtedness for the payment of the purchase price of property or assets purchased (but Debt shall not be deemed to include customer advances for construction or any bonds issued under the Indenture which are not Outstanding Bonds), (iii) leases which have been or, in accordance with generally accepted accounting principles, should be recorded as capital leases and (iv) guarantees of the obligations of another of the nature described in clauses (i), (ii) or (iii) which have been or, in accordance with generally accepted accounting principles, should be recorded as debt.

"Determination Date" shall mean the last day of each calendar quarter. Any calculation with respect to any Determination Date shall be based on the Company's balance sheet as of such date.

"Excluded Earnings" shall mean 35% of the Company's Net Income during any Restricted Period.

"Net Income" for any particular Restricted Period shall mean the amount of net income properly attributable to the conduct of the business of the Company for such period, as determined in accordance with generally accepted accounting principles consistently applied, after payment of or provision for taxes on income for such period.

"Outstanding Bonds" shall mean bonds which are outstanding within the meaning indicated in Section 20 of Article I of the Original Indenture except that, in addition to the bonds referred to in clauses (a), (b) and (c) of said Section 20, said term shall not include bonds for the retirement of which sufficient funds have been deposited with the Trustee with irrevocable instructions to apply such funds to the retirement of such bonds at a specified time, which may be either the maturity thereof or a specified redemption date, whether or not notice of redemption shall have been given.

"Restricted Period" shall mean a period commencing on any Determination Date on which the total Debt of the Company is, or as the result of any Stock Payment then declared or set aside and to be made thereafter will be, more than 70% of Capitalization, and continuing until the third consecutive Determination Date on which the total Debt of the Company does not exceed 70% of Capitalization.

"Stock Payment" shall mean any payment in cash or property (other than stock of the Company) to any holder of shares of any class of capital stock of the Company as such holder, whether by dividend or upon the purchase, redemption, conversion or other acquisition of such shares, or otherwise.

SECTION 3. The Company covenants and agrees that so long as any of the Bonds are outstanding neither the Company nor any subsidiary of the Company will, directly or indirectly, lend or in any manner extend its credit to, or indemnify, or make any donation or capital contribution to, or purchase any security of, any corporation which directly or indirectly controls the Company, or any subsidiary or affiliate (other than an affiliate which is a subsidiary of the Company) of any such corporation.

IV 3 (f)



pany to permit the legal and valid issue and authentication and delivery of the bonds which have been applied for has been duly had and taken;

4. An Officers' Certificate, as herein defined, stating the aggregate principal amount of all bonds at the time outstanding under this Indenture, and, unless the Opinion of Counsel provided for in paragraph 3 of this subdivision (*B*) shall state that the amount of indebtedness or bonded indebtedness which may be incurred by the Company is not then limited by law or by corporate action, also stating that the total amount of indebtedness or bonded indebtedness of the Company outstanding, including the aggregate principal amount of bonds issued and outstanding, as herein defined, under this Indenture plus the aggregate principal amount of bonds applied for in the accompanying application, does not exceed an amount which shall be specified in the Certificate; — p. 264

5. The officially authenticated certificates or other documents, if any, specified in the Opinion of Counsel provided for in paragraph 3 of this subdivision (*B*), including evidence satisfactory to the Trustee of the payment or provision for payment of any taxes therein referred to;

6. If the bonds, the authentication and delivery of which are then applied for, are not a part of any series then existing, a Resolution or Resolutions and an indenture supplemental hereto, creating the series of which such bonds are a part.

Section 3. (*A*) Subject to the provisions of Section 2 of this Article bonds in addition to those provided for in any other Section hereof may from time to time be executed by the Company and delivered to the Trustee and shall be authenticated and delivered by the Trustee upon the basis of Available Permanent Additions, subject to the conditions, provisions and limitations set forth in this Section. The aggegate principal amount of bonds that may be authenticated and delivered from time to time under the provisions of this Section is limited to seventy per cent. (70%) of the Net Amount of Available Permanent Additions, made the basis of the authentication and delivery thereof certified or provided in subdivision (*B*) of this Section.

No bonds shall be authenticated and delivered under this Section unless the Net Earnings of the Company as shown by a Net Earnings Certificate for a period of twelve (12) consecutive calendar months within the fifteen (15) calendar months next preceding the application for authentication and delivery of bonds, shall have been not less than one and three-quarters (1¾) times the interest requirements for a period of one year upon (*a*) the bonds applied for, (*b*) all bonds outstanding, as herein defined, on the date of such application, and (*c*) all indebtedness outstanding on the date of such application which is secured by any lien for the payment of money or its equivalent prior to or on a parity with the lien of this Indenture other than Permitted Liens, as herein defined.

(*B*) No application by the Company to the Trustee for the authentication and delivery of bonds under this Section shall be granted by the Trustee, until the Trustee shall have received:

1. The documents provided for in Section 2 of this Article;

2. An Engineer's Certificate, as herein defined, dated not more than thirty (30) days preceding the

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## ARTICLE III.

### Covenants of the Company.

SECTION 1. The Company hereby covenants and agrees with the Trustee, for the benefit of the Trustee and all the present and future holders of the Bonds, that the Company will pay the principal of and premium, if any, and interest on all bonds issued or to be issued as aforesaid under and secured by the Original Indenture as hereby supplemented, as well as all bonds which may be hereafter issued in exchange or substitution therefor, and will perform and fulfill all of the terms, covenants and conditions of the Original Indenture and of this Twenty-Seventh Supplemental Indenture with respect to the additional bonds to be issued under the Original Indenture as hereby supplemented.

SECTION 2. The Company covenants and agrees that so long as any of the Bonds are outstanding (a) the Company will not make any Stock Payment if, after giving effect thereto, its retained earnings, computed in accordance with generally accepted accounting principles consistently applied, will be less than the sum of (i) Excluded Earnings, if any, since December 31, 1991, and (ii) $20,000,000; (b) Stock Payments made more than 40 days after the commencement, and prior to the expiration, of any Restricted Period shall not exceed 65% of the Company's Net Income during such Restricted Period; and (c) the Company will not authorize a Stock Payment if there has occurred and is continuing an event of default under subsections (a) and (b) of Section 1 of Article XI of the Original Indenture.

For the purposes of this Section 2 the following terms shall have the following meanings:

"Stock Payment" shall mean any payment in cash or property (other than stock of the Company) to any holder of shares of any class of capital stock of the Company as such holder, whether by dividend or upon the purchase, redemption, conversion or other acquisition of such shares, or otherwise.

"Excluded Earnings" shall mean 35% of the Company's Net Income during any Restricted Period.

"Restricted Period" shall mean a period commencing on any Determination Date on which the total Debt of the Company is, or as the result of any Stock Payment then declared or set aside and to be made thereafter will be, more than 70% of Capitalization, and continuing until the third consecutive Determination Date on which the total Debt of the Company does not exceed 70% of Capitalization.

"Net Income" for any particular Restricted Period shall mean the amount of net income properly attributable to the conduct of the business of the Company for such Period, as determined in accordance with generally accepted accounting principles consistently applied, after payment of or provision for taxes on income for such Period.

"Determination Date" shall mean the last day of each calendar quarter. Any calculation with respect to any Determination Date shall be based on the Company's balance sheet as of such date.

"Debt" means (i) all indebtedness, whether or not represented by bonds, debentures, notes or other securities, for the repayment of money borrowed, (ii) all deferred indebtedness for the payment of the purchase price of property or assets purchased (but Debt shall not be deemed to include Customer Advances for Construction or any bonds issued under the Indenture which are not Outstanding Bonds), (iii) leases which have been or, in accordance with generally accepted accounting principles, should be recorded as capital leases and (iv) guarantees of the obligations of another of the nature described in clauses (i), (ii) or (iii) which have been or, in accordance with generally accepted accounting principles, should be recorded as debt.

"Outstanding Bonds" shall mean bonds which are outstanding within the meaning indicated in Section 20 of Article I of the Original Indenture except that, in addition to the bonds referred to in clauses (a), (b) and (c) of said Section 20, said term shall not include bonds for the retirement of which sufficient funds have been deposited with the Trustee with irrevocable instructions to apply such funds to the retirement of such bonds at a specified time, which may be either the maturity thereof or a specified redemption date, whether or not notice of redemption shall have been given.

"Capitalization" shall mean the sum of (i) the aggregate principal amount of all Debt at the time outstanding, (ii) the aggregate par or stated value of all capital stock of the Company of all classes at the time outstanding, (iii) premium on capital stock, (iv) capital surplus, and (v) retained earnings.

SECTION 3. The Company covenants and agrees that so long as any of the Bonds are outstanding neither the Company nor any subsidiary of the Company will, directly or indirectly, lend or in any manner extend its credit to, or indemnify, or make any donation or capital contribution to, or purchase any security of, any corporation which directly or indirectly controls the Company, or any subsidiary or affiliate (other than an affiliate which is a subsidiary of the Company) of any such corporation.

Execution Version

AQUA AMERICA, INC.

$125,000,000

$35,000,000 3.01% Senior Notes, Series A, due November 3, 2031
$30,000,000 3.19% Senior Notes, Series B, due November 3, 2034
$25,000,000 3.25% Senior Notes, Series C, due November 3, 2035
$10,000,000 3.41% Senior Notes, Series D, due November 3, 2038
$25,000,000 3.57% Senior Notes, Series E, due November 3, 2041

# NOTE PURCHASE AGREEMENT

DATED AS OF NOVEMBER 3, 2016

Default or Event of Default would exist under the terms of this Agreement, and *provided, further,* that once a Subsidiary has been designated an Unrestricted Subsidiary, it shall not thereafter be redesignated as a Restricted Subsidiary on more than one occasion. Within ten days following any designation described above, the Company will deliver to each Purchaser a notice of such designation accompanied by a certificate signed by a Senior Financial Officer of the Company certifying compliance with all requirements of this **Section 9.6** and setting forth all information required in order to establish such compliance.

*Section 9.7. Subsidiary Guaranty.* (a) If at any time any Subsidiary of the Company shall become a co-obligor under, or guarantor of Debt outstanding under, any Material Credit Facility (a *"Subsidiary Guarantor"*), then concurrently with any such event the Subsidiary Guarantor shall execute and deliver to the holders of the Notes an unconditional guarantee of the Notes which shall be in form and substance satisfactory to the Required Holders, and (b) deliver such proof of corporate or other action, incumbency of officers, opinions of counsel and other documents as is consistent with those delivered by the Company pursuant to **Section 4** on the Closing Date or as the Required Holders shall have reasonably requested.

## SECTION 10. NEGATIVE COVENANTS.

The Company covenants that so long as any of the Notes are outstanding:

*Section 10.1. Limitation on Debt.* The Company will not permit Consolidated Debt (determined as of the last day of each fiscal quarter) to exceed 65% of Consolidated Total Capitalization as of such date.

*Section 10.2. Limitation on Liens.* The Company will not, and will not permit any of its Restricted Subsidiaries to, directly or indirectly create, incur, assume or permit to exist (upon the happening of a contingency or otherwise) any Lien on or with respect to any property or asset (including, without limitation, any document or instrument in respect of goods or accounts receivable) of the Company or any such Restricted Subsidiary, whether now owned or held or hereafter acquired, or any income or profits therefrom, or assign or otherwise convey any right to receive income or profits, except:

(a) Liens for taxes, assessments or other governmental charges that are not yet due and payable or the payment of which is not at the time required by **Section 9.4**; *provided,* any such tax, assessment or other governmental charge shall be paid prior to the commencement of any proceedings to foreclose any Lien related thereto;

(b) any attachment or judgment Lien, unless the judgment it secures shall not, within 60 days after the entry thereof, have been discharged or execution thereof stayed pending appeal, or shall not have been discharged within 60 days after the expiration of any such stay;

(c) Liens incidental to the conduct of business or the ownership of properties and assets (including landlords', carriers', warehousemen's, mechanics', materialmen's and other similar Liens for sums not yet due and payable or which are being contested in

(xi) Investments in addition to the Investments permitted by the preceding clauses (i) through (x); *provided* that the aggregate principal amount of Investments outstanding pursuant to this clause (xi) shall not at any time exceed 25% of Consolidated Net Worth.

In valuing Investments for purposes of applying the limitations set forth in clause (xi) of this **Section 10.6**, such Investments shall be taken at the original cost thereof, without allowance for any subsequent write-offs or appreciation or depreciation therein, but less any amount repaid or recovered on account of capital or principal.

*Section 10.7. Nature of Business.* Neither the Company nor any Restricted Subsidiary will engage in any business, other than, when taken as a whole, the general nature of the business in which the Company and its Restricted Subsidiaries are engaged on the date of this Agreement and other energy related regulated business activities and non-regulated business activities that are complementary to the foregoing.

*Section 10.8. Transactions with Affiliates.* The Company will not and will not permit any Restricted Subsidiary to enter into directly or indirectly any Material transaction or group of related transactions (including without limitation the purchase, lease, sale or exchange of properties of any kind or the rendering of any service) with any Affiliate (other than the Company or another Restricted Subsidiary), except upon fair and reasonable terms no less favorable to the Company or such Restricted Subsidiary than would be obtainable in a comparable arm's-length transaction with a Person not an Affiliate. In addition, the Company will not, and will not permit any Restricted Subsidiary to, make any loan or advance to the Company or any Restricted Subsidiary except in the ordinary course of business and in accordance with the reasonable requirements of the business of the Company or any such Restricted Subsidiary.

*Section 10.9. Acquisitions.* The Company will not, and will not permit any Restricted Subsidiary to, make any acquisition of all or substantially all of the assets or capital stock of any business entity if at the time of such acquisition and after giving effect thereto, a Default or Event of Default shall exist.

*Section 10.10. Unrestricted Subsidiaries.* The Company will not at any time permit Unrestricted Subsidiaries to (i) own more than 40% of the Consolidated Total Assets of the Company and its Subsidiaries, or (ii) account for more than 40% of the consolidated gross revenues of the Company and its Subsidiaries, determined in each case in accordance with GAAP.

*Section 10.11. Interest Coverage Covenant.* Section 6.1(b) (the *"Interest Coverage Covenant"*) of the Bank Credit Agreement in effect on the date of this Agreement (as such covenant may be amended or modified from time to time whether pursuant to an amendment to the Bank Credit Agreement in effect on the date of this Agreement or any new, restated or replacement Bank Credit Agreement) is hereby incorporated by reference into this **Section 10.11**. The Interest Coverage Covenant shall continue in effect until such time as the Interest Coverage Covenant shall have been eliminated from the Bank Credit Agreement or all indebtedness under the Bank Credit Agreement is repaid in full and all commitments related thereto are terminated; *provided,* that if at the time of any such repayment or the termination of any such commitment a Default or Event of Default shall exist under this Agreement, then the Interest Coverage Covenant shall continue in full force and effect so long as such Default or Event of Default continues to exist. If at any time a Default or Event of Default exists under the Interest Coverage Covenant, no modification or waiver of the Interest Coverage Covenant shall be effective unless the Required Holders shall have consented thereto. Promptly, but in no event more than 5 Business Days following the execution of any Bank Credit Agreement (or any amendment thereto) which changes or eliminates the Interest Coverage Covenant, the Company shall furnish each holder of the Notes with a copy of such agreement.

*Section 10.12. Economic Sanctions, Etc.* The Company will not, and will not permit any Controlled Entity to (a) become (including by virtue of being owned or controlled by a Blocked Person), own or control a Blocked Person or (b) directly or indirectly have any investment in or engage in any dealing or transaction (including any investment, dealing or transaction involving the proceeds of the Notes) with any Person if such investment, dealing or transaction (i) would cause any holder or any affiliate of such holder to be in violation of, or subject to sanctions under, any law or regulation applicable to such holder, or (ii) is prohibited by or subject to sanctions under any U.S. Economic Sanctions Laws.

## SECTION 11. EVENTS OF DEFAULT.

An *"Event of Default"* shall exist if any of the following conditions or events shall occur and be continuing:

(a) the Company defaults in the payment of any principal or Make-Whole Amount, if any, on any Note when the same becomes due and payable, whether at maturity or at a date fixed for prepayment or by declaration or otherwise; or

(b) the Company defaults in the payment of any interest on any Note for more than five Business Days after the same becomes due and payable; or

(c) the Company defaults in the performance of or compliance with any term contained in **Section 8.5, 10.1, 10.2, 10.3, 10.4, 10.5** or **10.11**; or

(d) the Company defaults in the performance of or compliance with any Material term contained herein (other than those referred to in paragraphs (a), (b) and (c) of this **Section 11**) and such default is not remedied within 30 days after the earlier of (i) a Responsible Officer obtaining actual knowledge of such default and (ii) the Company receiving written notice of such default from any holder of a Note (any such written notice to be identified as a "notice of default" and to refer specifically to this paragraph (d) of **Section 11**); or

(e) any representation or warranty made in writing by or on behalf of the Company or by any officer of the Company in this Agreement or in any writing required thereof at the interest rate implicit in such rentals and otherwise in accordance with GAAP) under the lease relating to such Sale-and-Leaseback Transaction.

*"Bank Credit Agreement"* means the bank credit agreement dated as of March 23, 2012, between the Company and PNC Bank National Association, as agent, and the banks party thereto, as from time to time amended or restated or any replacement facility which constitutes the primary bank credit facility of the Company.

*"Blocked Person"* means (a) a Person whose name appears on the list of Specially Designated Nationals and Blocked Persons published by OFAC, (b) a Person, entity, organization, country or regime that is blocked or a target of sanctions that have been imposed under U.S. Economic Sanctions Laws or (c) a Person that is an agent, department or instrumentality of, or is otherwise beneficially owned by, controlled by or acting on behalf of, directly or indirectly, any Person, entity, organization, country or regime described in clause (a) or (b).

*"Business Day"* means (a) for the purposes of **Section 8.6** only, any day other than a Saturday, a Sunday or a day on which commercial banks in New York City are required or authorized to be closed, and (b) for the purposes of any other provision of this Agreement, any day other than a Saturday, a Sunday or a day on which commercial banks in Philadelphia, Pennsylvania or New York, New York are required or authorized to be closed.

*"Capital Lease"* means, at any time, a lease with respect to which the lessee is required concurrently to recognize the acquisition of an asset and the incurrence of a liability in accordance with GAAP.

*"Capital Lease Obligation"* means, with respect to any Person and a Capital Lease, the amount of the obligation of such Person as the lessee under such Capital Lease which would, in accordance with GAAP, appear as a liability on a balance sheet of such Person.

*"Change in Control"* is defined in **Section 8.7**.

*"Closing"* is defined in **Section 3**.

*"Code"* means the Internal Revenue Code of 1986, as amended from time to time, and the rules and regulations promulgated thereunder from time to time.

*"Company"* means Aqua America, Inc., a Pennsylvania corporation.

*"Confidential Information"* is defined in **Section 20**.

*"Consolidated Debt"* means, as of any date of determination, the total of all Debt of the Company and its Subsidiaries outstanding on such date, after eliminating all offsetting debits and credits between the Company and its Subsidiaries and all other items required to be eliminated in the course of the preparation of consolidated financial statements of the Company and its Subsidiaries in accordance with GAAP.

"*Consolidated Funded Debt*" means, as of any date of determination, the total of all Funded Debt of the Company and its Subsidiaries outstanding on such date, after eliminating all offsetting debits and credits between the Company and its Subsidiaries and all other items required to be eliminated in the course of the preparation of consolidated financial statements of the Company and its Subsidiaries in accordance with GAAP.

"*Consolidated Net Worth*" means, as of any date of determination, the sum of (i) the par value (or value stated on the books of the corporation) of the capital stock (but excluding treasury stock and capital stock subscribed and unissued) of the Company and its Subsidiaries plus (ii) the amount of the paid-in capital and retained earnings of the Company and its Subsidiaries, in each case as such amounts would be shown on a consolidated balance sheet of the Company and its Subsidiaries as of such time prepared in accordance with GAAP.

"*Consolidated Total Assets*" means, as of any date of determination, the total amount of all assets of the Company and its Subsidiaries, as such amounts would be shown on a consolidated balance sheet of the Company and its Subsidiaries as of such time prepared in accordance with GAAP.

"*Consolidated Total Capitalization*" means, as of any date of determination, the sum of (i) Consolidated Funded Debt and (ii) Consolidated Net Worth.

"*Controlled Entity*" means (i) any of the Subsidiaries of the Company and any of their or the Company's respective Controlled Affiliates and (ii) if the Company has a parent company, such parent company and its Controlled Affiliates. As used in this definition, "*Control*" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"*Debt*" means, with respect to any Person, without duplication,

(a) its liabilities for borrowed money;

(b) its liabilities for the deferred purchase price of property acquired by such Person (excluding accounts payable and other accrued liabilities arising in the ordinary course of business but including, without limitation, all liabilities created or arising under any conditional sale or other title retention agreement with respect to any such property);

(c) its Capital Lease Obligations;

(d) all liabilities for borrowed money secured by any Lien with respect to any property owned by such Person (whether or not it has assumed or otherwise become liable for such liabilities);

(e) all non-contingent liabilities in respect of reimbursement agreements or similar agreements in respect of letters of credit or instruments serving a similar function issued or accepted for its account by banks and other financial institutions;

## SECTION 10. NEGATIVE COVENANTS.

The Company covenants that so long as any of the Notes are outstanding:

*Section 10.1. Limitation on Debt.* The Company will not permit Consolidated Debt (determined as of the last day of each fiscal quarter) to exceed 62% of Consolidated Total Capitalization as of such date.

*Section 10.2. Limitation on Liens.* The Company will not, and will not permit any Subsidiary to, directly or indirectly create, incur, assume or permit to exist (upon the happening of a contingency or otherwise) any Lien on or with respect to any property or asset (including, without limitation, any document or instrument in respect of goods or accounts receivable) of the Company or any Subsidiary, whether now owned or held or hereafter acquired, or any income or profits therefrom, or assign or otherwise convey any right to receive income or profits, except:

(a) Liens for taxes, assessments or other governmental charges that are not yet due and payable or the payment of which is not at the time required by **Section 9.4**; *provided*, any such tax, assessment or other governmental charge shall be paid prior to the commencement of any proceedings to foreclose any Lien related thereto;

(b) any attachment or judgment Lien, unless the judgment it secures shall not, within 60 days after the entry thereof, have been discharged or execution thereof stayed pending appeal, or shall not have been discharged within 60 days after the expiration of any such stay;

(c) Liens incidental to the conduct of business or the ownership of properties and assets (including landlords', carriers', warehousemen's, mechanics', materialmen's and other similar Liens for sums not yet due and payable or which are being contested in good faith by appropriate proceedings diligently conducted) and Liens to secure the performance of bids, tenders, leases, or trade contracts, or to secure statutory obligations (including obligations under workers compensation, unemployment insurance and other social security legislation), surety or appeal bonds or other Liens incurred in the ordinary course of business and not in connection with the borrowing of money;

(d) leases or subleases granted to others, zoning restrictions, easements, rights-of-way, restrictions and other similar charges or encumbrances, in each case incidental to the ownership of property or assets or the ordinary conduct of the business of the Company or any of its Subsidiaries, *provided* that such Liens do not, materially impair the use of such property and which are not violated in any material respect by the existing or proposed use by the Company and its Subsidiaries of the properties subject to such Liens;

(e) Liens securing Debt of a Subsidiary to the Company or to a Subsidiary;

(f) Liens created under indentures, mortgages and deeds of trust securing Debt of the Company or a Subsidiary;

*"Capital Lease"* means, at any time, a lease with respect to which the lessee is required concurrently to recognize the acquisition of an asset and the incurrence of a liability in accordance with GAAP.

*"Capital Lease Obligation"* means, with respect to any Person and a Capital Lease, the amount of the obligation of such Person as the lessee under such Capital Lease which would, in accordance with GAAP, appear as a liability on a balance sheet of such Person.

*"Change in Control"* is defined in **Section 8.7**.

*"Closing"* is defined in **Section 3**.

*"Code"* means the Internal Revenue Code of 1986, as amended from time to time, and the rules and regulations promulgated thereunder from time to time.

*"Company"* means Aqua Pennsylvania, Inc., a Pennsylvania corporation.

*"Confidential Information"* is defined in **Section 20**.

*"Consolidated Debt"* means, as of any date of determination, the total of all Debt of the Company and its Subsidiaries outstanding on such date, after eliminating all offsetting debits and credits between the Company and its Subsidiaries and all other items required to be eliminated in the course of the preparation of consolidated financial statements of the Company and its Subsidiaries in accordance with GAAP.

*"Consolidated Funded Debt"* means, as of any date of determination, the total of all Funded Debt of the Company and its Subsidiaries outstanding on such date, after eliminating all offsetting debits and credits between the Company and its Subsidiaries and all other items required to be eliminated in the course of the preparation of consolidated financial statements of the Company and its Subsidiaries in accordance with GAAP.

*"Consolidated Net Worth"* means, as of any date of determination, the sum of (i) the par value (or value stated on the books of the corporation) of the capital stock (but excluding treasury stock and capital stock subscribed and unissued) of the Company and its Subsidiaries plus (ii) the amount of the paid-in capital and retained earnings of the Company and its Subsidiaries, in each case as such amounts would be shown on a consolidated balance sheet of the Company and its Subsidiaries as of such time prepared in accordance with GAAP.

*"Consolidated Total Assets"* means, as of any date of determination, the total amount of all assets of the Company and its Subsidiaries, as such amounts would be shown on a consolidated balance sheet of the Company and its Subsidiaries as of such time prepared in accordance with GAAP.

*"Consolidated Total Capitalization"* means, as of any date of determination, the sum of (i) Consolidated Funded Debt and (ii) Consolidated Net Worth.

*"Debt"* means, with respect to any Person, without duplication,

(a) its liabilities for borrowed money;

(b) its liabilities for the deferred purchase price of property acquired by such Person (excluding accounts payable and other accrued liabilities arising in the ordinary course of business but including, without limitation, all liabilities created or arising under any conditional sale or other title retention agreement with respect to any such property);

(c) its Capital Lease Obligations;

(d) all liabilities for borrowed money secured by any Lien with respect to any property owned by such Person (whether or not it has assumed or otherwise become liable for such liabilities);

(e) all non-contingent liabilities in respect of reimbursement agreements or similar agreements in respect of letters of credit or instruments serving a similar function issued or accepted for its account by banks and other financial institutions;

(f) Swaps of such Person; and

(g) Guaranties of such Person with respect to liabilities of a type described in any of clauses (a) through (f) hereof.

Debt of any Person shall include all obligations of such Person of the character described in clauses (a) through (g) to the extent such Person remains legally liable in respect thereof notwithstanding that any such obligation is deemed to be extinguished under GAAP.

*"Default"* means an event or condition the occurrence or existence of which would, with the lapse of time or the giving of notice or both, become an Event of Default.

*"Default Rate"* means with respect to the Notes, that rate of interest per annum that is the greater of (i) 7.66% per annum, or (ii) 2% over the rate of interest publicly announced by PNC Bank, N.A. in New York, New York as its "base" or "prime" rate.

*"Environmental Laws"* means any and all federal, state, local, and foreign statutes, laws, regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses, agreements or governmental restrictions relating to pollution and the protection of the environment or the release of any materials into the environment, including but not limited to those related to hazardous substances or wastes, air emissions and discharges to waste or public systems.

*"ERISA"* means the Employee Retirement Income Security Act of 1974, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"Debt"* means, with respect to any Person, without duplication,

(a) its liabilities for borrowed money;

(b) its liabilities for the deferred purchase price of property acquired by such Person (excluding accounts payable and other accrued liabilities arising in the ordinary course of business but including, without limitation, all liabilities created or arising under any conditional sale or other title retention agreement with respect to any such property);

(c) its Capital Lease Obligations;

(d) all liabilities for borrowed money secured by any Lien with respect to any property owned by such Person (whether or not it has assumed or otherwise become liable for such liabilities);

(e) all non-contingent liabilities in respect of reimbursement agreements or similar agreements in respect of letters of credit or instruments serving a similar function issued or accepted for its account by banks and other financial institutions;

(f) Swaps of such Person; and

(g) Guaranties of such Person with respect to liabilities of a type described in any of clauses (a) through (f) hereof.

Debt of any Person shall include all obligations of such Person of the character described in clauses (a) through (g) to the extent such Person remains legally liable in respect thereof notwithstanding that any such obligation is deemed to be extinguished under GAAP.

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*"Environmental Laws"* means any and all federal, state, local, and foreign statutes, laws, regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses, agreements or governmental restrictions relating to pollution and the protection of the environment or the release of any materials into the environment, including but not limited to those related to hazardous substances or wastes, air emissions and discharges to waste or public systems.

*"ERISA"* means the Employee Retirement Income Security Act of 1974, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

**AMENDED AND RESTATED CREDIT AGREEMENT**

**among**

**AQUA PENNSYLVANIA, INC.**

**and**

**THE BANKS PARTY HERETO**

**and**

**PNC BANK, NATIONAL ASSOCIATION**
**as Agent**

**Dated as of November 17, 2016**

5.9 Taxes. Pay when due all taxes, assessments and governmental charges imposed upon it or any of its properties or that it is required to withhold and pay over, except where contested in good faith and where adequate reserves have been set aside to the extent required under GAAP.

5.10 Covenants of the Indenture. Comply at all times with the covenants contained in the Indenture, as last supplemented by the Supplemental Indenture, without regard to any amendment of or supplement to the Indenture occurring after October 15, 2010.

5.11 Guarantees of Obligations. It is the intent of the parties hereto that all of the obligations of the Borrower hereunder shall be unconditionally guaranteed by all of its Material Subsidiaries to the maximum extent permitted under any Requirement of Law applicable to any such Material Subsidiary. Accordingly, in the event that any Material Subsidiary shall be formed, acquired or come into existence after the date hereof then the Borrower will cause such Material Subsidiary to (i) execute and deliver a Guaranty Agreement in form and substance satisfactory to the Agent pursuant to which such Material Subsidiary will become a "Guarantor" hereunder, and guarantee the obligations of the Borrower hereunder and under the Notes and other Loan Documents and (ii) deliver such proof of corporate or other action, incumbency of officers, opinions of counsel and other documents as is consistent with those delivered by the Borrower pursuant to Section 4.1 on the Closing Date or as the Agent shall have reasonably requested.

5.12 Anti-Money Laundering/International Trade Law Compliance. No Covered Entity will become a Sanctioned Person. No Covered Entity, either in its own right or through any third party, will (a) have any of its assets in a Sanctioned Country or in the possession, custody or control of a Sanctioned Person in violation of any Anti-Terrorism Law; (b) do business in or with, or derive any of its income from investments in or transactions with, any Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law; (c) engage in any dealings or transactions prohibited by any Anti-Terrorism Law or (d) use the Loans to fund any operations in, finance any investments or activities in, or make any payments to, a Sanctioned Country or Sanctioned Person in violation of any Anti-Terrorism Law. The funds used to repay the Loans will not be derived from any unlawful activity. Each Covered Entity shall comply with all Anti-Terrorism Laws. The Borrower shall promptly notify the Agent in writing upon the occurrence of a Reportable Compliance Event.

## SECTION 6. NEGATIVE COVENANTS

The Borrower hereby agrees that, so long as the Commitments remain in effect, any Note remains outstanding and unpaid or any other amount is owing to any Bank or the Agent hereunder, the Borrower shall not directly or indirectly:

6.1 Financial Covenants.

(a) Equity to Capital Ratio. Permit as of the end of any fiscal quarter the Equity to Capital Ratio to be less than thirty eight percent (38%).

(b) Interest Coverage Ratio. Permit as of the end of any fiscal quarter the Interest Coverage Ratio to be less than 1.8 to 1.

6.2 Limitation on Certain Debt. Except for the Loans and Commitments under the Loan Documents and the Term Loan Facilities, at any time enter into, assume or suffer to exist lines of credit or comparable extensions of credit from one or more commercial banks (or their Affiliates) under which the Borrower has incurred or may incur aggregate Debt in excess of $15,000,000.

6.3 Limitation on Liens. Create, incur, assume or suffer to exist any Lien upon any of its property, assets or revenues, including, without limitation, the stock of its Subsidiaries, whether now owned or hereafter acquired, except for:

(a) The following, (i) if the validity or amount thereof is being contested in good faith by appropriate and lawful proceedings diligently conducted so long as levy and execution thereon have been stayed and continue to be stayed or (ii) if a final judgment is entered and such judgment is discharged within thirty (30) days of entry, and in either case they do not materially impair the ability of the Borrower to perform its obligations hereunder or under the other Loan Documents:

(A) Claims or Liens for taxes, assessments or charges due and payable and subject to interest or penalty, provided that the Borrower maintains such reserves or other appropriate provisions as shall be required by GAAP and pays all such taxes, assessments or charges forthwith upon the commencement of proceedings to foreclose any such Lien;

(B) Claims, Liens or encumbrances upon, and defects of title to, real or personal property including any attachment of personal or real property or other legal process prior to adjudication of a dispute on the merits; and

(C) Claims or Liens of mechanics, materialmen, warehousemen, carriers, or other statutory nonconsensual Liens;

(b) pledges or deposits in connection with workers' compensation, unemployment insurance and other social security legislation;

(c) deposits to secure the performance of bids, trade contracts (other than for borrowed money), leases, statutory obligations, surety and appeal bonds, performance bonds and other obligations of a like nature incurred in the ordinary course of business of the Borrower;

(d) easements, rights-of-way, restrictions and other similar encumbrances incurred in the ordinary course of business which, in the aggregate, are not substantial in amount and which do not interfere with the ordinary conduct of the business of the Borrower;

(e) Liens which were in existence on the date hereof and shown on Schedule 6.3 and replacements, extensions or replacements thereof;

"Covered Entity": (a) the Borrower, each of the Borrower's Subsidiaries and all Guarantors and (b) each Person that, directly or indirectly, is in control of a Person described in clause (a) above. For purposes of this definition, control of a Person shall mean the direct or indirect (x) ownership of, or power to vote, 25% or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"Daily LIBOR Rate" shall mean, for any day, the rate per annum determined by the Agent by dividing (the resulting quotient rounded upwards, if necessary, to the nearest 1/100$^{th}$ of 1%) (x) the Published Rate by (y) a number equal to 1.00 minus the Eurocurrency Reserve Requirements. The Published Rate shall be adjusted as of each Business Day based on changes in the Published Rate or the Eurocurrency Reserve Requirements without notice to the Borrower, and shall be applicable from the effective date of any such change. Notwithstanding the foregoing, if the Daily LIBOR Rate as determined above would be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

"Debt": with respect to any Person, at any time, without duplication, all of (i) its liabilities for borrowed money, (ii) liabilities secured by any Lien existing on property owned by such Person (whether or not such liabilities have been assumed), (iii) its liabilities in respect to Capital Leases; (iv) its liabilities under Contingent Obligations; and (v) all other obligations which are required by GAAP to be shown as liabilities on its balance sheet but excluding (x) deferred taxes and other deferred or long-term liabilities and other amounts not in respect of borrowed money and (y) the aggregate amount of accounts receivable sold, factored or otherwise transferred for value without recourse (other than for breach of representations).

"Default": any of the events specified in Section 7, whether or not any requirement for the giving of notice, the lapse of time, or both, or any other condition precedent therein set forth, has been satisfied.

"Defaulting Bank": any Bank, as determined by the Agent, that has (a) failed to fund any portion of its Revolving Credit Loans or participations in Swing Line Loans within three Business Days of the date required to be funded by it hereunder, (b) notified the Borrower, the Agent, the Swing Line Bank or any Bank in writing that it does not intend to comply with any of its funding obligations under this Agreement or has made a public statement to the effect that it does not intend to comply with its funding obligations under this Agreement or under other agreements in which it commits to extend credit, (c) failed, within three Business Days after request by the Agent, to confirm that it will comply with the terms of this Agreement relating to its obligations to fund prospective Revolving Credit Loans or participations in Swing Line Loans, (d) otherwise failed to pay over to the Agent or any other Bank any other amount required to be paid by it hereunder within three Business Days of the date when due, unless the subject of a good faith dispute, or (e) (i) become or is insolvent or has a parent company that has become or is insolvent, (ii) become the subject of a Bail-In Action, or (iii) become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee or custodian appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment or has a parent company that has become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee or custodian appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment (it being understood that a Defaulting Bank shall cease to be a Defaulting Bank if the Borrower, the Agent and the Swing Line Bank shall each agree that such Defaulting Bank has adequately remedied all matters that caused such Bank to be a Defaulting Bank).

"Distribution": in respect of any corporation, (a) dividends, distributions or other payments on account of any capital stock of the corporation (except distributions in common stock of such corporation); (b) the redemption or acquisition of such stock or of warrants, rights or other options to purchase such stock (except when solely in exchange for common stock of such corporation); and (c) any payment on account of, or the setting apart of any assets for a sinking or other analogous fund for, the purchase, redemption, defeasance, retirement or other acquisition of any share of any class of capital stock of such corporation or any warrants or options to purchase any such stock.

"Dollars" and "$": dollars in lawful currency of the United States of America.

"EEA Financial Institution": (i) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (ii) any entity established in an EEA Member Country which is a parent of an institution described in clause (i) of this definition, or (iii) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (i) or (ii) of this definition and is subject to consolidated supervision with its parent.

"EEA Member Country": any of the member states of the European Union, Iceland, Liechtenstein and Norway.

"EEA Resolution Authority" any public administrative authority or any person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"Environmental Laws": any and all applicable foreign, Federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees or binding requirements of any Governmental Authority, or binding Requirement of Law (including common law) regulating, relating to or imposing liability or standards of conduct concerning protection of the environment or public health, remediation of environmental conditions, or damages arising from such conditions, as now or may at any time hereafter be in effect.

"Equity to Capital Ratio": at the date of determination, the ratio of Consolidated Shareholders' Equity to the sum of (i) Consolidated Funded Debt and (ii) Consolidated Shareholders' Equity.

"ERISA": the Employee Retirement Income Security Act of 1974, as amended from time to time.

"EU Bail-In Legislation Schedule": the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

"Eurocurrency Reserve Requirements": for any day as applied to a Eurodollar Loan, the aggregate (without duplication) of the rates (expressed as a decimal fraction) of reserve requirements in effect on such day (including, without limitation, basic, supplemental, marginal and emergency reserves under any regulations of the Board of Governors of the Federal Reserve System or other Governmental Authority having jurisdiction with respect thereto) dealing with reserve requirements prescribed for eurocurrency funding (currently referred to as "Eurocurrency Liabilities" in Regulation D of such Board) maintained by a member bank of such System.

"Eurodollar Rate": with respect to the Loans comprising any Eurodollar Borrowing for any Interest Period, the interest rate per annum determined by the Agent by dividing (the resulting quotient rounded upwards, if necessary, to the nearest 1/100th of 1% per annum) (a) the rate which appears on the Bloomberg Page BBAM1 (or on such other substitute Bloomberg page that displays rates at which U.S. dollar deposits are offered by leading banks in the London interbank deposit market), or the rate which is quoted by another source selected by the Agent as an authorized information vendor for the purpose of displaying rates at which U.S. dollar deposits are offered by leading banks in the London interbank deposit market (for purposes of this definition, an "Alternate Source"), at approximately 11:00 a.m., London time, two (2) Business Days prior to the commencement of such Interest Period as the London interbank offered rate for U.S. Dollars for an amount comparable to such Eurodollar Borrowing and having a borrowing date and a maturity comparable to such Interest Period (or if there shall at any time, for any reason, no longer exist a Bloomberg Page BBAM1 (or any substitute page) or any Alternate Source, a comparable replacement rate determined by the Agent at such time (which determination shall be conclusive absent manifest error)), by (b) a number equal to 1.00 minus the Eurocurrency Reserve Requirements; provided, however, that if the Eurodollar Rate determined as provided above would be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

The Eurodollar Rate shall be adjusted with respect to any Eurodollar Borrowing that is outstanding on the effective date of any change in the Eurocurrency Reserve Requirements as of such effective date. The Agent shall give prompt notice to the Borrower of the Eurodollar Rate as determined or adjusted in accordance herewith, which determination shall be conclusive absent manifest error.

"Eurodollar Borrowing": a Borrowing comprised of Eurodollar Loans.

"Eurodollar Loan": any Revolving Credit Loan bearing interest at a rate determined by reference to the Eurodollar Rate in accordance with the provisions of Section 2.

"Event of Default": any of the events specified in Section 7, provided that any requirement for the giving of notice, the lapse of time, or both, or any other condition, has been satisfied.

"Excluded Taxes": as defined in subsection 2.12(a).

"Existing Credit Agreement": as defined in the Background to this Agreement.

"Exposure": as to any Bank at any date, an amount equal to the sum of (a) the aggregate principal amount of all Loans made by such Bank then outstanding and (b) the principal amount of such Bank's pro rata share of Swing Line Loans then outstanding based on its Commitment Percentage.

"FATCA": Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantially comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreement entered into pursuant to Section 1471(b)(1) of the Code.

"Federal Funds Effective Rate": for any day, the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System arranged by Federal funds brokers, as published on the next succeeding Business Day by the Federal Reserve Bank of New York, or, if such rate is not so published for any day which is a Business Day, the average of the quotations for the day of such transactions received by the Agent from three Federal funds brokers of recognized standing selected by it.

"Federal Funds Open Rate" for any day shall mean the rate per annum which is the daily federal funds open rate as quoted by ICAP North America, Inc. (or any successor) as set forth on the Bloomberg Screen BTMM for that day opposite the caption "OPEN" (or on such other substitute Bloomberg Screen that displays such rate), or as set forth on such other recognized electronic source used for the purpose of displaying such rate as selected by the Agent (an "Alternate Federal Funds Source") (or if such rate for such day does not appear on the Bloomberg Screen BTMM (or any substitute screen) or on any Alternate Federal Funds Source, or if there shall at any time, for any reason, no longer exist a Bloomberg Screen BTMM (or any substitute screen) or any Alternate Federal Funds Source, a comparable replacement rate determined by the Agent at such time (which determination shall be conclusive absent manifest error)); provided, that if such day is not a Business Day, the Federal Funds Open Rate for such day shall be the Federal Funds Open Rate on the immediately preceding Business Day."

"Fee Letter": the letter from the Agent to the Borrower dated November 14, 2016 regarding certain fees payable by the Borrower.

"Fees": as defined in subsection 2.4(a).

"Foreign Bank": any Bank that is not created or organized under the Laws of the United States, any State thereof or the District of Columbia.

"GAAP": at any time with respect to the determination of the character or amount of any asset or liability or item of income or expense, or any consolidation or other accounting computation, generally accepted accounting principles as applied to the public utility industry, as such principles shall be in effect on the date of, or at the end of the period covered by, the financial statements from which such asset, liability, item of income, or item of expense, is derived, or, in the case of any such computation, as in effect on the date when such computation is required to be determined, subject to Section 1.3(b).

"Governmental Authority": shall mean the government of the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including, without limitation, the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

"Guarantor": any Material Subsidiary which becomes a "Guarantor" after the date hereof pursuant to Section 5.11.

"Guaranty": any Guaranty Agreement entered into by a Guarantor pursuant to Section 5.11.

"Indenture": means the Indenture of Mortgage dated as of January 1, 1941 between the Borrower and Chase Manhattan Trust Company, National Association, as successor Trustee, as amended and supplemented.

"Insolvency": with respect to any Multiemployer Plan, the condition that such Plan is insolvent within the meaning of Section 4245 of ERISA.

"Insolvent": pertaining to a condition of Insolvency.

"Interest Coverage Ratio": at the date of determination, the ratio of Consolidated EBIT to Consolidated Interest Expense, in each case for the prior four (4) consecutive fiscal quarters.

"Interest Payment Date": (a) as to any Base Rate Loan or Swing Line Loan, the last day of each month, (b) as to any Eurodollar Loan having an Interest Period of three months or less, the last day of such Interest Period, and (c) as to any Eurodollar Loan having an Interest Period longer than three months, each day which is three months, or a whole multiple thereof, after the first day of such Interest Period and the last day of such Interest Period.

"Interest Period": with respect to any Eurodollar Loan:

(i) initially the period commencing on the borrowing or conversion date, as the case may be, with respect to such Eurodollar Loan and ending one, two, three or six months thereafter, as selected by the Borrower in their notice of borrowing or notice of conversion, given with respect thereto; and

(ii) thereafter, each period commencing on the last day of the next preceding Interest Period applicable to such Eurodollar Loan and ending one, two, three or six months thereafter, as selected by the Borrower by irrevocable notice to the Agent not less than three Business Days prior to the last day of the then current Interest Period with respect thereto;

provided that, the foregoing provisions relating to Interest Periods are subject to the following:

(i) if any Interest Period would end on a day other than a Business Day, such Interest Period shall be extended to the next succeeding Business Day unless such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day;

(ii) any Interest Period that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall end on the last Business Day of a calendar month;

(iii) an Interest Period that otherwise would extend beyond the Termination Date shall end on the Termination Date; and

(iv) the Borrower shall select Interest Periods so as not to require a payment or prepayment of any Eurodollar Loan during an Interest Period for such Loan.

"Investments": investments (by loan or extension of credit, purchase, advance, guaranty, capital contribution or otherwise) made in cash or by delivery of Property, by the Borrower (i) in any Person, whether by acquisition of stock or other ownership interest, indebtedness or other obligation or Security, or by loan, advance or capital contribution, or (ii) in any Property or (iii) any agreement to do any of the foregoing.

"Law": any law(s) (including common law), constitution, statute, treaty, regulation, rule, ordinance, opinion, issued guidance, release, ruling, order, executive order, injunction, writ, decree, bond, judgment, authorization or approval, lien or award of or any settlement arrangement, by agreement, consent or otherwise, with any Governmental Body, foreign or domestic.

Execution Version

**AMENDED AND RESTATED CREDIT AGREEMENT**

**Dated as of June 7, 2018**

**among**

**AQUA AMERICA, INC.**

**and**

**THE BANKS PARTY HERETO**

**and**

**PNC BANK, NATIONAL ASSOCIATION,**
**as Agent**

**PNC CAPITAL MARKETS, LLC,**
**as Lead Arranger**

6.1 Financial Covenants.

(a) Leverage Ratio. Permit as of the end of any fiscal quarter the Leverage Ratio to be greater than sixty-five percent (65%).

(b) Interest Coverage Ratio. Permit as of the end of any fiscal quarter the Interest Coverage Ratio to be less than 1.8 to 1.

6.2 Limitation on Certain Debt. Except for the Commitments under the Loan Documents, at any time enter into, assume or suffer to exist lines of credit or comparable extensions of credit from one or more commercial banks (or their Affiliates) under which the Borrower has incurred or may incur aggregate Debt in excess of $25,000,000.

6.3 Limitation on Liens. Create, incur, assume or suffer to exist any Lien upon any of its property, assets or revenues, including, without limitation, the Capital Stock of its Subsidiaries, whether now owned or hereafter acquired, except for:

(a) Liens for taxes, assessments or other governmental charges that are not yet due and payable or the payment of which is not at the time required by Section 5.9; provided, any such tax, assessment or other governmental charge shall be paid prior to the commencement of any proceedings to foreclose any Lien related thereto;

(b) any attachment or judgment Lien, unless the judgment it secures shall not, within 60 days after the entry thereof, have been discharged or execution thereof stayed pending appeal, or shall not have been discharged within 60 days after the expiration of any such stay;

(c) Liens incidental to the conduct of business or the ownership of properties and assets (including landlords', carriers', warehousemen's, mechanics', materialmen's and other similar Liens for sums not yet due and payable or which are being contested in good faith by appropriate proceedings diligently conducted) and Liens to secure the performance of bids, tenders, leases, or trade contracts, or to secure statutory obligations (including obligations under workers compensation, unemployment insurance and other social security legislation), surety or appeal bonds or other Liens incurred in the ordinary course of business and not in connection with the borrowing of money;

(d) leases or subleases granted to others, zoning restrictions, easements, rights-of-way, restrictions and other similar charges or encumbrances, in each case incidental to the ownership of property or assets or the ordinary conduct of the business of the Borrower or any of its Restricted Subsidiaries; provided, however, that such Liens do not, materially impair the use of such property or materially detract from the value of such property and which are not violated in any material respect by the existing or proposed use by the Borrower and its Restricted Subsidiaries of the properties subject to such Liens;

(e) Liens securing Debt of a Restricted Subsidiary to the Borrower or a Wholly-Owned Restricted Subsidiary;

"Code": the Internal Revenue Code of 1986, as amended from time to time.

"Commitment": as to any Bank, the obligation of such Bank to make Revolving Credit Loans, issue and/or acquire participating interests in Letters of Credit and make or participate in Swing Line Loans hereunder, in an aggregate amount at any one time outstanding not to exceed (a) as to any Bank which is an original signatory to this Agreement, the amount set forth opposite such Bank's name on Schedule I hereto under the caption "Commitment", as the same may be changed from time to time in accordance with the provisions of this Agreement or (b) as to any Bank which is not an original signatory to this Agreement but which becomes a Bank by executing an Assignment and Assumption, Increased Commitment and Acceptance or a New Bank Joinder, the Commitment for such Bank set forth on Schedule I to such Assignment and Assumption, Increased Commitment and Acceptance or New Bank Joinder, as such amount may be changed from time to time in accordance with the provisions of this Agreement.

"Commitment Percentage": as to any Bank at any time, the proportion (expressed as a percentage) that such Bank's Commitment bears to the Total Commitment at such time (or, at any time after the Commitments shall have expired or been terminated, the percentage which the amount of such Bank's Exposure constitutes of the aggregate amount of the Total Exposure at such time).

"Commitment Period": the period from, and including, the Closing Date to, but not including, the Termination Date.

"Commonly Controlled Entity": an entity, whether or not incorporated, which is under common control with the Borrower within the meaning of Section 4001 of ERISA or is part of a group which includes the Borrower and which is treated as a single employer under Section 414 of the Code.

"Compliance Certificate": as defined in subsection 5.2(a).

"Consolidated Assets": at any time, the amount at which all assets (including, without duplication, the capitalized value of any leasehold interest under any Capital Lease) of the Borrower and its Subsidiaries would be reflected on a consolidated balance sheet of the Borrower at such time.

"Consolidated EBIT": for any period, Consolidated Net Income for such period, plus the amount of income taxes and interest expense deducted from earnings in determining such Consolidated Net Income.

"Consolidated Funded Debt": at any time, all Debt of the Borrower and its Subsidiaries determined on a consolidated basis consisting of, without duplication (a) borrowed money Debt, including without limitation capitalized lease obligations, (b) reimbursement obligations in respect of letters of credit and the like, and (c) Debt in the nature of a Contingent Obligation, whether or not required to be reflected on a consolidated balance sheet of the Borrower in accordance with GAAP.

"Consolidated Interest Expense": for any period, the amount of cash interest expense deducted from the consolidated earnings of the Borrower and its Subsidiaries in determining Consolidated Net Income for such period in accordance with GAAP.

"Consolidated Net Income": for any fiscal period, net earnings (or loss) after income and other taxes computed on the basis of income of the Borrower and its Subsidiaries for such period determined on a consolidated basis in accordance with GAAP.

"Consolidated Shareholders' Equity": at a particular date, the net book value of the shareholders' equity of the Borrower and its Subsidiaries as would be shown on a consolidated balance sheet of the Borrower at such time determined in accordance with GAAP.

"Contingent Obligation": with respect to any Person (for the purpose of this definition, the "Obligor") any obligation (except the endorsement in the ordinary course of business of instruments for deposit or collection) of the Obligor guaranteeing or in effect guaranteeing any indebtedness of any other Person (for the purpose of this definition, the "Primary Obligor") in any manner, whether directly or indirectly, including (without limitation) indebtedness incurred through an agreement, contingent or otherwise, by the Obligor:

(a) to purchase such indebtedness of the Primary Obligor or any Property or assets constituting security therefor;

(b) to advance or supply funds

(i) for the purpose of payment of such indebtedness (except to the extent such indebtedness otherwise appears on Borrower's consolidated balance sheet as indebtedness), or

(ii) to maintain working capital or other balance sheet condition or any income statement condition of the Primary Obligor or otherwise to advance or make available funds for the purchase or payment of such indebtedness or obligation; or

(c) to lease Property or to purchase Securities or other Property or services primarily for the purpose of assuring the owner of such indebtedness or obligation of the ability of the Primary Obligor to make payment of the indebtedness or obligation; or

(d) to make any future "earnout" payment or similar payments in connection with a Permitted Acquisition.

For purposes of computing the amount of any Contingent Obligation, in connection with any computation of indebtedness or other liability, it shall be assumed that, without duplication, the indebtedness or other liabilities of the Primary Obligor that are the subject of such Contingent Obligation are direct obligations of the issuer of such Obligation.

"Contractual Obligation": as to any Person, any provision of any Security issued by such Person or of any agreement, instrument or other undertaking to which such Person is a party or by which it or any of its property is bound.

"Covered Entity" means (a) the Borrower and each of the Borrower's Subsidiaries, (including, in any event, all guarantors of the Obligations) and (b) each Person that, directly or indirectly, is in control of a Person described in clause (a) above. For purposes of this definition, control of a Person shall mean the direct or indirect (x) ownership of, or power to vote, 25% or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"Daily LIBOR Rate": shall mean, for any day, the rate per annum determined by the Agent by dividing (the resulting quotient rounded upwards, if necessary, to the nearest 1/100$^{th}$ of 1%) (x) the Published Rate by (y) a number equal to 1.00 minus the Eurocurrency Reserve Requirements. The Published Rate shall be adjusted as of each Business Day based on changes in the Published Rate or the Eurocurrency Reserve Requirements without notice to the Borrower, and shall be applicable from the effective date of any such change. Notwithstanding the foregoing, if the Daily LIBOR Rate as determined above would be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

"Debt": with respect to any Person, at any time, without duplication, all of (i) its liabilities for borrowed money, (ii) liabilities secured by any Lien existing on property owned by such Person (whether or not such liabilities have been assumed), (iii) Capitalized Lease Obligations; (iv) its liabilities under Contingent Obligations,(v) all reimbursement and other obligations of such Person in respect of letters of credit, bankers' acceptances and similar obligations created for the account of such Person, in each case whether or not matured, (vi) its liabilities for the deferred purchase price of property acquired by such Person (excluding accounts payable and other accrued liabilities arising in the ordinary course of business, but including, without limitation, seller's notes and all liabilities created or arising under any conditional sale or title retention agreement with respect to any such property), (vii) Swaps of such Person and (viii) all other obligations which are required by GAAP to be shown as liabilities on its balance sheet, but excluding (x) deferred taxes and other deferred or long-term liabilities and other amounts not in respect of borrowed money and (y) the aggregate amount of accounts receivable sold, factored or otherwise transferred for value without recourse (other than for breach of representations).

"Debt Rating": to the extent rated, the rating of the senior long-term Debt of the Borrower or any Significant Subsidiary by each of Moody's and S&P.

"Default": any of the events specified in Section 7, whether or not any requirement for the giving of notice, the lapse of time, or both, or any other condition precedent therein set forth, has been satisfied.

"Default Rate": as defined in Section 2.7.

"Defaulting Bank": any Bank, as determined by the Agent, that has (a) failed to fund any portion of its Revolving Credit Loans or participations in Letters of Credit or Swing Line Loans within three Business Days of the date required to be funded by it hereunder, unless such Bank notifies the Agent and the Borrower in writing that such failure is the result of such

Bank's good faith determination that one or more conditions precedent to funding (which conditions precedent, together with the applicable Event of Default, if any, shall be specifically identified in such writing) have not been satisfied, (b) notified the Borrower, the Agent, the Swing Line Bank or any Bank in writing that it does not intend to comply with any of its funding obligations under this Agreement or has made a public statement to the effect that it does not intend to comply with its funding obligations under this Agreement or under other agreements in which it commits to extend credit, (unless such writing or public statement relates to such Bank's obligation to fund a Loan hereunder and states that such position is based on such Bank's determination that a condition precedent to funding (which condition precedent, together with the applicable Event of Default, if any, shall be specifically identified in such writing or public statement) cannot be satisfied), (c) failed, within three Business Days after request by the Agent, to confirm that it will comply with the terms of this Agreement relating to its obligations to fund prospective Revolving Credit Loans or participations in Letters of Credit or Swing Line Loans (provided that such Bank shall cease to be a Defaulting Bank pursuant to this clause (c) upon receipt of such confirmation by the Agent), (d) otherwise failed to pay over to the Agent or any other Bank any other amount required to be paid by it hereunder within three Business Days of the date when due, unless the subject of a good faith dispute, or (e) (i) become or is insolvent or has a parent company that has become or is insolvent, (ii) become the subject of a Bail-In Action, or (iii) become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee or custodian appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment or has a parent company that has become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee or custodian appointed for it, or has taken any action in furtherance of, or indicating its consent to, approval of or acquiescence in any such proceeding or appointment (it being understood that a Defaulting Bank shall cease to be a Defaulting Bank if the Borrower, the Agent, the Issuing Bank and the Swing Line Bank shall each agree that such Defaulting Bank has adequately remedied all matters that caused such Bank to be a Defaulting Bank).

"Distribution": in respect of any Person, (a) dividends, distributions or other payments on account of any Capital Stock of such Person (except distributions in Capital Stock of such Person); (b) the redemption or acquisition of such Capital Stock or of warrants, rights or other options to purchase such Capital Stock (except when solely in exchange for Capital Stock of such Person); and (c) any payment on account of, or the setting apart of any assets for a sinking or other analogous fund for, the purchase, redemption, defeasance, retirement or other acquisition of any share of any class of Capital Stock of such Person or any warrants or options to purchase any such Capital Stock.

"Dollars" and "$": dollars in lawful currency of the United States of America.

"EEA Financial Institution": (i) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (ii) any entity established in an EEA Member Country which is a parent of an institution described in clause (i) of this definition, or (iii) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (i) or (ii) of this definition and is subject to consolidated supervision with its parent.

"EEA Member Country": any of the member states of the European Union, Iceland, Liechtenstein and Norway.

"EEA Resolution Authority": any public administrative authority or any person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"Environmental Laws": any and all applicable foreign, Federal, state, local or municipal laws, rules, orders, regulations, statutes, ordinances, codes, decrees or binding requirements of any Governmental Authority, or binding Requirement of Law (including common law) regulating, relating to or imposing liability or standards of conduct concerning protection of the environment, as now or may at any time hereafter be in effect.

"ERISA": the Employee Retirement Income Security Act of 1974, as amended from time to time.

"EU Bail-In Legislation Schedule": the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

"Eurocurrency Reserve Requirements": for any day as applied to a Eurodollar Loan, the aggregate (without duplication) of the rates (expressed as a decimal fraction) of reserve requirements in effect on such day (including, without limitation, basic, supplemental, marginal and emergency reserves under any regulations of the Board of Governors of the Federal Reserve System or other Governmental Authority having jurisdiction with respect thereto) dealing with reserve requirements prescribed for eurocurrency funding (currently referred to as "Eurocurrency Liabilities" in Regulation D of such Board) maintained by a member bank of such System.

"Eurodollar Borrowing": a Borrowing comprised of Eurodollar Loans.

"Eurodollar Loan": any Revolving Credit Loan bearing interest at a rate determined by reference to the Eurodollar Rate in accordance with the provisions of Section 2.

"Eurodollar Rate": with respect to the Loans comprising any Eurodollar Borrowing for any Interest Period, the interest rate per annum determined by the Agent by dividing (the resulting quotient rounded upwards, if necessary, to the nearest 1/100th of 1% per annum) (a) the rate which appears on the Bloomberg Page BBAM1 (or on such other substitute Bloomberg page that displays rates at which U.S. dollar deposits are offered by leading banks in the London interbank deposit market), or the rate which is quoted by another source selected by the Agent as an authorized information vendor for the purpose of displaying rates at which U.S. dollar deposits are offered by leading banks in the London interbank deposit market (for purposes of this definition, an "Alternate Source"), at approximately 11:00 a.m., London time, two (2) Business Days prior to the commencement of such Interest Period as the London interbank offered rate for U.S. Dollars for an amount comparable to such Eurodollar Borrowing and having a borrowing date and a maturity comparable to such Interest Period (or if there shall at any time, for any reason, no longer exist a Bloomberg Page BBAM1 (or any substitute page) or any Alternate Source, a comparable replacement rate determined by the Agent at such time (which determination shall be conclusive absent manifest error)), by (b) a number equal to 1.00

minus the Eurocurrency Reserve Requirements; provided, however, that if the Eurodollar Rate determined as provided above would be less than zero, such rate shall be deemed to be zero for purposes of this Agreement.

The Eurodollar Rate shall be adjusted with respect to any Eurodollar Borrowing that is outstanding on the effective date of any change in the Eurocurrency Reserve Requirements as of such effective date. The Agent shall give prompt notice to the Borrower of the Eurodollar Rate as determined or adjusted in accordance herewith, which determination shall be conclusive absent manifest error.

"Euro-Rate Termination Date": has the meaning assigned to such term in subsection 2.10(d).

"Event of Default": any of the events specified in Section 7, provided that any requirement for the giving of notice, the lapse of time, or both, or any other condition, has been satisfied.

"Exchange Act": means the Securities and Exchange Act of 1934, as amended.

"Excluded Taxes": has the meaning assigned to such term in subsection 2.12(a).

"Existing Credit Agreement": as defined in the Background to this Agreement.

"Existing Letters of Credit": shall mean those certain Letters of Credit issued by the Issuing Bank prior to the Closing Date and which remain outstanding as of the date hereof, a list of which is set forth on Schedule II hereto.

"Exposure": as to any Bank at any date, an amount equal to the sum of (a) the aggregate principal amount of all Loans made by such Bank then outstanding, (b) such Bank's Commitment Percentage multiplied by the aggregate Letter of Credit Obligations at such time and (c) such Bank's Commitment Percentage multiplied by the aggregate principal amount of Swing Line Loans then outstanding.

"Facility Fee": as defined in subsection 2.4(b).

"FATCA": Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantially comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreement entered into pursuant to Section 1471(b)(1) of the Code.

"FCPA": shall mean the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder.

"Federal Funds Effective Rate": for any day shall mean the rate per annum (based on a year of 360 days and actual days elapsed and rounded upward to the nearest 1/100 of 1%) announced by the Federal Reserve Bank of New York (or any successor) on such day as being the weighted average of the rates on overnight federal funds transactions on the previous trading day, as computed and announced by such Federal Reserve Bank (or any successor) in substantially the same manner as such Federal Reserve Bank computes and announces the weighted average it refers to as the "Federal Funds Effective Rate" as of the date of this Agreement; provided, if such Federal Reserve Bank (or its successor) does not announce such rate on any day, the "Federal Funds Effective Rate" for such day shall be the Federal Funds Effective Rate for the last day on which such rate was announced.

"Fee Letter": that certain letter from the Agent to the Borrower dated April 23, 2018 regarding certain administrative fees.

"Fees": the Closing Fees, the Facility Fees, the Letter of Credit Fees and the Administrative Fees.

"Foreign Bank": any Bank that is not created or organized under the Laws of the United States, any State thereof or the District of Columbia.

"GAAP": at any time with respect to the determination of the character or amount of any asset or liability or item of income or expense, or any consolidation or other accounting computation, generally accepted accounting principles as applied to the public utility industry, as such principles shall be in effect on the date of, or at the end of the period covered by, the financial statements from which such asset, liability, item of income, or item of expense, is derived, or, in the case of any such computation, as in effect on the date when such computation is required to be determined, subject to subsection 1.3(b).

"Governmental Acts": as defined in subsection 2.5(j).

"Governmental Authority": shall mean the government of the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including, without limitation, the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

"Guarantor": as of the Closing Date, each Significant Unregulated Subsidiary and each Subsidiary now or hereafter, pursuant to Section 5.10, executing and delivering a Guaranty.

"Guaranty": any Guaranty Agreement executed and delivered to the Agent by a Guarantor substantially in the form of Exhibit E hereto.

"Increased Commitment and Acceptance": any Increased Commitment and Acceptance executed and delivered by a Bank, the Borrower and the Agent, substantially in the form of Exhibit F hereto, as amended, supplemented or otherwise modified from time to time.

"Insolvency": with respect to any Multiemployer Plan, the condition that such Plan is insolvent within the meaning of Section 4245 of ERISA.

"Insolvent": pertaining to a condition of Insolvency.

"Interest Coverage Ratio": at the date of determination, the ratio of (a) Consolidated EBIT to (b) Consolidated Interest Expense, in each case for the prior four (4) consecutive fiscal quarters then ending.

"Interest Payment Date": (a) as to any Base Rate Loan or Swing Line Loan, each March 31, June 30, September 30 and December 31, (b) as to any Eurodollar Loan having an Interest Period of three months or less, the last day of such Interest Period, and (c) as to any Eurodollar Loan having an Interest Period longer than three months; each day which is three months, or a whole multiple thereof, after the first day of such Interest Period and the last day of such Interest Period.

"Interest Period": with respect to any Eurodollar Loan:

(i) initially the period commencing on the borrowing or conversion date, as the case may be, with respect to such Eurodollar Loan and ending one, two, three or six months thereafter, as selected by the Borrower in their notice of borrowing or notice of conversion, given with respect thereto; and

(ii) thereafter, each period commencing on the last day of the next preceding Interest Period applicable to such Eurodollar Loan and ending one, two, three or six months thereafter, as selected by the Borrower by irrevocable notice to the Agent not less than three Business Days prior to the last day of the then current Interest Period with respect thereto;

provided that, the foregoing provisions relating to Interest Periods are subject to the following:

(i) if any Interest Period would end on a day other than a Business Day, such Interest Period shall be extended to the next succeeding Business Day unless such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day;

(ii) any Interest Period that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall end on the last Business Day of a calendar month;

(iii) an Interest Period that otherwise would extend beyond the Termination Date shall end on the Termination Date; and

(iv) the Borrower shall select Interest Periods so as not to require a payment or prepayment of any Eurodollar Loan during an Interest Period for such Loan.

"Investments": investments (by loan or extension of credit, purchase, advance, guaranty, capital contribution or otherwise) made in cash or by delivery of Property, by the Borrower or any of its Subsidiaries (i) in any Person, whether by acquisition of stock or other ownership interest, indebtedness or other obligation or Security, or by loan, advance or capital contribution, or (ii) in any Property or (iii) any agreement to do any of the foregoing.

"Issuing Bank": PNC, in its capacity as issuer of Letters of Credit, and any successor thereto.

"Joinder": a Joinder Agreement in form and substance acceptable to the Agent pursuant to which a Subsidiary of the Borrower should join the applicable Loan Documents in accordance with Section 5.10 hereto.

"Law": any law (including common law), constitution, statute, treaty, regulation, rule, ordinance, opinion, release, ruling, order, injunction, writ, decree, bond, judgment, authorization or approval, lien or award by or settlement agreement with any Governmental Authority.

"L/C Disbursement": shall mean a payment or disbursement made by the Issuing Bank pursuant to a Letter of Credit issued by the Issuing Bank.

"L/C Sublimit": $50,000,000.

"Letter of Credit Collateral Account": has the meaning assigned to such term in subsection 2.19(c)(iv).

"Letter of Credit Coverage Requirement": with respect to each Letter of Credit at any time, 105% of the maximum amount available to be drawn thereunder at such time (determined without regard to whether any conditions to drawing could be met at such time).

"Letter of Credit Fee": has the meaning assigned to that term in subsection 2.5(b).

"Letter of Credit Obligations": at any time, an amount equal to the sum of (a) 100% of the maximum amount available to be drawn under all Letters of Credit outstanding at such time (determined without regard to whether any conditions to drawing could be met at such time) and (b) the aggregate amount of drawings under Letters of Credit which have not then been reimbursed pursuant to subsection 2.5(d)(i).

"Letter of Credit Participant": in respect of each Letter of Credit, each Bank (other than the Issuing Bank) in its capacity as the holder of a participating interest in such Letter of Credit.

"Letters of Credit": collectively, the Existing Letters of Credit and any letters of credit issued by the Issuing Bank under Section 2.5, as amended, supplemented, extended or otherwise modified from time to time.

"Leverage Ratio": at the date of determination, the ratio of (a) Consolidated Funded Debt to (b) the sum of (i) Consolidated Funded Debt and (ii) Consolidated Shareholders' Equity.

"Lien": any mortgage, pledge, hypothecation, assignment, deposit arrangement, encumbrance, lien (statutory or other), charge, or other security interest or any preference, priority or other security agreement or preferential arrangement of any kind or nature whatsoever (including, without limitation, any conditional sale or other title retention agreement and any Capital Lease having substantially the same economic effect as any of the foregoing).

"Loan Documents": the collective reference to this Agreement, the Notes, the Guaranty, the Applications, the Letters of Credit, any New Bank Joinders, any Increased Commitment and Acceptances, any Joinder entered into with any Bank or any Affiliate thereof, and all other documents, instruments, agreements or certificates delivered in connection herewith, in each case as amended, supplemented or otherwise modified from time to time.

"Loan Parties": the Borrower and each of its Subsidiaries that is party to a Loan Document.

"Loans": the collective reference to the Revolving Credit Loans and the Swing Line Loans.

"Material": material in relation to the business, operations, affairs, financial condition, assets or properties of the Borrower and its Subsidiaries taken as a whole.

"Material Adverse Effect": a material adverse effect on (a) the validity or enforceability of this Agreement or any other Loan Document, (b) the business, Property, assets, financial condition or results of operations of the Borrower and its Subsidiaries taken as a whole, (c) the ability of the Borrower and the other Loan Parties to duly and punctually to pay their Debts and perform their obligations under the Loan Documents, or (d) the ability of the Agent or any of the Banks, to the extent permitted, to enforce their legal remedies pursuant to this Agreement or any other Loan Document.

"Materials of Environmental Concern": any gasoline or petroleum (including crude oil or any fraction thereof) or petroleum products or any hazardous or toxic substances, materials or wastes, defined or regulated as such in or under any Environmental Law, including, without limitation, asbestos, polychlorinated biphenyls, and ureaformaldehyde insulation.

"Moody's": Moody's Investors Service, Inc.

"Multiemployer Plan": a Plan which is a multiemployer plan as defined in Section 4001(a)(3) of ERISA.

"New Bank": as defined in subsection 9.6(f).

"New Bank Joinder": any New Bank Joinder executed and delivered by a financial institution desiring to become a Bank hereunder, the Borrower and the Agent,

## G. Rate of Return

RR8. Attach copies of the summaries of the company's projected revenues, expenses and capital budgets for the next 2 years.

A. Please refer to Schedules B-1 and C-1 of Exhibit 1-A for water and Schedules B-1 and C-1 of Exhibit 1-B for wastewater for the Company's projected revenues and expenses for the next 2 years. Please refer to RR26 for a listing of the future test year and fully projected future test year capital budget.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR9. Describe long-term debt reacquisitions by company and parent as follows:

a. Reacquisitions by issue by year.

b. Total gain on reacquisitions by issue by year.

c. Accounting of gain for income tax and book purposes.

A. The Company has called certain debt issuances in the past when the decision was to the benefit of the customer to do so.

a. Please see the attached.

b. None.

c. None.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
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## Long Term Debt Refunding

| Amount | Interest Rate | Maturity Date | Year of Refunding |
|---|---|---|---|
| $ 7,200,000 | 8.875% | 6/1/2010 | 1992 |
| $ 3,150,000 | 9.200% | 12/15/2001 | 1993 |
| $ 4,400,000 | 10.125% | 5/15/1995 | 1993 |
| $ 10,000,000 | 12.450% | 8/1/2003 | 1993 |
| $ 8,000,000 | 13.000% | 7/1/2005 | 1995 |
| $ 5,000,000 | 7.875% | 12/1/1997 | 1996 |
| $ 4,150,000 | 8.400% | 5/1/2002 | 1996 |
| $ 10,000,000 | 10.650% | 4/1/2006 | 1996 |
| $ 3,200,000 | 6.500% | 6/1/2010 | 2002 |
| $ 14,000,000 | 6.375% | 10/15/2023 | 2004 |
| $ 21,770,000 | 6.350% | 8/15/2025 | 2005 |
| $ 2,132,180 | 9.220% | 11/15/2019 | 2007 |
| $ 18,360,000 | 6.000% | 7/1/2030 | 2010 |
| $ 25,000,000 | 6.000% | 6/1/2029 | 2010 |
| $ 3,200,000 | 9.530% | 12/15/2019 | 2012 |
| $ 1,500,000 | 8.260% | 11/1/2022 | 2012 |
| $ 3,500,000 | 8.320% | 11/1/2022 | 2012 |
| $ 30,000,000 | 5.350% | 10/1/2031 | 2012 |
| $ 25,000,000 | 5.550% | 9/1/2032 | 2012 |
| $ 25,000,000 | 5.150% | 9/1/2032 | 2013 |
| $ 14,000,000 | 5.050% | 10/1/2039 | 2014 |
| $ 4,000,000 | 8.140% | 11/1/2025 | 2015 |
| $ 24,675,000 | 5.000% | 2/1/2035 | 2015 |
| $ 25,375,000 | 5.000% | 11/1/2038 | 2015 |
| $ 24,165,000 | 5.000% | 11/1/2037 | 2015 |
| $ 21,770,000 | 5.000% | 11/1/2036 | 2015 |
| $ 23,915,000 | 5.000% | 2/1/2040 | 2017 |
| $ 23,915,000 | 5.000% | 2/1/2041 | 2017 |
| $ 24,830,000 | 5.250% | 7/1/1942 | 2018 |
| $ 24,830,000 | 5.250% | 7/1/1943 | 2018 |

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**2018 RATE CASE**
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**G. Rate of Return**

RR10. Provide the following information concerning compensating bank balance requirements for actual per book test year:

a. Name of each bank.

b. Address of each bank.

c. Type of accounts with each bank (checking, savings, escrow, other services, etc.).

d. Average daily balance in each account.

e. Amount and percentage requirements for compensating bank balances at each bank.

f. Average daily compensating bank balance at each bank.

g. Documents from each bank explaining compensating bank balance requirements.

h. Interest earned on each type of account.

A. None. Compensating bank balances are not required.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
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**G. Rate of Return**

RR11. Provide the following information concerning bank notes payable for actual per book test year:

a. Line of credit at each bank.

b. Average daily balances of notes payable to each bank, by name of bank.

c. Interest rate charged on each bank note (prime rate, formula).

d. Purpose of each bank note, (for example, construction, fuel storage, working capital, debt retirement).

e. Prospective future need for this type of financing.

A. Please see the attached.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**Lines of Credit**

| | | | |
|---|---|---|---|
| a. | **Bank Name** | **Amount** | |
| | PNC Bank Revolver | $ 100,000,000 | (includes $10,000,000 Swing Line Loan) |
| b. | **Average Daily Balance for Historical Test Year** | | |
| | PNC Bank Revolver | $ 21,820,450 | |
| c. | **Formula Rate as Follows:** | | |
| | PNC Bank Revolver | LIBOR rate + 65 basis points for 30, 60, 90 or 180 days, or<br>PNC Bank prime rate, or<br>Federal Funds rate + 50 basis points<br>Swing Line Loan: Federal Funds rate + 75 basis points | |

d. The proceeds of the lines of credit are used for working capital.

e. The Company anticipates that it will utilize bank loans in the future to provide interim funding for capital expenditures and acquisitions.

<u>**AQUA PENNSYLVANIA, INC.**</u>
<u>**2018 RATE CASE**</u>
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**G. Rate of Return**

RR12. Submit details on company or parent common stock offerings for the past 5 years to present, as follows:

a. Date of prospectus.

b. Date of offering.

c. Record date.

d. Offering period including dates and number of days.

e. Amount and number of shares of offering.

f. Offering ratio, if rights offering.

g. Percent subscribed.

h. Offering price.

i. Gross proceeds per share.

j. Expenses per share.

k. Net proceeds per share in (12.) i and j.

l. Market price per share.

(1) At record date.

(2) At offering date.

(3) One month after close of offering.

m. Average market price during offering.

(1) Price per share.

(2) Rights per share-average value of rights.

n. Latest reported earnings per share at time of offering.

o. Latest reported dividends at time of offering.

A. There have been no stock offerings over the five years previous to the rate case filing.

**<u>AQUA PENNSYLVANIA, INC.</u>**
**<u>2018 RATE CASE</u>**
**<u>FILING REQUIREMENTS</u>**

**G. Rate of Return**

RR13. Attach a chart explaining company's corporate relationship to its affiliates showing system structure.

A. Please see the attached.

Aqua America, Inc.
Company and Subsidiary List - July 2018

| Company Name | | | | State of Inc. | Business Registration | Regulated or Non-Regulated | Type of Business | % Owned by Parent | Date Acquired or Created |
|---|---|---|---|---|---|---|---|---|---|
| A. | | | **AQUA AMERICA, INC.** | PA | | Non-regulated | Parent Company | | 11/11/1968 |
| | 1 | | **Aqua Acquisition Corporation** | PA | | Non-regulated | Holding Company | 100% | |
| | 2 | | **Aqua Assistance Initiative, Inc.** | PA | | Non-regulated | Non profit, non stock | 100% | 4/3/2018 |
| | 3 | | **Aqua Charitable Trust** | PA | | Non-regulated | Non profit, non stock | 100% | 12/21/1998 |
| | 4 | | **Aqua Development, Inc.** | TX | | Non-regulated | Non-regulated services | 100% | 7/29/2003 |
| | 5 | | **Aqua Georgia, Inc.** | GA | | Non-regulated | Wastewater services | 100% | 12/7/2009 |
| | 6 | | **Aqua Holdings, Inc.** | PA | | Non-regulated | Infrastructure Co. | 100% | 2/15/2011 |
| | | a. | Aqua Tanks, LLC | PA | | Non-regulated | Infrastructure Investment | 100% | 6/4/2013 |
| | | b. | Old Dominion Pipeline Company, LLC | PA | | | Infrastructure Investment | 100% | 7/16/2013 |
| | 7 | | **Aqua Illinois, Inc.** | IL | | Regulated | Regulated utility | 100% | 3/10/1999 |
| | 8 | | **Aqua Indiana, Inc.** | IN | | Regulated | Regulated utility | 100% | 7/31/2003 |
| | | a. | Hendricks County Wastewater, LLC | IN | | Non-Regulated | Wastewater services | 100% | 7/31/2003 |
| | 9 | | **Aqua Indiana - South Haven, Inc.** | IN | | Regulated | Holding Company | 100% | 12/27/2007 |
| | | a. | South Haven Sewer Works, Inc. | IN | | Regulated | Wastewater services | 100% | 5/16/1994 |
| | 10 | | **Aqua Indiana - Western Hancock,** | IN | | Non-regulated | Holding Company | 100% | 12/4/2007 |
| | | a. | Western Hancock Utilities, LLC | IN | | Regulated | Wastewater services | 100% | 12/4/2007 |
| | | b. | SaniTech, Inc. | IN | | | | | 11/17/2016 |
| | | c. | Southeastern Utilities, Inc. | IN | | | | | 9/30/2016 |
| | 11 | | **Aqua Infrastructure, LLC** | PA | FLA, OH, TX | Non-regulated | Infrastructure Investment | 100% | 7/22/2011 |
| | | a. | Charlevoix Capital Ventures, LLC | PA | IL | Non-regulated | Infrastructure Investment | 100% | 2/14/2012 |
| | 12 | | **Aqua New Jersey, Inc.** | NJ | | Regulated | Regulated utility | 100% | 7/31/2003 |
| | 13 | | **Aqua North Carolina, Inc.** | NC | | Regulated | Regulated utility | 100% | 3/10/1999 |
| | 14 | | **Aqua Ohio, Inc.** | OH | | Regulated | Regulated utility | 100% | 3/10/1999 |
| | | a. | Aqua Ohio Wastewater, Inc | OH | | Regulated | Regulated utility | 100% | 4/22/2016 |
| | 15 | | **Aqua Operations, Inc.** | DE | IN, NC, FL, TX | Non-regulated | Non-regulated services | 100% | 7/31/2003 |
| | 16 | | **Aqua Pennsylvania, Inc.** | PA | | Regulated | Regulated utility | 100% | 5/7/1984 |
| | | a. | Aqua Pennsylvania Wastewater, Inc. | PA | | Regulated | Regulated utility | 100% | 11/22/2000 |

Aqua America, Inc.
Company and Subsidiary List - July 2018

| Company Name | | | | State of Inc. | Business Registration | Regulated or Non-Regulated | Type of Business | % Owned by Parent | Date Acquired or Created |
|---|---|---|---|---|---|---|---|---|---|
| | | b. | Honesdale Consolidated Water Company | PA | | Regulated | Regulated utility | 100% | 7/31/1989 |
| | | c. | Superior Water Company | PA | | Regulated | Water Utility | 100% | 1/1/2016 |
| | 17 | | **Aqua Resources, Inc.** | DE | PA, IN, OH, NC, IL, NJ | Non-regulated | Non-regulated services | 100% | 3/18/2005 |
| | | a. | Aqua Wastewater Management, Inc. | PA | NY, NJ DE, MD | Non-regulated | Non-regulated services | 100% | 4/22/1996 |
| | | b. | Aqua Infrastructure Rehabilitation Co., LLC | DE | PA, VA, NJ, SC, MD, IN, IL, DC | Non-regulated | Non-regulated services | 100% | 6/25/2014 |
| | 18 | | **Aqua Services, Inc.** | PA | NC, OH, IL | Non-regulated | Intercompany support | 100% | 7/31/2003 |
| | 19 | | **Aqua Texas, Inc.** | TX | | Regulated | Regulated utility | 100% | 4/22/1996 |
| | | a. | Harper Water Company, Inc. | TX | | Regulated | Regulated utility | 100% | 7/31/2003 |
| | 20 | | **Aqua Utilities Florida** | FL | | Regulated | Regulated utility | 100% | 6/27/2007 |
| | 21 | | **Aqua Utilities, Inc.** | TX | IN, NY, NJ | Regulated | Regulated utility | 100% | 7/2/2003 |
| | | a. | Kerrville South Water Company, Inc. | TX | | Regulated | Regulated utility | 100% | 10/23/2007 |
| | 22 | | **Aqua Virginia, Inc.** | VA | | Regulated | Regulated utility | 100% | 7/31/2003 |
| | | a. | **Great Bay Utilities, Inc.** | VA | | Regulated | Regulated utility | 100% | 7/19/2018 |
| | 23 | | **Galaxy Acquisition Corporation** | IL | | | | 100% | 4/11/2018 |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

## G. Rate of Return

RR14. If the utility plans to make a formal claim for a specified allowable rate of return, provide the following data in statement or exhibit form:

a. Claimed capitalization and capitalization ratios with supporting data.

b. Claimed cost of long-term debt with supporting data.

c. Claimed cost of short-term debt with supporting data.

d. Claimed cost of total debt with supporting data.

e. Claimed cost of preferred stock with supporting data.

f. Claimed cost of common equity with supporting data.

A. Please refer to the direct testimony of Paul R. Moul and the accompanying Exhibit 4 for the Company's claim for a specified allowable rate of return, including the details requested in items (a) through (f).

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR15. Supply copies of the following documents for the company and, if applicable, its parent:

a. Most recent annual report to shareholders including any statistical supplements.

b. Most recent SEC form 10K.

c. All SEC form 10Q reports issued within the preceding 12 months of the date of submittal of the rate increase request.

A. Please see the attached.

2017

# Annual Report

AQUA[SM]

**Proud to be part of our nation's water and wastewater infrastructure solution.**

Aqua America, Inc.

## Forward-Looking Information

This document includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements are based on management’s beliefs and assumptions. Various factors may cause actual results to be materially different than the suggested outcomes within forward-looking statements. Accordingly, there is no assurance that such results will be realized. For details on the uncertainties that may cause the Company’s actual future results to be materially different than those expressed in our forward-looking statements, see our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q filed with the Securities and Exchange Commission (“SEC”) and available on the SEC’s website at www.sec.gov. In light of these risks, uncertainties, and assumptions, the events described in the forward-looking statements might not occur or might occur to a different extent or at a different time than described. Forward-looking statements speak only as of the date they are made. Aqua America, Inc. expressly disclaims an obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

# **Aqua America's Core Values:**
## Integrity, Respect and the Pursuit of Excellence.

At Aqua, our values are close to heart, embedded at the core of our company and reinforce the commitment we have to being exceptional. They are the principles that guide and inspire our work as a leader in the renewal of our nation's water and wastewater infrastructure for stronger communities.

**Integrity:** Aqua is a place of honesty, good character and trust. We care about one another, our customers and our mission of protecting and providing Earth's most essential resource.

**Respect:** We are committed to one another, our customers, the community and the environment. We respect our well-being and the importance of time with family and friends.

**Excellence:** Whether at home or at work, we seek growth and development opportunities and excel in safety and customer service. We work to uphold a successful company that maximizes shareholder value.

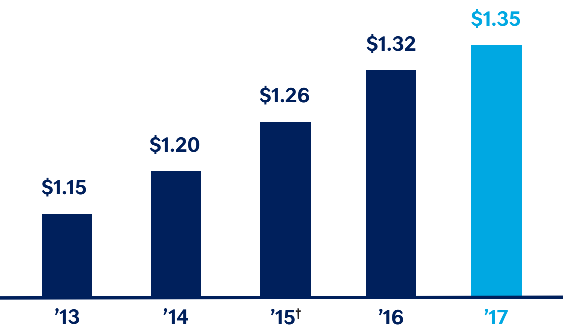
At Aqua, we approach every day with **integrity, respect and the pursuit of excellence** to be the best we can be.

# Financial Highlights

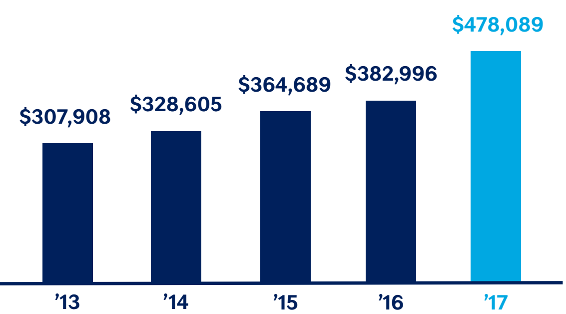
in thousands of dollars, except per-share amounts

| | 2017 | 2016 | % Change |
|---|---|---|---|
| **Operating revenues** | $809,525 | $819,875 | (1.3%) |
| **Regulated segment** | | | |
| **Operating revenues** | $804,905 | $800,107 | 0.6% |
| **Operating and maintenance expense** | $286,962 | $285,347 | (0.6%) |
| **Net income** | $239,738 | $234,182 | 2.4% |
| **Diluted net income per common share** | $1.35 | $1.32 | 2.2% |
| **Annualized dividend rate** per common share (12/31) | $0.818 | $0.765 | 7.0% |
| **Total assets** | $6,332,463 | $6,158,991 | 2.8% |
| **Number of utility customers served** | 982,849 | 972,265 | 1.1% |

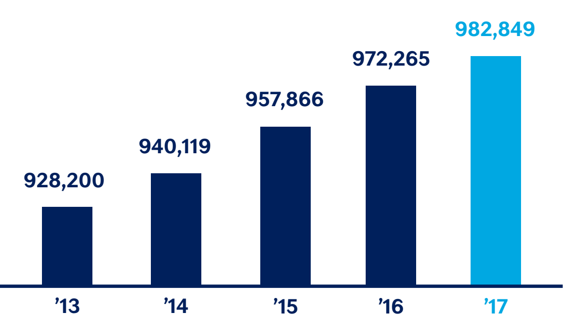
## Diluted Net Income per Common Share



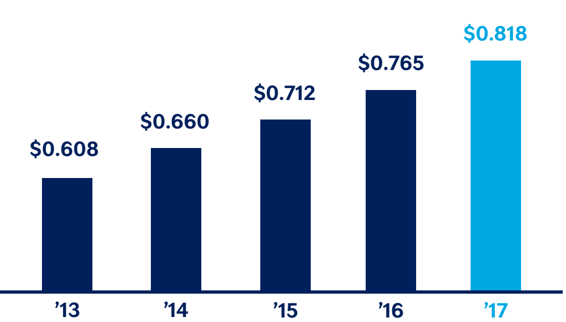

## Capital Spending
(existing operations)




## Utility Customer Connections
(continuing operations)




## Dividend per Share
(annualized)




†2015: Income from Continuing Operations adjusted for Joint Venture Impairment Charge (a Non-GAAP Financial Measure). 2015 Income from Continuing Operations per Share was $1.14

# A message from the Chairman & CEO

**Christopher H. Franklin**
Chairman, President, and Chief Executive Officer

The year 2017 ushered in a renewed national dialogue on the state of our country's infrastructure. Throughout the year, the nation's roads, bridges, water and wastewater systems were a topic of conversation from the Oval Office to dining room tables across the country. From calls for urgent investment in rapidly deteriorating infrastructure to frank discussions over how to fund such a vast need, it's been a critically important conversation – and one that Aqua has long been championing.

### The state of our nation's water infrastructure

When it comes to water and wastewater infrastructure, the reality is that the United States has more than 1 million miles of underground pipe, much of which is nearly a century old and in dire need of replacement. According to the American Water Works Association, it will cost an estimated $1 trillion to maintain and expand drinking water service to meet demands over the next 20 years. There is no question that upgrading water and wastewater infrastructure is a major challenge facing our country, and Aqua is proud to be leading the charge when it comes to offering a viable solution. As one of the largest publicly regulated water companies in the country, we are actively renewing and improving infrastructure through thoughtful and continuous capital investment. In fact, in 2017 alone, we invested $478 million in water and wastewater infrastructure.

### Aqua America's role in infrastructure renewal

Most importantly, our investment has had a direct impact on the communities we serve across our eight-state footprint – communities like:

- University Park, Illinois, where we were able to significantly improve water quality with a 14-mile pipeline project
- Lakes of Mission Grove, Texas, which lacked its own wastewater plant
- Southeastern Pennsylvania, where main breaks were reduced by 70 percent following significant infrastructure investments

You can read more about the investment Aqua has made in these communities in the pages that follow.

In September, I had the great honor of addressing the U.S. House of Representatives' Transportation and Infrastructure Committee's Subcommittee on Water Resources and the Environment, where I explained to legislators why publicly regulated utilities like Aqua are well positioned to play a major role in helping more cities and towns across the country address their water and wastewater needs. As I told Congress, the road to repairing and replacing water and wastewater infrastructure in the country should include private capital going to work to help solve the problem. In speaking out on these issues, I hope to continue encouraging discourse on the importance of infrastructure investment, and about our willingness to be a part of the solution.

Investment in water infrastructure is an important component of our business strategy. It ensures that we can continue to provide safe and reliable water and wastewater services, which in turn leads to increased customer confidence and supports Aqua's excellent reputation. Additionally, this investment is the base from which we grow shareholder value.

## A three-pronged strategy for growth

Our work to continue building shareholder value manifests itself in our three-pronged growth strategy. The company has followed this strategy for two years and it is proving successful. The first prong of the strategy is our work to become the solution chosen by middle-market municipal water and wastewater utilities as they face the financial, compliance and operational challenges of running utility systems. Unlike elected officials who must share their daily focus beyond running a utility with responsibilities in human services, public safety, and roads and bridges, among other challenges, our dedicated employees at Aqua focus their undivided time improving and maintaining water and wastewater infrastructure.

Since we've applied our three-pronged strategy two years ago, we've acquired more customers from municipal systems than we had in the previous eight years, and our pipeline of opportunities is stronger than ever before.

The second prong of our strategy focuses on the acquisition of regulated utilities. Over many years, we've developed a deep expertise installing pipe and plant and successfully recovering the cost of the capital and return on the capital through the regulatory process. In fact, we've installed 538 miles of main, just in the past three years. Our expertise in this area can be more broadly applied to solve infrastructure rehabilitation issues faced by other utilities through a disciplined acquisition program. Management and the board continue to explore opportunities to apply our core expertise by seeking relationships that could lead to the acquisition of additional regulated operations.

While market premiums for mergers and acquisitions remain elevated, our work in this area remains active and the team is attentive to potential opportunities in the regulated market.

Our third prong in the growth strategy considers market-based opportunities. These are acquisition opportunities that are outside the regulated business but would complement the regulated business and capitalize on our core strengths.

Our activity in this area requires that any opportunity would be scalable, would come with a management team and would provide a product or service that would include regulated utilities as their customers. Although we have considered several market-based opportunities, the regulated market has been particularly active and has required the largest portion of management's time.

Since 2015, we have sold the small, market-based businesses that were determined not to be scalable and have focused almost entirely on the regulated business. While market-based opportunities remain in our strategy, our near-term activity will focus primarily on the regulated business.

## A strong commitment to stakeholders

For the last 25 years, I have been proud to work for a company that is driven by talented, motivated employees who give back to the communities in which we operate. On behalf of the senior leadership team and board of directors, I thank each employee who focuses every day on supporting Aqua's mission to protect and provide Earth's most essential resource. I'd also like to extend a special thanks to our shareholders for your continued confidence and support, which enables us to execute on our goals so successfully.

As Americans and as the current stewards of our country's infrastructure, we believe we have a responsibility not only to our company and our shareholders, but also to our fellow citizens, to invest in and maintain our infrastructure. Our infrastructure is basic to our quality of life, commerce and security – our commitment has never been stronger.

With appreciation,

***"According to the American Water Works Association, it will cost an estimated $1 trillion to maintain and expand drinking water service to meet demands over the next 20 years."***

# Renewed Infrastructure Benefits Customers and the Environment

Aqua Pennsylvania owns and is responsible for 5,800 miles of pipe—varying in size, type and age—in 32 counties. Much of this water infrastructure is approaching the end of its useful lifecycle, making it susceptible to main breaks, service interruptions and water discoloration. It also increases customer dissatisfaction and what's known as non-revenue water – water lost through leaks, breaks, and so on, before it passes through a customer meter. Managing a distribution system of this size requires substantial planning, expertise and foresight.

***"Over the past few years, Aqua has shown the Treasure Lake Property Owners Association their true ability in water supply service and customer care. Aqua has gone above and beyond in their efforts while working with the TLPOA including the assistance of traffic control, road closures and detours, and clean-up of work areas. The entire Aqua staff has shown us a great level of understanding and respect when it comes to our needs and requirements at Treasure Lake. We look forward to building a stronger and more efficient water system with Aqua in the future."***

**Shirley Elmore, CMCA, AMS, PCAM**
General Manager
Treasure Lake Property Owners Association

> ***When we purchased the Treasure Lake system, only 60 percent of the water leaving the well stations reached customers. We have since replaced 15 percent of the distribution system, increasing deliverability to nearly 80 percent with a goal to increase that further by the end of 2019.***
>
> **Patrick Burke**
> Director, Operations
> Aqua Pennsylvania

**SOLUTION** Aqua Pennsylvania has proactively focused on its main replacement program to better serve its customers. In 2017 alone, Aqua Pennsylvania completed nearly 200 projects, replacing 135 miles of main with an investment of $141 million. Over the life of the main replacement program, Aqua Pennsylvania has replaced more than 1,700 miles of pipe with an investment of $1.4 billion.

**OUTCOME** Aqua Pennsylvania's investment in the state's water and wastewater infrastructure continues to benefit customers and the environment alike. When the program started, the pipes were on a 900-year replacement cycle. Today, that has been significantly reduced to a 90-year replacement cycle. The benefits of the main replacement program have been most dramatic in its southeastern division—the largest with 4,600 miles of main that serve 1 million people. Main breaks there have been reduced by 70 percent to an all-time low of eight breaks per 100 miles of pipe, per year, and customer complaints have fallen by 59 percent. Non-revenue water also continues to trend downward, reducing expenses for power and treatment chemicals, which ultimately protects our ecosystem. In 2017, non-revenue water was 17.5 percent, which is excellent for a system the size and age of the southeast division.

# Expertise and Persistence Delivers for Illinois Residents and Businesses

Residents and businesses of University Park, Illinois were served by a water source that contained high levels of iron, calcium and magnesium, creating taste and hardness issues. Many relied on water softeners and filters to reduce hardness. While the water met all U.S. Environmental Protection Agency regulations, it fell short of customer expectations. The well source was simply not good, leaving Aqua Illinois with a complicated problem.

**SOLUTION** Aqua Illinois conducted a feasibility study to explore a set of potential solutions; enhancing wells, improving treatments or running a pipeline from a better water source to University Park. Extending the pipeline would be complex both physically and financially, requiring Aqua Illinois to navigate jurisdiction issues, obtain easements and design around waterways and farm fields. Thanks to the experienced and dedicated staff of Aqua Illinois, construction began in late 2016 and successfully concluded in November 2017. The 14 miles of new pipeline runs from Aqua Illinois' award-winning Kankakee plant to its customers in University Park.

***"A huge upside is the cost savings and no more lugging bags of salt down to the water softener. Now our water comes straight to the tap clean and ready to drink."***

**Joe Dascenzo**
Resident
Monee, IL

***Since Aqua started delivering filtered and softened water from the Kankakee Water Treatment Plant, Arctic Glacier Ice has seen the water quality characteristics improve dramatically. As a result of the improved water quality, Arctic Glacier Ice is now able to produce crystal clear ice of the highest quality for our customers.***

**Tim Teehan**
Operations Manager
Arctic Glacier Ice

**OUTCOME** Aqua Illinois is proud that both residents and businesses are benefiting from this expansive project. University Park customers have seen a **90 percent reduction in iron** and a **70 percent reduction in hardness.** The pipeline project also increased water capacity, which is attracting new economic development to the area.

***I have made it a top priority of my administration to improve water quality and attract growth to our community. Working with Aqua, University Park now has the best tasting water in the State and a reliable water system capable of promoting quality residential, commercial, and industrial growth in our community.***

**Vivian Covington**
Mayor
Village of University Park, IL

# New Texas Wastewater Plant Increases Capacity Five-Fold

When Aqua Texas acquired the Lakes of Mission Grove system, the community's population was so low that the volume of wastewater produced couldn't sustain its own treatment plant. This required Aqua Texas to haul wastewater to a treatment plant each day.

***"It's essential that we adequately plan for the growth of the systems for the families we serve."***

**Bob Laughman**
President
Aqua Texas

***The completion of the wastewater treatment plant makes the Lakes of Mission Grove subdivision one of the most desirable small communities in the county.***

**Carolyn Schiller**
Resident
Lakes of Mission Grove Homeowners Association

**SOLUTION** When the community's population started to rapidly grow, Aqua was able to plan for a new wastewater treatment plant that could serve current residents and new families to come. In 2016, Aqua Texas began the bidding process for the engineering of what would become a $1.2 million plant to serve the Lakes of Mission Grove residents.

**OUTCOME** The project successfully concluded in November 2017, providing a new treatment capacity of 135,000 gallons of wastewater per day, serving an additional 500 homes. The efficient new plant provides significant operational savings and increased environmental benefits.

2017

# Financial Data

AQUA

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report (the "Annual Report") are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions.

Because forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including but not limited to:

- changes in general economic, business, credit and financial market conditions;
- changes in governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the profitability of future acquisitions;
- changes to the rules or our assumptions underlying our determination of what qualifies for an income tax deduction for qualifying utility asset improvements;
- the decisions of governmental and regulatory bodies, including decisions on rate increase requests;
- our ability to file rate cases on a timely basis to minimize regulatory lag;
- abnormal weather conditions, including those that result in water use restrictions;
- changes in, or unanticipated, capital requirements;
- changes in our credit rating or the market price of our common stock;
- changes in valuation of strategic ventures;
- our ability to integrate businesses, technologies or services which we may acquire;
- our ability to manage the expansion of our business;
- our ability to treat and supply water or collect and treat wastewater;
- the extent to which we are able to develop and market new and improved services;
- the effect of the loss of major customers;
- our ability to retain the services of key personnel and to hire qualified personnel as we expand;
- labor disputes;
- increasing difficulties in obtaining insurance and increased cost of insurance;
- cost overruns relating to improvements to, or the expansion of, our operations;
- increases in the costs of goods and services;
- civil disturbance or terroristic threats or acts;
- the continuous and reliable operation of our information technology systems, including the impact of cyber security attacks or other cyber-related events;
- changes in accounting pronouncements;
- litigation and claims; and
- changes in environmental conditions, including the effects of climate change.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this Annual Report completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this Annual Report. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. For further information or other factors which could affect our financial results and such forward-looking statements, see *Risk Factors* included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

## OVERVIEW

The following discussion and analysis of our financial condition and results of operations should be read together with our Consolidated Financial Statements and related Notes included in this Annual Report. This discussion contains forward-looking statements that are based on management's current expectations, estimates and projections about our business, operations and financial performance. All dollar amounts are in thousands of dollars, except per share amounts.

### The Company

Aqua America, Inc., (referred to as "Aqua America", the "Company", "we", "us", or "our"), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to an estimated three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 52% of our operating revenues and approximately 74% of our net income for 2017. As of December 31, 2017, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of people we serve. Aqua Pennsylvania's service territory is located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through two operating and maintenance contracts with municipal authorities close to our utility companies' service territory; and offers, through a third party, water and sewer line repair service and protection solutions to households. In 2017, we completed the sale of business units that are reported within the Company's market-based subsidiary, Aqua Resources, which installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, and repaired and performed maintenance on water and wastewater systems. Additionally, during 2016 we completed the sale of business units within Aqua Resources, which were reported as assets held for sale in the Company's consolidated balance sheets, which provided liquid waste hauling and disposal services, and inspection, and cleaning and repair of storm and sanitary wastewater lines.

### Industry Mission

The mission of the regulated water utility industry is to provide quality and reliable water service at reasonable rates to customers, while earning a fair return for shareholders. A number of challenges face the industry, including:

- strict environmental, health and safety standards;
- aging utility infrastructure and the need for substantial capital investment;
- economic regulation by state, and/or, in some cases, local government;
- declining consumption per customer as a result of conservation;
- lawsuits and the need for insurance; and
- the impact of weather and sporadic drought conditions on water sales demand.

### Economic Regulation

Most of our water and wastewater utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions, and authorize the issuance of securities. The utility commissions also generally establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state, and may change over time. A small number of our operations are subject to rate regulation by county or city government. Over time, the regulatory party in a particular state may change, as was the case for our Texas operations where, in 2014, economic regulation changed from the Texas Commission on Environmental Quality to the Public Utility Commission of Texas. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances in the various states in which we operate. One consideration we may undertake in evaluating which states to focus our growth and investment strategy is whether a state provides for consolidated rates, a surcharge for replacing and rehabilitating infrastructure and other systems, and other regulatory policies that promote infrastructure investment and efficiency in processing rate cases.

***Rate Case Management Capability*** **–** We strive to achieve the industry's mission by effective planning, efficient investments, and productive use of our resources. We maintain a rate case management capability to pursue timely and adequate returns on the capital investments that we make in improving our distribution system, treatment plants, information technology systems, and other infrastructure. This capital investment creates assets that are used and useful in providing utility service, and is commonly referred to as rate base. Timely and adequate rate relief is important to our continued profitability and in providing a fair return to our shareholders; thus, providing access to capital markets to help fund these investments. Accordingly, the objective of our rate case management strategy is to provide that the rates of our utility operations reflect, to the extent practicable, the timely recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations), capital, and taxes. In pursuing our rate case strategy, we consider the amount of net utility plant additions and replacements made since the previous rate decision, the changes in the cost of capital, changes in our capital structure, and changes in operating and other costs. Based on these assessments, our utility operations periodically file rate increase requests with their respective state utility commissions or local regulatory authorities. In general, as a regulated enterprise, our water and wastewater rates are established to provide full recovery of utility operating costs, taxes, interest on debt used to finance capital investments, and a return on equity used to finance capital investments. Our ability to recover our expenses in a timely manner and earn a return on equity employed in the business helps determine the profitability of the Company. As of December 31, 2017, the Company's rate base is estimated to be $4,125,000, which is comprised of:

- $2,874,000 filed with respective state utility commissions or local regulatory authorities; and
- $1,251,000 not yet filed with respective state utility commissions or local regulatory authorities.

Our water and wastewater operations are composed of 53 rate divisions, each of which requires a separate rate filing for the evaluation of the cost of service and recovery of investments in connection with the establishment of tariff rates for that rate division. When feasible and beneficial to our utility customers, we have sought approval from the applicable state utility commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the eight states in which we operate currently permit us to file a revenue requirement using some form of consolidated rates for some or all of the rate divisions in that state.

***Revenue Surcharges*** **–** Six states in which we operate water utilities, and five states in which we operate wastewater utilities, permit us to add a surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. In all other states, water and wastewater utilities absorb all of the depreciation and capital costs of these projects between base rate increases without the benefit of additional revenues. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which often acts as a disincentive to water and wastewater utilities to rehabilitate their infrastructure. In addition, some states permit our subsidiaries to use a surcharge or credit on their bills to reflect allowable changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new costs are fully incorporated in base rates.

***Effects of Inflation*** **–** Recovery of the effects of inflation through higher water and wastewater rates is dependent upon receiving adequate and timely rate increases. However, rate increases are not retroactive and often lag increases in costs caused by inflation. On occasion, our regulated utility companies may enter into rate settlement agreements, which require us to wait for a period of time to file the next base rate increase request. These agreements may result in regulatory lag whereby inflationary increases in expenses may not yet be reflected in rates, or a gap may exist between when a capital project is completed and the start of its recovery in rates. Even during periods of moderate inflation, the effects of inflation can have a negative impact on our operating results.

**Growth-Through-Acquisition Strategy**

Part of our strategy to meet the industry challenges is to actively explore opportunities to expand our utility operations through acquisitions of water and wastewater utilities either in areas adjacent to our existing service areas or in new service areas, and to explore acquiring market-based businesses that are complementary to our regulated water and wastewater operations. To complement our growth strategy, we routinely evaluate the operating performance of our individual utility systems, and in instances where limited economic growth opportunities exist or where we are unable to achieve favorable operating results or a return on equity that we consider acceptable, we will seek to sell the utility system and reinvest the proceeds in other utility systems. Consistent with this strategy, we are focusing our acquisitions and resources in states where we have critical mass of operations in an effort to achieve economies of scale and increased efficiency. Our growth-through-acquisition strategy allows us to operate more efficiently by sharing operating expenses over more utility customers and provides new locations for future earnings growth through capital investment. Another element of our growth strategy is the consideration of opportunities to expand by acquiring other utilities, including those that may be in a new state if they provide promising economic growth opportunities and a return on equity that we consider acceptable. The ability to successfully execute this strategy and meet the industry challenges is largely due to our core competencies, financial position, and our qualified and trained workforce, which we strive to retain by treating employees fairly and providing our employees with development and growth opportunities.

During 2017, we completed four acquisitions, which along with the organic growth in our existing systems, represents 10,584 new customers. During 2016, we completed 19 acquisitions, which along with the organic growth in our existing systems, represents 15,282 new customers. During 2015, we completed 16 acquisitions, which along with the organic growth in our existing systems, represents 17,747 new customers.

We believe that utility acquisitions, organic growth, and a potential expansion of our market-based business will continue to be the primary sources of growth for us. With approximately 53,000 community water systems in the U.S., 82% of which serve less than 3,300 customers, the water industry is the most fragmented of the major utility industries (telephone, natural gas, electric, water, and wastewater). In the states where we operate regulated utilities, we believe there are approximately 14,500 community water systems of widely-varying size, with the majority of the population being served by government-owned water systems.

Although not as fragmented as the water industry, the wastewater industry in the U.S. also presents opportunities for consolidation. According to the U.S. Environmental Protection Agency's ("EPA") most recent survey of wastewater treatment facilities (which includes both government-owned facilities and regulated utility systems) in 2012, there are approximately 15,000 such facilities in the nation serving approximately 76% of the U.S. population. The remaining population represents individual homeowners with their own treatment facilities; for example, community on-lot disposal systems and septic tank systems. The vast majority of wastewater facilities are government-owned rather than regulated utilities. The EPA survey also indicated that there are approximately 4,000 wastewater facilities in operation in the states where we operate regulated utilities.

Because of the fragmented nature of the water and wastewater utility industries, we believe that there are many potential water and wastewater system acquisition candidates throughout the United States. We believe the factors driving the consolidation of these systems are:

- the benefits of economies of scale;
- the increasing cost and complexity of environmental regulations;
- the need for substantial capital investment;
- the need for technological and managerial expertise;
- the desire to improve water quality and service;
- limited access to cost-effective financing;
- the monetizing of public assets to support, in some cases, the declining financial condition of municipalities; and
- the use of system sale proceeds by a municipality to accomplish other public purposes.

We are actively exploring opportunities to expand our water and wastewater utility operations through regulated utility acquisitions or otherwise, including the management of publicly-owned facilities in a public-private partnership. We intend to continue to pursue acquisitions of government-owned and regulated water and wastewater utility systems that provide services in areas near our existing service territories or in new service areas. It is our intention to focus on growth opportunities in states where we have critical mass, which allows us to improve economies of scale through spreading our fixed costs over more customers – this cost efficiency should enable us to reduce the size of future rate increases. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to pursue growth ventures in market-based activities, by acquiring businesses that provide water and wastewater or other utility-related services, and investing in infrastructure projects.

**Sendout**

Sendout represents the quantity of treated water delivered to our distribution systems. We use sendout as an indicator of customer demand. Weather conditions tend to impact water consumption, particularly during the late spring, summer, and early fall when discretionary and recreational use of water is at its highest. Consequently, a higher proportion of annual operating revenues are realized in the second and third quarters. In general, during this period, an extended period of hot and dry weather increases water consumption, while above-average rainfall and cool weather decreases water consumption. Conservation efforts, construction codes that require the use of low-flow plumbing fixtures, as well as mandated water use restrictions in response to drought conditions can reduce water consumption. We believe an increase in conservation awareness by our customers, including the increased use of more efficient plumbing fixtures and appliances, may continue to result in a long-term structural trend of declining water usage per customer. These gradual long-term changes are normally taken into account by the utility commissions in setting rates, whereas significant short-term changes in water usage, resulting from drought warnings, water use restrictions, or extreme weather conditions, may not be fully reflected in the rates we charge between rate proceedings.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions, regardless of our ability to meet unrestricted customer water demands. The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income. In general, water consumption in the summer months is affected by drought warnings and restrictions to a higher degree because discretionary and recreational use of water is highest during the summer months, particularly in our northern service territories. At other times of the year, warnings and restrictions generally have less of an effect on water consumption. Currently, portions of our northern and central Texas service areas have conservation water restrictions. Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

The geographic diversity of our utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of the country. During the year ended December 31, 2017, our operating revenues were derived principally from the following states: approximately 52% in Pennsylvania, 13% in Ohio, 9% in Texas, 8% in Illinois, and 7% in North Carolina.

**Performance Measures Considered by Management**

We consider the following financial measures (and the period to period changes in these financial measures) to be the fundamental basis by which we evaluate our operating results:

- earnings per share;
- operating revenues;
- income from continuing operations;
- earnings before interest, taxes, and depreciation ("EBITD");
- earnings before income taxes as compared to our operating budget;
- net income; and
- the dividend rate on common stock.

In addition, we consider other key measures in evaluating our utility business performance within our Regulated segment:

- our number of utility customers;
- the ratio of operations and maintenance expense compared to operating revenues (this percentage is termed "operating expense ratio");
- return on revenues (income from continuing operations divided by operating revenues);
- rate base growth;
- return on equity (net income divided by stockholders' equity); and
- the ratio of capital expenditures to depreciation expense.

Furthermore, we review the measure of earnings before unusual items that are noncash and not directly related to our core business, such as the measure of adjusted earnings to remove the joint venture impairment charge, which was recognized in 2015. Refer to Note 1 – *Summary of Significant Accounting Policies – Investment in Joint Venture* in this Annual Report for information regarding the impairment charge. We review these measurements regularly and compare them to historical periods, to our operating budget as approved by our Board of Directors, and to other publicly-traded water utilities.

Our operating expense ratio is one measure that we use to evaluate our operating efficiency and management effectiveness of our regulated operations. Our operating expense ratio is affected by a number of factors, including the following:

- ***Regulatory lag*** **–** Our rate filings are designed to provide for the recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claim costs, and costs to comply with environmental regulations), capital, and taxes. The revenue portion of the operating expense ratio can be impacted by the timeliness of recovery of, and the return on capital investments. The operating expense ratio is further influenced by regulatory lag (increases in operations and maintenance expenses not yet recovered in rates or a gap between the time that a capital project is completed and the start of its cost recovery in rates). The operating expense ratio is also influenced by decreases in operating revenues without a commensurate decrease in operations and maintenance expense, such as changes in customer water consumption as impacted by adverse weather conditions, conservation trends, or as a result of utility rates incorporating the effects of income tax benefits derived from deducting qualifying utility asset improvements for tax purposes that are capitalized for book purposes in Aqua Pennsylvania and consequently forgoing operating revenue increases. During periods of inflation, our operations and maintenance expenses may increase, impacting the operating expense ratio, as a result of regulatory lag, since our rate cases may not be filed timely and are not retroactive.

- ***Acquisitions*** **–** In general, acquisitions of smaller undercapitalized utility systems in some areas may initially increase our operating expense ratio if the operating revenues generated by these operations are accompanied by a higher ratio of operations and maintenance expenses as compared to other operational areas of the company that are more densely populated and have integrated operations. In these cases, the acquired operations are characterized as having relatively higher operating costs to fixed capital costs, in contrast to the majority of our operations, which generally consist of larger, interconnected systems, with higher fixed capital costs (utility plant investment) and lower operating costs per customer. In addition, we operate market-based subsidiary companies, Aqua Resources and Aqua Infrastructure. The cost-structure of these market-based companies differs from our utility companies in that, although they may generate free cash flow, these companies have a higher ratio of operations and maintenance expenses to operating revenues and a lower capital investment and, consequently, a lower ratio of fixed capital costs versus operating revenues in contrast to our regulated operations. As a result, the operating expense ratio is not comparable between the businesses. These market-based subsidiary companies are not a component of our Regulated segment.

We continue to evaluate initiatives to help control operating costs and improve efficiencies.

(*In thousands of dollars, except per share amounts*)

**Consolidated Selected Financial and Operating Statistics**

Our selected five-year consolidated financial and operating statistics follow:

| Years ended December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Utility customers: | | | | | |
| Residential water | 807,872 | 801,190 | 791,404 | 779,665 | 771,660 |
| Commercial water | 40,956 | 40,582 | 40,151 | 39,614 | 39,237 |
| Industrial water | 1,338 | 1,349 | 1,353 | 1,357 | 1,368 |
| Other water | 19,430 | 19,036 | 17,420 | 17,412 | 17,230 |
| Wastewater | 113,253 | 110,108 | 107,538 | 102,071 | 98,705 |
| Total utility customers | 982,849 | 972,265 | 957,866 | 940,119 | 928,200 |
| Operating revenues: | | | | | |
| Residential water | $ 483,865 | $ 484,901 | $ 477,773 | $ 460,013 | $ 457,404 |
| Commercial water | 130,373 | 131,170 | 126,677 | 122,795 | 121,178 |
| Industrial water | 27,880 | 27,916 | 28,021 | 27,369 | 25,263 |
| Other water | 65,324 | 62,983 | 56,997 | 59,474 | 57,446 |
| Wastewater | 87,560 | 82,780 | 79,399 | 76,472 | 73,062 |
| Other utility | 9,903 | 10,357 | 10,746 | 9,934 | 10,174 |
| Regulated segment total | 804,905 | 800,107 | 779,613 | 756,057 | 744,527 |
| Other and eliminations | 4,620 | 19,768 | 34,591 | 23,846 | 17,366 |
| Consolidated operating revenues | $ 809,525 | $ 819,875 | $ 814,204 | $ 779,903 | $ 761,893 |
| Operations and maintenance expense | $ 287,206 | $ 304,897 | $ 309,310 | $ 288,556 | $ 283,561 |
| Joint venture impairment charge (1) | $ - | $ - | $ 21,433 | $ - | $ - |
| Income from continuing operations | $ 239,738 | $ 234,182 | $ 201,790 | $ 213,884 | $ 202,871 |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 | $ 233,239 | $ 221,300 |
| Capital expenditures | $ 478,089 | $ 382,996 | $ 364,689 | $ 328,605 | $ 307,908 |
| **Operating Statistics** | | | | | |
| Selected operating results as a percentage of operating revenues: | | | | | |
| Operations and maintenance | 35.5% | 37.2% | 38.0% | 37.0% | 37.2% |
| Depreciation and amortization | 16.9% | 16.2% | 15.8% | 16.2% | 16.3% |
| Taxes other than income taxes | 7.0% | 6.9% | 6.8% | 6.5% | 6.9% |
| Interest expense, net | 10.9% | 9.8% | 9.4% | 9.8% | 10.1% |
| Income from continuing operations | 29.6% | 28.6% | 24.8% | 27.4% | 26.6% |
| Return on Aqua America stockholders' equity | 12.2% | 12.7% | 11.7% | 14.1% | 14.4% |
| Ratio of capital expenditures to depreciation expense | 3.5 | 2.9 | 2.9 | 2.7 | 2.6 |
| Effective tax rate | 6.6% | 8.2% | 6.9% | 10.5% | 9.5% |

(1) Represents a $21,433 ($32,975 pre-tax) joint venture impairment charge. This amount represents our share of the impairment charge recognized by our joint venture that operates a private pipeline to supply raw water to firms with natural gas well drilling operations.

## RESULTS OF OPERATIONS

Our income from continuing operations has grown at an annual compound rate of approximately 5.7% and our net income has grown at an annual compound rate of approximately 4.1% during the five-year period ended December 31, 2017. During the past five years, operating revenues grew at a compound rate of 1.5% and operating expenses grew at a compound rate of 2.1%.

**Operating Segments**

We have identified ten operating segments and we have one reportable segment based on the following:

- Eight segments are composed of our water and wastewater regulated utility operations in the eight states where we provide these services. These operating segments are aggregated into one reportable segment since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution and/or wastewater collection methods, and the nature of the regulatory environment. Our single reportable segment is named the Regulated segment.

- Two segments are not quantitatively significant to be reportable and are composed of Aqua Resources and Aqua Infrastructure. These segments are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

(*In thousands of dollars, except per share amounts*)

The following table provides the Regulated segment and consolidated information for the years ended December 31, 2017, 2016, and 2015:

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 804,905 | $ 4,620 | $ 809,525 | $ 800,107 | $ 19,768 | $ 819,875 |
| Operations and maintenance expense | 286,962 | 244 | 287,206 | 285,347 | 19,550 | 304,897 |
| Taxes other than income taxes | 54,524 | 2,104 | 56,628 | 53,916 | 2,469 | 56,385 |
| Earnings (loss) before interest, taxes, depreciation and amortization | $ 463,419 | $ 2,272 | 465,691 | $ 460,844 | $ (2,251) | 458,593 |
| Depreciation and amortization | | | 136,724 | | | 133,008 |
| Operating income | | | 328,967 | | | 325,585 |
| Other expense (income): | | | | | | |
| Interest expense, net | | | 88,341 | | | 80,594 |
| Allowance for funds used during construction | | | (15,211) | | | (8,815) |
| Gain on sale of other assets | | | (484) | | | (378) |
| Equity income in joint venture | | | (331) | | | (976) |
| Provision for income taxes | | | 16,914 | | | 20,978 |
| Net income | | | $ 239,738 | | | $ 234,182 |

| | 2015 | | |
|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 779,613 | $ 34,591 | $ 814,204 |
| Operations and maintenance expense | 282,866 | 26,444 | 309,310 |
| Taxes other than income taxes | 52,361 | 2,696 | 55,057 |
| Earnings before interest, taxes, depreciation and amortization | $ 444,386 | $ 5,451 | 449,837 |
| Depreciation and amortization | | | 128,737 |
| Operating income | | | 321,100 |
| Other expense (income): | | | |
| Interest expense, net | | | 76,536 |
| Allowance for funds used during construction | | | (6,219) |
| Gain on sale of other assets | | | (468) |
| Gain on extinguishment of debt | | | (678) |
| Equity loss in joint venture | | | 35,177 |
| Provision for income taxes | | | 14,962 |
| Net income | | | $ 201,790 |

**Consolidated Results**

***Operating Revenues –*** Operating revenues totaled $809,525 in 2017, $819,875 in 2016, and $814,204 in 2015. Our Regulated segment's revenues totaled $804,905 in 2017, $800,107 in 2016, and $779,613 in 2015. The growth in our Regulated segment's revenues over the past three years is a result of increases in our water and wastewater rates and our customer base. Rate increases implemented during the past three years have provided additional operating revenues of $6,143 in 2017, $4,319 in 2016, and $8,503 in 2015. Negatively impacting revenues in 2017 was a decrease in customer water consumption primarily due to unfavorable weather conditions during the year. The number of customers increased at an annual compound rate of 1.4% over the past three years due to acquisitions and organic growth, adjusted to exclude customers associated with utility system dispositions. Acquisitions in our Regulated segment have provided additional water and wastewater revenues of $1,695 in 2017, $8,201 in 2016, and $8,900, in 2015.

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its last rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that historically had been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change which provides for the flow-through of income tax benefits that resulted in a substantial reduction in income tax expense and greater net income and cash flow. As a result, Aqua Pennsylvania was able to suspend its water Distribution System Improvement Charges from January 1, 2013 to September 30, 2017, when it resumed the use of a water Distribution System Improvement Charge on October 1, 2017. Aqua Pennsylvania was able to lengthen the amount of time until its next base rate case, which is expected to be filed in 2018. During 2017, 2016, and 2015, the income tax accounting change resulted in income tax benefits of $84,766, $78,530, and $72,944 that reduced the Company's current income tax expense and increased net income. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 for qualifying capital expenditures made prior to 2012. Based on the settlement agreement, beginning in 2013, the Company began to amortize 1/10$^{th}$ of these expenditures, or $38,000 annually, which reduced income tax expense and increased the Company's net income by $16,734, which is included in the income tax benefits noted previously. In accordance with the settlement agreement, this amortization is expected to reduce income tax expense during periods when qualifying parameters are met.

Our operating subsidiaries received rate increases representing estimated annualized revenues of $7,558 in 2017 resulting from five base rate decisions, $3,434 in 2016 resulting from six rate decisions, and $3,347 in 2015 resulting from four rate decisions. Revenues from these increases realized in the year of grant were $6,343 in 2017, $1,788 in 2016, and $2,887 in 2015. As of December 31, 2017, our operating subsidiaries have filed two rate requests, which are being reviewed by the state utility commissions, proposing an aggregate increase of $13,888 in annual revenues. During 2018, we intend to file five additional rate requests proposing an aggregate of approximately $80,000 of increased annual revenues; the timing and extent to which our rate increase requests may be granted will vary by state. Our planned rate filings for 2018 are subject to the issuance of procedural orders directing how the Federal tax law changes are to be reflected in our utility customer rates.

Currently, Pennsylvania, Illinois, Ohio, Indiana, New Jersey, and North Carolina allow for the use of a surcharge for replacing and rehabilitating infrastructure systems. The rate increases under this surcharge typically adjust periodically based on additional qualified capital expenditures completed or anticipated in a future period. This surcharge is capped as a percentage of base rates, generally at 5% to 12.75% of base rates, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. These surcharges provided revenues of $10,255 in 2017, $7,379 in 2016, and $3,261 in 2015.

Our Regulated segment also includes operating revenues of $9,903 in 2017, $10,357 in 2016, and $10,746 in 2015 associated with contract operations that are integrated into the regulated utility business and operations. These amounts vary over time according to the level of activity associated with the utility contract operations.

In addition to the Regulated segment operating revenues, we recognized market-based revenues that are associated with Aqua Resources and Aqua Infrastructure of $4,798 in 2017, $20,091 in 2016, and $34,909 in 2015. The decrease in revenues in 2017 and 2016 is due to the disposition of business units within Aqua Resources.

***Operations and Maintenance Expenses –*** Operations and maintenance expenses totaled $287,206 in 2017, $304,897 in 2016, and $309,310 in 2015. Most elements of operating costs are subject to the effects of inflation and changes in the number of customers served. Several elements are subject to the effects of changes in water consumption, weather, and the degree of water treatment required due to variations in the quality of the raw water. The principal elements of operating costs are labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations. Electricity and chemical expenses vary in relationship to water consumption, raw water quality, and price changes. Maintenance expenses are sensitive to extremely cold weather, which can cause water mains to rupture, resulting in additional costs to repair the affected main.

Operations and maintenance expenses decreased in 2017, as compared to 2016, by $17,691 or 5.8%, primarily due to:

- decreases in market-based activities expenses of $15,933 due to the disposition of business units within Aqua Resources;
- a decrease in water production costs of $6,301 primarily due to a reduction in purchased water expense of $4,794 due to replacing a purchased water supply with the Company's own water supply source;
- a decrease in the Company's self-insured employee medical benefit program expense of $4,838;
- offset by $4,102 for the timing of expenses incurred for the maintenance of our utility systems and the purchase of supplies, as well as other increases in operations and maintenance expenses.

Operations and maintenance expenses decreased in 2016 as compared to 2015 by $4,413 or 1.4%, primarily due to:

- decreases in market-based activities expenses of $10,393 due to the disposition of business units within Aqua Resources;
- a decrease in water production costs of $3,156;
- the effects of the recognition in 2015 of:
    - leadership transition expenses of $2,510,
    - the recording of a reserve of $1,862 for water rights held for future use, and
    - the recording of a legal contingency reserve of $1,580;
- the reversal of a reserve for a legal contingency of $1,580;
- offset by an increase in postretirement benefits of $5,554; and
- additional operating costs associated with acquisitions of $4,538, as well as other increases in operations and maintenance expenses.

***Depreciation and Amortization Expenses –*** Depreciation expense was $136,302 in 2017, $130,987 in 2016, and $125,290 in 2015, and has increased principally as a result of the significant capital expenditures made to expand and improve our utility facilities, and our acquisitions of new utility systems.

Amortization expense was $422 in 2017, $2,021 in 2016, and $3,447 in 2015, and has decreased primarily due to the completion of the recovery of our costs associated with various rate filings. Expenses associated with filing rate cases are deferred and amortized over periods that generally range from one to three years.

***Taxes Other than Income Taxes –*** Taxes other than income taxes totaled $56,628 in 2017, $56,385 in 2016, and $55,057 in 2015. The increase in 2017 was primarily due to an increase in gross receipts, excise and franchise taxes of $949, and an increase in taxes assessed resulting from the pumping of ground water in Texas of $486 due to higher water production volume and rates, offset by a $978 decrease in property taxes primarily due to a favorable ruling on a property tax appeal in Ohio. The increase in 2016 was primarily due to an increase of $578 for pumping fees in Texas due to higher water production, a rate increase, and the addition of two water systems, and an increase in gross receipts, excise and franchise taxes of $502.

***Interest Expense, net*** – Net interest expense was $88,341 in 2017, $80,594 in 2016, and $76,536 in 2015. Interest income of $202 in 2017, $217 in 2016, and $272 in 2015 was netted against interest expense. Net interest expense increased in 2017 due to an increase in average borrowings of $157,768 and an increase in short-term and long-term interest rates. Net interest expense increased in 2016 due to an increase in average short-term borrowings of $9,808 at higher short-term interest rates and an increase in average outstanding fixed rate long-term debt of $98,006 partially offset by a decline in long-term interest rates. Interest income decreased in 2017 due to lower investment rates. The weighted average cost of fixed rate long-term debt was 4.35% at December 31, 2017, 4.26% at December 31, 2016, and 4.57% at December 31, 2015. The weighted average cost of fixed and variable rate long-term debt was 4.29% at December 31, 2017, 4.23% at December 31, 2016, and 4.44% at December 31, 2015.

***Allowance for Funds Used During Construction*** – The allowance for funds used during construction ("AFUDC") was $15,211 in 2017, $8,815 in 2016, and $6,219 in 2015, and varies as a result of changes in the average balance of utility plant construction work in progress, to which AFUDC is applied, changes in the AFUDC rate which is based predominantly on short-term interest rates, changes in the balance of short-debt, and changes in the amount of AFUDC related to equity. The increase in 2017 and 2016 is primarily due to an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity and in 2017 and 2016, and an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied. The amount of AFUDC related to equity was $11,633 in 2017, $6,561 in 2016, and $4,621 in 2015.

***Gain on Sale of Other Assets*** – Gain on sale of other assets totaled $484 in 2017, $378 in 2016, and $468 in 2015, and consists of the sales of property, plant and equipment and marketable securities.

***Gain on Extinguishment of Debt*** – The gain on extinguishment of debt of $678 in 2015 results from the recognition of the unamortized issuance premium for the early redemption of $95,985 of tax-exempt bonds at 5.00% that were originally maturing between 2035 and 2038.

***Equity (Earnings) Loss in Joint Venture*** – Equity (earnings) loss in joint venture totaled $(331) in 2017, $(976) in 2016, and $35,177 in 2015. The equity earnings in 2017 primarily resulted from the sale of raw water to firms in the natural gas drilling industry. The equity earnings in 2016 resulted from the recognition of a connection fee earned by the joint venture in 2016 for which our share was $1,831 and a reduction in depreciation expense resulting from the noncash impairment charge recognized by the joint venture on its long-lived assets in 2015. In 2015, a noncash impairment charge was recognized by the joint venture on its long-lived assets for which our share was $32,975. The impairment charge was recognized in 2015 as a result of a determination that the long-lived assets, primarily consisting of a pipeline and pump station, had become impaired due to a marked decline in natural gas prices in 2015, a distinguishable reduction in the volume of water sales by the joint venture which led to a lowered forecast in 2015 on future water sales volumes by the joint venture, as well as changes in the natural gas industry and market conditions. At the time of the impairment, these market conditions were largely associated with natural gas prices, which sharply declined in 2015 and this downturn no longer appeared to be temporary and instead was expected to be a long-term condition.

***Income Taxes*** – Our effective income tax rate was 6.6% in 2017, 8.2% in 2016, and 6.9% in 2015. The effective income tax rate for 2017, 2016, and 2015 was affected by the 2012 income tax accounting change for qualifying utility asset improvements at Aqua Pennsylvania which resulted in a $84,766, $78,530, and $72,944 net reduction to the Company's 2017, 2016, and 2015 Federal and state income tax expense, respectively. As of December 31, 2017, the Company has an unrecognized tax benefit related to the Company's change in its tax accounting method for qualifying utility asset improvement costs, of which up to $24,243 of these tax benefits would further reduce the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position in the period this information is determined. Offsetting this reduction was the effect of the revaluation of our deferred income tax assets and liabilities, triggered by the TCJA, which resulted in the recognition of additional income tax expense of $3,141 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates.

(*In thousands of dollars, except per share amounts*)

***Summary –***

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Operating income | $ 328,967 | $ 325,585 | $ 321,100 |
| Net income | 239,738 | 234,182 | 201,790 |
| Diluted net income per share | 1.35 | 1.32 | 1.14 |

The changes in diluted net income per share in 2017 and 2016 over the previous years were due to the aforementioned changes.

Although we have experienced increased income in the recent past, continued adequate rate increases reflecting increased operating costs and new capital investments, are important to the future realization of improved profitability.

***Fourth Quarter Results –*** The following table provides our fourth quarter results:

| | Three Months Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Operating revenues | $ 203,312 | $ 196,799 |
| Operations and maintenance | 79,243 | 77,550 |
| Depreciation | 34,794 | 33,342 |
| Amortization | 64 | 654 |
| Taxes other than income taxes | 12,238 | 13,291 |
| | 126,339 | 124,837 |
| Operating income | 76,973 | 71,962 |
| Other expense (income): | | |
| Interest expense, net | 23,217 | 20,458 |
| Allowance for funds used during construction | (4,641) | (2,369) |
| (Gain) loss on sale of other assets | (162) | 12 |
| Equity loss in joint venture | 71 | 167 |
| Income before income taxes | 58,488 | 53,694 |
| Provision for income taxes | 5,015 | 4,045 |
| Net income | $ 53,473 | $ 49,649 |

The increase in operating revenues of $6,513 was primarily due to an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $4,247, an increase in customer water consumption, and additional revenues of $438 associated with a larger customer base due to utility acquisitions, offset by a decrease in market-based activities revenue of $2,323 due to dispositions.

The increase in operations and maintenance expense of $1,693 is due primarily to $3,490 associated with the timing of expenses incurred for the maintenance of our utility systems and the purchase of supplies, an increase in postretirement benefits expense of $1,249, offset by a decrease in market-based activities expenses of $2,952, and a decrease in water production costs of $1,842 due to replacing a purchased water supply with the Company's own water supply source.

Depreciation expense increased by $1,452 primarily due to the utility plant placed in service since December 31, 2016.

The decrease in other taxes of $1,053 is primarily due to a decrease in property taxes of $1,466 due to a favorable property tax appeal in Ohio, offset by an increase in capital stock taxes of $199 due to the effect of a reversal of a reserve from the prior year, and an increase in taxes assessed resulting from the pumping of ground water in Texas of $166 due to higher water production volume and rates.

(*In thousands of dollars, except per share amounts*)

Interest expense increased by $2,759 due to an increase in the average outstanding debt balance.

AFUDC increased by $2,272 due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied, and an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity.

The provision for income taxes increased by $970 primarily as a result of the revaluation of our deferred income tax assets and liabilities, triggered by the TCJA, which resulted in the recognition of additional income tax expense of $3,141 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates, offset by the effect of additional tax deductions recognized in the fourth quarter of 2017 for certain qualifying infrastructure improvements for Aqua Pennsylvania.

## LIQUIDITY AND CAPITAL RESOURCES

**Consolidated Cash Flow and Capital Expenditures**
Net operating cash flows from continuing operations, dividends paid on common stock, capital expenditures used in continuing operations, including allowances for funds used during construction, and expenditures for acquiring water and wastewater systems for our continuing operations for the five years ended December 31, 2017 were as follows:

| | Net Operating Cash Flows | Dividends | Capital Expenditures | Acquisitions |
|---|---|---|---|---|
| 2013 | $ 365,803 | $ 102,889 | $ 307,908 | $ 14,997 |
| 2014 | 364,888 | 112,106 | 328,605 | 14,616 |
| 2015 | 370,794 | 121,248 | 364,689 | 28,989 |
| 2016 | 396,163 | 130,923 | 382,996 | 9,423 |
| 2017 | 381,318 | 140,660 | 478,089 | 5,860 |
| | $ 1,878,966 | $ 607,826 | $ 1,862,287 | $ 73,885 |

Included in capital expenditures for the five-year period are: expenditures for the rehabilitation of existing water and wastewater systems, the expansion of our water and wastewater systems, modernization and replacement of existing treatment facilities, water meters, office facilities, information technology, vehicles, and equipment. During this five-year period, we received $31,657 of customer advances and contributions in aid of construction to finance new water mains and related facilities that are not included in the capital expenditures presented in the above table. In addition, during this period, we have made repayments of debt of $978,762, and have refunded $22,607 of customers' advances for construction. Dividends increased during the past five years as a result of annual increases in the dividends declared and paid and increases in the number of shares outstanding.

Our planned 2018 capital program, exclusive of the costs of new mains financed by advances and contributions in aid of construction, is estimated to be approximately $500,000 in infrastructure improvements for the communities we serve. The 2018 capital program is expected to include $213,200 for infrastructure rehabilitation surcharge qualified projects. On January 1, 2013, Aqua Pennsylvania reset its water infrastructure rehabilitation surcharge to zero resulting from the change in its tax method of accounting for qualifying utility asset improvements as described below. Although we were not eligible to use an infrastructure rehabilitation surcharge with our Aqua Pennsylvania water customers from January 1, 2013 to September 30, 2017, we were able to use the income tax savings derived from the qualifying utility asset improvements to maintain Aqua Pennsylvania's capital investment program. Our planned 2018 capital program in Pennsylvania is estimated to be approximately $337,000, a portion of which is expected to be eligible as a deduction for qualifying utility asset improvements for Federal income tax purposes. Our overall 2018 capital program, along with $113,769 of debt repayments and $160,973 of other contractual cash obligations, as reported in the section captioned

"Management's Discussion and Analysis of Financial Condition and Results of Operations – *Contractual Obligations*", has been, or is expected to be, financed through internally-generated funds, our revolving credit facilities, and the issuance of long-term debt.

Future utility construction in the period 2019 through 2020, including recurring programs, such as the ongoing replacement or rehabilitation of water meters and water mains, water treatment plant upgrades, storage facility renovations, and additional transmission mains to meet customer demands, exclusive of the costs of new mains financed by advances and contributions in aid of construction, is estimated to require aggregate expenditures of approximately \$875,000. We anticipate that approximately one-half of these expenditures will require external financing. We expect to refinance \$189,025 of long-term debt during this period as they become due with new issues of long-term debt, internally-generated funds, and our revolving credit facilities. The estimates discussed above do not include any amounts for possible future acquisitions of water and wastewater systems or the financing necessary to support them.

Our primary sources of liquidity are cash flows from operations (including the allowed deferral of Federal income tax payments), borrowings under various short-term lines of credit and other credit facilities, and customer advances and contributions in aid of construction. Our cash flow from operations, or internally-generated funds, is impacted by the timing of rate relief, water consumption, and changes in Federal tax laws with respect to the reduction in the corporate income tax rate, and accelerated tax depreciation or deductions for utility construction projects. We fund our capital and typical acquisitions through internally-generated funds, supplemented by short-term lines of credit. Over time, we partially repay or pay-down our short-term lines of credit with long-term debt. The ability to finance our future construction programs, as well as our acquisition activities, depends on our ability to attract the necessary external financing and maintain internally-generated funds. Timely rate orders permitting compensatory rates of return on invested capital will be required by our operating subsidiaries to achieve an adequate level of earnings and cash flow to enable them to secure the capital they will need to operate and to maintain satisfactory debt coverage ratios.

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that have historically been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change, which resulted in a substantial reduction in income tax expense and greater net income and cash flow, and as a result allowed Aqua Pennsylvania to suspend its water Distribution System Improvement Charges from January 1, 2013 to September 30, 2017, and lengthen the amount of time until the next Aqua Pennsylvania rate case, which is expected to be filed in 2018. As a result of the Pennsylvania rate order, income tax benefits reduced the Company's current income tax expense and increased net income by \$84,766 in 2017, \$78,530 in 2016, and \$72,944 in 2015. The Company recognized a tax deduction on its 2012 Federal tax return of \$380,000 for qualifying capital expenditures made prior to 2012, and based on the settlement agreement, beginning in 2013, the Company began to amortize $1/10^{th}$ of these expenditures or \$38,000 annually, which reduced income tax expense and increased the Company's net income by \$16,734. In accordance with the settlement agreement, this amortization is expected to reduce income tax expense during periods when qualifying parameters are met.

**Acquisitions**

As part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of six municipalities for a total combined purchase price in cash of \$150,700. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur by the end of 2018, which is subject to the timing of the regulatory approval process. These acquisitions are expected to add approximately 16,325 customers in two of the states in which the Company operates.

During the past five years, we have expended cash of $73,885 and issued 439,943 shares of common stock, valued at $12,845 at the time of acquisition, related to the acquisition of utility systems, both water and wastewater utilities, as well as investments in supplying raw water to the natural gas drilling industry.

In 2017, we completed four acquisitions of water and wastewater utility systems for $5,860 in cash in two of the states in which we operate, adding 1,003 customers.

In January 2016, we acquired the water and wastewater utility system assets of Superior Water Company, Inc., which provided public water service to 4,108 customers in portions of Berks, Chester, and Montgomery counties in Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. Additionally, during 2016, we completed 18 acquisitions of water and wastewater utility systems for $5,518 in cash in eight of the states in which we operate, adding 2,469 customers.

In April 2015, we acquired the water and wastewater utility system assets of North Maine Utilities, located in the Village of Glenview, Illinois serving 7,409 customers. The total purchase price consisted of $23,079 in cash. Additionally, during 2015, we completed 14 acquisitions of water and wastewater utility systems for $5,210 in cash in six of the states in which we operate, adding 3,170 customers.

During 2014, we completed 16 acquisitions of water and wastewater utility systems for $10,530 in cash in seven of the states in which we operate, adding 6,148 customers. Further, in 2014, we acquired two market-based businesses that specialized in inspecting, cleaning and repairing storm and sanitary sewer lines, as well as providing water distribution system services and training to waterworks operators. The total purchase price in aggregate was $4,810 and both these businesses were subsequently sold in November 2016 and January 2017.

During 2013, we completed 15 acquisitions of water and wastewater utility systems for $14,997 in cash in four of the states in which we operate, adding 5,991 customers.

We continue to pursue the acquisition of water and wastewater utility systems, and explore other utility acquisitions that may be in a new state. Our typical acquisitions are expected to be financed with short-term debt with subsequent repayment from the proceeds of long-term debt, retained earnings, or equity issuances.

**Joint Venture**

In September 2011, one of our subsidiaries entered into a joint venture with a firm that operates natural gas pipelines and processing plants for the construction and operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania (the "Joint Venture"). We own 49% of the Joint Venture. The 56 mile pipeline construction and permitted intake on the Susquehanna River cost $109,000. As of December 31, 2017, our capital contributions since inception totaled $53,643 in cash. This investment has been financed through the issuance of long-term debt. Our 49% investment in the Joint Venture is an unconsolidated affiliate and is accounted for under the equity method of accounting. Our initial investment is carried at cost. Subsequently, the carrying amount of our investment is adjusted to reflect capital contributions or distributions, our equity in earnings and losses since the commencement of the system's operations, and a decline in the fair value of our investment. In 2015, an impairment charge was recognized by the joint venture on its long-lived assets, of which the Company's share totaled $32,975 ($21,433 after-tax), representing our share of the noncash impairment charge as further described in Note 1 – *Summary of Significant Accounting Policies – Investment in Joint Venture* in this Annual Report.

**Dispositions**

We routinely review and evaluate areas of our business and operating divisions and, over time, may sell utility systems or portions of systems. In 2017, the Company sold two business units within Aqua Resources, which resulted in total proceeds of $867, and recognized a net loss of $324. In 2016, the Company sold two business units within Aqua Resources, which resulted in total proceeds of $4,459, and recognized a net loss of $543.

In December 2014, we completed the sale of our water utility system in southwest Allen County Indiana to the City of Fort Wayne, Indiana for $67,011, which is comprised of $50,100 in addition to $16,911 the city initially paid the Company towards its water and wastewater system assets in the northern part of Fort Wayne in 2008. We recognized a gain on sale of $29,210 ($17,611 after-tax) in the fourth quarter of 2014. In addition, as a result of this transaction, Aqua Indiana expanded its sewer customer base by accepting new wastewater flows from the City. Additionally, in March, 2014, we completed the sale of our wastewater treatment facility in Georgia.

In 2013, in accordance with our strategy to focus our resources on states where we have critical mass to improve our economies of scale and expect future economic growth, we sold water and wastewater systems in Florida, through five separate sales transactions. The Company received total net proceeds from these sales of $88,934, and recognized a gain on sale of $21,178 ($13,766 after-tax).

Additionally, in June 2013, the Company sold a water and wastewater utility system in Texas for net proceeds of $3,400. The sale resulted in the recognition of a gain on sale of these assets, net of expenses, of $1,025 ($615 after-tax).

Despite these transactions, one of our primary strategies continues to be to acquire additional utility systems, to maintain our existing systems where there is a strategic business benefit, and to actively oppose unilateral efforts by municipal governments to acquire any of our operations.

**Sources of Capital**

Since net operating cash flow plus advances and contributions in aid of construction have not been sufficient to fully fund cash requirements, we issued $1,670,223 of long-term debt and obtained other short-term borrowings during the past five years. At December 31, 2017, we have a $250,000 long-term revolving credit facility that expires in February 2021, of which $19,811 was designated for letter of credit usage, $170,189 was available for borrowing, and $60,000 of borrowings were outstanding at December 31, 2017. In addition, we have short-term lines of credit of $135,500, of which $131,850 was available as of December 31, 2017. These short-term lines of credit are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

Our consolidated balance sheet historically has had a negative working capital position, whereby routinely our current liabilities exceed our current assets. Management believes that internally-generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

Our loan and debt agreements require us to comply with certain financial covenants, which among other things, subject to specific exceptions, limit the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2017, we were in compliance with our debt covenants under our credit facilities. Failure to comply with our debt covenants could result in an event of default, which could result in us being required to repay or refinance our borrowings before their due date, possibly limiting our future borrowings, and increasing our borrowing costs.

The Company has a universal shelf registration statement, which was filed with the SEC in February 2015, which allows for the potential future offer and sale by us, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices. The Company's Board of Directors has authorized the Company to issue up to $500,000 of our common stock, preferred stock, debt securities, and other securities specified therein under this universal shelf registration statement. The Company has not issued any securities to date under this universal shelf registration statement. This registration statement expires in February 2018, and we intend to file a new three-year universal shelf registration statement.

In addition, we have a shelf registration statement, which was filed with the SEC on February 27, 2015, to permit the offering from time to time of an aggregate of $500,000 of our common stock and shares of preferred stock in connection with acquisitions. During 2016, we issued 439,943 shares of common stock totaling $12,845 to acquire a water system. The balance remaining available for use under the acquisition shelf registration as of December 31, 2017 is $487,155.

We will determine the form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement at the time of issuance.

We offer a Dividend Reinvestment and Direct Stock Purchase Plan (the "Plan") that provides a convenient and economical way to purchase shares of the Company. Under the direct stock purchase portion of the Plan, shares are issued throughout the year. The dividend reinvestment portion of the Plan offers a five percent discount on the purchase of shares of common stock with reinvested dividends. As of the December 2017 dividend payment, holders of 9.9% of the common shares outstanding participated in the dividend reinvestment portion of the Plan. The shares issued under the Plan are either original issue shares or shares purchased by the Company's transfer agent in the open-market. During the past five years, we have sold 551,788 original issue shares of common stock for net proceeds of $13,625 through the dividend reinvestment portion of the Plan, and we used the proceeds to invest in our operating subsidiaries, to repay short-term debt, and for general corporate purposes. In 2017, 2016, and 2015, 447,753, 484,645, and 535,439 shares of common stock were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $15,168, $14,916, and $14,380, respectively.

The Company's Board of Directors has authorized us to repurchase our common stock, from time to time, in the open market or through privately negotiated transactions. In 2014, we repurchased 560,000 shares of our common stock in the open market for $13,280. In December 2014, the Company's Board of Directors authorized a share buyback program of up to 1,000,000 shares to minimize share dilution through timely and orderly share repurchases. In December 2015, the Company's Board of Directors added 400,000 shares to this program. In 2015, we repurchased 805,000 shares of our common stock in the open market for $20,502. In 2016, we did not repurchase any shares of our common stock in the open market under this program. This program expired on December 31, 2016.

**Off-Balance Sheet Financing Arrangements**
We do not engage in any off-balance sheet financing arrangements. We do not have any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities.

(*In thousands of dollars, except per share amounts*)

**Contractual Obligations**

The following table summarizes our contractual cash obligations as of December 31, 2017:

| | | Payments Due By Period | | | |
|---|---|---|---|---|---|
| | Total | Less than 1 year | 1 - 3 years | 3 - 5 years | More than 5 years |
| Long-term debt | $ 2,143,127 | $ 113,769 | $ 189,025 | $ 121,966 | $ 1,718,367 |
| Interest on fixed-rate, long-term debt (1) | 1,366,407 | 77,497 | 148,277 | 131,248 | 1,009,385 |
| Operating leases (2) | 20,080 | 1,919 | 2,957 | 2,148 | 13,056 |
| Unconditional purchase obligations (3) | 31,510 | 4,853 | 8,989 | 8,024 | 9,644 |
| Other purchase obligations (4) | 63,064 | 63,064 | - | - | - |
| Pension plan obligation (5) | 12,484 | 12,484 | - | - | - |
| Other obligations (6) | 11,932 | 1,156 | 2,035 | 2,118 | 6,623 |
| Total | $ 3,648,604 | $ 274,742 | $ 351,283 | $ 265,504 | $ 2,757,075 |

(1) Represents interest payable on fixed rate, long-term debt. Amounts reported may differ from actual due to future refinancing of debt.

(2) Represents operating leases that are noncancelable, before expiration, for the lease of motor vehicles, buildings, land and other equipment.

(3) Represents our commitment to purchase minimum quantities of water as stipulated in agreements with other water purveyors. We use purchased water to supplement our water supply, particularly during periods of peak customer demand. Our actual purchases may exceed the minimum required levels.

(4) Represents an approximation of the open purchase orders for goods and services purchased in the ordinary course of business.

(5) Represents contributions to be made to pension plan.

(6) Represents expenditures estimated to be required under legal and binding contractual obligations.

In addition to these obligations, we pay refunds on customers' advances for construction over a specific period of time based on operating revenues related to developer-installed water mains or as new customers are connected to and take service from such mains. After all refunds are paid, any remaining balance is transferred to contributions in aid of construction. The refund amounts are not included in the above table because the refund amounts and timing are dependent upon several variables, including new customer connections, customer consumption levels and future rate increases, which cannot be accurately estimated. Portions of these refund amounts are payable annually through 2027 and amounts not paid by the contract expiration dates become non-refundable.

In addition to the obligations disclosed in the contractual obligations table above, we have uncertain tax positions of $17,583. Although we believe our tax positions comply with applicable law, we have made judgments as to the sustainability of each uncertain tax position based on its technical merits. Due to the uncertainty of future cash outflows, if any, associated with our uncertain tax positions, we are unable to make a reasonable estimate of the timing or amounts that may be paid. See Note 7 – *Income Taxes* in this Annual Report for further information on our uncertain tax positions.

We will fund these contractual obligations with cash flows from operations and liquidity sources held by or available to us.

(*In thousands of dollars, except per share amounts*)

The Company is routinely involved in legal matters, including both asserted and unasserted legal claims, during the ordinary course of business. See Note 9 – *Commitments and Contingencies* in this Annual Report for a discussion of the Company's legal matters. It is not always possible for management to make a meaningful estimate of the potential loss or range of loss associated with such litigation. Also, unanticipated changes in circumstances and/or revisions to the assessed probability of the outcomes of legal matters could result in expenses being incurred in future periods as well as an increase in actual cash required to resolve the legal matter.

**Capitalization**

The following table summarizes our capitalization during the past five years:

| December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Long-term debt (1) | 52.3% | 50.8% | 50.8% | 49.4% | 50.3% |
| Aqua America stockholders' equity | 47.7% | 49.2% | 49.2% | 50.6% | 49.7% |
| | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

(1) Includes current portion, as well as our borrowings under a variable rate revolving credit agreement of $60,000 at December 31, 2017, $25,000 at December 31, 2016, $60,000 at December 31, 2015, $72,000 at December 31, 2014, and $0 at December 31, 2013.

Over the past five years, the changes in the capitalization ratios primarily resulted from the issuance of debt to finance our acquisitions and capital program, growth in net income, the issuance of common stock, and the declaration of dividends.

## INCOME TAX MATTERS

**Tax Cuts and Jobs Act of 2017**

On December 22, 2017, President Trump signed the TCJA into law. Substantially all of the provisions of the TCJA are effective for tax years beginning after December 31, 2017, except as noted below. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes include a reduction in the corporate federal income tax rate from 35% to 21%, and a limitation on the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific provisions related to regulated public utilities in the TCJA generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017.

The Company's regulated operations accounting for income taxes are impacted by the FASB's accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates to 21% under the provisions of the TCJA results in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes are to be passed back to customers for certain accelerated tax depreciation benefits. Potential refunds of other deferred taxes will be determined by our state regulators. Our state regulatory commissions have or are in the process of issuing procedural orders directing how the tax law changes are to be reflected in our utility customer rates. In addition, we have two rate cases currently in progress in two states in which TCJA is expected to be addressed in the new base rates. The December 31, 2017 consolidated balance sheet reflects the impact of the TCJA on our regulatory assets and liabilities, which reduced our regulatory assets by $357,262 and increased our regulatory liabilities by $303,320. These adjustments had no impact on our 2017 cash flows.

As of December 31, 2017, resulting from the TCJA enactment, our deferred income tax assets and liabilities were revalued based upon the new corporate income tax rate of 21%. The revaluation of our deferred income tax assets and liabilities resulted in the recognition of additional income tax expense of $3,141 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates.

## CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our financial condition and results of operations are impacted by the methods, assumptions, and estimates used in the application of critical accounting policies. The following accounting policies are particularly important to our financial condition or results of operations, and require estimates or other judgments of matters of uncertainty. Changes in the estimates or other judgments included within these accounting policies could result in a significant change to the financial statements. We believe our most critical accounting policies include revenue recognition, the use of regulatory assets and liabilities, the valuation of our long-lived assets (which consist primarily of utility plant in service, regulatory assets, and goodwill) our accounting for post-retirement benefits, and our accounting for income taxes. We have discussed the selection and development of our critical accounting policies and estimates with the Audit Committee of the Board of Directors.

***Revenue Recognition*** ─ Our utility revenues recognized in an accounting period include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. The estimated usage is based on our judgment and assumptions; our actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates is determined.
In Virginia, we commence the billing of our utility customers, under new rates, upon authorization from the respective utility commission and before the final commission rate order is issued. The revenue recognized reflects an estimate based on our judgment of the final outcome of the commission's ruling. We monitor the applicable facts and circumstances regularly, and revise the estimate as required. The revenue billed and collected prior to the final ruling is subject to refund based on the commission's final ruling.

***Regulatory Assets and Liabilities*** ─ We defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that these costs and credits will be recognized in the rate-making process in a period different from when the costs and credits were incurred. These deferred amounts, both assets and liabilities, are then recognized in the income statement in the same period that they are reflected in our rates charged for water or wastewater service. In the event that our assessment as to the probability of the inclusion in the rate-making process is incorrect, the associated regulatory asset or liability would be adjusted to reflect the change in our assessment or change in regulatory approval.

***Valuation of Long-Lived Assets, Goodwill and Intangible Assets*** ─ We review our long-lived assets for impairment, including utility plant in service and investment in joint venture. We also review regulatory assets for the continued application of the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations. Our review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely.
For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission. For our equity method investment in joint venture, the Company evaluates whether it has experienced a decline in the value of its investment that is other than temporary in nature. We would recognize an impairment loss if the fair value of our investment is less than the carrying amount of the investment, and the decline in value is considered other than temporary. Additionally, the Company would recognize its share of an impairment loss if the joint venture determines that the carrying amount of the joint venture's assets exceeds the sum of the joint venture's undiscounted estimated cash flows.

Our long-lived assets, which consist primarily of utility plant in service, regulatory assets and investment in joint venture, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, we determine whether it is more likely than not that the fair value of those assets is less than their carrying amount. If we determine that it is more likely than not (that is, the likelihood of more than 50 percent), we would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, we would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. This assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. These estimates include significant inherent uncertainties, since they involve forecasting future events. If changes in circumstances or events occur, or estimates and assumptions that were used in this review are changed, we may be required to record an impairment charge on our long-lived assets.

We have an investment in a joint venture, for which we own 49%, and use the equity method of accounting to account for this joint venture. The joint venture operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north central Pennsylvania. In the fourth quarter of 2015, the joint venture recognized an impairment charge on its long-lived assets, of which the Company's share totaled $32,975 ($21,433 after-tax), representing our share of the noncash impairment charge. Refer to Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*, and *Investment in Joint Venture* in this Annual Report for additional information regarding the review of long-lived assets for impairment. See also *Consolidated Results – Equity (Earnings) Loss in Joint Venture* above in this Annual Report.

We test the goodwill attributable for each of our reporting units for impairment at least annually on July 31, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. If changes in circumstances or events occur, or estimates and assumptions that were used in our impairment test change, we may be required to record an impairment charge for goodwill. Refer to Note 1 – *Summary of Significant Accounting Policies – Goodwill* in this Annual Report for information regarding the results of our annual impairment test.

***Accounting for Post-Retirement Benefits*** ─ We maintain a qualified and a non-qualified defined benefit pension plan and plans that provide for post-retirement benefits other than pensions. Accounting for pension and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by our employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from our actuarial consultant, who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefits expense that we recognize.

Our discount rate assumption, which is used to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds, all of which were noncallable (or callable with make-whole provisions), and have at least $50,000 in outstanding value. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the projected benefit payments of the plans. A decrease in the discount rate would increase our post-retirement benefits expense and benefit obligation. After reviewing the hypothetical portfolio of bonds, we selected a discount rate of 3.66% for our pension plan and 3.73% for our other post-retirement benefit plans as of December 31, 2017, which represent a 47 and 52 basis-point decrease as compared to the discount rates selected at December 31, 2016, respectively. Our post-retirement benefits expense under these plans is determined using the discount rate as of the beginning of the year, which was 4.13% for our pension plan and 4.25% for our other-postretirement benefit plans for 2017, and will be 3.66% for our pension plan and 3.73% for our other post-retirement benefit plans for 2018.

Our expected return on plan assets is determined by evaluating the asset class return expectations with our advisors as well as actual, long-term, historical results of our asset returns. The Company's market-related value of plan assets is equal to the fair value of the plans' assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets, which is a component of post-retirement benefits expense. The allocation of our plans' assets impacts our expected return on plan assets. In 2017, we changed the targeted allocation of the plans' assets to reflect 50% to 70% return seeking assets, and 30% to 50% liability hedging assets, which replaced the former targeted allocation of 25% to 75% domestic equities, 0% to 10% international equities, 25% to 50% fixed income, 0% to 5% alternative investments, and 0% to 20% cash and cash equivalents. Our post-retirement benefits expense increases as the expected return on plan assets decreases. We believe that our actual long-term asset allocations on average will approximate our targeted allocations. Our targeted allocations are driven by our investment strategy to earn a reasonable rate of return while maintaining risk at acceptable levels through the diversification of investments across and within various asset categories. For 2017, we used a 7.00% expected return on plan assets assumption which will decrease to 6.75% for 2018.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and our funding policy, during 2018 our pension contribution is expected to be $12,484. Future years' contributions will be subject to economic conditions, plan participant data and the funding rules in effect at such time as the funding calculations are performed, though we expect future changes in the amount of contributions and expense recognized to be generally included in customer rates.

***Accounting for Income Taxes*** ─ We estimate the amount of income tax payable or refundable for the current year and the deferred income tax liabilities and assets that results from estimating temporary differences resulting from the treatment of specific items, such as depreciation, for tax and financial statement reporting. Generally, these differences result in the recognition of a deferred tax asset or liability on our consolidated balance sheet and require us to make judgments regarding the probability of the ultimate tax impact of the various transactions we enter into. Based on these judgments, we may record tax reserves or adjustments to valuation allowances on deferred tax assets to reflect the expected realization of future tax benefits. Actual income taxes could vary from these estimates and changes in these estimates can increase income tax expense in the period that these changes in estimates occur.

Our determination of what qualifies as a capital cost versus a tax deduction, for qualifying utility asset improvements, as it relates to our income tax accounting method change beginning in 2012, is subject to subsequent adjustment as well as IRS audits, changes in income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures, or qualifying utility asset improvements, the expiration of a statute of limitations, or other unforeseen matters could impact the tax benefits that have already been recognized. We establish reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. We believe our tax positions comply with applicable law and that we have adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than our estimates recorded, we would then need to adjust our tax reserves which could result in additional income tax expense or benefits in the period that this information is known.

## IMPACT OF RECENT ACCOUNTING PRONOUNCEMENTS

We describe the impact of recent accounting pronouncements in Note 1 – *Summary of Significant Accounting Policies* in this Annual Report.

**AQUA AMERICA, INC. AND SUBSIDIARIES**
**Management's Report On Internal Control Over Financial Reporting**

Management of Aqua America, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. The Company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In assessing the effectiveness of internal control over financial reporting, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework* (2013). As a result of management's assessment and based on the criteria in the framework, management has concluded that, as of December 31, 2017, the Company's internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2017 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Christopher H. Franklin
*Chairman, President and Chief Executive Officer*

David P. Smeltzer
*Executive Vice President and Chief Financial Officer*

February 28, 2018

## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Aqua America, Inc.:

***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheets and statements of capitalization of Aqua America Inc. and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of net income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

***Basis for Opinions***

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania

February 28, 2018

We have served as the Company's auditor since 2000.

## AQUA AMERICA, INC. AND SUBSIDIARIES
## CONSOLIDATED BALANCE SHEETS
## (In thousands of dollars, except per share amounts)

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| **Assets** | | |
| Property, plant and equipment, at cost | $ 7,003,993 | $ 6,509,117 |
| Less: accumulated depreciation | 1,604,133 | 1,507,502 |
| Net property, plant and equipment | 5,399,860 | 5,001,615 |
| | | |
| Current assets: | | |
| Cash and cash equivalents | 4,204 | 3,763 |
| Accounts receivable and unbilled revenues, net | 98,596 | 97,394 |
| Inventory, materials and supplies | 14,361 | 12,961 |
| Prepayments and other current assets | 12,542 | 12,804 |
| Assets held for sale | 1,543 | 1,728 |
| Total current assets | 131,246 | 128,650 |
| | | |
| Regulatory assets | 713,971 | 948,647 |
| Deferred charges and other assets, net | 38,485 | 30,845 |
| Investment in joint venture | 6,671 | 7,026 |
| Goodwill | 42,230 | 42,208 |
| Total assets | $ 6,332,463 | $ 6,158,991 |
| **Liabilities and Equity** | | |
| Aqua America stockholders' equity: | | |
| Common stock at $.50 par value, authorized 300,000,000 shares, issued 180,700,251 and 180,311,345 in 2017 and 2016 | $ 90,350 | $ 90,155 |
| Capital in excess of par value | 807,135 | 797,513 |
| Retained earnings | 1,132,556 | 1,032,844 |
| Treasury stock, at cost, 2,986,308 and 2,916,969 shares in 2017 and 2016 | (73,280) | (71,113) |
| Accumulated other comprehensive income | 860 | 669 |
| Total stockholders' equity | 1,957,621 | 1,850,068 |
| | | |
| Long-term debt, excluding current portion | 2,029,358 | 1,759,962 |
| Less: debt issuance costs | 21,605 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | 2,007,753 | 1,737,605 |
| Commitments and contingencies (See Note 9) | | |
| | | |
| Current liabilities: | | |
| Current portion of long-term debt | 113,769 | 150,671 |
| Loans payable | 3,650 | 6,535 |
| Accounts payable | 59,165 | 47,256 |
| Book overdraft | 21,629 | 12,616 |
| Accrued interest | 21,359 | 18,367 |
| Accrued taxes | 23,764 | 25,607 |
| Other accrued liabilities | 41,152 | 40,484 |
| Total current liabilities | 284,488 | 301,536 |
| | | |
| Deferred credits and other liabilities: | | |
| Deferred income taxes and investment tax credits | 769,073 | 1,269,253 |
| Customers' advances for construction | 93,186 | 91,843 |
| Regulatory liabilities | 541,910 | 250,635 |
| Other | 107,341 | 115,583 |
| Total deferred credits and other liabilities | 1,511,510 | 1,727,314 |
| | | |
| Contributions in aid of construction | 571,091 | 542,468 |
| Total liabilities and equity | $ 6,332,463 | $ 6,158,991 |

See accompanying notes to consolidated financial statements.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME

(In thousands of dollars)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Operating revenues | $ 809,525 | $ 819,875 | $ 814,204 |
| Operating expenses: | | | |
| Operations and maintenance | 287,206 | 304,897 | 309,310 |
| Depreciation | 136,302 | 130,987 | 125,290 |
| Amortization | 422 | 2,021 | 3,447 |
| Taxes other than income taxes | 56,628 | 56,385 | 55,057 |
| Total operating expenses | 480,558 | 494,290 | 493,104 |
| Operating income | 328,967 | 325,585 | 321,100 |
| Other expense (income): | | | |
| Interest expense, net | 88,341 | 80,594 | 76,536 |
| Allowance for funds used during construction | (15,211) | (8,815) | (6,219) |
| Gain on sale of other assets | (484) | (378) | (468) |
| Gain on extinguishment of debt | - | - | (678) |
| Equity (earnings) loss in joint venture | (331) | (976) | 35,177 |
| Income before income taxes | 256,652 | 255,160 | 216,752 |
| Provision for income taxes | 16,914 | 20,978 | 14,962 |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| Net income per common share: | | | |
| Basic | $ 1.35 | $ 1.32 | $ 1.14 |
| Diluted | $ 1.35 | $ 1.32 | $ 1.14 |
| Average common shares outstanding during the period: | | | |
| Basic | 177,612 | 177,273 | 176,788 |
| Diluted | 178,175 | 177,846 | 177,517 |
| Cash dividends declared per common share | $ 0.7920 | $ 0.7386 | $ 0.6860 |

See accompanying notes to consolidated financial statements.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands of dollars)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| Other comprehensive income, net of tax: | | | |
| Unrealized holding gain (loss) on investments, net of tax expense (benefit) of $102, $21, and $(53) for the years ended December 31, 2017, 2016, and 2015, respectively | 191 | 39 | (101) |
| Reclassification of gain on sale of investment to net income, net of tax expense of $30 for the twelve months ended December 31, 2016 (1) | - | (57) | - |
| Comprehensive income | $ 239,929 | $ 234,164 | $ 201,689 |

See accompanying notes to consolidated financial statements.

(1) Amount of pre-tax gain of $87 reclassified from accumulated other comprehensive income to gain on sale of other assets on the consolidated statement of net income for the year ended December 31, 2016.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CAPITALIZATION

(In thousands of dollars, except per share amounts)

| | | December 31, 2017 | December 31, 2016 |
|---|---|---|---|
| Aqua America stockholders' equity: | | | |
| Common stock, $.50 par value | | $ 90,350 | $ 90,155 |
| Capital in excess of par value | | 807,135 | 797,513 |
| Retained earnings | | 1,132,556 | 1,032,844 |
| Treasury stock, at cost | | (73,280) | (71,113) |
| Accumulated other comprehensive income | | 860 | 669 |
| Total stockholders' equity | | 1,957,621 | 1,850,068 |
| Long-term debt of subsidiaries (substantially collateralized by utility plant): | | | |
| Interest Rate Range | Maturity Date Range | | |
| 0.00% to 0.99% | 2023 to 2033 | 4,196 | 4,661 |
| 1.00% to 1.99% | 2019 to 2035 | 12,914 | 15,539 |
| 2.00% to 2.99% | 2019 to 2033 | 19,254 | 19,668 |
| 3.00% to 3.99% | 2019 to 2056 | 475,232 | 381,944 |
| 4.00% to 4.99% | 2020 to 2057 | 631,599 | 487,318 |
| 5.00% to 5.99% | 2019 to 2043 | 205,578 | 213,078 |
| 6.00% to 6.99% | 2018 to 2036 | 44,000 | 52,985 |
| 7.00% to 7.99% | 2022 to 2027 | 32,335 | 33,066 |
| 8.00% to 8.99% | 2021 to 2025 | 6,092 | 6,565 |
| 9.00% to 9.99% | 2018 to 2026 | 25,700 | 26,400 |
| 10.00% to 10.99% | 2018 | 6,000 | 6,000 |
| | | 1,462,900 | 1,247,224 |
| Notes payable to bank under revolving credit agreement, variable rate, due 2021 | | 60,000 | 25,000 |
| Unsecured notes payable: | | | |
| Bank notes at 1.975% and 2.48% due 2018 and 2019 | | 100,000 | 100,000 |
| Notes at 3.01% and 3.59% due 2027 and 2041 | | 245,000 | 245,000 |
| Notes ranging from 4.62% to 4.87%, due 2018 through 2024 | | 122,800 | 133,600 |
| Notes ranging from 5.20% to 5.95%, due 2018 through 2037 | | 152,427 | 159,809 |
| Total long-term debt | | 2,143,127 | 1,910,633 |
| Current portion of long-term debt | | 113,769 | 150,671 |
| Long-term debt, excluding current portion | | 2,029,358 | 1,759,962 |
| Less: debt issuance costs | | 21,605 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | | 2,007,753 | 1,737,605 |
| Total capitalization | | $ 3,965,374 | $ 3,587,673 |

See accompanying notes to consolidated financial statements.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF EQUITY

(In thousands of dollars)

| | Common stock | Capital in excess of par value | Retained earnings | Treasury stock | Accumulated Other Comprehensive Income | Noncontrolling Interest | Total |
|---|---|---|---|---|---|---|---|
| Balance at December 31, 2014 | $ 89,296 | $ 758,145 | $ 849,952 | $ (42,838) | $ 788 | $ 40 | $ 1,655,383 |
| Net income | - | - | 201,790 | - | - | - | 201,790 |
| Other comprehensive loss, net of income tax benefit of $53 | - | - | - | - | (101) | - | (101) |
| Dividends | - | - | (121,248) | - | - | - | (121,248) |
| Sale of stock (26,295 shares) | 13 | 664 | - | - | - | - | 677 |
| Repurchase of stock (981,585 shares) | - | - | - | (25,247) | - | - | (25,247) |
| Equity compensation plan (321,402 shares) | 161 | (161) | - | - | - | - | - |
| Exercise of stock options (424,709 shares) | 212 | 7,328 | - | - | - | - | 7,540 |
| Stock-based compensation | - | 5,860 | (433) | - | - | - | 5,427 |
| Employee stock plan tax benefits | - | 2,602 | - | - | - | - | 2,602 |
| Other | - | (853) | - | - | - | (40) | (893) |
| Balance at December 31, 2015 | 89,682 | 773,585 | 930,061 | (68,085) | 687 | - | 1,725,930 |
| Net income | - | - | 234,182 | - | - | - | 234,182 |
| Other comprehensive loss, net of income tax benefit of $9 | - | - | - | - | (18) | - | (18) |
| Dividends | - | - | (130,923) | - | - | - | (130,923) |
| Stock issued for acquisition (439,943 shares) | 220 | 12,625 | - | - | - | - | 12,845 |
| Sale of stock (47,478 shares) | 24 | 1,364 | - | | - | - | 1,388 |
| Repurchase of stock (97,400 shares) | - | - | - | (3,028) | - | - | (3,028) |
| Equity compensation plan (231,502 shares) | 115 | (115) | - | - | - | - | - |
| Exercise of stock options (228,762 shares) | 114 | 4,146 | - | - | - | - | 4,260 |
| Stock-based compensation | - | 5,390 | (476) | - | - | - | 4,914 |
| Employee stock plan tax benefits | - | 1,329 | - | - | - | - | 1,329 |
| Other | - | (811) | - | - | - | - | (811) |
| Balance at December 31, 2016 | 90,155 | 797,513 | 1,032,844 | (71,113) | 669 | - | 1,850,068 |
| Net income | - | - | 239,738 | - | - | - | 239,738 |
| Other comprehensive income, net of income tax of $102 | - | - | - | - | 191 | - | 191 |
| Dividends | - | - | (140,660) | - | - | - | (140,660) |
| Sale of stock (45,121 shares) | 23 | 1,430 | - | - | - | - | 1,453 |
| Repurchase of stock (69,339 shares) | - | - | - | (2,167) | - | - | (2,167) |
| Equity compensation plan (169,258 shares) | 85 | (85) | - | - | - | - | - |
| Exercise of stock options (174,527 shares) | 87 | 2,786 | - | - | - | - | 2,873 |
| Stock-based compensation | - | 6,342 | (348) | - | - | - | 5,994 |
| Cumulative effect of change in accounting principle - windfall tax benefit | - | - | 982 | - | - | - | 982 |
| Other | - | (851) | - | - | - | - | (851) |
| Balance at December 31, 2017 | $ 90,350 | $ 807,135 | $ 1,132,556 | $ (73,280) | $ 860 | $ - | $ 1,957,621 |

See accompanying notes to consolidated financial statements.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands of dollars)

| | Years ended December 31, 2017 | 2016 | 2015 |
|---|---|---|---|
| Cash flows from operating activities: | | | |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| Adjustments to reconcile net income to net cash flows from operating activities: | | | |
| Depreciation and amortization | 136,724 | 133,008 | 128,737 |
| Deferred income taxes | 13,780 | 17,250 | 16,506 |
| Provision for doubtful accounts | 4,986 | 5,505 | 5,765 |
| Stock-based compensation | 6,342 | 5,390 | 5,860 |
| (Gain) loss on sale of utility system and market-based business unit | 774 | (744) | - |
| Gain on sale of other assets | (484) | (378) | (468) |
| Gain on extinguishment of debt | - | - | (678) |
| Equity (earnings) loss in joint venture | (331) | (976) | 35,177 |
| Net change in receivables, inventory and prepayments | (6,458) | (3,974) | (6,520) |
| Net change in payables, accrued interest, accrued taxes and other accrued liabilities | (763) | 4,756 | (3,469) |
| Pension and other postretirement benefits contributions | (16,240) | (9,505) | (16,184) |
| Other | 3,250 | 11,649 | 4,278 |
| Net cash flows from operating activities | 381,318 | 396,163 | 370,794 |
| Cash flows from investing activities: | | | |
| Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $3,578, $2,220, and $1,598 | (478,089) | (382,996) | (364,689) |
| Acquisitions of utility systems and other, net | (5,860) | (9,423) | (28,989) |
| Release of funds previously restricted for construction activity | - | - | 47 |
| Net proceeds from the sale of utility systems and other assets | 1,342 | 7,746 | 648 |
| Other | 2,223 | 1,464 | (1,079) |
| Net cash flows used in investing activities | (480,384) | (383,209) | (394,062) |
| Cash flows from financing activities: | | | |
| Customers' advances and contributions in aid of construction | 7,312 | 7,263 | 5,904 |
| Repayments of customers' advances | (6,536) | (3,763) | (3,977) |
| Net repayments of short-term debt | (2,885) | (10,186) | (1,677) |
| Proceeds from long-term debt | 591,024 | 503,586 | 560,544 |
| Repayments of long-term debt | (359,068) | (373,087) | (400,407) |
| Change in cash overdraft position | 9,012 | (8,076) | (739) |
| Proceeds from issuing common stock | 1,453 | 1,388 | 677 |
| Proceeds from exercised stock options | 2,873 | 4,260 | 7,540 |
| Share-based compensation windfall tax benefits | - | 1,332 | 1,842 |
| Repurchase of common stock | (2,167) | (3,028) | (25,247) |
| Dividends paid on common stock | (140,660) | (130,923) | (121,248) |
| Other | (851) | (1,186) | (853) |
| Net cash flows (used in) from financing activities | 99,507 | (12,420) | 22,359 |
| Net increase (decrease) in cash and cash equivalents | 441 | 534 | (909) |
| Cash and cash equivalents at beginning of year | 3,763 | 3,229 | 4,138 |
| Cash and cash equivalents at end of year | $ 4,204 | $ 3,763 | $ 3,229 |
| Cash paid during the year for: | | | |
| Interest, net of amounts capitalized | $ 81,771 | $ 72,662 | $ 74,724 |
| Income taxes | 3,177 | 2,739 | 6,902 |
| Non-cash investing activities: | | | |
| Property, plant and equipment additions purchased at the period end, but not yet paid | $ 45,385 | $ 35,145 | $ 25,612 |
| Non-cash customer advances for construction | 39,220 | 26,234 | 27,992 |

See accompanying notes to consolidated financial statements.

See Note 2 – *Acquisitions,* Note 10 – *Long-term Debt and Loans Payable*, and Note 14 – *Employee Stock and Incentive Plan* for a description of non-cash activities.

**Note 1 – *Summary of Significant Accounting Policies***

***Nature of Operations*** ─ Aqua America, Inc. ("Aqua America," the "Company," "we," "our", or "us") is the holding company for regulated utilities providing water or wastewater services concentrated in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 52% of our operating revenues and approximately 74% of our net income for 2017. As of December 31, 2017, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of people we serve. Aqua Pennsylvania's service territory is located in the suburban areas north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. The Company's other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater services through two operating and maintenance contracts with municipal authorities close to our utility companies' service territory; and offers, through a third party, water and wastewater line repair service and protection solutions to households. In 2017, we completed the sale of business units that are reported within the Company's market-based subsidiary, Aqua Resources, which installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, and repaired and performed maintenance on water and wastewater systems. Additionally, during 2016 we completed the sale of business units within Aqua Resources, which were reported as assets held for sale in the Company's consolidated balance sheets, which provided liquid waste hauling and disposal services, and inspection, and cleaning and repair of storm and sanitary wastewater lines.

The Company has identified ten operating segments and has one reportable segment named the Regulated segment. The reportable segment is comprised of eight operating segments for our water and wastewater regulated utility companies which are organized by the states where we provide these services. These operating segments are aggregated into one reportable segment since each of the Company's operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. In addition, Aqua Resources and Aqua Infrastructure are not quantitatively significant to be reportable and are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated segment and intersegment eliminations.

***Regulation*** ─ Most of the operating companies that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. The respective utility commissions have jurisdiction with respect to rates, service, accounting procedures, issuance of securities, acquisitions and other matters. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. Regulated public utilities follow the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in rates.

***Use of Estimates in Preparation of Consolidated Financial Statements*** ─ The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

***Basis of Presentation –*** The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated. Certain prior period amounts have been reclassified to conform to the current period presentation in the consolidated statements of cash flows:

- pension and other postretirement benefit contributions; and
- as a result of the adoption in 2017 of the FASB's accounting guidance on the classification of certain cash receipts and cash payments, the presentation of debt extinguishment costs (refer to Note 1 – *Summary of Significant Accounting Policies, Recent Accounting Pronouncements)*.

Additionally, certain prior period amounts have been reclassified to conform to the current period presentation:

- in the consolidated balance sheets for the presentation of book overdraft, and
- in Note 17 – *Segment Information* of total assets for Other and Eliminations for the reclassification of regulatory assets previously reflected within Other and Eliminations that are now presented with the Regulated segment.

***Recognition of Revenues ─*** Revenues in our Regulated segment principally include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the latest billing to the end of the accounting period. In addition, the Company's market-based subsidiary Aqua Resources recognizes revenues when services are performed and Aqua Infrastructure recognizes revenues when services are performed. The Company's market-based subsidiaries recognized revenues of $4,798 in 2017, $20,091 in 2016, and $34,909 in 2015.

***Property, Plant and Equipment and Depreciation ─*** Property, plant and equipment consist primarily of utility plant. The cost of additions includes contracted cost, direct labor and fringe benefits, materials, overheads, and for additions meeting certain criteria, allowance for funds used during construction. Water systems acquired are typically recorded at estimated original cost of utility plant when first devoted to utility service and the applicable depreciation is recorded to accumulated depreciation. The difference between the estimated original cost, less applicable accumulated depreciation, and the purchase price is recorded as goodwill, or as an acquisition adjustment within utility plant as permitted by the applicable regulatory jurisdiction. At December 31, 2017, utility plant includes a net credit acquisition adjustment of $24,550, which is generally being amortized from 2 to 59 years. Amortization of the acquisition adjustments totaled $2,774 in 2017, $2,223 in 2016, and $2,556 in 2015.

Utility expenditures for maintenance and repairs, including major maintenance projects and minor renewals and betterments, are charged to operating expenses when incurred in accordance with the system of accounts prescribed by the utility commissions of the states in which the company operates. The cost of new units of property and betterments are capitalized. Utility expenditures for water main cleaning and relining of pipes are deferred and recorded in net property, plant and equipment in accordance with the FASB's accounting guidance for regulated operations. As of December 31, 2017, $16,430 of these costs have been incurred since the last respective rate proceeding and the Company expects to recover these costs in future rates.

The cost of software upgrades and enhancements are capitalized if they result in added functionality, which enables the software to perform tasks it was previously incapable of performing. Information technology costs associated with major system installations, conversions and improvements, such as software training, data conversion and business process reengineering costs, are deferred as a regulatory asset if the Company expects to recover these costs in future rates. If these costs are not deferred, then these costs are charged to operating expenses when incurred. As of December 31, 2017, $34,775 of these costs have been deferred since the last respective rate proceeding as a regulatory asset, and the deferral is reported as a component of net property, plant and equipment.

When units of utility property are replaced, retired or abandoned, the recorded value thereof is credited to the asset account and such value, together with the net cost of removal, is charged to accumulated depreciation. To the extent the Company anticipates recovery of the cost of removal or other retirement costs through rates after the retirement costs are incurred, a regulatory asset is recorded as those costs are incurred. In some cases, the Company recovers retirement costs through rates during the life of the associated asset and before the costs are incurred. These amounts, which are not yet utilized, result in a regulatory liability being reported based on the amounts previously recovered through customer rates.

The straight-line remaining life method is used to compute depreciation on utility plant. Generally, the straight-line method is used with respect to transportation and mechanical equipment, office equipment and laboratory equipment.

Long-lived assets of the Company, which consist primarily of utility plant in service, regulatory assets, and investment in joint venture, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a disallowance of utility plant in service or regulatory assets by the respective utility commission, a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, the Company determines whether it is more likely than not that the fair value of those assets is less than their carrying amount. If the Company determines that it is more likely than not (that is, the likelihood of more than 50 percent), the Company would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, the Company would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. There has been no change in circumstances or events that have occurred that require adjustments to the carrying values of the Company's long-lived assets, except for an impairment charge recognized by the joint venture on its long-lived assets in 2015.

***Allowance for Funds Used During Construction*** ─ The allowance for funds used during construction ("AFUDC") represents the capitalized cost of funds used to finance the construction of utility plant. In general, AFUDC is applied to construction projects requiring more than one month to complete. No AFUDC is applied to projects funded by customer advances for construction, contributions in aid of construction, or applicable state-revolving fund loans. AFUDC includes the net cost of borrowed funds and a rate of return on other funds when used, and is recovered through water rates as the utility plant is depreciated. The amount of AFUDC related to equity funds in 2017 was $11,633, 2016 was $6,561, and 2015 was $4,621. No interest was capitalized by our market-based businesses.

***Cash and Cash Equivalents*** ─ The Company considers all highly liquid investments with an original maturity of three months or less, which are not restricted for construction activity, to be cash equivalents.

The Company had a book overdraft, which represents transactions that have not cleared the bank accounts at the end of the period, for specific disbursement cash accounts of $21,629 and $12,616 at December 31, 2017 and 2016, respectively. The Company transfers cash on an as-needed basis to fund these items as they clear the bank in subsequent periods. The balance of the book overdraft is reported as book overdraft and the change in the book overdraft balance is reported as cash flows from financing activities, due to our ability to fund the overdraft with the Company's credit facility.

***Funds Restricted for Construction Activity*** ─ The proceeds received from specific financings for construction and capital improvement of utility facilities are held in escrow until the designated expenditures are incurred. These amounts are reported as funds restricted for construction activity and are expected to be released over time as the capital projects are funded. As of December 31, 2017 and 2016, the Company did not have any funds restricted for construction activity.

***Accounts Receivable*** **─** Accounts receivable are recorded at the invoiced amounts, which consists of billed and unbilled revenues. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in our existing accounts receivable, and is determined based on historical write-off experience and the aging of account balances. The Company reviews the allowance for doubtful accounts quarterly. Account balances are written off against the allowance when it is probable the receivable will not be recovered. When utility customers request extended payment terms, credit is extended based on regulatory guidelines, and collateral is not required.

***Inventories, Materials and Supplies*** **─** Inventories are stated at cost. Cost is determined using the first-in, first-out method.

***Regulatory Assets, Deferred Charges and Other Assets*** **─** Deferred charges and other assets consist primarily of assets held to compensate employees in the future who participate in the Company's deferred compensation plan and other costs. Other costs, for which the Company has received or expects to receive prospective rate recovery, are deferred as a regulatory asset and amortized over the period of rate recovery in accordance with the FASB's accounting guidance for regulated operations. See Note – 6 *Regulatory Assets and Liabilities* for further information regarding the Company's regulatory assets.

Marketable equity securities are carried on the balance sheet at fair market value, and changes in fair value are included in other comprehensive income.

***Investment in Joint Venture*** **–** The Company uses the equity method of accounting to account for our 49% investment in a joint venture with a firm in the natural gas industry for the construction and operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania, which commenced operations in 2012. Our initial investment is carried at cost. Subsequently, the carrying amount of our investment is adjusted to reflect capital contributions or distributions, and our equity in earnings or losses since the commencement of the system's operations, as well as a decline in the fair value of our investment. Our share of equity earnings or losses in the joint venture is reported in the consolidated statements of net income as equity (earnings) losses in joint venture. During 2017 and 2016 we received distributions of $686 and $1,666, respectively. For our equity method investment in joint venture, the Company evaluates whether it has experienced a decline in the value of its investment that is other than temporary in nature. We would recognize an impairment loss if the fair value of our investment is less than the carrying amount of the investment, and the decline in value is considered other than temporary. Additionally, the Company would recognize its share of an impairment loss if the joint venture determines that the carrying amount of the joint venture's assets exceeds the sum of the joint venture's undiscounted estimated cash flows.

During 2015, the joint venture experienced the following events:

- a decline in natural gas prices, in 2015,
- a distinguishable reduction in the volume of water sales by the joint venture which led to a lowered forecast in 2015 on future water sales volumes by the joint venture, and
- changes in the natural gas industry and market conditions.

At the time, these market conditions were largely associated with natural gas prices, which sharply declined in 2015 and this downturn no longer appeared temporary and instead was expected to be a long-term condition. It was then determined that the carrying amount of the joint venture's long-lived assets exceeded the sum of the joint venture's undiscounted estimated cash flows, which resulted in the recognition of a noncash impairment charge of $32,975 ($21,433 after-tax) in 2015, representing the Company's share of the impairment charge. The impairment charge, on a pre-tax basis, is reported as equity loss in joint venture on the Company's consolidated statements of income. The amount of the impairment charge recognized by the joint venture is equal to the difference between the carrying value and the fair value of the long-lived assets. Fair value is estimated to be the present value of the future net cash flows associated with the assets, discounted using a rate commensurate with the risk and remaining life of the assets.

(In thousands of dollars, except per share amounts)

***Goodwill* ─** Goodwill represents the excess cost over the fair value of net tangible and identifiable intangible assets acquired through acquisitions. Goodwill is not amortized but is tested for impairment annually, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The Company tested the goodwill attributable for each of our reporting units for impairment as of July 31, 2017, and concluded that the estimated fair value of each reporting unit, which has goodwill recorded, exceeded the reporting unit's carrying amount, indicating that none of the Company's goodwill was impaired. The following table summarizes the changes in the Company's goodwill:

| | Regulated Segment | Other | Consolidated |
|---|---|---|---|
| Balance at December 31, 2015 | $ 27,246 | $ 6,620 | $ 33,866 |
| Goodwill acquired during year | 10,378 | - | 10,378 |
| Reclassifications to utility plant acquisition adjustment | (98) | - | (98) |
| Disposition | (159) | (1,232) | (1,391) |
| Classified as assets held for sale | | (547) | (547) |
| Balance at December 31, 2016 | 37,367 | 4,841 | 42,208 |
| Goodwill acquired during year | 72 | - | 72 |
| Reclassifications to utility plant acquisition adjustment | (50) | - | (50) |
| Balance at December 31, 2017 | $ 37,389 | $ 4,841 | $ 42,230 |

The reclassification of goodwill to utility plant acquisition adjustment results from a mechanism approved by the applicable utility commission. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

The goodwill allocated to a disposition or classified as assets held for sale results from the allocation of goodwill for market-based business units based on their relative fair value as compared to Aqua Resource's fair value.

***Income Taxes* ─** The Company accounts for some income and expense items in different time periods for financial and tax reporting purposes. Deferred income taxes are provided on specific temporary differences between the tax basis of the assets and liabilities, and the amounts at which they are carried in the consolidated financial statements. The income tax effect of temporary differences not currently recovered in rates is recorded as deferred taxes with an offsetting regulatory asset or liability. These deferred income taxes are based on the enacted tax rates expected to be in effect when such temporary differences are projected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amount more likely than not to be realized. Investment tax credits are deferred and amortized over the estimated useful lives of the related properties. Judgment is required in evaluating the Company's Federal and state tax positions. Despite management's belief that the Company's tax return positions are fully supportable, the Company establishes reserves when it believes that its tax positions are likely to be challenged and it may not fully prevail in these challenges. The Company's provision for income taxes includes interest, penalties and reserves for uncertain tax positions.

In 2012, the Company changed its tax method of accounting for qualifying utility asset improvement costs in Aqua Pennsylvania effective with the tax year ended December 31, 2012 and for prior tax years. The tax accounting method was changed to permit the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. This change was implemented in response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania, which provides for a reduction in current income tax expense as a result of the recognition of income tax benefits for qualifying utility asset improvements. This change results in a significant reduction in the effective income tax rate, a reduction in current income tax expense, and reduces the amount of taxes currently payable. For qualifying capital expenditures made prior to 2012, the resulting tax benefits have been deferred as of December 31, 2012 and, in accordance with the rate order, a ten year amortization of the income tax benefits, which reduces future income tax expense, commenced in 2013.

***Customers' Advances for Construction and Contributions in Aid of Construction*** ─ Water mains, other utility property or, in some instances, cash advances to reimburse the Company for its costs to construct water mains or other utility property, are contributed to the Company by customers, real estate developers and builders in order to extend utility service to their properties. The value of these contributions is recorded as customers' advances for construction. Over time, the amount of non-cash contributed property will vary based on the timing of the contribution of the non-cash property and the volume of non-cash contributed property received in connection with development in our service territories. The Company makes refunds on these advances over a specific period of time based on operating revenues related to the property, or as new customers are connected to and take service from the applicable water main. After all refunds are made, any remaining balance is transferred to contributions in aid of construction. Contributions in aid of construction include direct non-refundable contributions and the portion of customers' advances for construction that become non-refundable.

Based on regulatory conventions in states where the Company operates, generally our subsidiaries depreciate contributed property and amortize contributions in aid of construction at the composite rate of the related property. Contributions in aid of construction and customers' advances for construction are deducted from the Company's rate base for rate-making purposes, and therefore, no return is earned on contributed property.

***Stock-Based Compensation*** ─ The Company records compensation expense in the financial statements for stock-based awards based on the grant date fair value of those awards. Stock-based compensation expense includes an estimate for pre-vesting forfeitures and is recognized over the requisite service periods of the awards on either a straight-line basis, or the graded vesting method, which is generally commensurate with the vesting term.

***Fair Value Measurements*** – The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or

- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. Additionally, assets that are measured at fair value using the net asset value ("NAV") per share practical expedient are not classified in the fair value hierarchy. There have been no changes in the valuation techniques used to measure fair value or asset or liability transfers between the levels of the fair value hierarchy for the years ended December 31, 2017 and 2016.

***Recent Accounting Pronouncements*** ─ In March 2017, the FASB issued updated accounting guidance on the presentation of net periodic pension and postretirement benefit cost (net benefit cost). Historically, net benefit cost is reported as an employee cost within operating income, net of amounts capitalized. The guidance requires the bifurcation of net benefit cost. The service cost component will be presented with other employee compensation costs in operating income and the other components of net benefit cost will be reported separately outside of operating income, and will not be eligible for capitalization. The guidance is effective for annual reporting periods beginning after December 15, 2017, and interim periods within that reporting period, and is to be applied retrospectively for the presentation of the service cost component and the other components of net benefit cost, and on a prospective basis for the capitalization of only the service cost component of net benefit cost. On January 1, 2018, the Company adopted the updated guidance, which did not have a material impact on its results of operations or financial position.

In January 2017, the FASB issued updated accounting guidance that eliminates step 2 of the current goodwill impairment test, which requires a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment loss will instead be measured at the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance will be effective for annual reporting periods beginning after December 15, 2019, and interim periods within that reporting period, with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. The Company elected to early adopt the provisions of the updated guidance, for its annual impairment valuation performed in the third quarter of 2017, and the provisions of the updated guidance did not have an impact on its results of operations or financial position.

In August 2016, the FASB issued updated accounting guidance on the classification of certain cash receipts and cash payments in the statement of cash flows, which is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. This guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is permitted. The Company has elected to early adopt the provisions of the updated guidance, which resulted in the reclassification of $375 debt extinguishment costs for 2016, from cash flows from operating to financing activities to conform to the new classification.

In March 2016, the FASB issued updated accounting guidance on simplifying the accounting for share-based payments, which includes several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The updated guidance was effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years, with early adoption available. On January 1, 2017, the Company adopted the updated guidance, prospectively, and recognized a previously unrecognized windfall tax benefit for stock-based compensation of $982, associated with the Company's 2012 Federal net operating loss, which was recorded as an adjustment to deferred income taxes and retained earnings (refer to the presentation of "cumulative effect of change in accounting principle – windfall tax benefit" on the Company's Consolidated Statement of Equity). Additionally, income tax benefits in excess of compensation costs or tax deficiencies for share-based compensation are now recorded to our income tax provision, instead of historically to stockholder's equity, which impacts our effective tax rate. Lastly, all tax-related cash flows resulting from share-based payments are reported prospectively as operating activities on the statement of cash flows, a change from the historical requirement to present tax benefits as an inflow from financing activities and an outflow from operating activities.

In February 2016, the FASB issued updated accounting guidance on accounting for leases, which requires lessees to establish a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The updated accounting guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption available. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption. Refer to Note 9 – *Commitments and Contingencies* for further information on the Company's leases.

In January 2016, the FASB issued updated accounting guidance on the recognition and measurement of financial assets and financial liabilities, which amends certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including the requirement to measure certain equity investments at fair value with changes in fair value recognized in net income. The updated guidance is effective for interim and annual periods beginning after December 31, 2017. On January 1, 2018, the Company adopted the updated guidance, which did not have a material impact on its results of operations or financial position.

In May 2014, the FASB issued updated accounting guidance on recognizing revenue from contracts with customers, which outlines a single comprehensive model that an entity will apply to determine the measurement of revenue and timing of recognition. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The updated guidance also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. The updated guidance is effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the updated guidance in each prior reporting period, or (ii) a modified retrospective approach with the cumulative effect of initially adopting the updated guidance recognized through retained earnings at the date of adoption. In 2016, the Company performed an evaluation of the requirements of the updated guidance and believes that the impact of adoption will not result in a material change in the Company's measurement of revenue. In 2017, the American Institute of Certified Public Accountants ("AICPA") power and utility entities revenue recognition task force determined that contributions in aid of construction are not in the scope of the new standard, and submitted its recommendation to the AICPA's revenue recognition working group for approval. The Company implemented the updated guidance using the modified retrospective approach on January 1, 2018, which did not result in a change in the Company's measurement of revenue, and reached the following conclusions:

- The Company's tariff sale contracts, including those with lower credit quality customers, are generally deemed to be probable of collection, and thus the timing of revenue recognition will continue to be concurrent with the delivery of water and wastewater services, consistent with our current practice.
- Contributions in aid of construction are outside of the scope of the standard, and will continue to be accounted for as a noncurrent liability.

**Note 2 – *Acquisitions***

As part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of six municipalities for a total combined purchase price in cash of $150,700. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur by the end of 2018, which is subject to the timing of the regulatory approval process. These acquisitions are expected to add approximately 16,325 customers in two of the states in which the Company operates.

Pursuant to the Company's growth-through-acquisition strategy, the Company completed the following acquisitions:

In 2017, the Company completed four acquisitions of water and wastewater utility systems in two states adding 1,003 customers. The total purchase price of these utility systems consisted of $5,860 in cash, which resulted in $72 of goodwill being recorded. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2017 are $461. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

In January 2016, the Company acquired Superior Water Company, Inc., which provides public water service to 4,108 customers in portions of Berks, Chester, and Montgomery counties in Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $25,167, contributions in aid of construction of $16,565, and goodwill of $8,622. Additionally, during 2016, the Company completed 18 acquisitions of water and wastewater utility systems in various states adding 2,469 customers. The total purchase price of these utility systems consisted of $5,518 in cash. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired were $4,896 in 2017 and $3,809 in 2016. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

In April 2015, the Company acquired the water and wastewater utility system assets of North Maine Utilities, located in the Village of Glenview, Illinois serving approximately 7,400 customers. The total purchase price consisted of $23,079 in cash. The purchase price allocation for this acquisition consists primarily of acquired property, plant and equipment. Additionally, in 2015, the Company completed 14 acquisitions of water and wastewater utility systems in various states adding 3,170 customers. The total purchase price of these utility systems consisted of $5,210 in cash. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired were $10,868 in 2017, $10,708 in 2016, and $6,662 in 2015. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

**Note 3 –*Dispositions***

The following dispositions have not been presented as discontinued operations in the Company's consolidated financial statements as they do not qualify as discontinued operations, since their disposal does not represent a strategic shift that has a major effect on our operations or financial results. The gains or loss disclosed below are reported in the consolidated statements of net income as a component of operations and maintenance expense. These business units were reported within the Company's market-based subsidiary, Aqua Resources, and were included in "Other" in the Company's segment information.

*Dispositions Completed in 2017 and 2016*

In the second quarter of 2016, the Company decided to market for sale two business units that are reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, for which the sale was completed in January 2017. The other business unit repaired and performed maintenance on water and wastewater systems, for which the sale was completed in June 2017. These business units were reported as assets held for sale in the Company's December 31, 2016 consolidated balance sheet included in this Annual Report. These transactions resulted in total proceeds of $867 and the recognition of a net loss of $324.

In the third quarter of 2016, the Company marketed for sale a business unit which inspects, cleans and repairs storm and sanitary wastewater lines. In November 2016, this business unit was sold for $1,059 in cash and resulted in a loss on sale of $1,081. Further, in December 2015, the Company decided to sell a business unit which provides liquid waste hauling and disposal services. During the second quarter of 2016, this business unit was sold for $3,400 in cash and resulted in a gain on sale of $537.

(In thousands of dollars, except per share amounts)

*Dispositions Reported as Assets Held for Sale at December 31, 2017*

In the first quarter of 2017, the Company decided to market for sale a water system that serves approximately 265 customers. This water system is reported as assets held for sale in the Company's consolidated balance sheet.

**Note 4 – *Property, Plant and Equipment***

| | December 31, 2017 | December 31, 2016 | Approximate Range of Useful Lives | Weighted Average Useful Life |
|---|---|---|---|---|
| Utility plant and equipment: | | | | |
| Mains and accessories | $ 3,134,900 | $ 2,898,560 | 30 - 93 years | 79 years |
| Services, hydrants, treatment plants and reservoirs | 1,753,433 | 1,621,972 | 5 - 85 years | 51 years |
| Operations structures and water tanks | 296,736 | 283,635 | 14 - 85 years | 47 years |
| Miscellaneous pumping and purification equipment | 768,962 | 733,074 | 12 - 90 years | 41 years |
| Meters, data processing, transportation and operating equipment | 768,655 | 733,837 | 4 - 63 years | 25 years |
| Land and other non-depreciable assets | 103,357 | 98,529 | - | - |
| Utility plant and equipment | 6,826,043 | 6,369,607 | | |
| Utility construction work in progress | 201,902 | 163,565 | - | - |
| Net utility plant acquisition adjustment | (24,550) | (25,683) | 2 - 59 years | 31 years |
| Non-utility plant and equipment | 598 | 1,628 | 3 - 25 years | 13 years |
| Total property, plant and equipment | $ 7,003,993 | $ 6,509,117 | | |

**Note 5 – *Accounts Receivable***

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Billed utility revenue | $ 65,695 | $ 63,518 |
| Unbilled revenue | 35,042 | 34,635 |
| Other | 4,930 | 6,336 |
| | 105,667 | 104,489 |
| Less allowance for doubtful accounts | 7,071 | 7,095 |
| Net accounts receivable | $ 98,596 | $ 97,394 |

The Company's utility customers are located principally in the following states: 47% in Pennsylvania, 15% in Ohio, 10% in North Carolina, 8% in Texas, and 7% in Illinois. No single customer accounted for more than one percent of the Company's regulated operating revenues during the years ended December 31, 2017, 2016, and 2015. The following table summarizes the changes in the Company's allowance for doubtful accounts:

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Balance at January 1, | $ 7,095 | $ 5,873 | $ 5,365 |
| Amounts charged to expense | 4,986 | 5,500 | 5,762 |
| Accounts written off | (6,135) | (5,410) | (6,513) |
| Recoveries of accounts written off | 1,125 | 1,132 | 1,259 |
| Balance at December 31, | $ 7,071 | $ 7,095 | $ 5,873 |

(In thousands of dollars, except per share amounts)

**Note 6 – *Regulatory Assets and Liabilities***

The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. Except for income taxes, regulatory assets and regulatory liabilities are excluded from the Company's rate base and do not earn a return. The components of regulatory assets and regulatory liabilities are as follows:

| | December 31, 2017 | | December 31, 2016 | |
|---|---|---|---|---|
| | Regulatory Assets | Regulatory Liabilities | Regulatory Assets | Regulatory Liabilities |
| Income taxes | $ 584,067 | $ 438,750 | $ 814,418 | $ 157,266 |
| Utility plant retirement costs | 5,367 | 35,249 | 4,986 | 31,288 |
| Post-retirement benefits | 112,532 | 65,964 | 119,519 | 59,882 |
| Accrued vacation | 2,198 | - | 1,984 | - |
| Water tank painting | 3,259 | 1,855 | 2,111 | 2,143 |
| Fair value adjustment of long-term debt assumed in acquisition | 2,901 | - | 3,268 | - |
| Rate case filing expenses and other | 3,647 | 92 | 2,361 | 56 |
| | $ 713,971 | $ 541,910 | $ 948,647 | $ 250,635 |

Items giving rise to deferred state income taxes, as well as a portion of deferred Federal income taxes related to specific differences between tax and book depreciation expense, are recognized in the rate setting process on a cash basis or as a reduction in current income tax expense and will be recovered as they reverse. Amounts include differences that arise between specific utility asset improvement costs capitalized for book and deducted as an expense for tax purposes. Additionally, the recording of AFUDC for equity funds results in the recognition of a regulatory asset for income taxes, which represents amounts due related to the revenue requirement.

A portion of the regulatory liability for income taxes is related to Aqua Pennsylvania's income tax accounting change for the tax benefits realized on the Company's 2012 tax return, which have not yet reduced current income tax expense due to the ten year amortization period which began in 2013. This amortization was stipulated in a June 2012 rate order issued to Aqua Pennsylvania and is subject to specific parameters being met each year. Beginning in 2013, the Company amortized $38,000, annually, of its deferred income tax benefits, which reduced current income tax expense and increased the Company's net income by $16,734.

On December 22, 2017, President Trump signed the TCJA into law, which reduced the Federal corporate income tax rate from 35% to 21%. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rate to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes relating to certain accelerated tax depreciation benefits are to be passed back to customers. Potential refunds of other deferred taxes will be determined by our state regulators. The December 31, 2017 consolidated balance sheet reflects the impact of the TCJA on our regulatory assets and liabilities, and reduces our regulatory assets by $357,262 and increases our regulatory liabilities by $303,320. These adjustments had no impact on our 2017 cash flows.

The regulatory asset for utility plant retirement costs, including cost of removal, represents costs already incurred that are expected to be recovered in future rates over a five year recovery period. The regulatory liability for utility plant retirement costs represents amounts recovered through rates during the life of the associated asset and before the costs are incurred.

The regulatory asset for accrued vacation represents costs that would otherwise be charged to operations and maintenance expense for vacation that is earned by employees, which is recovered as a cost of service.

(In thousands of dollars, except per share amounts)

The regulatory asset for post-retirement benefits, which includes pension and other post-retirement benefits, primarily reflects a regulatory asset that has been recorded for the costs that would otherwise be charged to stockholders' equity for the underfunded status of the Company's pension and other post-retirement benefit plans. The Company also has a regulatory asset related to post-retirement benefits costs that represent costs already incurred which are now being recovered in rates over 10 years. The regulatory liability for post-retirement benefits represents costs recovered in rates in excess of post-retirement benefits expense.

Expenses associated with water tank painting are deferred and amortized over a period of time as approved in the regulatory process. Water tank painting costs are generally being amortized over a period ranging from 1 to 15 years. The regulatory liability for water tank painting costs represents amounts recovered through rates and before the costs are incurred.

The Company recorded a fair value adjustment for fixed rate, long-term debt assumed in acquisitions that matures in various years ranging from 2022 to 2029. The regulatory asset or liability results from the rate setting process continuing to recognize the historical interest cost of the assumed debt.

The regulatory asset related to rate case filing expenses and other represents the costs associated with filing for rate increases that are deferred and amortized over periods that generally range from one to five years, and costs incurred by the Company for which it has received or expects to receive rate recovery.

The regulatory asset related to the costs incurred for information technology software projects and water main cleaning and relining projects are described in Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*.

**Note 7 – *Income Taxes***

The provision for income taxes consists of:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Current: | | | |
| Federal | $ 1,297 | $ 2,046 | $ 2,624 |
| State | 1,837 | 1,682 | (4,168) |
| | 3,134 | 3,728 | (1,544) |
| Deferred: | | | |
| Federal | 21,376 | 21,489 | 12,649 |
| State | (7,596) | (4,239) | 3,857 |
| | 13,780 | 17,250 | 16,506 |
| Total tax expense | $ 16,914 | $ 20,978 | $ 14,962 |

The statutory Federal tax rate is 35% and for states with a corporate net income tax, the state corporate net income tax rates range from 3% to 9.99% for all years presented.

(In thousands of dollars, except per share amounts)

The reasons for the differences between amounts computed by applying the statutory Federal corporate income tax rate to income before income tax expense are as follows:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Computed Federal tax expense at statutory rate | $ 89,828 | $ 89,306 | $ 75,863 |
| Decrease in Federal tax expense related to an income tax accounting change for qualifying utility asset improvement costs | (69,325) | (62,831) | (59,488) |
| State income taxes, net of Federal tax benefit | (3,743) | (1,662) | (202) |
| Increase in tax expense for depreciation expense to be recovered in future rates | 199 | 199 | 199 |
| Stock-based compensation | (595) | (227) | (174) |
| Deduction for Aqua America common dividends paid under employee benefit plan | (455) | (455) | (456) |
| Amortization of deferred investment tax credits | (376) | (405) | (421) |
| Federal tax rate change | 3,141 | - | - |
| Other, net | (1,760) | (2,947) | (359) |
| Actual income tax expense | $ 16,914 | $ 20,978 | $ 14,962 |

In 2012, the Company changed its tax method of accounting for qualifying utility system repairs in Aqua Pennsylvania effective with the tax year ended December 31, 2012 and for prior tax years. The tax accounting method was changed to permit the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. This change was implemented in response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania which provides for a reduction in current income tax expense as a result of the flow-through recognition of some income tax benefits due to the income tax accounting change. The Company recorded income tax benefits of $84,766, $78,530, and $72,944 during 2017, 2016, and 2015, respectively. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 for qualifying capital expenditures made prior to 2012, and based on the rate order, in 2013, the Company began to amortize 1/10th of these expenditures. In accordance with the rate order, the amortization is expected to reduce current income tax expense during periods when qualifying parameters are met. Beginning in 2013, the Company amortized the qualifying capital expenditures made prior to 2012 and recognized $38,000, annually, of deferred income tax benefits, which reduced current income tax expense and increased the Company's net income by $16,734. The Company's effective income tax rate for 2017, 2016, and 2015 was 6.6%, 8.2%, and 6.9%, respectively.

The Company establishes reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. The Company believes its tax positions comply with applicable law and that it has adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than the estimates recorded, the Company would then adjust its tax reserves or unrecognized tax benefits in the period that this information becomes known. The Company has elected to recognize accrued interest and penalties related to uncertain tax positions as income tax expense.

(In thousands of dollars, except per share amounts)

The following table provides the changes in the Company's unrecognized tax benefits:

| | 2017 | 2016 |
|---|---|---|
| Balance at January 1, | $ 28,099 | $ 28,016 |
| Additions based on tax position related to the current year | 705 | 83 |
| Effect of Federal tax rate change | (11,221) | - |
| Balance at December 31, | $ 17,583 | $ 28,099 |

The unrecognized tax benefits relate to the income tax accounting change, and the tax position is attributable to a temporary difference. The Company does not anticipate material changes to its unrecognized tax benefits within the next year. As a result of the regulatory treatment afforded by the income tax accounting change in Pennsylvania and despite this position being a temporary difference, as of December 31, 2017 and 2016, $24,243 and $20,674 and, respectively, of these tax benefits would have an impact on the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position.

The following table provides the components of net deferred tax liability:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Deferred tax assets: | | |
| Customers' advances for construction | $ 17,123 | $ 21,738 |
| Costs expensed for book not deducted for tax, principally accrued expenses | 12,956 | 15,751 |
| Utility plant acquisition adjustment basis differences | 1,752 | 3,114 |
| Post-retirement benefits | 36,353 | 38,269 |
| Tax loss and credit carryforwards | 56,642 | 77,911 |
| Other | 2,348 | 2,137 |
| | 127,174 | 158,920 |
| Less valuation allowance | 11,623 | 9,486 |
| | 115,551 | 149,434 |
| Deferred tax liabilities: | | |
| Utility plant, principally due to depreciation and differences in the basis of fixed assets due to variation in tax and book accounting | 795,537 | 1,104,032 |
| Deferred taxes associated with the gross-up of revenues necessary to recover, in rates, the effect of temporary differences | 46,143 | 269,773 |
| Tax effect of regulatory asset for post-retirement benefits | 36,353 | 38,269 |
| Deferred investment tax credit | 6,591 | 6,613 |
| | 884,624 | 1,418,687 |
| Net deferred tax liability | $ 769,073 | $ 1,269,253 |

At December 31, 2017, the Company has a cumulative Federal NOL of $63,302. The Company believes the Federal NOLs are more likely than not to be recovered and require no valuation allowance. The Company's Federal NOLs do not begin to expire until 2032.

In 2012 and 2011, as a result of the Company's Federal cumulative NOLs the Company ceased recognizing the windfall tax benefit associated with stock-based compensation, because the deduction did not reduce income taxes payable. As of December 31, 2015, the Company utilized all of the 2011 NOL and recognized a windfall tax benefit of $588. As a result of the adoption on January 1, 2017 of the FASB's updated accounting guidance on simplifying the accounting for share-based payments, the Company recognized a windfall tax benefit of $982 associated with the Company's 2012 Federal NOL, which was recorded as an adjustment to retained earnings.

At December 31, 2017, the Company has a cumulative state NOL of $627,258, a portion of which is offset by a valuation allowance because the Company does not believe these NOLs are more likely than not to be realized. The state NOLs do not begin to expire until 2023.

The Company has unrecognized tax positions that result in the associated tax benefit being unrecognized. The Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $64,476 and $85,380, respectively, which results from the Company's adoption in 2013 of the FASB's accounting guidance on the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions are $127,778 and $712,638, respectively. The Company records its unrecognized tax benefit as a reduction to its deferred income tax liability.

As of December 31, 2017, the Company's Federal income tax returns for all years through 2011 have been closed. Tax years 2012 through 2017 remain open to Federal examination. The statute remains open for the Company's state income tax returns for tax years 2014 through 2017 in the various states in which it conducts business.

On December 22, 2017, President Trump signed the TCJA into law. Substantially all of the provisions of the TCJA are effective for taxable years beginning after December 31, 2017. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes that impact the Company included in the TCJA are a reduction in the corporate federal income tax rate from 35% to 21%, effective January 1, 2018, and a limitation of the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific TCJA provisions related to our regulated entities generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017.

Changes in the Code from the TCJA had a material impact on our financial statements in 2017. In accordance with the FASB's accounting guidance for income taxes, the tax effects of changes in tax laws must be recognized in the period in which the law is enacted, or December 22, 2017 for the TCJA. Additionally, deferred tax assets and liabilities are required to be measured at the enacted tax rate expected to apply when temporary differences are to be realized or settled. Thus, at the date of enactment, the Company's deferred taxes were re-measured based upon the new tax rate. For our regulated entities, the change in deferred taxes is recorded as either an offset to a regulatory asset or liability and may be subject to refund to customers. In instances where the deferred tax balances are not in ratemaking, such as the Company's market-based operations, the change in deferred taxes is recorded as an adjustment to our deferred tax provision. To the extent the revalued deferred income tax assets and liabilities were outside of our regulated operations and are not believed to be recoverable in utility customer rates, the revalued amount of $3,141 was recognized as additional deferred income tax expense during the quarter ended December 31, 2017.

The staff of the SEC has recognized the complexity of reflecting the impacts of the TCJA, and on December 22, 2017 issued guidance, which clarifies accounting for income taxes if information is not yet available or complete and provides for up to a one year period in which to complete the required analyses and accounting (the measurement period). The guidance describes three scenarios (or "buckets") associated with a company's status of accounting for income tax reform: (1) a company is complete with its accounting for certain effects of tax reform, (2) a company is able to determine a reasonable estimate for certain effects of tax reform and records that estimate as a provisional amount, or (3) a company is not able to determine a reasonable estimate and therefore continues to apply the FASB's accounting guidance, based on the provisions of the tax laws that were in effect immediately prior to the TCJA being enacted.

(In thousands of dollars, except per share amounts)

The Company has completed or has made a reasonable estimate for the measurement and accounting of the effect of the TCJA which have been reflected in the December 31, 2017 financial statements. The accounting for these completed and provisional items, described below, increased the 2017 deferred income tax provision by $3,141 for the year ending December 31, 2017, and decreased the accumulated deferred income tax liability by $303,320 at December 31, 2017.

One of our states, Pennsylvania, has not yet issued an accounting or procedural order addressing how the TCJA changes are to be reflected in our utility customer rates. As of December 31, 2017, the Company has provisionally estimated that $175,108 of deferred income tax liabilities for our Pennsylvania subsidiary will be a regulatory liability. Additionally, two operating divisions in one of our states operate under locally-negotiated contractual rates with their respective counties, and it is expected that negotiations will results in a contract that will pass back the effects of the reduction in the corporate net income tax rate under the TCJA; however, these negotiations have not yet started. As of December 31, 2017, the Company has provisionally estimated that $9,419 of deferred income tax liabilities for these two divisions will be a regulatory liability. Overall, the Company has applied a reasonable interpretation of the impact of the TCJA and a reasonable estimate of the regulatory resolution. Further clarification of the TCJA and regulatory resolution may change the amounts estimated of the deferred income tax provision and the accumulated deferred income tax liability.

The Company's regulated operations accounting for income taxes are impacted by the FASB's accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the Federal corporate income tax rates to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes related to certain accelerated tax depreciation deduction benefits are to be passed back to customers. Potential refunds of other deferred taxes will be determined by our state regulators. Our state regulatory commissions have or are in the process of issuing procedural orders directing how the tax law changes are to be reflected in our utility customer rates. In addition, we have two rate cases currently in progress in two states in which the TCJA is expected to be addressed in the new base rates. The December 31, 2017 consolidated balance sheet reflects the impact of the TCJA on our regulatory assets and liabilities which reduced our regulatory assets by $357,262 and increased our regulatory liabilities by $303,320. These adjustments had no impact on our 2017 cash flows.

**Note 8 – *Taxes Other than Income Taxes***

The following table provides the components of taxes other than income taxes:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Property | $ 25,810 | $ 26,788 | $ 26,545 |
| Gross receipts, excise and franchise | 13,458 | 12,510 | 11,847 |
| Payroll | 9,477 | 9,772 | 9,539 |
| Regulatory assessments | 2,552 | 2,630 | 2,689 |
| Pumping fees | 5,057 | 4,571 | 3,993 |
| Other | 274 | 114 | 444 |
| Total taxes other than income taxes | $ 56,628 | $ 56,385 | $ 55,057 |

(In thousands of dollars, except per share amounts)

**Note 9 – *Commitments and Contingencies***

***Commitments –*** The Company leases motor vehicles, buildings and other equipment under operating leases that are noncancelable. The future annual minimum lease payments due are as follows:

| 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter |
|---|---|---|---|---|---|
| $ 1,312 | $ 1,010 | $ 743 | $ 585 | $ 365 | $ 250 |

The Company leases parcels of land on which treatment plants and other facilities are situated and adjacent parcels that are used for watershed protection. The operating leases are noncancelable, expire between 2019 and 2052, and contain renewal provisions. Some leases are subject to an adjustment every five years based on changes in the Consumer Price Index. Subject to the aforesaid adjustment, during each of the next five years, an average of $602 of annual lease payments for land is due, and the aggregate of the years remaining approximates $12,806.

The Company maintains agreements with other water purveyors for the purchase of water to supplement its water supply, particularly during periods of peak demand. The agreements stipulate purchases of minimum quantities of water to the year 2026. The estimated annual commitments related to such purchases through 2022 are expected to average $4,373 and the aggregate of the years remaining approximates $9,644.

The Company has entered into purchase obligations, in the ordinary course of business, that include agreements for water treatment processes at some of its wells in a small number of its divisions. The 20 year term agreement provides for the use of treatment equipment and media used in the treatment process and are subject to adjustment based on changes in the Consumer Price Index. The future contractual cash obligations related to these agreements are as follows:

| 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter |
|---|---|---|---|---|---|
| $ 1,157 | $ 1,007 | $ 1,028 | $ 1,048 | $ 1,069 | $ 6,623 |

Rent expense under operating leases, purchased water expense, and water treatment expenses under these agreements were as follows:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Operating lease expense | $ 2,241 | $ 2,776 | $ 2,440 |
| Purchased water under long-term agreements | 8,558 | 13,955 | 13,718 |
| Water treatment expense under contractual agreement | 945 | 940 | 972 |

***Contingencies –*** The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of December 31, 2017, the aggregate amount of $18,961 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. While the final outcome of these loss contingencies cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of these matters are not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Further, Aqua America has insurance coverage for a number of these loss contingencies, and as of December 31, 2017, estimates that approximately $7,131 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets, net.

(In thousands of dollars, except per share amounts)

Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which the Company or any of its subsidiaries is a party or to which any of its properties is the subject that are material or are expected to have a material effect on the Company's financial position, results of operations or cash flows.

Additionally, the Company self-insures its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,451 and $1,770 at December 31, 2017 and 2016 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

**Note 10 – *Long-term Debt and Loans Payable***

***Long-term Debt –*** The consolidated statements of capitalization provide a summary of long-term debt as of December 31, 2017 and 2016. The supplemental indentures with respect to specific issues of the first mortgage bonds restrict the ability of Aqua Pennsylvania and other operating subsidiaries of the Company to declare dividends, in cash or property, or repurchase or otherwise acquire the stock of these companies. Loan agreements for Aqua Pennsylvania and other operating subsidiaries of the Company have restrictions on minimum net assets. As of December 31, 2017, restrictions on the net assets of the Company were $1,443,473 of the total $1,957,621 in net assets. Included in this amount were restrictions on Aqua Pennsylvania's net assets of $1,090,062 of their total net assets of $1,528,172. As of December 31, 2017, $1,396,003 of Aqua Pennsylvania's retained earnings of $1,416,003 and $142,700 of the retained earnings of $189,000 of other subsidiaries were free of these restrictions. Some supplemental indentures also prohibit Aqua Pennsylvania and some other subsidiaries of the Company from making loans to, or purchasing the stock of, the Company.

Sinking fund payments are required by the terms of specific issues of long-term debt. Excluding amounts due under the Company's revolving credit agreement, the future sinking fund payments and debt maturities of the Company's long-term debt are as follows:

| Interest Rate Range | 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter |
|---|---|---|---|---|---|---|
| 0.00% to 0.99% | $ 464 | $ 464 | $ 463 | $ 464 | $ 466 | $ 1,875 |
| 1.00% to 1.99% | 51,327 | 1,222 | 1,158 | 910 | 888 | 7,409 |
| 2.00% to 2.99% | 1,766 | 51,813 | 1,863 | 1,913 | 1,965 | 9,934 |
| 3.00% to 3.99% | 2,807 | 2,758 | 2,555 | 2,594 | 2,541 | 706,977 |
| 4.00% to 4.99% | 11,195 | 50,404 | 16,616 | 15,297 | 237 | 660,650 |
| 5.00% to 5.99% | 20,595 | 36,126 | 18,120 | 8,402 | 17,979 | 256,783 |
| 6.00% to 6.99% | 13,000 | - | - | - | - | 31,000 |
| 7.00% to 7.99% | 484 | 569 | 615 | 666 | 358 | 29,643 |
| 8.00% to 8.99% | 431 | 566 | 613 | 1,665 | 721 | 2,096 |
| 9.00% to 9.99% | 5,700 | 700 | 2,400 | 4,900 | - | 12,000 |
| 10.00% to 10.99% | 6,000 | - | - | - | - | - |
| Total | $ 113,769 | $ 144,622 | $ 44,403 | $ 36,811 | $ 25,155 | $ 1,718,367 |

In October 2017, Aqua Pennsylvania issued $75,000 of first mortgage bonds, of which $35,000 is due in 2054, $20,000 is due in 2055, and $20,000 is due in 2057 with interest rates of 4.06%, 4.07%, and 4.09%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

(In thousands of dollars, except per share amounts)

In July 2017 Aqua Illinois issued $100,000 of first mortgage bonds consisting of the following:

| Amount | Interest Rate | Maturity |
|---|---|---|
| $25,000 | 3.64% | 2032 |
| $6,000 | 3.89% | 2037 |
| $15,000 | 3.90% | 2038 |
| $10,000 | 4.18% | 2047 |
| $22,000 | 4.22% | 2049 |
| $22,000 | 4.24% | 2050 |

The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In July 2017, Aqua Pennsylvania issued $80,000 of first mortgage bonds, of which $40,000 is due in 2055 and $40,000 is due in 2057 with interest rates of 4.04% and 4.06%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In January 2017, Aqua Pennsylvania issued $50,000 of first mortgage bonds, of which $10,000 is due in 2042 and $40,000 is due in 2044 with interest rates of 3.65% and 3.69%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In December 2016, Aqua Pennsylvania issued $85,000 of first mortgage bonds, of which $25,000 is due in 2051 and $60,000 is due in 2056 with interest rates of 3.85% and 3.95%, respectively. In January 2017, Aqua Pennsylvania issued $50,000 of first mortgage bonds, of which $10,000 is due in 2042 and $40,000 is due in 2044 with interest rates of 3.65% and 3.69%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In November 2016, the Company issued $125,000 of senior notes, of which $35,000 is due in 2031, $30,000 is due in 2034, $25,000 is due in 2035, $10,000 is due in 2038, and $25,000 is due in 2041 with interest rates of 3.01%, 3.19%, 3.25%, 3.41%, and 3.57%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

As of December 31, 2017 and 2016, the Company did not have any funds restricted for construction activity.

The weighted average cost of long-term debt at December 31, 2017 and 2016 was 4.29% and 4.23%, respectively. The weighted average cost of fixed rate long-term debt at December 31, 2017 and 2016 was 4.36% and 4.26%, respectively.

The Company has a five-year $250,000 unsecured revolving credit facility, with four banks that expires in February 2021. This facility includes a $15,000 sublimit for daily demand loans. Funds borrowed under this facility are classified as long-term debt and are used to provide working capital as well as support for letters of credit for insurance policies and other financing arrangements. As of December 31, 2017, the Company has the following sublimits and available capacity under the credit facility: $50,000 letter of credit sublimit, $30,189 of letters of credit available capacity, $0 borrowed under the swing-line commitment, and $60,000 of funds borrowed under the agreement. Interest under this facility is based at the Company's option, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. A facility fee is charged on the total commitment amount of the agreement. Under this facility the average cost of borrowings was 1.91% and 1.54%, and the average borrowing was $48,333 and $89,374, during 2017 and 2016, respectively.

The Company is obligated to comply with covenants under some of its loan and debt agreements. These covenants contain a number of restrictive financial covenants, which among other things limit, subject to specific exceptions, the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2017, the Company was in compliance with its debt covenants under its loan and debt agreements. Failure to comply with the Company's debt covenants could result in an event of default, which could result in the Company being required to repay or finance its borrowings before their due date, possibly limiting the Company's future borrowings, and increasing its borrowing costs.

***Loans Payable –*** In November 2017, Aqua Pennsylvania renewed its $100,000 364-day unsecured revolving credit facility with four banks. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. As of December 31, 2017 and 2016, funds borrowed under the agreement were $3,650 and $5,545, respectively. Interest under this facility is based, at the borrower's option, on the prime rate, an adjusted federal funds rate, an adjusted London Interbank Offered Rate corresponding to the interest period selected, an adjusted Euro-Rate corresponding to the interest period selected or at rates offered by the banks. This agreement restricts short-term borrowings of Aqua Pennsylvania. A commitment fee of 0.05% is charged on the total commitment amount of Aqua Pennsylvania's revolving credit agreement. The average cost of borrowing under the facility was 1.78% and 1.18%, and the average borrowing was $21,913 and $29,760, during 2017 and 2016, respectively. The maximum amount outstanding at the end of any one month was $66,466 and $52,905 in 2017 and 2016, respectively.

At December 31, 2017 and 2016, the Company had other combined short-term lines of credit of $35,500. Funds borrowed under these lines are classified as loans payable and are used to provide working capital. As of December 31, 2017 and 2016, funds borrowed under the short-term lines of credit were $0 and $990, respectively. The average borrowing under the lines was $908 and $2,944 during 2017 and 2016, respectively. The maximum amount outstanding at the end of any one month was $990 in 2017 and $9,440 in 2016, respectively. Interest under the lines is based at the Company's option, depending on the line, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. The average cost of borrowings under all lines during 2017 and 2016 was 1.81% and 1.24%, respectively.

***Interest Income and Expense–*** Interest income of $202, $217, and $272 was netted against interest expense on the consolidated statement of net income for the years ended December 31, 2017, 2016, and 2015, respectively. The total interest cost was $88,543, $80,811, and $76,808 in 2017, 2016, and 2015, including amounts capitalized for borrowed funds of $3,578, $2,220, and $1,598, respectively.

### Note 11 – *Fair Value of Financial Instruments*

Financial instruments are recorded at carrying value in the financial statements and approximate fair value, with the exception of long-term debt, as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of cash and cash equivalents, which is comprised of uninvested cash, is determined based on level 1 methods and assumptions. As of December 31, 2017 and 2016, the carrying amounts of the Company's cash and cash equivalents were $4,204 and $3,763, which equates to their fair value. The fair value of "available-for-sale" securities to fund our deferred compensation and non-qualified pension plan liabilities, which represents mutual and money market funds, is determined based on quoted market prices from active markets utilizing level 1 methods and assumptions. As of December 31, 2017 and 2016, the carrying amount of these securities was $21,776 and $20,342. As of December 31, 2017 and 2016, the carrying amount of the Company's loans payable was $3,650 and $6,535, respectively, which equates to their estimated fair value.

(In thousands of dollars, except per share amounts)

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Carrying amount | $ 2,143,127 | $ 1,910,633 |
| Estimated fair value | 2,262,785 | 2,018,933 |

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $93,186 and $91,843 at December 31, 2017 and 2016, respectively. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels and future rate increases. Portions of these non-interest bearing instruments are payable annually through 2027 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

**Note 12 – *Stockholders' Equity***

At December 31, 2017, the Company had 300,000,000 shares of common stock authorized; par value $0.50. Shares outstanding and treasury shares held were as follows:

| | December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Shares outstanding | 177,713,943 | 177,394,376 | 176,544,091 |
| Treasury shares | 2,986,308 | 2,916,969 | 2,819,569 |

At December 31, 2017, the Company had 1,770,819 shares of authorized but unissued Series Preferred Stock, $1.00 par value.

The Company has a universal shelf registration statement with the SEC to allow for the potential future sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities and other securities specified therein at indeterminate prices. This registration statement expires in February 2018, and we intend to file a new three-year universal shelf registration statement.

In 2015, the Company filed a registration statement with the SEC which permits the offering, from time to time, of an aggregate of $500,000 in shares of common stock and shares of preferred stock in connection with acquisitions. During 2016, 439,943 shares of common stock totaling $12,845 were issued by the Company to acquire a water utility system. The balance remaining available for use under the acquisition shelf registration as of December 31, 2017 is $487,155.

The form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement will be determined at the time of issuance.

The Company has a Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") that allows reinvested dividends to be used to purchase shares of common stock at a five percent discount from the current market value. Under the direct stock purchase program, shares are purchased by investors at a five percent discount from the market price. The shares issued under the Plan are either shares purchased by the Company's transfer agent in the open-market or original issue shares. In 2017, 2016, and 2015, 447,753 484,645, and 535,439 shares of the Company were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $15,168, $14,916, and $14,380, respectively. During 2017 and 2016, under the dividend reinvestment portion of the Plan, 45,121 and 47,478 original issue shares of common stock were sold, providing the Company with proceeds of $1,453 and $1,388, respectively.

In December 2014, the Company's Board of Directors authorized a share buyback program, commencing in 2015, of up to 1,000,000 shares to minimize share dilution through timely and orderly share repurchases. In December 2015, the Company's Board of Directors added 400,000 shares to this program. The specific timing, amount and other terms of repurchases depend on market conditions, regulatory requirements and other factors. In 2016, we did not repurchase any shares of our common stock in the open market. In 2015, we repurchased 805,000 shares of the Company's common stock in the open market for $20,502. In 2014, we repurchased 560,000 shares of our common stock in the open market for $13,280. This program expired on December 31, 2016.

The Company's accumulated other comprehensive income is reported in the stockholders' equity section of the consolidated balance sheets, the consolidated statements of equity, and the related components of other comprehensive income are reported in the consolidated statements of comprehensive income. The Company reports its unrealized gains or losses on investments as other comprehensive income and accumulated other comprehensive income. The Company recorded a regulatory asset for its underfunded status of its pension and other post-retirement benefit plans that would otherwise be charged to other comprehensive income, as it anticipates recovery of its costs through customer rates.

**Note 13 – *Net Income per Common Share and Equity per Common Share***

Basic net income per share is based on the weighted average number of common shares outstanding. Diluted net income per share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation is included in the computation of diluted net income per share. The dilutive effect of stock-based compensation is calculated by using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per share:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Average common shares outstanding during the period for basic computation | 177,612 | 177,273 | 176,788 |
| Effect of dilutive securities: | | | |
| Employee stock-based compensation | 563 | 573 | 729 |
| Average common shares outstanding during the period for diluted computation | 178,175 | 177,846 | 177,517 |

For the years ended December 31, 2017, 2016, and 2015, all of the Company's employee stock options were included in the calculation of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods.

Equity per common share was $11.02 and $10.43 at December 31, 2017 and 2016, respectively. These amounts were computed by dividing Aqua America stockholders' equity by the number of shares of common stock outstanding at the end of each year.

**Note 14 – *Employee Stock and Incentive Plan***

Under the Company's 2009 Omnibus Equity Compensation Plan, as amended as of February 27, 2014 (the "2009 Plan"), as approved by the Company's shareholders to replace the 2004 Equity Compensation Plan (the "2004 Plan"), stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. No further grants may be made under the 2004 Plan. The 2009 Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the 2009 Plan may be issued pursuant to stock award, stock units and other stock-based awards, subject to adjustment as provided in the 2009 Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the 2009 Plan for more than 500,000 shares of common stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the 2009 Plan. Awards to employees and consultants under the 2009 Plan are made by a committee of the Board of Directors, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At December 31, 2017, 3,720,624 shares underlying stock-based compensation awards were still available for grant under the 2009 Plan.

(In thousands of dollars, except per share amounts)

The recording of compensation expense for share-based compensation has no impact on net cash flows and results in the reclassification on the consolidated cash flow statements of related tax benefits from cash flows from operating activities to cash flows from financing activities to the extent these tax benefits exceed the associated compensation cost.

***Performance Share Units*** – During 2017, 2016, and 2015, the Company granted performance share units. A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three year performance period specified in the grant, subject to exceptions through the respective vesting periods, generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals.

The performance goals of the 2017, 2016, and 2015 PSU grants consisted of the following metrics:

| | Performance Grant of: | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Metric 1 – Company's total shareholder return ("TSR") compared to the TSR for a specific peer group of investor-owned water companies (a market-based condition) | 26.47% | 27.5% | 30% |
| Metric 2 – Company's TSR compared to the TSR for the companies listed in the Standard and Poor's Midcap Utilities Index (a market-based condition) | 26.47% | 27.5% | 30% |
| Metric 3 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition) | 23.53% | - | - |
| Metric 4 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three year measurement period (a performance-based condition) | 23.53% | - | - |
| Metric 5 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition) | - | 25.0% | - |
| Metric 6 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three year measurement period (a performance-based condition) | - | 20.0% | - |
| Metric 7 – Maintaining an average ratio of operations and maintenance expenses as a percentage of revenues at Aqua Pennsylvania compared to a target average ratio for the three year performance period (a performance-based condition) | - | - | 20% |
| Metric 8 – Earning a cumulative total earnings before taxes for the Company's operations other than Aqua Pennsylvania for the three year performance period compared to a target (a performance-based condition) | - | - | 20% |

The following table provides the compensation expense and income tax benefit for PSUs:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expense | $ 4,351 | $ 3,823 | $ 4,419 |
| Income tax benefit | 1,766 | 1,552 | 1,796 |

(In thousands of dollars, except per share amounts)

The following table summarizes nonvested PSU transactions for the year ended December 31, 2017:

| | Number of Share Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested share units at beginning of period | 476,896 | $ 27.96 |
| Granted | 125,202 | 30.79 |
| Performance criteria adjustment | (33,502) | 28.14 |
| Forfeited | (22,664) | 28.68 |
| Share units vested in prior period and issued in current period | 32,400 | 25.31 |
| Share units issued | (125,999) | 36.37 |
| Nonvested share units at end of period | 452,333 | 26.16 |

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions associated with the PSUs using the Monte Carlo valuation method, which assesses the probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs associated with performance-based conditions was based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The fair value of each PSU grant is amortized into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on an estimate of the final expected value of the award, and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows. The following table provides the assumptions used in the pricing model for the grant, the resulting grant date fair value of PSUs, and the intrinsic value and fair value of PSUs that vested during the year:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Expected term (years) | 3.0 | 3.0 | 3.0 |
| Risk-free interest rate | 1.49% | 0.91% | 1.03% |
| Expected volatility | 17.9% | 17.9% | 16.9% |
| Weighted average fair value of PSUs granted | $ 30.79 | $ 28.89 | $ 26.46 |
| Intrinsic value of vested PSUs | $ 3,926 | $ 5,912 | $ 7,964 |
| Fair value of vested PSUs | $ 3,207 | $ 5,104 | $ 6,416 |

As of December 31, 2017, $4,945 of unrecognized compensation costs related to PSUs is expected to be recognized over a weighted average period of approximately 1.7 years. The aggregate intrinsic value of PSUs as of December 31, 2017 was $18,114. The aggregate intrinsic value of PSUs is based on the number of nonvested share units and the market value of the Company's common stock as of the period end date.

(In thousands of dollars, except per share amounts)

***Restricted Stock Units*** – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock and is valued based on the fair market value of the Company's stock on the date of grant. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. In some cases, the right to receive the shares is subject to specific performance goals established at the time the grant is made. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation expense and income tax benefit for RSUs:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expense | $ 1,183 | $ 1,061 | $ 1,076 |
| Income tax benefit | 489 | 438 | 444 |

The following table summarizes nonvested RSU transactions for the year ended December 31, 2017:

| | Number of Stock Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock units at beginning of period | 109,273 | $ 28.48 |
| Granted | 41,293 | 30.37 |
| Stock units vested but not paid | (1,467) | 31.47 |
| Stock units vested and issued | (26,914) | 26.45 |
| Forfeited | (5,398) | 31.03 |
| Nonvested stock units at end of period | 116,787 | 29.46 |

The following table summarizes the value of RSUs:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Weighted average fair value of RSUs granted | $ 30.37 | $ 32.08 | $ 26.00 |
| Intrinsic value of vested RSUs | 896 | 805 | 2,327 |
| Fair value of vested RSUs | 751 | 605 | 1,904 |

As of December 31, 2017, $1,401 of unrecognized compensation costs related to RSUs is expected to be recognized over a weighted average period of approximately 1.7 years. The aggregate intrinsic value of RSUs as of December 31, 2017 was $4,582. The aggregate intrinsic value of RSUs is based on the number of nonvested stock units and the market value of the Company's common stock as of the period end date.

(In thousands of dollars, except per share amounts)

***Stock Options –*** A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire ten years from the grant date. The vesting of stock options granted in 2017 are subject to the achievement of the following performance goal: the Company achieves at least an adjusted return on equity equal to 150 basis points below the return on equity granted by the Pennsylvania Public Utility Commission during the Company's Pennsylvania subsidiary's last rate proceeding. The adjusted return on equity equals net income, excluding net income or loss from acquisitions which have not yet been incorporated into a rate application as of the last year end, divided by equity which excludes equity applicable to acquisitions which are not yet incorporated in a rate application during the award period.

The fair value of each stock option is amortized into compensation expense using the graded vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides compensation expense and income tax benefit for stock options:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expenses | $ 245 | $ - | $ - |
| Income tax benefit | 208 | 260 | 193 |

There were no stock options granted during the years ended December 31, 2016, and 2015.

Options under the plans were issued at the closing market price of the stock on the day of the grant.
The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model, which relies on assumptions that require management's judgment. The following table provides the assumptions used in the pricing model for grants and the resulting grant date fair value of stock options granted in the period reported:

| | Year ended December 31, |
|---|---|
| | 2017 |
| Expected term (years) | 5.45 |
| Risk-free interest rate | 2.01% |
| Expected volatility | 17.7% |
| Dividend yield | 2.51% |
| Grant date fair value per option | $ 4.07 |

The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense.

(In thousands of dollars, except per share amounts)

The following table summarizes stock option transactions for the year ended December 31, 2017:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Life (years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding, beginning of year | 427,335 | $ 15.55 | | |
| Granted | 120,127 | 30.47 | | |
| Forfeited | (5,191) | 30.47 | | |
| Expired / Cancelled | (2,812) | 14.26 | | |
| Exercised | (174,527) | 16.46 | | |
| Outstanding at end of year | 364,932 | $ 19.83 | 3.7 | $ 7,081 |
| Exercisable at end of year | 249,996 | $ 14.93 | 1.2 | $ 6,074 |

The intrinsic value of stock options is the amount by which the market price of the stock on a given date, such as at the end of the period or on the day of exercise, exceeded the closing market price of stock on the date of grant. The following table summarizes the intrinsic value of stock options exercised:

| | Years ended December 31, 2017 | 2016 | 2015 |
|---|---|---|---|
| Intrinsic value of options exercised | $ 2,767 | $ 2,945 | $ 4,154 |

The following table summarizes information about the options outstanding and options exercisable as of December 31, 2017:

| | Options Outstanding | | | Options Exercisable | |
|---|---|---|---|---|---|
| | Shares | Weighted Average Remaining Life (years) | Weighted Average Exercise Price | Shares | Weighted Average Exercise Price |
| Range of prices: | | | | | |
| $13.00 - 14.99 | 89,770 | 2.1 | $ 13.72 | 89,770 | $ 13.72 |
| $15.00 - 15.99 | 101,167 | 1.2 | 15.30 | 101,167 | 15.30 |
| $16.00 - 16.99 | 59,059 | 0.2 | 16.15 | 59,059 | 16.15 |
| $17.00 - 30.99 | 114,936 | 9.1 | 30.47 | - | - |
| | 364,932 | 3.7 | 19.83 | 249,996 | 14.93 |

As of December 31, 2017, there was $223 of total unrecognized compensation costs related to nonvested stock options granted under the plans. The cost is expected to be recognized over a weighted average period of approximately 1.5 years.

***Restricted Stock –*** Restricted stock awards provide the grantee with the rights of a shareholder, including the right to receive dividends and to vote such shares, but not the right to sell or otherwise transfer the shares during the restriction period. Restricted stock awards result in compensation expense which is equal to the fair market value of the stock on the date of the grant and is amortized ratably over the restriction period. The Company expects forfeitures of restricted stock to be de minimis.

(In thousands of dollars, except per share amounts)

The following table summarizes the value of restricted stock awards:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Intrinsic value of restricted stock awards vested | $ - | $ - | $ 860 |
| Fair value of restricted stock awards vested | - | - | 553 |

As of December 31, 2017, there were no unrecognized compensation costs related to nonvested restricted stock as restricted stock was fully amortized in 2014. Additionally, there was no restricted stock granted during the years ended December 31, 2017, 2016, and 2015.

***Stock Awards*** – The following table provides compensation costs for stock-based compensation related to stock awards:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expense | $ 563 | $ 506 | $ 365 |
| Income tax benefit | 233 | 210 | 151 |

The following table summarizes the value of stock awards:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Intrinsic and fair value of stock awards vested | $ 563 | $ 506 | $ 365 |
| Weighted average fair value of stock awards granted | 34.42 | 31.87 | 26.44 |

The following table summarizes stock award transactions for year ended December 31, 2017:

| | Number of Stock Awards | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock awards at beginning of period | - | $ - |
| Granted | 16,345 | 34.42 |
| Vested | (16,345) | 34.42 |
| Nonvested stock awards at end of period | - | - |

**Note 15 – *Pension Plans and Other Post-retirement Benefits***

The Company maintains a qualified, defined benefit pension plan that covers its full-time employees who were hired prior to April 1, 2003. Retirement benefits under the plan are generally based on the employee's total years of service and compensation during the last five years of employment. The Company's policy is to fund the plan annually at a level which is deductible for income tax purposes and which provides assets sufficient to meet its pension obligations over time. To offset some limitations imposed by the Internal Revenue Code with respect to payments under qualified plans, the Company has a non-qualified Supplemental Pension Benefit Plan for Salaried Employees in order to prevent some employees from being penalized by these limitations, and to provide certain retirement benefits based on employee's years of service and compensation. The Company also had non-qualified Supplemental Executive Retirement Plans, which were terminated in 2016, for some current and retired employees. The net pension costs and obligations of the qualified and non-qualified plans are included in the tables which follow. Employees hired after April 1, 2003 may participate in a defined contribution plan that provides a Company matching contribution on amounts contributed by participants and an annual profit-sharing contribution based upon a percentage of the eligible participants' compensation.

Effective July 1, 2015, the Company added a permanent lump sum option to the form of benefit payments offered to participants of the qualified defined benefit pension plan upon retirement or termination. The plan paid $8,858 and $9,990 to participants who elected this option during 2017 and 2016.

In addition to providing pension benefits, the Company offers post-retirement benefits other than pensions to employees hired before April 1, 2003 and retiring with a minimum level of service. These benefits include continuation of medical and prescription drug benefits, or a cash contribution toward such benefits, for eligible retirees and life insurance benefits for eligible retirees. The Company funds these benefits through various trust accounts. The benefits of retired officers and other eligible retirees are paid by the Company and not from plan assets due to limitations imposed by the Internal Revenue Code.

In 2016, the Company recognized a settlement loss of $2,895, which results from lump sum payments from the non-qualified plans exceeding the threshold of service and interest cost for the period. A settlement loss is the recognition of unrecognized pension benefit costs that would have been incurred in subsequent periods. The Company recorded this settlement loss as a regulatory asset, as it is probable of recovery in future rates, which will be amortized into pension benefit costs.

(In thousands of dollars, except per share amounts)

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid in the years indicated:

| | Pension Benefits | Other Post-retirement Benefits |
|---|---|---|
| Years: | | |
| 2018 | $ 20,516 | $ 2,249 |
| 2019 | 20,462 | 2,553 |
| 2020 | 21,580 | 2,777 |
| 2021 | 20,674 | 2,957 |
| 2022 | 21,538 | 3,177 |
| 2023-2027 | 106,397 | 18,764 |

The changes in the benefit obligation and fair value of plan assets, the funded status of the plans and the assumptions used in the measurement of the company's benefit obligation are as follows:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Change in benefit obligation: | | | | |
| Benefit obligation at January 1, | $ 308,172 | $ 306,539 | $ 69,312 | $ 65,137 |
| Service cost | 3,174 | 3,179 | 1,020 | 1,014 |
| Interest cost | 12,434 | 13,038 | 2,947 | 2,927 |
| Actuarial loss | 18,516 | 15,321 | 4,047 | 1,400 |
| Plan participants' contributions | - | - | 124 | 170 |
| Benefits paid | (21,317) | (21,861) | (1,490) | (1,336) |
| Settlements | - | (7,742) | - | - |
| Special termination benefits | - | (302) | - | - |
| Benefit obligation at December 31, | 320,979 | 308,172 | 75,960 | 69,312 |
| | | | | |
| Change in plan assets: | | | | |
| Fair value of plan assets at January 1, | 242,360 | 238,605 | 46,085 | 43,704 |
| Actual return on plan assets | 33,278 | 17,375 | 5,188 | 2,149 |
| Employer contributions | 16,032 | 16,285 | 500 | 1,360 |
| Benefits paid | (21,317) | (21,861) | (1,323) | (1,128) |
| Settlements | - | (7,742) | - | - |
| Special termination benefits | - | (302) | - | - |
| Asset transfer | - | - | (2,700) | - |
| Fair value of plan assets at December 31, | 270,353 | 242,360 | 47,750 | 46,085 |
| | | | | |
| Funded status of plan: | | | | |
| Net liability recognized at December 31, | $ 50,626 | $ 65,812 | $ 28,210 | $ 23,227 |

(In thousands of dollars, except per share amounts)

The following table provides the net liability recognized on the consolidated balance sheets at December 31,:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Current liability | $ 396 | $ 613 | $ - | $ - |
| Noncurrent liability | 50,230 | 65,199 | 28,210 | 23,227 |
| Net liability recognized | $ 50,626 | $ 65,812 | $ 28,210 | $ 23,227 |

At December 31, 2017 and 2016, the Company's pension plans had benefit obligations in excess of its plan assets. The following tables provide the projected benefit obligation, the accumulated benefit obligation and fair market value of the plan assets as of December 31,:

| | Projected Benefit Obligation Exceeds the Fair Value of Plan Assets | |
|---|---|---|
| | 2017 | 2016 |
| Projected benefit obligation | $ 320,979 | $ 308,172 |
| Fair value of plan assets | 270,353 | 242,360 |

| | Accumulated Benefit Obligation Exceeds the Fair Value of Plan Assets | |
|---|---|---|
| | 2017 | 2016 |
| Accumulated benefit obligation | $ 301,473 | $ 291,889 |
| Fair value of plan assets | 270,353 | 242,360 |

The following table provides the components of net periodic benefit costs for the years ended December 31,:

| | Pension Benefits | | | Other Post-retirement Benefits | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Service cost | $ 3,174 | $ 3,179 | $ 3,349 | $ 1,020 | $ 1,014 | $ 1,224 |
| Interest cost | 12,434 | 13,038 | 12,955 | 2,947 | 2,927 | 2,802 |
| Expected return on plan assets | (17,077) | (16,910) | (18,702) | (2,589) | (2,647) | (2,923) |
| Amortization of prior service cost (credit) | 579 | 578 | 174 | (509) | (549) | (687) |
| Amortization of actuarial loss | 8,003 | 7,153 | 5,993 | 1,165 | 926 | 1,282 |
| Settlement loss | - | 2,895 | - | - | - | - |
| Special termination benefits | - | 302 | - | - | - | - |
| Net periodic benefit cost | $ 7,113 | $ 10,235 | $ 3,769 | $ 2,034 | $ 1,671 | $ 1,698 |

The Company records the underfunded status of its pension and other post-retirement benefit plans on its consolidated balance sheets and records a regulatory asset for these costs that would otherwise be charged to stockholders' equity, as the Company anticipates recoverability of the costs through customer rates to be probable. The Company's pension and other post-retirement benefit plans were underfunded at December 31, 2017 and 2016. Changes in the plans' funded status will affect the assets and liabilities recorded on the balance sheet. Due to the Company's regulatory treatment, the recognition of the funded status is recorded as a regulatory asset pursuant to the FASB's accounting guidance for regulated operations.

(In thousands of dollars, except per share amounts)

The following table provides the amounts recognized in regulatory assets that have not been recognized as components of net periodic benefit cost as of December 31,:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Net actuarial loss | $ 86,750 | $ 92,436 | $ 15,724 | $ 15,441 |
| Prior service cost (credit) | 3,262 | 3,841 | (1,869) | (2,378) |
| Total recognized in regulatory assets | $ 90,012 | $ 96,277 | $ 13,855 | $ 13,063 |

The following table provides the estimated net actuarial loss and prior service cost for the Company's pension plans that will be amortized from regulatory asset into net periodic benefit cost for the year ending December 31, 2018:

| | Pension Benefits | Other Post-retirement Benefits |
|---|---|---|
| Net actuarial loss | $ 7,291 | $ 1,182 |
| Prior service cost (credit) | 527 | (509) |

Accounting for pensions and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from the Company's actuarial consultant who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefit expense that the Company recognizes.

The significant assumptions related to the Company's benefit obligations are as follows:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Weighted Average Assumptions Used to Determine Benefit Obligations as of December 31, | | | | |
| Discount rate | 3.66% | 4.13% | 3.73% | 4.25% |
| Rate of compensation increase | 3.0-4.0% | 3.0-4.0% | n/a | n/a |
| Assumed Health Care Cost Trend Rates Used to Determine Benefit Obligations as of December 31, | | | | |
| Health care cost trend rate | n/a | n/a | 7.0% | 6.6% |
| Rate to which the cost trend is assumed to decline (the ultimate trend rate) | n/a | n/a | 5.0% | 5.0% |
| Year that the rate reaches the ultimate trend rate | n/a | n/a | 2022 | 2020 |

*n/a – Assumption is not applicable.*

(In thousands of dollars, except per share amounts)

The significant assumptions related to the Company's net periodic benefit costs are as follows:

| | Pension Benefits | | | Other Post-retirement Benefits | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Weighted Average Assumptions Used to Determine Net Periodic Benefit Costs for Years Ended December 31, | | | | | | |
| Discount rate | 4.13% | 4.48% | 4.20% | 4.25% | 4.60% | 4.17% |
| Expected return on plan assets | 7.00% | 7.25% | 7.50% | 4.67-7.00% | 4.83-7.25% | 5.00-7.50% |
| Rate of compensation increase | 3.0-4.0% | 3.0-4.0% | 3.0-4.0% | n/a | n/a | n/a |
| Assumed Health Care Cost Trend Rates Used to Determine Net Periodic Benefit Costs for Years Ended December 31, | | | | | | |
| Health care cost trend rate | n/a | n/a | n/a | 6.6% | 7.0% | 7.0% |
| Rate to which the cost trend is assumed to decline (the ultimate trend rate) | n/a | n/a | n/a | 5.0% | 5.0% | 5.0% |
| Year that the rate reaches the ultimate trend rate | n/a | n/a | n/a | 2021 | 2021 | 2019 |

*n/a – Assumption is not applicable.*

Assumed health-care trend rates have a significant effect on the expense and liabilities for other post-retirement benefit plans. The health care trend rate is based on historical rates and expected market conditions. A one-percentage point change in the assumed health-care cost trend rates would have the following effects:

| | 1-Percentage-Point Increase | 1-Percentage-Point Decrease |
|---|---|---|
| Effect on the health-care component of the accrued other post-retirement benefit obligation | $ 4,797 | $ (4,369) |
| Effect on aggregate service and interest cost components of net periodic post-retirement health-care benefit cost | $ 277 | $ (244) |

The Company's discount rate assumption, which is utilized to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds, all of which were noncallable (or callable with make-whole provisions), and have at least $50,000 in outstanding value. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the plan's benefit payments. The Company's pension expense and liability (benefit obligations) increases as the discount rate is reduced.

The Company's expected return on plan assets is determined by evaluating the asset class return expectations with its advisors as well as actual, long-term, historical results of our asset returns. The Company's market related value of plan assets is equal to the fair value of the plan's assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets which is a component of post-retirement benefits expense. The Company's pension expense increases as the expected return on plan assets decreases. For 2017, the Company used a 7.00% expected return on plan assets assumption which will decrease to 6.75% for 2018. The Company believes its actual long-term asset allocation on average will approximate the targeted allocation. The Company's investment strategy is to earn a reasonable rate of return while maintaining risk at acceptable levels. Risk is managed through fixed income investments to manage interest rate exposures that impact the valuation of liabilities and through the diversification of investments across and within various asset categories. Investment returns are compared to a total plan benchmark constructed by applying the plan's asset allocation target weightings to passive index returns representative of the respective asset classes in which the plan invests. The Retirement and Employee Benefits Committee meets quarterly to review plan investments and management monitors investment performance quarterly through a performance report prepared by an external consulting firm.

(In thousands of dollars, except per share amounts)

The Company's pension plan asset allocation and the target allocation by asset class are as follows:

| | Target Allocation | Percentage of Plan Assets at December 31, 2017 |
|---|---|---|
| Return seeking assets | 50 to 70% | 64% |
| Liability hedging assets | 30 to 50% | 36% |
| Total | 100% | 100% |

| | Target Allocation | Percentage of Plan Assets at December 31, 2016 |
|---|---|---|
| Domestic equities | 25 to 75% | 65% |
| International equities | 0 to 10% | 6% |
| Fixed income | 25 to 50% | 19% |
| Alternative investments | 0 to 5% | 2% |
| Cash and cash equivalents | 0 to 20% | 8% |
| Total | 100% | 100% |

The fair value of the Company's pension plans' assets at December 31, 2017 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Assets measured at NAV (a) | Total |
|---|---|---|---|---|---|
| Common stock | $ 26,902 | $ - | $ - | $ - | $ 26,902 |
| Return seeking assets: | | | | | |
| Global equities | - | - | - | 66,281 | 66,281 |
| Real estate securities | - | - | - | 14,110 | 14,110 |
| Hedge / diversifying strategies | - | - | - | 38,143 | 38,143 |
| Credit | - | - | - | 28,395 | 28,395 |
| Liability hedging assets | - | - | - | 91,872 | 91,872 |
| Cash and cash equivalents | 4,650 | - | - | - | 4,650 |
| Total pension assets | $ 31,552 | $ - | $ - | $ 238,801 | $ 270,353 |

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

(In thousands of dollars, except per share amounts)

The fair value of the Company's pension plans' assets at December 31, 2016 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Domestic equities: | | | | |
| Common stocks | $ 152,740 | $ - | $ - | $ 152,740 |
| Mutual funds | 3,668 | - | - | 3,668 |
| International equities | 13,813 | - | - | 13,813 |
| Fixed income: | | | | |
| U.S. Treasury and government agency bonds | - | 11,170 | - | 11,170 |
| Corporate and foreign bonds | - | 24,385 | - | 24,385 |
| Mutual funds | 9,752 | | - | 9,752 |
| Alternative investments: | | | | |
| Real estate | 2,613 | - | - | 2,613 |
| Commodity funds | 1,279 | - | - | 1,279 |
| Cash and cash equivalents | 348 | 22,592 | - | 22,940 |
| Total pension assets | $ 184,213 | $ 58,147 | $ - | $ 242,360 |

Equity securities include our common stock in the amounts of $16,471 or 6.1% and $20,632 or 8.5% of total pension plans' assets as of December 31, 2017 and 2016, respectively.

The asset allocation for the Company's other post-retirement benefit plans and the target allocation by asset class are as follows:

| | Target Allocation | Percentage of Plan Assets at December 31, 2017 |
|---|---|---|
| Return seeking assets | 50 to 70% | 62% |
| Liability hedging assets | 30 to 50% | 38% |
| Total | 100% | 100% |

| | Target Allocation | Percentage of Plan Assets at December 31, 2016 |
|---|---|---|
| Domestic equities | 25 to 75% | 52% |
| International equities | 0 to 10% | 3% |
| Fixed income | 25 to 50% | 25% |
| Alternative investments | 0 to 5% | 0% |
| Cash and cash equivalents | 0 to 20% | 20% |
| Total | 100% | 100% |

(In thousands of dollars, except per share amounts)

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2017 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Assets measured at NAV (a) | Total |
|---|---|---|---|---|---|
| Return seeking assets: | | | | | |
| Global equities | $ 9,477 | $ - | $ - | $ 15,158 | $ 24,635 |
| Real estate securities | 1,731 | - | - | 3,211 | 4,942 |
| Liability hedging assets | 5,265 | - | - | 8,961 | 14,226 |
| Cash and cash equivalents | 3,947 | - | - | - | 3,947 |
| Total other post-retirement assets | $ 20,420 | $ - | $ - | $ 27,330 | $ 47,750 |

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2016 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Domestic equities: | | | | |
| Common stocks | $ 10,667 | $ - | $ - | $ 10,667 |
| Mutual funds | 13,464 | - | - | 13,464 |
| International equities | 1,242 | - | - | 1,242 |
| Fixed income: | | | | |
| U.S. Treasury and government agency bonds | - | 4,968 | - | 4,968 |
| Corporate and foreign bonds | - | 6,347 | - | 6,347 |
| Alternative investments | 172 | - | - | 172 |
| Cash and cash equivalents | - | 9,225 | - | 9,225 |
| Total other post-retirement assets | $ 25,545 | $ 20,540 | $ - | $ 46,085 |

***Valuation Techniques Used to Determine Fair Value***

- *Common Stocks* - Investments in common stocks are valued using unadjusted quoted prices obtained from active markets.
- *Return Seeking Assets* – Investments in return seeking assets consists of the following:
  - Global equities, which consist of common and preferred shares of stock, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or commingled fund vehicles, consisting of such securities valued using NAV, which are not classified within the fair value hierarchy.
  - Real estate securities, which consist of securities, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or for real estate commingle fund vehicles that are not publicly quoted, the fund administrators value the funds using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.

  - Hedge / diversifying strategies, which consist of a multi-manager fund vehicle having underlying exposures that collectively seek to provide low correlation of return to equity and fixed income markets, thereby offering diversification. As a multi-manager fund investment, NAV is derived from underlying manager NAVs, which are derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
  - Credit, which consist of certain opportunistic, return-oriented credits which primarily include below investment grade bonds (i.e. high yield bonds), bank loans, and securitized debt. Credits are valued using the NAV per fund share, derived from either quoted prices in active markets of the underlying securities, or less active markets, or quotes of similar assets, and are not classified within the fair value hierarchy.

- *Liability Hedging Assets* – Investments in liability hedging assets consist of funds investing in high-quality fixed income (i.e. U.S. Treasury securities and government bonds), and for funds for which market quotations are readily available, are valued at the last reported closing price on the primary market or exchange on which they are traded. Funds for which market quotations are not readily available, are valued using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
- *Cash and Cash Equivalents* – Investments in cash and cash equivalents are comprised of both uninvested cash and money market funds. The uninvested cash is valued based on its carrying value, and the money market funds are valued utilizing the net asset value per unit based on the fair value of the underlying assets as determined by the fund's investment managers.
- *Mutual Funds* – Investments in mutual funds which consist of either equity or fixed income investments are valued using the net asset value per unit as obtained from quoted market prices from active markets.
- *International Equities* – Investments in international equities are valued using unadjusted quoted prices obtained from active markets.
- *Fixed Income* – Investments in fixed income that comprise U.S. Treasury and government agency bonds, and corporate and foreign bonds are valued utilizing pricing models that incorporate available trade, bid, and other market information to value the fixed income securities.
- *Alternative Investments* – Investments in alternative investments are comprised of either real estate funds, real estate investment trusts, or commodity funds, and are valued using unadjusted quoted prices obtained from active markets.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and the Company's funding policy, during 2018 our pension contribution is expected to be $12,484.

The Company has a 401(k) savings plan, which is a defined contribution plan and covers substantially all employees. The Company makes matching contributions that are based on a percentage of an employee's contribution, subject to specific limitations, as well as, non-discretionary contributions based on eligible hourly wages for certain union employees, discretionary year-end contributions based on an employee's eligible compensation, and employer profit sharing contributions. Participants may diversify their Company matching account balances into other investments offered under the 401(k) savings plan. The Company's contributions, which are recorded as compensation expense, were $5,374, $4,988, and $5,001, for the years ended December 31, 2017, 2016, and 2015, respectively.

**Note 16 – *Water and Wastewater Rates***

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that historically have been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change which provides for the flow-through of income tax benefits that resulted in a substantial reduction in income tax expense and greater net income and cash flow. This change allowed Aqua Pennsylvania to suspend its water Distribution System Improvement Charges in 2013 and lengthen the amount of time until the next Aqua Pennsylvania rate case. Beginning on October 1, 2017, Aqua Pennsylvania initiated a water infrastructure rehabilitation surcharge for the capital invested since the last rate proceeding and expects to file a base rate case in 2018.

The Company's operating subsidiaries were allowed rate increases totaling $7,558 in 2017, $3,434 in 2016, and $3,347 in 2015, represented by five, six, and four rate decisions, respectively. Revenues from these increases realized in the year of grant were approximately $6,343, $1,788, and $2,887 in 2017, 2016, and 2015, respectively.

Six states in which the Company operates permit water utilities, and in five states wastewater utilities, to add a surcharge to their water or wastewater bills to offset the additional depreciation and capital costs related to infrastructure system replacement and rehabilitation projects completed and placed into service between base rate filings. Currently, Pennsylvania, Illinois, Ohio, Indiana, New Jersey, and North Carolina allow for the use of this surcharge. The surcharge for infrastructure system replacements and rehabilitations is typically adjusted periodically based on additional qualified capital expenditures completed or anticipated in a future period, is capped as a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. The surcharge for infrastructure system replacements and rehabilitations provided revenues in 2017, 2016, and 2015 of $10,255, $7,379, and $3,261, respectively.

**Note 17 – *Segment Information***

The Company has ten operating segments and one reportable segment. The Regulated segment, the Company's single reportable segment, is comprised of eight operating segments representing our water and wastewater regulated utility companies which are organized by the states where we provide water and wastewater services. These operating segments are aggregated into one reportable segment since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment.

Two operating segments are included within the Other category below. These segments are not quantitatively significant and are comprised of Aqua Infrastructure and Aqua Resources. In addition to these segments, Other is comprised of other business activities not included in the reportable segment, including corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

(In thousands of dollars, except per share amounts)

The following table presents information about the Company's reportable segment:

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 804,905 | $ 4,620 | $ 809,525 | $ 800,107 | $ 19,768 | $ 819,875 |
| Operations and maintenance expense | 286,962 | 244 | 287,206 | 285,347 | 19,550 | 304,897 |
| Depreciation | 136,246 | 56 | 136,302 | 131,835 | (848) | 130,987 |
| Amortization | 240 | 182 | 422 | 2,076 | (55) | 2,021 |
| Operating income (loss) | 326,935 | 2,032 | 328,967 | 326,933 | (1,348) | 325,585 |
| Interest expense, net | 81,974 | 6,367 | 88,341 | 76,222 | 4,372 | 80,594 |
| Allowance for funds used during construction | 15,211 | - | 15,211 | 8,815 | - | 8,815 |
| Equity earnings in joint venture | - | (331) | (331) | - | (976) | (976) |
| Income tax (benefit) | 14,107 | 2,807 | 16,914 | 24,956 | (3,978) | 20,978 |
| Net income (loss) | 246,548 | (6,810) | 239,738 | 234,922 | (740) | 234,182 |
| Capital expenditures | 478,077 | 12 | 478,089 | 381,965 | 1,031 | 382,996 |
| Total assets | 6,236,109 | 96,354 | 6,332,463 | 6,066,477 | 92,514 | 6,158,991 |
| Goodwill | 37,389 | 4,841 | 42,230 | 37,367 | 4,841 | 42,208 |

| | 2015 | | |
|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 779,613 | $ 34,591 | $ 814,204 |
| Operations and maintenance expense | 282,866 | 26,444 | 309,310 |
| Depreciation | 125,146 | 144 | 125,290 |
| Amortization | 3,364 | 83 | 3,447 |
| Operating income | 315,876 | 5,224 | 321,100 |
| Interest expense, net | 72,703 | 3,833 | 76,536 |
| Allowance for funds used during construction | 6,219 | - | 6,219 |
| Equity loss in joint venture | - | 35,177 | 35,177 |
| Income tax (benefit) | 26,379 | (11,417) | 14,962 |
| Net Income (loss) | 224,122 | (22,332) | 201,790 |
| Capital expenditures | 363,594 | 1,095 | 364,689 |
| Total assets | 5,645,780 | 72,093 | 5,717,873 |
| Goodwill | 27,246 | 6,620 | 33,866 |

Selected Quarterly Financial Data (Unaudited)

Aqua America, Inc. and Subsidiaries

(In thousands of dollars, except per share amounts)

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter | Year |
|---|---|---|---|---|---|
| 2017 | | | | | |
| Operating revenues | $ 187,787 | $ 203,418 | $ 215,008 | $ 203,312 | $ 809,525 |
| Operations and maintenance expense | 69,128 | 70,853 | 67,982 | 79,243 | 287,206 |
| Operating income | 69,896 | 84,612 | 97,486 | 76,973 | 328,967 |
| Net income | 49,072 | 60,968 | 76,225 | 53,473 | 239,738 |
| Basic net income per common share | 0.28 | 0.34 | 0.43 | 0.30 | 1.35 |
| Diluted net income per common share | 0.28 | 0.34 | 0.43 | 0.30 | 1.35 |
| Dividend paid per common share | 0.1913 | 0.1913 | 0.2047 | 0.2047 | 0.7920 |
| Dividend declared per common share | 0.1913 | 0.1913 | 0.2047 | 0.2047 | 0.7920 |
| Price range of common stock: | | | | | |
| high | 32.32 | 34.41 | 34.66 | 39.55 | 39.55 |
| low | 29.41 | 31.18 | 32.30 | 33.12 | 29.41 |
| 2016 | | | | | |
| Operating revenues | $ 192,607 | $ 203,876 | $ 226,593 | $ 196,799 | $ 819,875 |
| Operations and maintenance expense | 73,541 | 73,994 | 79,812 | 77,550 | 304,897 |
| Operating income | 72,331 | 83,493 | 97,799 | 71,962 | 325,585 |
| Net income | 51,737 | 59,626 | 73,170 | 49,649 | 234,182 |
| Basic net income per common share | 0.29 | 0.34 | 0.41 | 0.28 | 1.32 |
| Diluted net income per common share | 0.29 | 0.33 | 0.41 | 0.28 | 1.32 |
| Dividend paid per common share | 0.178 | 0.178 | 0.1913 | 0.1913 | 0.7386 |
| Dividend declared per common share | 0.178 | 0.178 | 0.1913 | 0.1913 | 0.7386 |
| Price range of common stock: | | | | | |
| high | 32.44 | 35.66 | 35.83 | 31.29 | 35.83 |
| low | 28.35 | 30.31 | 29.53 | 28.03 | 28.03 |

High and low prices of the Company’s common stock are as reported on the New York Stock Exchange.

Summary of Selected Financial Data (Unaudited)
Aqua America, Inc. and Subsidiaries
(In thousands of dollars, except per share amounts)

| Years ended December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| PER COMMON SHARE: | | | | | |
| Income from continuing operations: | | | | | |
| Basic | $ 1.35 | $ 1.32 | $ 1.14 | $ 1.21 | $ 1.15 |
| Diluted | 1.35 | 1.32 | 1.14 | 1.20 | 1.15 |
| Income from discontinued operations: | | | | | |
| Basic | - | - | - | 0.11 | 0.10 |
| Diluted | - | - | - | 0.11 | 0.10 |
| Net income: | | | | | |
| Basic | 1.35 | 1.32 | 1.14 | 1.32 | 1.26 |
| Diluted | 1.35 | 1.32 | 1.14 | 1.31 | 1.25 |
| Cash dividends declared and paid | 0.79 | 0.74 | 0.69 | 0.63 | 0.58 |
| Return on Aqua America stockholders' equity | 12.2% | 12.7% | 11.7% | 14.1% | 14.4% |
| Book value at year end | $ 11.02 | $ 10.43 | $ 9.78 | $ 9.37 | $ 8.68 |
| Market value at year end | 39.23 | 30.04 | 29.80 | 26.70 | 23.59 |
| INCOME STATEMENT HIGHLIGHTS: | | | | | |
| Operating revenues | $ 809,525 | $ 819,875 | $ 814,204 | $ 779,903 | $ 761,893 |
| Depreciation and amortization | 136,724 | 133,008 | 128,737 | 126,535 | 123,985 |
| Interest expense, net | 88,341 | 80,594 | 76,536 | 76,397 | 77,316 |
| Income from continuing operations before income taxes (1) | 256,652 | 255,160 | 216,752 | 239,103 | 224,104 |
| Provision for income taxes | 16,914 | 20,978 | 14,962 | 25,219 | 21,233 |
| Income from continuing operations (1) | 239,738 | 234,182 | 201,790 | 213,884 | 202,871 |
| Income from discontinued operations | - | - | - | 19,355 | 18,429 |
| Net income (1) | 239,738 | 234,182 | 201,790 | 233,239 | 221,300 |
| BALANCE SHEET HIGHLIGHTS: | | | | | |
| Total assets | $ 6,332,463 | $ 6,158,991 | $ 5,717,873 | $ 5,383,243 | $ 5,027,430 |
| Property, plant and equipment, net | 5,399,860 | 5,001,615 | 4,688,925 | 4,401,990 | 4,138,568 |
| Aqua America stockholders' equity | 1,957,621 | 1,850,068 | 1,725,930 | 1,655,343 | 1,534,835 |
| Long-term debt, including current portion, excluding debt issuance costs (3) | 2,143,127 | 1,910,633 | 1,779,205 | 1,619,270 | 1,554,871 |
| Total debt, excluding debt issuance costs (3) | 2,146,777 | 1,917,168 | 1,795,926 | 1,637,668 | 1,591,611 |
| ADDITIONAL INFORMATION: | | | | | |
| Operating cash flows from continuing operations | $ 381,318 | $ 396,163 | $ 370,794 | $ 364,888 | $ 365,803 |
| Capital expenditures | 478,089 | 382,996 | 364,689 | 328,605 | 307,908 |
| Net cash expended for acquisitions of utility systems and other | 5,860 | 9,423 | 28,989 | 14,616 | 14,997 |
| Dividends on common stock | 140,660 | 130,923 | 121,248 | 112,106 | 102,889 |
| Number of utility customers served (2) | 982,849 | 972,265 | 957,866 | 940,119 | 928,200 |
| Number of shareholders of common stock | 23,511 | 24,750 | 25,269 | 25,780 | 25,833 |
| Common shares outstanding (000) | 177,714 | 177,394 | 176,544 | 176,753 | 176,751 |
| Employees (full-time) (2) | 1,530 | 1,551 | 1,617 | 1,617 | 1,542 |

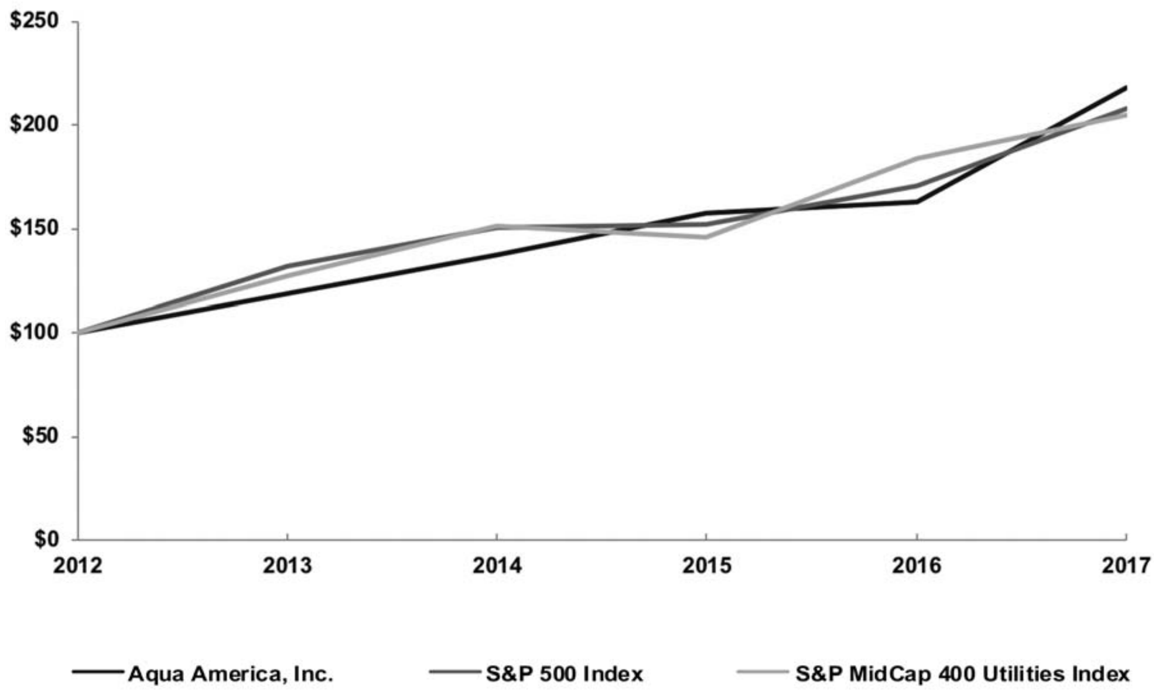
(1) 2015 results includes Aqua America's share of a joint venture impairment charge of $21,433 ($32,975 pre-tax)
(2) Reflects continuing operations
(3) Debt issuance costs for the years ended December 31, 2017, 2016, 2015, 2014, and 2013 were $21,605, $22,357, $23,165, $23,509, and $24,387, respectively

**Stock Price Performance**

The graph below matches the cumulative 5-Year total return of holders of Aqua America, Inc.'s common stock with the cumulative total returns of the S&P 500 index, and the S&P MidCap 400 Utilities index. The graph assumes that the value of the investment in our common stock, in each index, and in the peer group (including reinvestment of dividends) was $100 on 12/31/2012 and tracks it through 12/31/2017.

## Comparison of Five Year Cumulative Total Return*

Among Aqua America, Inc., the S&P 500 Index, and S&P MidCap 400 Utilities Index




*$100 invested on 12/31/12 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.



**Years as of December 31**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Aqua America, Inc. | 100.00 | 118.76 | 137.88 | 157.86 | 162.94 | 217.95 |
| S&P 500 Index | 100.00 | 132.39 | 150.51 | 152.59 | 170.84 | 208.14 |
| S&P MidCap 400 Utilities Index | 100.00 | 127.72 | 151.13 | 145.78 | 184.16 | 204.62 |

*The stock price performance included in this graph is not necessarily indicative of future stock price performance.*

**Financial Reports and Investor Relations**
Copies of the company's public financial reports, including annual reports and Forms 10–K and 10–Q, are available online and can be downloaded from the investor relations section of our Website at AquaAmerica.com. You may also obtain these reports by writing to us at:

Investor Relations Department
Aqua America, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010-3489

**Corporate Governance**
We are committed to maintaining high standards of corporate governance and are in compliance with the corporate governance rules of the Securities and Exchange Commission (SEC) and the New York Stock Exchange. Copies of our key corporate governance documents, including our Corporate Governance Guidelines, Code of Ethical Business Conduct, and the charters of each committee of our Board of Directors can be obtained from the corporate governance portion of the investor relations section of our Website, AquaAmerica.com. Amendments to the Code of Ethical Business, and in the event of any grant of waiver from a provision of the Code of Conduct requiring disclosure under applicable SEC rules will be disclosed on our Website.

**Annual Meeting**
8:30 a.m. Eastern Daylight Time
Tuesday, May 8, 2018
Drexelbrook Banquet Facility and Corporate Center
4700 Drexelbrook Drive
Drexel Hill, PA 19026

**Transfer Agent and Registrar**
Computershare
P.O. Box 505000
Louisville, KY 40233
800.205.8314 or
www.computershare.com/investor

**Independent Registered Public Accounting Firm**
PricewaterhouseCoopers LLP
Two Commerce Square
Suite 1800
2001 Market Street
Philadelphia, PA 19103-7042

**Stock Exchange**
The Common Stock of the company is listed on the New York Stock Exchange and under the ticker symbol **WTR**.

**Dividend Reinvestment and Direct Stock Purchase Plan**
The company's Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") enables shareholders to reinvest all, or a designated portion of, dividends paid on up to 100,000 shares of Common Stock in additional shares of Common Stock at a discretionary discount from a price based on the market value of the stock. The discount between 0 and 5.0 percent on the shares purchased or issued to meet the dividend reinvestment requirement will be designated by us in our sole discretion prior to the purchase or issuance of such shares. We reserve the right to change, reduce or discontinue any discount at any time without notice. In addition, shareholders may purchase additional shares of Aqua America Common Stock at any time with a minimum investment of $50, up to a maximum of $250,000 annually. Individuals may become shareholders by making an initial investment of at least $500. A Plan prospectus may be obtained by calling Computershare at 800.205.8314 or by visiting www.computershare.com/investor. Please read the prospectus carefully before you invest.

**IRA, Roth IRA, Education IRA**

An IRA, Roth IRA or Coverdell Education Savings Account may be opened through the Plan to hold shares of Common Stock of the company and to make contributions to the IRA to purchase shares of Common Stock. Participants in the Plan may roll over an existing IRA or other qualified plan distribution in cash into an IRA under the Plan to purchase the company's Common Stock. Participants may also transfer the company's Common Stock from an existing IRA into an IRA under the Plan. A prospectus, IRA forms and a disclosure statement may be obtained by calling Computershare at 800.597.7736. Please read the prospectus carefully before you invest.

**Direct Deposit**

With direct deposit, Aqua America cash dividends are deposited automatically on the dividend payment date of each quarter. Shareholders will receive confirmation of their deposit in the mail. Shareholders interested in direct deposit should call the company's transfer agent at 800.205.8314.

**Delivery of voting materials to shareholders sharing an address**

The SEC's rules permit the Company to deliver a Notice of Internet Availability of Proxy Materials or a single set of proxy materials to one address shared by two or more of the Company's shareholders. This is intended to reduce the printing and postage expense of delivering duplicate voting materials to our shareholders who have more than one Aqua America stock account. A separate Notice of Internet Availability or proxy card is included for each of these shareholders. If you received a Notice of Internet Availability you will not receive a printed copy of the proxy materials unless you request it by following the instructions in the notice for requesting printed proxy material.

**How to obtain a separate set of voting materials**

If you are a registered shareholder who shares an address with another registered shareholder and have received only one Notice of Internet Availability of Proxy Materials or set of proxy material and wish to receive a separate copy for each shareholder in your household for the 2018 annual meeting, you may write or call us to request a separate copy of this material at no cost to you at 610.645.1040 or write us at:

Attn: Investor Relations
Aqua America, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA, 19010

For future annual meetings, you may request separate voting material by calling Broadridge at 866.540.9095, or by writing to Broadridge Financial Solutions, Inc., Householding Department, 51 Mercedes Way, Edgewood, New York 11717.

**Account Access**

Aqua America shareholders may access their account by visiting www.computershare.com/investor. Shareholders may view their account, purchase additional shares, and make changes to their account. To learn more, visit www.computershare.com/investor or call 800.205.8314.

**Dividends**

Aqua America has paid dividends for 73 consecutive years. The normal Common Stock dividend dates for 2018 and the first six months of 2019 are:

| Declaration Date | Ex-Dividend Date | Record Date | Payment Date |
|---|---|---|---|
| February 5, 2018 | February 14, 2018 | February 16, 2018 | March 1, 2018 |
| May 7, 2018 | May 16, 2018 | May 18, 2018 | June 1, 2018 |
| August 6, 2018 | August 15, 2018 | August 17, 2018 | September 1, 2018 |
| November 5, 2018 | November 14, 2018 | November 16, 2018 | December 1, 2018 |
| February 4, 2019 | February 13, 2019 | February 15, 2019 | March 1, 2019 |
| May 6, 2019 | May 15, 2019 | May 17, 2019 | June 1, 2019 |

To be an owner of record, and therefore eligible to receive the quarterly dividend, shares must have been purchased before the ex-dividend date. Owners of any share(s) on or after the ex-dividend date will not receive the dividend for that quarter. The previous owner — the owner of record — will receive the dividend.

Only the Board of Directors may declare dividends and set record dates. Therefore, the payment of dividends and these dates may change at the discretion of the Board.

Dividends paid on the company's Common Stock are subject to Federal and State income tax.

**Lost Dividend Checks, Stock Certificates and Escheatment**

Dividend checks lost by shareholders, or those that might be lost in the mail, will be replaced upon notification of the lost or missing check. All inquiries concerning lost or missing dividend checks should be made to the company's transfer agent at 800.205.8314. Shareholders should call or write the company's transfer agent to report a lost certificate. Appropriate documentation will be prepared and sent to the shareholder with instructions.

Escheatment is the act of reporting and transferring property to a state when the rightful owner has an invalid address or has not made contact or initiated a transaction during the state's designated dormancy period. Escheated assets are transferred to the state for safekeeping (and often liquidated) until the rightful owner makes a claim on the asset. To keep your shares of stock and uncashed dividends from being escheated, you must maintain contact (recommended at least once a year) with the company's transfer agent, especially if you recently changed your address, changed your marital status or are managing an estate following a death. Unclaimed property laws vary widely from state to state.

**Safekeeping of Stock Certificates**

Under the Direct Stock Purchase Plan, shareholders may have their stock certificates deposited with the transfer agent for safekeeping free of charge. Stock certificates and written instructions should be forwarded to:

Computershare, N.A.
P.O. BOX 505000
Louisville, KY 40233

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As of March 29, 2018

## BOARD OF DIRECTORS

**Christopher H. Franklin**
*Chairman, President, and Chief Executive Officer*
*Aqua America, Inc.*
Director since 2015

**Nicholas DeBenedictis**
*Chairman Emeritus*
*Aqua America, Inc.*
Director since 1992

**Carolyn J. Burke**
*Executive Vice President, Strategy*
*Dynegy, Inc.*
Director since 2016

**Richard H. Glanton**
*Founder*
*ElectedFace, Inc.*
Director since 1995

**William P. Hankowsky**
*Chairman, President, and Chief Executive Officer*
*Liberty Property Trust*
Director since 2004

**Daniel J. Hilferty**
*President and Chief Executive Officer*
*Independence Health Group*
Director since 2017

**Wendell F. Holland, Esq.**
*Partner*
*CFSD Group, LLC*
Director since 2011

**Ellen T. Ruff**
*Partner*
*McGuireWoods, LLP.*
Director since 2006

## OFFICERS

**Christopher H. Franklin**
*Chairman, President, and Chief Executive Officer*

**Richard S. Fox**
*Executive Vice President*
*Chief Operating Officer, Regulated Operations*

**Christopher P. Luning**
*Senior Vice President*
*General Counsel and Secretary*

**Robert A. Rubin**
*Senior Vice President*
*Controller and Chief Accounting Officer*

**Daniel J. Schuller, PhD.**
*Executive Vice President*
*Corporate Development and Strategy*

**David P. Smeltzer**
*Executive Vice President*
*Chief Financial Officer*

AQUA[SM]

Aqua America, Inc.
762 W. Lancaster Avenue
Bryn Mawr, Pennsylvania 19010

877.987.2782
AquaAmerica.com

NYSE: WTR

**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON, D.C. 20549**

**FORM 10-K**

(Mark One)
☑ ANNUAL REPORT PURSUANT TO SECTION 13 or 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2017

Or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from __________ to __________

Commission File number 1-6659

**AQUA AMERICA, INC.**
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Pennsylvania | 23-1702594 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| 762 W Lancaster Avenue, Bryn Mawr, Pennsylvania | 19010-3489 |
| (Address of principal executive offices) | (Zip Code) |

(610) 527-8000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common stock, par value $.50 per share | New York Stock Exchange, Inc. |

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
☑ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
☐ Yes ☑ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☑ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
☑ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "small reporting company," and "emerging growth company" in Rule 12(b)-2 of the Exchange Act.:

| | |
|---|---|
| Large accelerated filer ☑ | Accelerated filer ☐ |
| Non-accelerated filer ☐ (do not check if smaller reporting company) | Small reporting company ☐ |
| Emerging growth company ☐ | |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ Yes ☑No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2017: $5,901,277,615

The number of shares outstanding of the registrant's common stock as of February 13, 2018: 177,750,505

**DOCUMENTS INCORPORATED BY REFERENCE**

(1) Portions of the definitive Proxy Statement, relating to the 2018 annual meeting of shareholders of registrant, to be filed within 120 days after the end of the fiscal year covered by this Form 10-K, have been incorporated by reference into Part III of this Form 10-K

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## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report on Form 10-K (the "Annual Report") are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions. Forward-looking statements in this Annual Report include, but are not limited to, statements regarding:

- recovery of capital expenditures and expenses in rates;
- projected capital expenditures and related funding requirements;
- our capability to pursue timely rate increase requests;
- the availability and cost of capital financing;
- developments, trends and consolidation in the water and wastewater utility and infrastructure industries;
- dividend payment projections;
- opportunities for future acquisitions, both within and outside the water and wastewater industry, the success of pending acquisitions and the impact of future acquisitions;
- the capacity of our water supplies, water facilities and wastewater facilities;
- the impact of federal and/or state tax policies, including changes in tax laws and policies as a result of the recently enacted Tax Cuts and Jobs Act, and the regulatory treatment of the effects of those policies;
- the impact of geographic diversity on our exposure to unusual weather;
- the impact of conservation awareness of customers and more efficient plumbing fixtures and appliances on water usage per customer;
- our authority to carry on our business without unduly burdensome restrictions;
- the continuation of investments in strategic ventures;
- our ability to obtain fair market value for condemned assets;
- the impact of fines and penalties;
- the impact of changes in and compliance with governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the impact of decisions of governmental and regulatory bodies, including decisions to raise or lower rates;
- the development of new services and technologies by us or our competitors;
- the availability of qualified personnel;
- the condition of our assets;
- the impact of legal proceedings;
- general economic conditions;
- acquisition-related costs and synergies;
- the sale of water and wastewater divisions; and
- the amount of income tax deductions for qualifying utility asset improvements and the Internal Revenue Service's ultimate acceptance of the deduction methodology.

Because forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including but not limited to:

- changes in general economic, business, credit and financial market conditions;
- changes in governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the profitability of future acquisitions;
- changes to the rules or our assumptions underlying our determination of what qualifies for an income tax deduction for qualifying utility asset improvements;
- the decisions of governmental and regulatory bodies, including decisions on rate increase requests;
- our ability to file rate cases on a timely basis to minimize regulatory lag;
- abnormal weather conditions, including those that result in water use restrictions;
- changes in, or unanticipated, capital requirements;
- changes in our credit rating or the market price of our common stock;
- changes in valuation of strategic ventures;
- our ability to integrate businesses, technologies or services which we may acquire;
- our ability to manage the expansion of our business;
- our ability to treat and supply water or collect and treat wastewater;
- the extent to which we are able to develop and market new and improved services;
- the effect of the loss of major customers;
- our ability to retain the services of key personnel and to hire qualified personnel as we expand;
- labor disputes;
- increasing difficulties in obtaining insurance and increased cost of insurance;
- cost overruns relating to improvements to, or the expansion of, our operations;
- increases in the costs of goods and services;
- civil disturbance or terroristic threats or acts;
- the continuous and reliable operation of our information technology systems, including the impact of cyber security attacks or other cyber-related events;
- changes in accounting pronouncements;
- litigation and claims; and
- changes in environmental conditions, including the effects of climate change.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this Annual Report completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this Annual Report. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. For further information or other factors which could affect our financial results and such forward-looking statements, see *Risk Factors*. We qualify all of our forward-looking statements by these cautionary statements.

PART I

Item 1. *Business*

*The Company*

Aqua America, Inc. (referred to as “Aqua America”, the “Company”, “we”, “us”, or “our”), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to an estimated three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 52% of our operating revenues and approximately 74% of our net income for 2017. As of December 31, 2017, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of people we serve. Aqua Pennsylvania’s service territory is located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company’s market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through two operating and maintenance contracts with municipal authorities close to our utility companies’ service territory; and offers, through a third party, water and wastewater line repair service and protection solutions to households. In 2017, we completed the sale of business units that are reported within Aqua Resources, which installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, and repaired and performed maintenance on water and wastewater systems. Additionally, during 2016, we completed the sale of business units within Aqua Resources, which provided liquid waste hauling and disposal services and inspection, and cleaning and repair of storm and sanitary wastewater lines.

Aqua America, which prior to its name change in 2004 was known as Philadelphia Suburban Corporation, was formed in 1968 as a holding company for its primary subsidiary, Aqua Pennsylvania, formerly known as Philadelphia Suburban Water Company. In the early 1990s, we embarked on a growth through acquisition strategy focused on water and wastewater operations. Our most significant transactions to date have been the merger with Consumers Water Company in 1999, the acquisition of the regulated water and wastewater operations of AquaSource, Inc. in 2003, the acquisition of Heater Utilities, Inc. in 2004, and the acquisition of American Water Works Company, Inc.’s regulated water and wastewater operations in Ohio in 2012. Since the early 1990s, our business strategy has been primarily directed toward the regulated water and wastewater utility industry, where we have more than quadrupled the number of regulated customers we serve, and have extended our regulated operations from southeastern Pennsylvania to include our current regulated utility operations throughout Pennsylvania and in seven other states. During 2010 through 2013, we sold our utility operations in six states, pursuant to a portfolio rationalization strategy to focus our operations in areas where we have critical mass and economic growth potential. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to pursue growth ventures in market-based activities, such as infrastructure opportunities that are supplementary and complementary to our regulated businesses.

The following table reports our operating revenues, by principal state, for the Regulated segment and Other and eliminations for the year ended December 31, 2017:

| | Operating Revenues (000's) | Operating Revenues (%) |
|---|---|---|
| Pennsylvania | $ 419,594 | 51.9% |
| Ohio | 106,254 | 13.1% |
| Texas | 72,312 | 8.9% |
| Illinois | 64,129 | 7.9% |
| North Carolina | 54,991 | 6.8% |
| Other states (1) | 87,625 | 10.8% |
| Regulated segment total | 804,905 | 99.4% |
| Other and eliminations | 4,620 | 0.6% |
| Consolidated | $ 809,525 | 100.0% |

(1) Includes our operating subsidiaries in the following states: New Jersey, Indiana, and Virginia.

Information concerning revenues, net income, identifiable assets and related financial information for the Regulated segment and Other and eliminations for 2017, 2016, and 2015 is set forth in *Management's Discussion and Analysis of Financial Condition and Results of Operations* and in Note 17 – *Segment Information* in the *Notes to Consolidated Financial Statements* which is contained in Item 8 of this Annual Report.

The following table summarizes our operating revenues, by utility customer class, for the Regulated segment and Other and eliminations for the year ended December 31, 2017:

| | Operating Revenues (000's) | Operating Revenues (%) |
|---|---|---|
| Residential water | $ 483,865 | 59.8% |
| Commercial water | 130,373 | 16.1% |
| Fire protection | 30,619 | 3.8% |
| Industrial water | 27,880 | 3.4% |
| Other water | 34,705 | 4.3% |
| Total water | 707,442 | 87.4% |
| Wastewater | 87,560 | 10.8% |
| Other utility | 9,903 | 1.2% |
| Regulated segment total | 804,905 | 99.4% |
| Other and eliminations | 4,620 | 0.6% |
| Consolidated | $ 809,525 | 100.0% |

Our utility customer base is diversified among residential water, commercial water, fire protection, industrial water, other water, wastewater customers, and other utility customers (consisting of operating contracts that are closely associated with the utility operations). Residential water and wastewater customers make up the largest component of our utility customer base, with these customers representing approximately 70% of our water and wastewater revenues for 2017, 2016, and 2015, respectively. Substantially all of our water customers are metered, which allows us to measure and bill for our customers' water consumption. Water consumption per customer is affected by local weather conditions during the year, especially during late spring, summer, and early fall. In general, during these seasons, an extended period of dry weather increases consumption, while above average rainfall decreases consumption. Also, an increase in the average temperature generally causes an increase in water consumption. On occasion, abnormally dry weather in our service areas can result in governmental authorities declaring drought warnings and imposing water use restrictions in the affected areas, which could reduce water consumption.  See "Business – *Water Utility Supplies, and Facilities and Wastewater Utility Facilities*" for a discussion of water use restrictions that may impact water consumption during abnormally dry weather.  The geographic diversity of our utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of our service territory.  Water usage is also affected by changing consumption patterns by our customers, resulting from such causes as increased water conservation and the installation of water saving devices and appliances that can result in decreased water usage.  It is estimated that in the event we experience a 0.50% decrease in residential water consumption it would result in a decrease in annual residential water revenue of approximately $2,400,000, and would likely be partially offset by a reduction in incremental water production expenses such as chemicals and power.

Our growth in revenues over the past five years is primarily a result of increases in water and wastewater rates and customer growth.  See *Economic Regulation* for a discussion of water and wastewater rates.  The increase in our utility customer base has been due to customers added through acquisitions, partnerships with developers, and organic growth (excluding dispositions) as shown below:

| Year | Utility Customer Growth Rate |
|---|---|
| 2017 | 1.1% |
| 2016 | 1.6% |
| 2015 | 1.9% |
| 2014 | 1.3% |
| 2013 | 1.3% |

In 2017, our customer count increased by 10,584 customers, primarily due to utility systems that we acquired and organic growth.  Overall, for the five-year period of 2013 through 2017, our utility customer base, adjusted to exclude customers associated with utility system dispositions, increased at an annual compound rate of 1.4%.  During the five-year period ended December 31, 2017, our utility customer base including customers associated with utility system acquisitions and dispositions increased from 968,357 at January 1,  2013 to 982,849 at December 31, 2017.    This five-year period includes the impact of the condemnation of our Fort Wayne, IN system in 2014, which resulted in the loss of approximately 13,000 connections.

*Acquisitions and Other Growth Ventures*

We believe that acquisitions will continue to be an important source of customer growth for us.  We intend to continue to pursue acquisitions of government-owned and regulated water and wastewater systems that provide services in areas near our existing service territories or in new service areas.  We engage in continuing activities with respect to potential acquisitions, including calling on prospective sellers, performing analyses of and due diligence on  acquisition candidates, making preliminary acquisition proposals, and negotiating the terms of potential acquisitions.  Further, we are also seeking other potential business opportunities, including but not limited to, partnering with public and regulated utilities to invest in infrastructure projects, growing our market-based activities by acquiring businesses that provide water and wastewater or other utility-related services, and investing in infrastructure projects.

According to the U.S. Environmental Protection Agency ("EPA"), approximately 85% of the U.S. population obtains its water from community water systems, and 15% of the U.S. population obtains its water from private wells.  With approximately 53,000 community water systems in the U.S. (82% of which serve less than 3,300 customers), the water industry is the most fragmented of the major utility industries (telephone, natural gas, electric, water and wastewater).  The majority of these community water systems are government-owned, and the balance of the systems are regulated utilities.  The nation's water systems range in size from large government-owned systems, such as the New York City water system which serves approximately 8.5 million people, to small systems, where a few customers share a common well.  In the states where we operate regulated utilities, we believe there are approximately 14,500 community water systems of widely-varying size, with the majority of the population being served by government-owned water systems.

Although not as fragmented as the water industry, the wastewater industry in the U.S. also presents opportunities for consolidation.  According to the EPA's most recent survey of wastewater treatment facilities (which includes both government-owned facilities and regulated utility systems) in 2012, there are approximately 15,000 such facilities in the nation serving approximately 76% of the U.S. population.  The remaining population represents individual homeowners with their own treatment facilities; for example, community on-lot disposal systems and septic tank systems.  A majority of wastewater facilities are government-owned rather than regulated utilities.  The EPA's survey also indicated that there are approximately 4,000 wastewater facilities in operation in the states where we operate regulated utilities.

Because of the fragmented nature of the water and wastewater utility industries, we believe there are many potential water and wastewater system acquisition candidates throughout the U.S.  We believe the factors driving consolidation of these systems are:

- the benefits of economies of scale;
- the increasing cost and complexity of environmental regulations;
- the need for substantial capital investment;
- the need for technological and managerial expertise;
- the desire to improve water quality and service;
- limited access to cost-effective financing;
- the monetizing of public assets to support, in some cases, the declining financial condition of municipalities; and
- the use of system sale proceeds by a municipality to accomplish other public purposes.

We are actively exploring opportunities to expand our utility operations through acquisitions or other growth ventures.  During the five-year period ended December 31, 2017, we expanded our utility operations by completing 70 acquisitions or other growth ventures.

*Water Utility Supplies and Facilities and Wastewater Utility Facilities*

Our water utility operations obtain their water supplies from surface water sources, underground aquifers, and water purchased from other water suppliers.  Our water supplies are primarily self-supplied and processed at twenty-one surface water treatment plants located in four states, and numerous well stations located in all of the states in which we conduct business.  Approximately 7% of our water supplies are provided through water purchased from other water suppliers.  It is our policy to obtain and maintain the permits necessary to obtain the water we distribute.

We believe that the capacities of our sources of supply, and our water treatment, pumping and distribution facilities, are generally sufficient to meet the present requirements of our customers under normal conditions.  We plan system improvements and additions to capacity in response to normal replacement and renewal needs, changing regulatory standards, changing patterns of consumption, and increased demand from customer growth.  The various state utility commissions have generally recognized the operating and capital costs associated with these improvements in setting water and wastewater rates.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions.  The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income.  In general, water consumption in the summer months is more affected by drought warnings and restrictions because discretionary and recreational use of water is at its highest during the summer months.  At other times of the year, warnings and restrictions generally have less of an effect on water consumption.  Currently, portions of our northern and central Texas service areas have conservation water restrictions.  Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

We believe that our wastewater treatment facilities are generally adequate to meet the present requirements of our customers under normal conditions.  Additionally, we own several wastewater collection systems that convey the wastewater to a municipally-owned facility for treatment.  Changes in regulatory requirements can be reflected in revised permit limits and conditions when permits are renewed, typically on a five-year cycle, or when treatment capacity is expanded.  Capital improvements are planned and budgeted to meet normal replacement and renewal needs, anticipated changes in regulations, needs for increased capacity related to projected growth, and to reduce inflow and infiltration to

collection systems. The various state utility commissions have generally recognized the operating and capital costs associated with these improvements in setting wastewater rates for current and new customers. It is our policy to obtain and maintain the permits necessary for the treatment of the wastewater that we return to the environment.

*Economic Regulation*

Most of our water and wastewater utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions and authorize the issuance of securities. The utility commissions also establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state, and may change over time. A small number of our operations are subject to rate regulation by county or city governments. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances we are granted by the respective utility commissions or authorities in the various states in which we operate.

Rate Case Management Capability – We maintain a rate case management capability, the objective of which is to provide that the tariffs of our utility operations reflect, to the extent practicable, the timely recovery of increases in costs of operations, capital expenditures, interest expense, taxes, energy, materials, and compliance with environmental regulations. We file rate increase requests to recover and earn a fair return on the infrastructure investments that we make in improving or replacing our facilities and to recover expense increases. In the states in which we operate, we are primarily subject to economic regulation by the following state utility commissions:

| State | Utility Commission |
|---|---|
| Pennsylvania | Pennsylvania Public Utility Commission |
| Ohio | Public Utilities Commission of Ohio |
| Texas | Public Utility Commission of Texas |
| Illinois | Illinois Commerce Commission |
| North Carolina | North Carolina Utilities Commission |
| New Jersey | New Jersey Board of Public Utilities |
| Indiana | Indiana Utility Regulatory Commission |
| Virginia | Virginia State Corporation Commission |

Our water and wastewater operations are comprised of 53 rate divisions, each of which requires a separate rate filing for the evaluation of the cost of service, including the recovery of investments, in connection with the establishment of rates for that rate division. When feasible and beneficial to our utility customers, we will seek approval from the applicable state regulatory commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the states in which we operate permit us to file a revenue requirement for some form of consolidated rates for all, or some of the rate divisions in that state.

In Virginia, we may seek authorization to bill our utility customers in accordance with a rate filing that is pending before the respective regulatory commission. As of December 31, 2017, we have no billings under interim rate arrangements for rate case filings in progress. Furthermore, some utility commissions authorize the use of expense deferrals and amortization in order to provide for an impact on our operating income by an amount that approximates the requested amount in a rate request. In these states, the additional revenue billed and collected prior to the final regulatory commission ruling is subject to refund to customers based on the outcome of the ruling. The revenue recognized and the expenses deferred by us reflect an estimate as to the final outcome of the ruling. If the request is denied completely or in part, we could be required to refund to customers some or all of the revenue billed to date and write-off some or all of the deferred expenses.

Revenue Surcharges – Six states in which we operate water utilities, and five states in which we operate wastewater utilities, permit us to add a surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. Without this surcharge, a water and wastewater utility absorbs all of the depreciation and capital costs of these projects between base rate increases. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which often acted as a disincentive to water and wastewater utilities to rehabilitate their infrastructure. In addition, our subsidiaries in some states use a surcharge or credit on their bills to reflect changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new cost levels are incorporated into base rates.

Currently, New Jersey allows for an infrastructure rehabilitation surcharge for water utilities, while Pennsylvania, Illinois, Ohio, Indiana, and North Carolina allow for the use of an infrastructure rehabilitation surcharge for both water and wastewater utility systems. The infrastructure rehabilitation surcharge typically adjusts periodically based on additional qualified capital expenditures completed or anticipated in a future period, and is capped at a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. This surcharge provided revenues of $10,255,284 in 2017, $7,379,000 in 2016, and $3,261,000 in 2015.

Income Tax Accounting Change – In December 2012, Aqua Pennsylvania adopted an income tax accounting change, implemented on Aqua America's 2012 federal income tax return, which was filed in September 2013. This accounting change allows a tax deduction for qualifying utility asset improvements that were formerly capitalized for tax purposes, and was implemented in response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission. The Pennsylvania rate order requires use of the flow-through method of income tax benefits which results in a reduction in current income tax expense as a result of the recognition of income tax benefits resulting from the accounting change. This tax accounting change and its treatment under the Pennsylvania rate order provided sufficient income tax benefits to permit the suspension of the Pennsylvania infrastructure rehabilitation surcharge from January 1, 2013 to September 30, 2017. Beginning on October 1, 2017, Aqua Pennsylvania initiated a water infrastructure rehabilitation surcharge for the capital invested since the last rate proceeding and expects to file a base rate case in 2018.

Fair Market Value Legislation – In April 2016, Pennsylvania enacted legislation allowing the public utility commission to utilize fair market value to set ratemaking rate base instead of the depreciated original cost of water or wastewater assets for certain qualifying municipal acquisitions. The legislation includes a process for engaging two independent utility valuation experts to perform appraisals that are filed with the public utility commission and then averaged and compared to the purchase price. The ratemaking rate base is the lower of the average of the appraisals or the purchase price and is subject to regulatory approval. Illinois, Indiana, and New Jersey also have legislation that allows the use of fair market value under varying rules and circumstances. We believe that this legislation will encourage consolidation in the water and wastewater industry providing municipalities with an option for exiting the business if they are dealing with their aging, deteriorating water and wastewater assets, do not have the expertise or technical capabilities to continue to comply with ever increasing environmental regulations or simply want to focus on other community priorities.

*Competition*

In general, we believe that Aqua America and its subsidiaries have valid authority, free from unduly burdensome restrictions, to enable us to carry on our business as presently conducted in the franchised or contracted areas we now serve. The rights to provide water or wastewater service to a particular franchised service territory are generally non-exclusive, although the applicable utility commissions usually allow only one regulated utility to provide service to a given area. In some instances, another water utility provides service to a separate area within the same political subdivision served by one of our subsidiaries. Therefore, as a regulated utility, there is little or no competition for the daily water and wastewater service we provide to our customers. Water and wastewater utilities may compete for the acquisition of other water and wastewater utilities or for acquiring new customers in new service territories. Competition for these acquisitions generally comes from nearby utilities, either other regulated utilities or municipal-owned, and sometimes from strategic or financial purchasers seeking to enter or expand in the water and wastewater industry. We compete for new service territories and the acquisition of other utilities on the following bases:

- economic value;
- economies of scale;
- our ability to provide quality water and wastewater service;
- our existing infrastructure network;
- our ability to perform infrastructure improvements;

- our ability to comply with environmental, health, and safety regulations;
- our technical, regulatory, and operational expertise;
- our ability to access capital markets; and
- our cost of capital.

The addition of new service territories and the acquisition of other utilities by regulated utilities such as us are generally subject to review and approval by the applicable state utility commissions.

In a very few number of instances, in one of our southern states, where there are municipally-owned water or wastewater systems near our operating divisions, the municipally-owned system may either have water distribution or wastewater collection mains that are located adjacent to our division's mains or may construct new mains that parallel our mains. In these rare circumstances, the municipally-owned system may attempt to voluntarily offer service to customers who are connected to our mains, resulting in our mains becoming surplus or underutilized without compensation.

In the states where our subsidiaries operate, it is possible that portions of our subsidiaries' operations could be acquired by municipal governments by one or more of the following methods:

- eminent domain;
- the right of purchase given or reserved by a municipality or political subdivision when the original franchise was granted; and
- the right of purchase given or reserved under the law of the state in which the subsidiary was incorporated or from which it received its permit.

The price to be paid upon such an acquisition by the municipal government is usually determined in accordance with applicable law under eminent domain. In other instances, the price may be negotiated, fixed by appraisers selected by the parties or computed in accordance with a formula prescribed in the law of the state or in the particular franchise or charter. We believe that our operating subsidiaries will be entitled to fair market value for any assets that are condemned, and we believe the fair market value will be in excess of the book value for such assets.

Despite maintaining a program to monitor condemnation interests and activities that may affect us over time, one of our primary strategies continues to be to acquire additional water and wastewater systems, to maintain our existing systems where there is a business or a strategic benefit, and to actively oppose unilateral efforts by municipal governments to acquire any of our operations, particularly for less than the fair market value of our operations or where the municipal government seeks to acquire more than it is entitled to under the applicable law or agreement. On occasion, we may voluntarily agree to sell systems or portions of systems in order to help focus our efforts in areas where we have more critical mass and economies of scale or for other strategic reasons.

*Environmental, Health and Safety Regulation*

Provision of water and wastewater services is subject to regulation under the federal Safe Drinking Water Act, the Clean Water Act, and related state laws, and under federal and state regulations issued under these laws. These laws and regulations establish criteria and standards for drinking water and for wastewater discharges. In addition, we are subject to federal and state laws and other regulations relating to solid waste disposal, dam safety and other aspects of our operations. Capital expenditures and operating costs required as a result of water quality standards and environmental requirements have been traditionally recognized by state utility commissions as appropriate for inclusion in establishing rates.

From time to time, Aqua America has acquired, and may acquire, systems that have environmental compliance issues. Environmental compliance issues also arise in the course of normal operations or as a result of regulatory changes. Aqua America attempts to align capital budgeting and expenditures to address these issues in due course. We believe that the capital expenditures required to address outstanding environmental compliance issues have been budgeted in our capital program and represent approximately $63,237,000, or approximately 3.0% of our expected total capital expenditures over the next five years. We are parties to agreements with regulatory agencies in Pennsylvania, Texas, North Carolina, and Indiana under which we have committed to make improvements for environmental compliance. These agreements are intended to provide the regulators with assurance that problems covered by these agreements will be addressed, and the agreements generally provide protection from fines, penalties and other actions while corrective measures are being implemented. We are actively working directly with state environmental officials in Pennsylvania, Texas, and North Carolina to implement or amend regulatory agreements as necessary.

Safe Drinking Water Act - The Safe Drinking Water Act establishes criteria and procedures for the EPA to develop national quality standards for drinking water. Regulations issued pursuant to the Safe Drinking Water Act set standards regarding the amount of microbial and chemical contaminants and radionuclides in drinking water. Current requirements under the Safe Drinking Water Act are not expected to have a material impact on our business, financial condition, or results of operations as we have made and are making investments to meet existing water quality standards. We may, in the future, be required to change our method of treating drinking water at some sources of supply and make additional capital investments if additional regulations become effective.

Clean Water Act - The Clean Water Act regulates discharges from drinking water and wastewater treatment facilities into lakes, rivers, streams, and groundwater. It is our policy to obtain and maintain all required permits and approvals for the discharges from our water and wastewater facilities, and to comply with all conditions of those permits and other regulatory requirements. A program is in place to monitor facilities for compliance with permitting, monitoring and reporting for wastewater discharges. From time to time, discharge violations may occur which may result in fines. These fines and penalties, if any, are not expected to have a material impact on our business, financial condition, or results of operations. We are also parties to agreements with regulatory agencies in several states where we operate while improvements are being made to address wastewater discharge issues.

Solid Waste Disposal - The handling and disposal of waste generated from water and wastewater treatment facilities is governed by federal and state laws and regulations. A program is in place to monitor our facilities for compliance with regulatory requirements, and we are not aware of any significant environmental remediation costs necessary from our handling and disposal of waste material from our water and wastewater operations.

Dam Safety - Our subsidiaries own thirty dams, of which fifteen are classified as high hazard dams that are subject to the requirements of the federal and state regulations related to dam safety, which undergo regular inspections and an annual engineering inspection. After a thorough review and inspection of our dams by professional outside engineering firms, we believe that all fifteen dams are structurally sound and well-maintained, except as described below. These inspections provide recommendations for ongoing rehabilitation which we include in our capital improvement program.

We performed studies of our dams that identified three dams in Pennsylvania and two dams in Ohio requiring capital improvements. These capital improvements result from the adoption by state regulatory agencies of revised formulas for calculating the magnitude of a possible maximum flood event. The most significant capital improvement remaining to be performed in our dam improvement program is on one dam in Pennsylvania at a total estimated cost of $13,300,000. Design for this dam commenced in 2013 and construction is expected to be completed in 2021.

A recent dam inspection in Illinois found cracks on two control gate mechanisms, and as a result, temporary gates were installed to eliminate reliance on the cracked control gates. An inspection of the other control gates was conducted in the fourth quarter of 2017, and it was determined that certain of the dam's control gates could be replaced. Although we are unable to estimate the amount of this planned capital expenditure at this time, the amount may be significant, and we believe such capital investments will be recoverable in ratemaking.

One of our Ohio dams needing capital improvements is no longer used for water supply, and may be sold to a third party. Should that sale not be consummated, we will need to breech the dam or rehabilitate portions of the dam at a cost of up to approximately $2,600,000.

Lead and Copper Rule – The events in Flint, Michigan, which commenced in 2014, and other communities have brought attention to the issue of lead in drinking water from home plumbing. Lead in drinking water can come from lead that leaches from service lines, home plumbing solder, and fixtures or faucets. Since the Lead and Copper Rule in 1992, we have been working to prevent lead leaching from home plumbing sources by reducing water corrosivity and adding chemicals that can prevent leaching of lead in pipes and homes. We also focus on identifying and removing lead service lines and encouraging customers to replace the customer-owned portion of the service line if it is lead as they are

identified during our main replacement program or during other maintenance activities. We are currently developing a lead service line inventory. We support the recommendations of The Lead Service Line Replacement Collaborative, a collaborative of leading water industry organizations that has recommended full replacement of lead service lines as a "best practice" to reduce lead in drinking water, but we only have control over the company-owned portion of each service line. In cases where we are replacing a company-owned lead service line, our standard approach is to replace the company-owned portion and advise and encourage the customer to replace the customer-owned portion of the service line, all the way to the customer's home. We also advise customers of the potential health impacts of lead in drinking water, and conduct lead testing at homes following replacement of a lead service line. We do not plan on replacing customer-owned lead service lines at locations where our portion of the service line does not contain lead, but if we become aware of such situations we will notify the customer. It is anticipated that the EPA will propose updated regulations for the Lead and Copper Rule in 2018.

Partnership for Safe Water Program – Aqua America is a proud participant in the American Water Works Association's (AWWA) Partnership for Safe Water Program. This voluntary program is a commitment to excellence within the drinking water community above and beyond EPA's stringent treatment goals. All of our active surface water treatment plants (within Pennsylvania, Ohio, Illinois, and Virginia) maintain good standing in the program which includes many awards of achievement. The honors include the "Director's Award" (achieved at 5 systems) which recognizes plants that have: 1) completed a comprehensive self-assessment report, 2) created an action plan for continuous improvement, and 3) provided several evaluations of performance demonstrating operational excellence. Several of our systems have met these criteria annually and have received 5, 10, 15, and 20 year subscriber awards. Furthermore, our Roaring Creek Pennsylvania treatment plant has received the Phase IV Excellence Award, the highest honor achieved in the Partnership Program.

Safety Standards - Our facilities and operations may be subject to inspections by representatives of the Occupational Safety and Health Administration from time to time. We maintain safety policies and procedures to comply with the Occupational Safety and Health Administration's rules and regulations, but violations may occur from time to time, which may result in fines and penalties, which are not expected to have a material impact on our business, financial condition, or results of operations. We endeavor to correct such violations promptly when they come to our attention.

*Security*

We maintain security measures at our facilities, and collaborate with federal, state and local authorities and industry trade associations regarding information on possible threats and security measures for water and wastewater utility operations. The costs incurred are expected to be recoverable in water and wastewater rates and are not expected to have a material impact on our business, financial condition, or results of operations.

We also maintain cyber security protection measures with respect to our information technology, including our customer data, and, in some cases, the monitoring and operation of our treatment, storage and pumping facilities.

*Employee Relations*

As of December 31, 2017, we employed a total of 1,530 full-time employees. Our subsidiaries are parties to 15 labor agreements with labor unions covering 527 employees. The labor agreements expire at various times between March 2018 and October 2022.

*Available Information*

We file annual, quarterly, current reports, proxy statements, and other information with the Securities and Exchange Commission ("SEC"). You may read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street, NE, Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. You may also obtain our SEC filings from the SEC's web site at www.sec.gov.

Our internet web site address is www.aquaamerica.com. We make available free of charge through our web site's *Investor Relations* page all of our filings with the SEC, including our annual report on Form 10-K, quarterly reports on

Form 10-Q, current reports on Form 8-K, and other information. These reports and information are available as soon as reasonably practicable after such material is electronically filed with the SEC.

In addition, you may request a copy of the foregoing filings, at no cost by writing or telephoning us at the following address or telephone number:

Investor Relations Department
Aqua America, Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010-3489
Telephone: 610-527-8000

Our Board of Directors has various committees including an audit committee, an executive compensation committee, a corporate governance committee, and a risk mitigation and investment policy committee. Each of these committees has a formal charter. We also have Corporate Governance Guidelines and a Code of Ethical Business Conduct. Copies of these charters, guidelines, and codes can be obtained free of charge from our *Investor Relations* page on our web site, www.aquaamerica.com. In the event we change or waive any portion of the Code of Ethical Business Conduct that applies to any of our directors, executive officers, or senior financial officers, we will post that information on our web site.

The references to our web site and the SEC's web site are intended to be inactive textual references only, and the contents of those web sites are not incorporated by reference herein and should not be considered part of this or any other report that we file with or furnish to the SEC.

## Item 1A. *Risk Factors*

*In addition to the other information included in this Annual Report, the following factors should be considered in evaluating our business and future prospects. Any of the following risks, either alone or taken together, could materially harm our business, financial condition, and results of operations. If one or more of these or other risks or uncertainties materialize, or if our underlying assumptions prove to be incorrect, our business, financial condition, and results of operations could be materially harmed.*

***Contamination of our water supply, including water provided to our customers, may result in disruption in our services, additional costs and litigation which could harm our business, financial condition, and results of operations.***

Our water supplies, including water provided to our customers, are subject to possible contamination, including from:

- naturally occurring compounds or man-made substances;
- chemicals and other hazardous materials;
- lead and other materials;
- pharmaceuticals and personal care products; and
- possible deliberate or terrorist attacks.

Depending on the nature of the water contamination, we may have to interrupt the use of that water supply until we are able to substitute, where feasible, the flow of water from an uncontaminated water source, including if practicable, the purchase of water from other suppliers, or continue the water supply under restrictions on use for drinking or broader restrictions against all use except for basic sanitation and essential fire protection. We may incur significant costs, including, but not limited to, costs for water quality testing and monitoring, treatment of the contaminated source through modification of our current treatment facilities or development of new treatment methods, or the purchase of alternative water supplies. In addition, the costs we could incur to decontaminate a water source or our water distribution system and dispose of waste could also be significant. The costs resulting from the contamination may not be recoverable in rates we charge our customer, or may not be recoverable in a timely manner. If we are unable to adequately treat the contaminated water supply or substitute a water supply from an uncontaminated water source in a timely or cost-effective manner, there may be an adverse effect on our business, financial condition, and results of operations. We could also be subject to:

- claims for consequences arising out of human exposure to contamination and/or hazardous substances in our water supplies, including toxic torts;
- claims for other environmental damage;
- claims for customers' business interruption as a result of an interruption in water service;
- claims for breach of contract;
- criminal enforcement actions; or
- other claims.

The events in Flint, Michigan, which commenced in 2014, and other communities have brought attention to the issue of lead in drinking water from home plumbing. Lead in drinking water can come from lead that leaches from service lines, home plumbing solder, and fixtures or faucets. We have been working to prevent lead leaching from home plumbing sources by reducing water corrosivity and adding chemicals that can prevent leaching of lead in pipes and homes. We also focus on identifying and removing lead service lines and encouraging customers to replace the customer-owned portion of the service line if it is lead as they are identified during our main replacement program or during other maintenance activities. We support the recommendations of The Lead Service Line Replacement Collaborative, a collaborative of leading water industry organizations that has recommended full replacement of lead service lines as a "best practice" to reduce lead in drinking water, but we only have control over the company-owned portion of each service line. In cases where we are replacing a company-owned lead service line, our standard approach is to replace the company-owned portion and advise and encourage the customer to replace the customer-owned portion of the service line, all the way to the customer's home. We also advise customers of the potential health impacts of lead in drinking water, and conduct lead testing at homes following replacement of a lead service line. We do not plan on replacing customer-owned lead service lines at locations where our portion of the service line does not contain lead, but if we become aware of such situations we will notify the customer. We anticipate that the EPA will propose updated regulations for the 1992 Lead and Copper Rule in 2018. Any such regulatory changes could have an impact on our business.

We may incur costs to defend our position and/or incur reputational damage even if we are not liable for consequences arising out of human exposure to contamination and/or hazardous substances in our water supplies or other environmental damage. Our insurance policies may not be sufficient to cover the costs of these claims, and losses incurred may make it difficult for us to secure insurance in the future at acceptable rates. Such claims or actions could harm our business, financial condition, and results of operations.

***The rates we charge our customers are subject to regulation. If we are unable to obtain government approval of our requests for rate increases or if approved rate increases are untimely or inadequate to recover and earn a return on our capital investments, to recover expenses or taxes, or to take into account changes in water usage, our profitability may suffer.***

The rates we charge our customers are subject to approval by utility commissions in the states in which we operate. We file rate increase requests, from time to time, to recover our investments in utility plant and expenses. Our ability to maintain and meet our financial objectives is dependent upon the recovery of, and return on, our capital investments and expenses through the rates we charge our customers. Once a rate increase petition is filed with a utility commission, the ensuing administrative and hearing process may be lengthy and costly, and our costs may not always be fully recoverable. The timing of our rate increase requests are therefore partially dependent upon the estimated cost of the administrative process in relation to the investments and expenses that we hope to recover through the rate increase. In addition, the amount or frequency of rate increases may be decreased or lengthened as a result of many factors including changes in regulatory oversight in the states in which we operate water and wastewater utilities and income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures or qualifying utility asset improvements. We can provide no assurances that any future rate increase request will be approved by the appropriate utility commission; and, if approved, we cannot guarantee that these rate increases will be granted in a timely or sufficient manner.

In Virginia, we may seek authorization to bill our utility customers in accordance with a rate filing that is pending before the respective regulatory commission. Furthermore, some utility commissions authorize the use of expense deferrals and amortization in order to provide for an impact on our operating income by an amount that approximates the requested amount in a rate request. The additional revenue billed and collected prior to the final ruling is subject to refund to customers based on the outcome of the ruling. The revenue recognized and the expenses deferred by us reflect an estimate as to the final outcome of the ruling. If the request is denied completely or in part, we could be required to refund to customers some or all of the revenue billed to date, and write-off some or all of the deferred expenses.

***Our business requires significant capital expenditures that are partially dependent on our ability to secure appropriate funding. Disruptions in the capital markets may limit our access to capital. If we are unable to obtain sufficient capital, or if the cost of borrowing increases, it may harm our business, financial condition, results of operations, and our ability to pay dividends.***

Our business is capital intensive. In addition to the capital required to fund customer growth through our acquisition strategy, on an annual basis, we spend significant sums for additions to or replacement of property, plant and equipment. We obtain funds for our capital expenditures from operations, contributions and advances by developers and others, debt issuances, and equity issuances. We have paid dividends consecutively for 73 years and our Board of Directors recognizes the value that our common shareholders place on both our historical payment record and on our future dividend payments. Our ability to maintain and meet our financial objectives is dependent upon the availability of adequate capital, and we may not be able to access the capital markets on favorable terms or at all. If in the future, our credit facilities are not renewed or our short-term borrowings are called for repayment, we would need to seek alternative financing sources; however, there can be no assurance that these alternative financing sources would be available on terms acceptable to us. In the event we are unable to obtain sufficient capital, we may need to take steps to conserve cash by reducing our capital expenditures or dividend payments and our ability to pursue acquisitions may be limited. The reduction in capital expenditures may result in reduced potential earnings growth, affect our ability to meet environmental laws and regulations, and limit our ability to improve or expand our utility systems to the level we believe appropriate. There is no guarantee that we will be able to obtain sufficient capital in the future on reasonable terms and conditions for expansion, construction and maintenance. In addition, delays in completing major capital projects could delay the recovery of the capital expenditures associated with such projects through rates. If the cost of borrowing increases, we might not be able to recover increases in our cost of capital through rates. The inability to recover higher borrowing costs through rates, or the regulatory lag associated with the time that it takes to begin recovery, may harm our business, financial condition, and results of operations.

***Our inability to comply with debt covenants under our credit facilities could result in prepayment obligations.***

We are obligated to comply with debt covenants under some of our loan and debt agreements. Failure to comply with covenants under our credit facilities could result in an event of default, which if not cured or waived, could result in us being required to repay or finance these borrowings before their due date, limit future borrowings, cause us to default on other obligations, and increase borrowing costs. If we are forced to repay or refinance (on less favorable terms) these borrowings, our business, financial condition, and results of operations could be harmed by reduced access to capital and increased costs and rates.

***One of the important elements of our growth strategy is the acquisition of water and wastewater utility systems. Any future acquisitions we decide to undertake may involve risks. Further, competition for acquisition opportunities from other regulated utilities, governmental entities, and strategic and financial buyers may hinder our ability to grow our business.***

One important element of our growth strategy is the acquisition and integration of water and wastewater utility systems in order to broaden our service areas. We will not be able to acquire other businesses if we cannot identify suitable acquisition opportunities or reach mutually agreeable terms with acquisition candidates. It is our intent, when practical, to integrate any businesses we acquire with our existing operations. The negotiation of potential acquisitions as well as the integration of acquired businesses could require us to incur significant costs and cause diversion of our management's time and resources. Future acquisitions by us could result in:

- dilutive issuances of our equity securities;
- incurrence of debt, contingent liabilities, and environmental liabilities;
- unanticipated capital expenditures;

- failure to maintain effective internal control over financial reporting;
- recording goodwill and other intangible assets for which we may never realize their full value and may result in an asset impairment that may negatively affect our results of operations;
- fluctuations in quarterly results;
- other acquisition related expenses; and
- exposure to unknown or unexpected risks and liabilities.

Some or all of these items could harm our business and our ability to finance our business and to comply with regulatory requirements. The businesses we acquire in the future may not achieve sales and profitability that would justify our investment, and any difficulties we encounter in the integration process, including in the integration of processes necessary for internal control and financial reporting, could interfere with our operations, reduce our operating margins and harm our internal controls.

Some states in which we operate allow the respective public utility commissions to use fair market value to set ratemaking rate base instead of the traditional depreciated original cost of water or wastewater assets for certain qualifying municipal acquisitions. Depending on the state, there are varying rules and circumstances in which fair value is determined. One state's regulations allows ratemaking rate base to equal the lower of the average of the appraisals or the purchase price, and is subject to regulatory approval. There may be situations where we may pay more than the ultimate fair value of the utility assets as set by the regulatory commission, despite the fair value legislation suggesting its full recovery. In these situations, goodwill may be recognized to the extent there is an excess purchase price over the fair value of net tangible and identifiable intangible assets acquired through acquisition. Our financial condition and results of operations can be harmed by an inability to earn a return on, and recover our purchase price as a component of rate base.

We compete with governmental entities, other regulated utilities, and strategic and financial buyers, for acquisition opportunities. As consolidation becomes more prevalent in the utility industry and competition for acquisitions increases, the prices for suitable acquisition candidates may increase to unacceptable levels and limit our ability to grow through acquisitions. In addition, our competitors may impede our growth by purchasing utilities near our existing operations, thereby preventing us from acquiring them. Governmental entities or environmental / social activist groups have challenged, and may in the future challenge our efforts to acquire new service territories, particularly from municipalities or municipal authorities. Higher purchase prices and resulting rates may limit our ability to invest additional capital for system maintenance and upgrades in an optimal manner. Our growth could be hindered if we are not able to compete effectively for new companies and/or service territories with other companies or strategic and financial buyers that have lower costs of operations or capital, or that submit more attractive bids. Any of these risks may harm our business, financial condition, and results of operations.

***Our facilities could be the target of a possible terrorist or other deliberate attack which could harm our business, financial condition and results of operations.***

In addition to the potential contamination of our water supply as described in a separate risk factor herein, we maintain security measures at our facilities and have heightened employee and public safety official awareness of potential threats to our water systems. We have and will continue to bear increases in costs for security precautions to protect our facilities, operations, and supplies, most of which have been recoverable under state regulatory policies. While the costs of increases in security, including capital expenditures, may be significant, we expect these costs to continue to be recoverable in water and wastewater rates. Despite our security measures, we may not be in a position to control the outcome of terrorist events, or other attacks on our water systems, should they occur. Such an event could harm our business, financial condition, and results of operations.

***The failure of, or the requirement to repair, upgrade or dismantle any of our dams or reservoirs may harm our business, financial condition, and results of operations.***

Several of our water systems include impounding dams and reservoirs of various sizes. Although we believe our dam review program, which includes regular inspections and other engineering studies, will ensure our dams are structurally sound and well-maintained, the failure of a dam could result in significant downstream damage and could result in claims for property damage or for injuries or fatalities. We periodically inspect our dams and purchase liability insurance to cover such risks, but depending on the nature of the downstream damage and cause of the failure, the policy limits of insurance coverage may not be sufficient, and losses incurred may make it difficult for us to secure insurance in the future at acceptable rates. A dam failure could also result in damage to, or disruption of, our water treatment and pumping facilities that are often located downstream from our dams and reservoirs. Significant damage to these facilities, or a significant decline in the storage of the raw water impoundment, could affect our ability to provide water to our customers until the facilities and a sufficient raw water impoundment can be restored. The estimated costs to maintain our dams are included in our capital budget projections and, although such costs to date have been recoverable in rates, there can be no assurance that rate increases will be granted in a timely or sufficient manner to recover such costs in the future, if at all.

***Any failure of our water and wastewater treatment plants, network of water and wastewater pipes, or water reservoirs could result in damages that may harm our business, financial condition, and results of operations.***

Our operating subsidiaries treat water and wastewater, distribute water and collect wastewater through an extensive network of pipes, and store water in reservoirs. A failure of a major treatment plant, pipe, or reservoir could result in claims for injuries or property damage. The failure of a major treatment plant, pipe, or reservoir may also result in the need to shut down some facilities or parts of our network in order to conduct repairs. Such failures and shutdowns may limit our ability to supply water in sufficient quality and quantities to our customers or collect and treat wastewater in accordance with standards prescribed by governmental regulators, including state utility commissions, and may harm our business, financial condition, and results of operations. Any business interruption or other losses might not be covered by insurance policies or be recoverable in rates, and such losses may make it difficult for us to secure insurance in the future at acceptable rates.

***We are increasingly dependent on the continuous and reliable operation of our information technology systems, and a disruption of these systems, resulting from cyber security attacks or other cyber-related events, could harm our business.***

We rely on our information technology systems in connection with the operation of our business, especially with respect to customer service and billing, accounting and, in some cases, the monitoring and operation of our treatment, storage and pumping facilities. In addition, we rely on our systems to track our utility assets and to manage maintenance and construction projects, materials and supplies, and our human resource functions. A loss of these systems, or major problems with the operation of these systems, could harm our business, financial condition, and results of operations. Our information technology systems may be vulnerable to damage or interruption from the following types of cyber security attacks or other cyber-related events:

- power loss, computer systems failures, and internet, telecommunications or data network failures;
- operator negligence or improper operation by, or supervision of, employees;
- physical and electronic loss of data;
- computer viruses, cyber security attacks, intentional security breaches, hacking, denial of service actions, misappropriation of data and similar events;
- difficulties in the implementation of upgrades or modification to our information technology systems; and
- hurricanes, fires, floods, earthquakes and other natural disasters.

Although we do not believe that our systems are at a materially greater risk of cyber security attacks than other similar organizations, our information technology systems may be vulnerable to damage or interruption from the types of cyber security attacks or other events listed above or other similar actions, and such incidents may go undetected for a period of time. Such cyber security attacks or other events may result in:

- the loss or compromise of customer, financial, employee, or operational data;
- disruption of billing, collections or normal field service activities;
- disruption of electronic monitoring and control of operational systems; and
- delays in financial reporting and other normal management functions.

Possible impacts associated with a cyber security attack or other events may include: remediation costs related to lost, stolen, or compromised data; repairs to data processing systems; increased cyber security protection costs; adverse effects

on our compliance with regulatory and environmental laws and regulation, including standards for drinking water; litigation; and reputational damage. We maintain insurance to help defray costs associated with cyber security attacks or other events, but we cannot provide assurance that such insurance will provide coverage for any particular type of incident or event or that such insurance will be adequate, and losses incurred may make it difficult for us to secure insurance in the future at acceptable rates.

***Our business is impacted by weather conditions and is subject to seasonal fluctuations, which could harm demand for our water service and our revenues and earnings.***

Demand for our water during the warmer months is generally greater than during cooler months due primarily to additional requirements for water in connection with irrigation systems, swimming pools, cooling systems, and other outside water use. Throughout the year, and particularly during typically warmer months, demand will vary with temperature, rainfall levels and rainfall frequency. In the event that temperatures during the typically warmer months are cooler than normal, if there is more rainfall than normal, or rainfall is more frequent than normal, the demand for our water may decrease and harm our business, financial condition, and results of operations.

***Decreased residential customer water consumption as a result of water conservation efforts may harm demand for our water service and may reduce our revenues and earnings.***

There has been a general decline in water usage per residential customer as a result of an increase in conservation awareness, and the impact of an increased use of more efficient plumbing fixtures and appliances. These gradual, long-term changes are normally taken into account by the utility commissions in setting rates, whereas short-term changes in water usage, if significant, may not be fully reflected in the rates we charge. We are dependent upon the revenue generated from rates charged to our residential customers for the volume of water used. If we are unable to obtain future rate increases to offset decreased residential customer water consumption to cover our investments, expenses, and return for which we initially sought the rate increase, our business, financial condition, and results of operations may be harmed.

***Drought conditions and government imposed water use restrictions may impact our ability to serve our current and future customers, and may impact our customers' use of our water, which may harm our business, financial condition, and results of operations.***

We depend on an adequate water supply to meet the present and future demands of our customers. Drought conditions could interfere with our sources of water supply and could harm our ability to supply water in sufficient quantities to our existing and future customers. An interruption in our water supply could harm our business, financial condition, and results of operations. Moreover, governmental restrictions on water usage during drought conditions may result in a decreased demand for our water, even if our water supplies are sufficient to serve our customers during these drought conditions, which may harm our business, financial condition, and results of operations.

***We employ a portfolio rationalization strategy to focus our operations in areas where we have critical mass and economic growth potential and to divest operations where limited customer growth opportunities exist or where we are unable to achieve favorable operating results or a return on equity that we consider acceptable. Dispositions we decide to undertake may involve risks which could harm our business, operating results, and financial condition.***

In the event we determine a division, utility system or business should be sold, we may be unable to reach terms that are agreeable to us or find a suitable buyer. If the business is part of our regulated operations, we may face additional challenges in obtaining regulatory approval for the disposition, and the regulatory approval obtained may include restrictive conditions. We may be required to continue to hold or assume residual liabilities with respect to the business sold. The negotiation of potential dispositions as well as the efforts to divest the acquired business could require us to incur significant costs and cause diversion of our management’s time and resources. Any of these risks may harm our business, financial condition, and results of operations.

***Our operations are geographically concentrated in Pennsylvania, which make us susceptible to risks affecting Pennsylvania.***

Although we operate water and wastewater facilities in a number of states, our operations are concentrated in Pennsylvania. As a result, our financial results are largely subject to political, water supply, labor, utility cost and regulatory risks, economic conditions, natural disasters and other risks affecting Pennsylvania.

***General economic conditions may affect our financial condition and results of operations.***

A general economic downturn may lead to a number of impacts on our business and may affect our financial condition and results of operations. Such impacts may include:

- a reduction in discretionary and recreational water use by our residential water customers, particularly during the summer months when such discretionary usage is normally at its highest;
- a decline in usage by industrial and commercial customers as a result of decreased business activity;
- an increased incidence of customers' inability to pay or delays in paying their utility bills, or an increase in customer bankruptcies, which may lead to higher bad debt expense and reduced cash flow;
- a lower natural customer growth rate due to a decline in new housing starts; and
- a decline in the number of active customers due to housing vacancies.

General economic turmoil may also lead to an investment market downturn, which may result in our pension and other post-retirement plans' asset market values suffering a decline and significant volatility. A decline in our plans' asset market values could increase our required cash contributions to the plans and expense in subsequent years.

***Our water and wastewater systems may be subject to condemnations or other methods of taking by governmental entities.***

In the states where our subsidiaries operate, it is possible that portions of our subsidiaries' operations could be acquired by municipal governments by one or more of the following methods:

- eminent domain;
- the right of purchase given or reserved by a municipality or political subdivision when the original franchise was granted; and
- the right of purchase given or reserved under the law of the state in which the subsidiary was incorporated or from which it received its permit.

The price to be paid upon such an acquisition by the municipal government is usually determined in accordance with applicable law under eminent domain. In other instances, the price may be negotiated, fixed by appraisers selected by the parties or computed in accordance with a formula prescribed in the law of the state or in the particular franchise or charter. We believe that our operating subsidiaries will be entitled to receive fair market value for any assets that are condemned. However, there is no assurance that the fair market value received for assets condemned will be in excess of book value.

In a very few number of instances, in one of our southern states where there are municipally-owned water or wastewater systems near our operating divisions, the municipally-owned system may either have water distribution or wastewater collection mains that are located adjacent to our division's mains or may construct new mains that parallel our mains. In these circumstances, on occasion, the municipally-owned system may attempt to offer service to customers who are connected to our mains, resulting in our mains becoming surplus or underutilized without compensation.

***The final determination of our income tax liability may be materially different from our income tax provision.***

Significant judgment is required in determining our provision for income taxes. Our calculation of the provision for income taxes is subject to our interpretation of applicable business tax laws in the jurisdictions in which we file. In addition, our income tax returns are subject to periodic examination by the Internal Revenue Service and other taxing authorities. In December 2012, Aqua Pennsylvania changed its tax method of accounting to permit the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for tax purposes. Subsequently, the Company's Ohio and North Carolina regulated subsidiaries similarly changed their tax method of accounting. Our determination of what qualifies as a capital cost versus a tax deduction for utility asset improvements is subject to subsequent adjustment and may impact the income tax benefits that have been recognized.

On December 22, 2017, President Trump signed into law legislation referred to as the "Tax Cuts and Jobs Act" (the "TCJA"). Substantially all of the provisions of the TCJA are effective for taxable years beginning after December 31, 2017. The TCJA makes significant changes to the Internal Revenue Code of 1986, as amended (the "Code"), and the taxation of business entities, and includes specific provisions related to regulated public utilities. Changes in the Code from the TCJA had a material impact on our financial statements in 2017. Significant changes that impact the Company in the TCJA include a reduction in the corporate federal income tax rate from 35% to 21%, and a limitation on the utilization of Net Operating Losses ("NOLs") arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. In addition, specific provisions related to regulated public utilities in the TCJA generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017, and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Since the tax effects of changes in tax law must be recognized in the period in which TCJA was enacted, our deferred income tax assets and liabilities have been remeasured in the period of enactment. This generally results in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. In certain states there is not yet complete guidance as to how to account for the TCJA. With respect to these states, we will account for the changes in income tax balances by making a reasonable estimate. The estimate may differ from the actual tax amount determined once the state regulators provide specific guidance. To the extent such estimates are adjusted or prove to be incorrect, there could be an impact on the Company's financial statements.

Although we believe our income tax estimates, including any tax reserves for uncertain tax positions or valuation allowances on deferred tax assets are appropriate, there is no assurance that the final determination of our income tax liability will not be materially different; either higher or lower, from what is reflected in our income tax provision. In the event we are assessed additional income taxes, our business, financial condition, and results of operations could be harmed.

***Federal and state environmental laws and regulations impose substantial compliance requirements on our operations. Our operating costs could be significantly increased in order to comply with new or stricter regulatory standards imposed by federal and state environmental agencies.***

Our water and wastewater services are governed by various federal and state environmental protection and health and safety laws and regulations, including the federal Safe Drinking Water Act, the Clean Water Act, Clean Air Act, Resource Conservation and Recovery Act and similar state laws, and federal and state regulations issued under these laws by the EPA and state environmental regulatory agencies. These laws and regulations establish, among other things, criteria and standards for drinking water and for discharges into the waters of the U.S. as well as dam safety, air emissions, and residuals management. Pursuant to these laws, we are required to obtain various environmental permits from environmental regulatory agencies for our operations. We cannot assure you that we will be at all times in total compliance with these laws, regulations and permits. If we fail to comply with these laws, regulations or permits, we could be fined or otherwise sanctioned by regulators and such noncompliance could result in civil suits. Environmental laws and regulations are complex and change frequently. These laws, and the enforcement thereof, have tended to become more stringent over time. While we have budgeted for future capital and operating expenditures to comply with these laws and our permits, it is possible that new or stricter standards could be imposed that will require additional capital expenditures or raise our operating costs. Although these expenditures and costs may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that govern our business would approve rate increases to enable us to recover such expenditures and costs. In summary, we cannot assure you that our costs of complying with, current and future environmental and health and safety laws will not harm our business, financial condition, and results of operations.

***Federal and state environmental laws, regulatory initiatives relating to hydraulic fracturing, changes in technology or hydraulic fracturing processes, and volatility in natural gas prices, could result in reduced demand for raw water utilized in hydraulic fracturing and harm our joint venture business, financial condition, or results of operations.***

We have invested in a joint venture for the construction and operation of a private pipeline system to supply raw water to natural gas drilling operations for hydraulic fracturing. Hydraulic fracturing involves the injection under pressure of water, along with other materials such as sand, into rock formations to stimulate natural gas production. In general, the environmental community has taken an interest in monitoring and understanding the potential environmental impact of hydraulic fracturing. Although hydraulic fracturing is currently regulated, in the event the use of hydraulic fracturing is further limited through regulation, our investment in the raw water pipeline may be harmed in the event that demand for raw water is reduced.

Changes in technology or hydraulic fracturing processes may occur which allows drillers to reuse injected water on a limited basis, or apply treatment processes to allow further reuse of water for drilling. These changes may reduce demand for raw water.

Furthermore, natural gas prices have historically been volatile, and are likely to continue to be volatile. A decrease in demand for natural gas, due to price volatility, could result in reduced demand for raw water utilized in hydraulic fracturing. In the fourth quarter of 2015, the joint venture recognized an impairment charge on its long-lived assets, which reduced the carrying value of our investment in the joint venture. The impairment resulted from a marked decline in natural gas prices in 2015, a further reduction in the volume of water sales by the joint venture, which led to a lowered forecast on future sales volumes, as well as changes in the natural gas industry activities in the Marcellus Shale region and general market conditions. In the event hydraulic fracturing is limited, due to a further reduction in demand for natural gas or other factors affecting the industry, our investment in the raw water pipeline may be harmed should the demand for raw water be reduced.

***Wastewater operations entail significant risks and may impose significant costs.***

Wastewater collection and treatment and septage pumping and sludge hauling involve various unique risks. If collection or treatment systems fail or do not operate properly, or if there is a spill, untreated or partially treated wastewater could discharge onto property or into nearby streams and rivers, causing various damages and injuries, including environmental damage. These risks are most acute during periods of substantial rainfall or flooding, which are the main causes of wastewater overflow and system failure. Liabilities resulting from such damages and injuries could harm our business, financial condition, and results of operations.

***Work stoppages and other labor relations matters could harm our operating results.***

Approximately 34% of our workforce is unionized under 15 labor contracts with labor unions, which expire over several years. In light of rising costs for healthcare and retirement benefits, contract negotiations in the future may be difficult. We are subject to a risk of work stoppages and other labor actions as we negotiate with the unions to address these issues, which could harm our business, financial condition, and results of operations. We cannot assure you that issues with our labor forces will be resolved favorably to us in the future or that we will not experience work stoppages.

***Significant or prolonged disruptions in the supply of important goods or services from third parties could harm our business, financial condition, and results of operations.***

We are dependent on a continuing flow of important goods and services from suppliers for our water and wastewater businesses. A disruption or prolonged delays in obtaining important supplies or services, such as maintenance services, purchased water, chemicals, water pipe, valves, hydrants, electricity, or other materials, could harm our water or wastewater services and our ability to operate in compliance with all regulatory requirements, which could harm our business, financial condition, and results of operations. In some circumstances, we rely on third parties to provide important services (such as customer bill print and mail activities or utility service operations in some of our divisions) and a disruption in these services could harm our business, financial condition, and results of operations. Some possible reasons for a delay or disruption in the supply of important goods and services include:

- our suppliers may not provide materials that meet our specifications in sufficient quantities;
- our suppliers may provide us with water that does not meet applicable quality standards or is contaminated;
- our suppliers may face production delays due to natural disasters, strikes, lock-outs, or other such actions;
- one or more suppliers could make strategic changes in the lines of products and services they offer; and
- some of our suppliers, such as small companies, may be more likely to experience financial and operational difficulties than larger, well-established companies, because of their limited financial and other resources.

As a result of any of these factors, we may be required to find alternative suppliers for the materials and services on which we rely. Accordingly, we may experience delays in obtaining appropriate materials and services on a timely basis and in sufficient quantities from such alternative suppliers at a reasonable price, which could interrupt services to our customers and harm our business, financial condition, and results of operations.

**We depend significantly on the services of the members of our management team, and the departure of any of those persons could cause our operating results to suffer.**

Our success depends significantly on the continued individual and collective contributions of our management team. The loss of the services of any member of our management team or the inability to hire and retain experienced management personnel could harm our business, financial condition, and results of operations.

***Climate change laws and regulations have been passed and are being proposed that require compliance with greenhouse gas emissions standards, as well as other climate change initiatives, which could impact our business, financial condition or results of operations.***

Climate change is receiving ever increasing attention worldwide. Many scientists, legislators, and others attribute global warming to increased levels of greenhouse gases ("GHG"), including carbon dioxide. Climate change laws and regulations enacted and proposed limit GHG emissions from covered entities, and require additional monitoring/reporting. At this time, the existing GHG laws and regulations are not expected to materially harm the Company's operations or capital expenditures. While the trend of increased regulation on climate change could change in light of the current federal administration's agenda, the uncertainty of future climate change regulatory requirements still remains. We cannot predict the potential impact of future laws and regulations on our business, financial condition, or results of operations. Although these future expenditures and costs for regulatory compliance may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that govern our business would approve rate increases to enable us to recover such expenditures and costs.

***Some scientific experts are predicting a worsening of weather volatility in the future, possibly created by the climate change greenhouse gases. Changing severe weather patterns could require additional expenditures to reduce the risk associated with any increasing storm, flood and drought occurrences.***

The issue of climate change is receiving ever increasing attention worldwide. Many climate change predictions, if true, present several potential challenges to water and wastewater utilities, such as: increased frequency and duration of droughts, increased precipitation and flooding, potential degradation of water quality, and changes in demand for services. We maintain an ongoing facility planning process, and this planning or the enactment of new standards may result in the need for additional capital expenditures or raise our operating costs. Because of the uncertainty of weather volatility related to climate change, we cannot predict its potential impact on our business, financial condition, or results of operations. Although any potential expenditures and costs may be recovered in the form of higher rates, there can be no assurance that the various state utility commissions that govern our business would approve rate increases to enable us to recover such expenditures and costs. We cannot assure you that our costs of complying with any climate change weather related measures will not harm our business, financial condition, or results of operations.

Item 1B *Unresolved Staff Comments*

None

Item 2. *Properties*

Our properties consist of water transmission and distribution mains and wastewater collection pipelines, water and wastewater treatment plants, pumping facilities, wells, tanks, meters, pipes, dams, reservoirs, buildings, vehicles, land, easements, rights-of-way, and other facilities and equipment used for the operation of our systems, including the collection, treatment, storage, and distribution of water and the collection and treatment of wastewater. Substantially all of our treatment, storage, and distribution properties are owned by our subsidiaries, and a substantial portion of our property is subject to liens of mortgage or indentures. These liens secure bonds, notes and other evidences of long-term indebtedness of our subsidiaries. For some properties that we acquired through the exercise of the power of eminent domain and other properties we purchased, we hold title for water supply purposes only. We own, operate and maintain over 12,800 miles of transmission and distribution mains, 21 surface water treatment plants, many well treatment stations, and 187 wastewater treatment plants. A small portion of the properties are leased under long-term leases.

The following table indicates our net property, plant and equipment, in thousands of dollars, as of December 31, 2017 in the principal states where we operate:

| | Net Property, Plant and Equipment | |
|---|---|---|
| Pennsylvania | $ 3,433,582 | 63.6% |
| Ohio | 457,238 | 8.5% |
| Illinois | 395,136 | 7.3% |
| North Carolina | 343,556 | 6.4% |
| Texas | 299,872 | 5.6% |
| Other (1) | 470,476 | 8.6% |
| Consolidated | $ 5,399,860 | 100.0% |

(1) Consists primarily of our operating subsidiaries in the following states: New Jersey, Indiana, and Virginia.

We believe that our properties are generally maintained in good condition and in accordance with current standards of good water and wastewater industry practice. We believe that our facilities are adequate and suitable for the conduct of our business and to meet customer requirements under normal circumstances.

Our corporate offices are leased from our subsidiary, Aqua Pennsylvania, and are located in Bryn Mawr, Pennsylvania.

Item 3. *Legal Proceedings*

There are various legal proceedings in which we are involved. Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which we or any of our subsidiaries is a party or to which any of our properties is the subject that we believe are material or are expected to materially harm our business, operating results or financial condition.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

Item 5. *Market for the Registrant's Common Stock, Related Stockholder Matters and Purchases of Equity Securities*

Our common stock is traded on the New York Stock Exchange under the ticker symbol WTR. As of February 13, 2018, there were approximately 23,683 holders of record of our common stock.

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The following table shows the high and low intraday sales prices for our common stock as reported on the New York Stock Exchange composite transactions reporting system and the cash dividends paid per share for the periods indicated:

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter | Year |
|---|---|---|---|---|---|
| 2017 | | | | | |
| Dividend paid per common share | $ 0.1913 | $ 0.1913 | $ 0.2047 | $ 0.2047 | $ 0.7920 |
| Dividend declared per common share | 0.1913 | 0.1913 | 0.2047 | 0.2047 | 0.7920 |
| Price range of common stock: | | | | | |
| high | 32.32 | 34.41 | 34.66 | 39.55 | 39.55 |
| low | 29.41 | 31.18 | 32.30 | 33.12 | 29.41 |
| 2016 | | | | | |
| Dividend paid per common share | $ 0.178 | $ 0.178 | $ 0.1913 | $ 0.1913 | $ 0.7386 |
| Dividend declared per common share | 0.178 | 0.178 | 0.1913 | 0.1913 | 0.7386 |
| Price range of common stock: | | | | | |
| high | 32.44 | 35.66 | 35.83 | 31.29 | 35.83 |
| low | 28.35 | 30.31 | 29.53 | 28.03 | 28.03 |

We have paid dividends consecutively for 73 years. On August 1, 2017, our Board of Directors authorized an increase of 7.0% in the September 1, 2017 quarterly dividend over the dividend Aqua America paid in the previous quarter. As a result of this authorization, beginning with the dividend payment in September 2017, the annualized dividend rate increased to $0.8188 per share. This is the 27th dividend increase in the past 26 years and the 19th consecutive year that we have increased our dividend in excess of five percent. We presently intend to pay quarterly cash dividends in the future, on March 1, June 1, September 1, and December 1, subject to our earnings and financial condition, restrictions set forth in our debt instruments, regulatory requirements and such other factors as our Board of Directors may deem relevant. In 2017, our dividends paid represented 58.7% of net income.

Information with respect to restrictions set forth in our debt instruments is disclosed in Note 10 – *Long-term Debt and Loans Payable* in the *Notes to Consolidated Financial Statements* which is contained in Item 8 of this Annual Report.

The following table summarizes the Company's purchases of its common stock for the quarter ending December 31, 2017:

Issuer Purchases of Equity Securities

| Period | Total Number of Shares Purchased (1) | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | Maximum Number of Shares that May Yet Be Purchased Under the Plan or Programs |
|---|---|---|---|---|
| October 1-31, 2017 | - | $ - | - | - |
| November 1-30, 2017 | - | $ - | - | - |
| December 1-31, 2017 | 1,335 | $ 37.80 | - | - |
| Total | 1,335 | $ 37.80 | - | - |

(1) These amounts include 1,355 shares we acquired from our employees who elected to pay the exercise price of their stock options (and then hold shares of the stock), upon exercise, by delivering to us shares of our common stock in accordance with the terms of our equity compensation plan that was previously approved by our shareholders and disclosed in our proxy statements. This feature of our equity compensation plan is available to all employees who receive stock-based compensation under the plan. We purchased these shares at their fair market value, as determined by reference to the closing price of our common stock on the day prior to the option exercise.

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Item 6. *Selected Financial Data*

Summary of Selected Financial Data (Unaudited)
Aqua America, Inc. and Subsidiaries
(In thousands of dollars, except per share amounts)

| Years ended December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| PER COMMON SHARE: | | | | | |
| Income from continuing operations: | | | | | |
| Basic | $ 1.35 | $ 1.32 | $ 1.14 | $ 1.21 | $ 1.15 |
| Diluted | 1.35 | 1.32 | 1.14 | 1.20 | 1.15 |
| Income from discontinued operations: | | | | | |
| Basic | - | - | - | 0.11 | 0.10 |
| Diluted | - | - | - | 0.11 | 0.10 |
| Net income: | | | | | |
| Basic | 1.35 | 1.32 | 1.14 | 1.32 | 1.26 |
| Diluted | 1.35 | 1.32 | 1.14 | 1.31 | 1.25 |
| Cash dividends declared and paid | 0.79 | 0.74 | 0.69 | 0.63 | 0.58 |
| Return on Aqua America stockholders' equity | 12.2% | 12.7% | 11.7% | 14.1% | 14.4% |
| Book value at year end | $ 11.02 | $ 10.43 | $ 9.78 | $ 9.37 | $ 8.68 |
| Market value at year end | 39.23 | 30.04 | 29.80 | 26.70 | 23.59 |
| INCOME STATEMENT HIGHLIGHTS: | | | | | |
| Operating revenues | $ 809,525 | $ 819,875 | $ 814,204 | $ 779,903 | $ 761,893 |
| Depreciation and amortization | 136,724 | 133,008 | 128,737 | 126,535 | 123,985 |
| Interest expense, net | 88,341 | 80,594 | 76,536 | 76,397 | 77,316 |
| Income from continuing operations before income taxes (1) | 256,652 | 255,160 | 216,752 | 239,103 | 224,104 |
| Provision for income taxes | 16,914 | 20,978 | 14,962 | 25,219 | 21,233 |
| Income from continuing operations (1) | 239,738 | 234,182 | 201,790 | 213,884 | 202,871 |
| Income from discontinued operations | - | - | - | 19,355 | 18,429 |
| Net income (1) | 239,738 | 234,182 | 201,790 | 233,239 | 221,300 |
| BALANCE SHEET HIGHLIGHTS: | | | | | |
| Total assets | $ 6,332,463 | $ 6,158,991 | $ 5,717,873 | $ 5,383,243 | $ 5,027,430 |
| Property, plant and equipment, net | 5,399,860 | 5,001,615 | 4,688,925 | 4,401,990 | 4,138,568 |
| Aqua America stockholders' equity | 1,957,621 | 1,850,068 | 1,725,930 | 1,655,343 | 1,534,835 |
| Long-term debt, including current portion, excluding debt issuance costs (3) | 2,143,127 | 1,910,633 | 1,779,205 | 1,619,270 | 1,554,871 |
| Total debt, excluding debt issuance costs (3) | 2,146,777 | 1,917,168 | 1,795,926 | 1,637,668 | 1,591,611 |
| ADDITIONAL INFORMATION: | | | | | |
| Operating cash flows from continuing operations | $ 381,318 | $ 396,163 | $ 370,794 | $ 364,888 | $ 365,803 |
| Capital expenditures | 478,089 | 382,996 | 364,689 | 328,605 | 307,908 |
| Net cash expended for acquisitions of utility systems and other | 5,860 | 9,423 | 28,989 | 14,616 | 14,997 |
| Dividends on common stock | 140,660 | 130,923 | 121,248 | 112,106 | 102,889 |
| Number of utility customers served (2) | 982,849 | 972,265 | 957,866 | 940,119 | 928,200 |
| Number of shareholders of common stock | 23,511 | 24,750 | 25,269 | 25,780 | 25,833 |
| Common shares outstanding (000) | 177,714 | 177,394 | 176,544 | 176,753 | 176,751 |
| Employees (full-time) (2) | 1,530 | 1,551 | 1,617 | 1,617 | 1,542 |

(1) 2015 results includes Aqua America's share of a joint venture impairment charge of $21,433 ($32,975 pre-tax)
(2) Reflects continuing operations
(3) Debt issuance costs for the years ended December 31, 2017, 2016, 2015, 2014, and 2013 were $21,605, $22,357, $23,165, $23,509, and $24,387, respectively

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

## OVERVIEW

The following discussion and analysis of our financial condition and results of operations should be read together with our Consolidated Financial Statements and related Notes included in this Annual Report. This discussion contains forward-looking statements that are based on management's current expectations, estimates and projections about our business, operations and financial performance. All dollar amounts are in thousands of dollars, except per share amounts.

**The Company**

Aqua America, Inc., (referred to as "Aqua America", the "Company", "we", "us", or "our"), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to an estimated three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 52% of our operating revenues and approximately 74% of our net income for 2017. As of December 31, 2017, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of people we serve. Aqua Pennsylvania's service territory is located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through two operating and maintenance contracts with municipal authorities close to our utility companies' service territory; and offers, through a third party, water and sewer line repair service and protection solutions to households. In 2017, we completed the sale of business units that are reported within the Company's market-based subsidiary, Aqua Resources, which installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, and repaired and performed maintenance on water and wastewater systems. Additionally, during 2016 we completed the sale of business units within Aqua Resources, which were reported as assets held for sale in the Company's consolidated balance sheets, which provided liquid waste hauling and disposal services, and inspection, and cleaning and repair of storm and sanitary wastewater lines.

**Industry Mission**

The mission of the regulated water utility industry is to provide quality and reliable water service at reasonable rates to customers, while earning a fair return for shareholders. A number of challenges face the industry, including:

- strict environmental, health and safety standards;
- aging utility infrastructure and the need for substantial capital investment;
- economic regulation by state, and/or, in some cases, local government;
- declining consumption per customer as a result of conservation;
- lawsuits and the need for insurance; and
- the impact of weather and sporadic drought conditions on water sales demand.

**Economic Regulation**

Most of our water and wastewater utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions, and authorize the issuance of securities. The utility commissions also generally establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state, and may change over time. A small number of our operations are subject to rate regulation by county or city government. Over time, the regulatory party in a particular state may change, as was the case for our Texas operations where, in 2014, economic regulation changed from the Texas Commission on Environmental Quality to the Public Utility Commission of Texas. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances in the various states in which we operate. One consideration we may undertake in evaluating which states to focus our growth and investment strategy is whether a state provides for consolidated rates, a surcharge for replacing and rehabilitating infrastructure and other systems, and other regulatory policies that promote infrastructure investment and efficiency in processing rate cases.

***Rate Case Management Capability –*** We strive to achieve the industry's mission by effective planning, efficient investments, and productive use of our resources. We maintain a rate case management capability to pursue timely and adequate returns on the capital investments that we make in improving our distribution system, treatment plants, information technology systems, and other infrastructure. This capital investment creates assets that are used and useful in providing utility service, and is commonly referred to as rate base. Timely and adequate rate relief is important to our continued profitability and in providing a fair return to our shareholders; thus, providing access to capital markets to help fund these investments. Accordingly, the objective of our rate case management strategy is to provide that the rates of our utility operations reflect, to the extent practicable, the timely recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations), capital, and taxes. In pursuing our rate case strategy, we consider the amount of net utility plant additions and replacements made since the previous rate decision, the changes in the cost of capital, changes in our capital structure, and changes in operating and other costs. Based on these assessments, our utility operations periodically file rate increase requests with their respective state utility commissions or local regulatory authorities. In general, as a regulated enterprise, our water and wastewater rates are established to provide full recovery of utility operating costs, taxes, interest on debt used to finance capital investments, and a return on equity used to finance capital investments. Our ability to recover our expenses in a timely manner and earn a return on equity employed in the business helps determine the profitability of the Company. As of December 31, 2017, the Company's rate base is estimated to be $4,125,000, which is comprised of:

- $2,874,000 filed with respective state utility commissions or local regulatory authorities; and
- $1,251,000 not yet filed with respective state utility commissions or local regulatory authorities.

Our water and wastewater operations are composed of 53 rate divisions, each of which requires a separate rate filing for the evaluation of the cost of service and recovery of investments in connection with the establishment of tariff rates for that rate division. When feasible and beneficial to our utility customers, we have sought approval from the applicable state utility commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the eight states in which we operate currently permit us to file a revenue requirement using some form of consolidated rates for some or all of the rate divisions in that state.

***Revenue Surcharges –*** Six states in which we operate water utilities, and five states in which we operate wastewater utilities, permit us to add a surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. In all other states, water and wastewater utilities absorb all of the depreciation and capital costs of these projects between base rate increases without the benefit of additional revenues. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which often acts as a disincentive to water and wastewater utilities to rehabilitate their infrastructure. In addition, some states permit our subsidiaries to use a surcharge or credit on their bills to reflect allowable changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new costs are fully incorporated in base rates.

***Effects of Inflation –*** Recovery of the effects of inflation through higher water and wastewater rates is dependent upon receiving adequate and timely rate increases. However, rate increases are not retroactive and often lag increases in costs caused by inflation. On occasion, our regulated utility companies may enter into rate settlement agreements, which require us to wait for a period of time to file the next base rate increase request. These agreements may result in regulatory lag whereby inflationary increases in expenses may not yet be reflected in rates, or a gap may exist between when a capital project is completed and the start of its recovery in rates. Even during periods of moderate inflation, the effects of inflation can have a negative impact on our operating results.

**Growth-Through-Acquisition Strategy**

Part of our strategy to meet the industry challenges is to actively explore opportunities to expand our utility operations through acquisitions of water and wastewater utilities either in areas adjacent to our existing service areas or in new service areas, and to explore acquiring market-based businesses that are complementary to our regulated water and wastewater operations. To complement our growth strategy, we routinely evaluate the operating performance of our individual utility systems, and in instances where limited economic growth opportunities exist or where we are unable to achieve favorable operating results or a return on equity that we consider acceptable, we will seek to sell the utility system and reinvest the proceeds in other utility systems. Consistent with this strategy, we are focusing our acquisitions and resources in states where we have critical mass of operations in an effort to achieve economies of scale and increased efficiency. Our growth-through-acquisition strategy allows us to operate more efficiently by sharing operating expenses over more utility customers and provides new locations for future earnings growth through capital investment. Another element of our growth strategy is the consideration of opportunities to expand by acquiring other utilities, including those that may be in a new state if they provide promising economic growth opportunities and a return on equity that we consider acceptable. The ability to successfully execute this strategy and meet the industry challenges is largely due to our core competencies, financial position, and our qualified and trained workforce, which we strive to retain by treating employees fairly and providing our employees with development and growth opportunities.

During 2017, we completed four acquisitions, which along with the organic growth in our existing systems, represents 10,584 new customers. During 2016, we completed 19 acquisitions, which along with the organic growth in our existing systems, represents 15,282 new customers. During 2015, we completed 16 acquisitions, which along with the organic growth in our existing systems, represents 17,747 new customers.

We believe that utility acquisitions, organic growth, and a potential expansion of our market-based business will continue to be the primary sources of growth for us. With approximately 53,000 community water systems in the U.S., 82% of which serve less than 3,300 customers, the water industry is the most fragmented of the major utility industries (telephone, natural gas, electric, water, and wastewater). In the states where we operate regulated utilities, we believe there are approximately 14,500 community water systems of widely-varying size, with the majority of the population being served by government-owned water systems.

Although not as fragmented as the water industry, the wastewater industry in the U.S. also presents opportunities for consolidation. According to the U.S. Environmental Protection Agency's ("EPA") most recent survey of wastewater treatment facilities (which includes both government-owned facilities and regulated utility systems) in 2012, there are approximately 15,000 such facilities in the nation serving approximately 76% of the U.S. population. The remaining population represents individual homeowners with their own treatment facilities; for example, community on-lot disposal systems and septic tank systems. The vast majority of wastewater facilities are government-owned rather than regulated utilities. The EPA survey also indicated that there are approximately 4,000 wastewater facilities in operation in the states where we operate regulated utilities.

Because of the fragmented nature of the water and wastewater utility industries, we believe that there are many potential water and wastewater system acquisition candidates throughout the United States. We believe the factors driving the consolidation of these systems are:

- the benefits of economies of scale;
- the increasing cost and complexity of environmental regulations;
- the need for substantial capital investment;
- the need for technological and managerial expertise;
- the desire to improve water quality and service;
- limited access to cost-effective financing;
- the monetizing of public assets to support, in some cases, the declining financial condition of municipalities; and
- the use of system sale proceeds by a municipality to accomplish other public purposes.

We are actively exploring opportunities to expand our water and wastewater utility operations through regulated utility acquisitions or otherwise, including the management of publicly-owned facilities in a public-private partnership. We intend to continue to pursue acquisitions of government-owned and regulated water and wastewater utility systems that provide services in areas near our existing service territories or in new service areas. It is our intention to focus on growth opportunities in states where we have critical mass, which allows us to improve economies of scale through spreading our fixed costs over more customers – this cost efficiency should enable us to reduce the size of future rate increases. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to pursue growth ventures in market-based activities, by acquiring businesses that provide water and wastewater or other utility-related services, and investing in infrastructure projects.

**Sendout**

Sendout represents the quantity of treated water delivered to our distribution systems. We use sendout as an indicator of customer demand. Weather conditions tend to impact water consumption, particularly during the late spring, summer, and early fall when discretionary and recreational use of water is at its highest. Consequently, a higher proportion of annual operating revenues are realized in the second and third quarters. In general, during this period, an extended period of hot and dry weather increases water consumption, while above-average rainfall and cool weather decreases water consumption. Conservation efforts, construction codes that require the use of low-flow plumbing fixtures, as well as mandated water use restrictions in response to drought conditions can reduce water consumption. We believe an increase in conservation awareness by our customers, including the increased use of more efficient plumbing fixtures and appliances, may continue to result in a long-term structural trend of declining water usage per customer. These gradual long-term changes are normally taken into account by the utility commissions in setting rates, whereas significant short-term changes in water usage, resulting from drought warnings, water use restrictions, or extreme weather conditions, may not be fully reflected in the rates we charge between rate proceedings.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions, regardless of our ability to meet unrestricted customer water demands. The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income. In general, water consumption in the summer months is affected by drought warnings and restrictions to a higher degree because discretionary and recreational use of water is highest during the summer months, particularly in our northern service territories. At other times of the year, warnings and restrictions generally have less of an effect on water consumption. Currently, portions of our northern and central Texas service areas have conservation water restrictions. Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

The geographic diversity of our utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of the country. During the year ended December 31, 2017, our operating revenues were derived principally from the following states: approximately 52% in Pennsylvania, 13% in Ohio, 9% in Texas, 8% in Illinois, and 7% in North Carolina.

**Performance Measures Considered by Management**

We consider the following financial measures (and the period to period changes in these financial measures) to be the fundamental basis by which we evaluate our operating results:

- earnings per share;
- operating revenues;
- income from continuing operations;
- earnings before interest, taxes, and depreciation (“EBITD”);
- earnings before income taxes as compared to our operating budget;
- net income; and
- the dividend rate on common stock.

In addition, we consider other key measures in evaluating our utility business performance within our Regulated segment:

- our number of utility customers;
- the ratio of operations and maintenance expense compared to operating revenues (this percentage is termed “operating expense ratio”);
- return on revenues (income from continuing operations divided by operating revenues);
- rate base growth;
- return on equity (net income divided by stockholders’ equity); and
- the ratio of capital expenditures to depreciation expense.

Furthermore, we review the measure of earnings before unusual items that are noncash and not directly related to our core business, such as the measure of adjusted earnings to remove the joint venture impairment charge, which was recognized in 2015. Refer to Note 1 – *Summary of Significant Accounting Policies – Investment in Joint Venture* in this Annual Report for information regarding the impairment charge. We review these measurements regularly and compare them to historical periods, to our operating budget as approved by our Board of Directors, and to other publicly-traded water utilities.

Our operating expense ratio is one measure that we use to evaluate our operating efficiency and management effectiveness of our regulated operations. Our operating expense ratio is affected by a number of factors, including the following:

- ***Regulatory lag*** **–** Our rate filings are designed to provide for the recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claim costs, and costs to comply with environmental regulations), capital, and taxes. The revenue portion of the operating expense ratio can be impacted by the timeliness of recovery of, and the return on capital investments. The operating expense ratio is further influenced by regulatory lag (increases in operations and maintenance expenses not yet recovered in rates or a gap between the time that a capital project is completed and the start of its cost recovery in rates). The operating expense ratio is also influenced by decreases in operating revenues without a commensurate decrease in operations and maintenance expense, such as changes in customer water consumption as impacted by adverse weather conditions, conservation trends, or as a result of utility rates incorporating the effects of income tax benefits derived from deducting qualifying utility asset improvements for tax purposes that are capitalized for book purposes in Aqua Pennsylvania and consequently forgoing operating revenue increases. During periods of inflation, our operations and maintenance expenses may increase, impacting the operating expense ratio, as a result of regulatory lag, since our rate cases may not be filed timely and are not retroactive.

- ***Acquisitions*** **–** In general, acquisitions of smaller undercapitalized utility systems in some areas may initially increase our operating expense ratio if the operating revenues generated by these operations are accompanied by a higher ratio of operations and maintenance expenses as compared to other operational areas of the company that are more densely populated and have integrated operations. In these cases, the acquired operations are characterized as having relatively higher operating costs to fixed capital costs, in contrast to the majority of our operations, which generally consist of larger, interconnected systems, with higher fixed capital costs (utility plant investment) and lower operating costs per customer. In addition, we operate market-based subsidiary companies, Aqua Resources and Aqua Infrastructure. The cost-structure of these market-based companies differs from our utility companies in that, although they may generate free cash flow, these companies have a higher ratio of operations and maintenance expenses to operating revenues and a lower capital investment and, consequently, a lower ratio of fixed capital costs versus operating revenues in contrast to our regulated operations. As a result, the operating expense ratio is not comparable between the businesses. These market-based subsidiary companies are not a component of our Regulated segment.

We continue to evaluate initiatives to help control operating costs and improve efficiencies.

## Consolidated Selected Financial and Operating Statistics

Our selected five-year consolidated financial and operating statistics follow:

| Years ended December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Utility customers: | | | | | |
| Residential water | 807,872 | 801,190 | 791,404 | 779,665 | 771,660 |
| Commercial water | 40,956 | 40,582 | 40,151 | 39,614 | 39,237 |
| Industrial water | 1,338 | 1,349 | 1,353 | 1,357 | 1,368 |
| Other water | 19,430 | 19,036 | 17,420 | 17,412 | 17,230 |
| Wastewater | 113,253 | 110,108 | 107,538 | 102,071 | 98,705 |
| Total utility customers | 982,849 | 972,265 | 957,866 | 940,119 | 928,200 |
| Operating revenues: | | | | | |
| Residential water | $ 483,865 | $ 484,901 | $ 477,773 | $ 460,013 | $ 457,404 |
| Commercial water | 130,373 | 131,170 | 126,677 | 122,795 | 121,178 |
| Industrial water | 27,880 | 27,916 | 28,021 | 27,369 | 25,263 |
| Other water | 65,324 | 62,983 | 56,997 | 59,474 | 57,446 |
| Wastewater | 87,560 | 82,780 | 79,399 | 76,472 | 73,062 |
| Other utility | 9,903 | 10,357 | 10,746 | 9,934 | 10,174 |
| Regulated segment total | 804,905 | 800,107 | 779,613 | 756,057 | 744,527 |
| Other and eliminations | 4,620 | 19,768 | 34,591 | 23,846 | 17,366 |
| Consolidated operating revenues | $ 809,525 | $ 819,875 | $ 814,204 | $ 779,903 | $ 761,893 |
| Operations and maintenance expense | $ 287,206 | $ 304,897 | $ 309,310 | $ 288,556 | $ 283,561 |
| Joint venture impairment charge (1) | $ - | $ - | $ 21,433 | $ - | $ - |
| Income from continuing operations | $ 239,738 | $ 234,182 | $ 201,790 | $ 213,884 | $ 202,871 |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 | $ 233,239 | $ 221,300 |
| Capital expenditures | $ 478,089 | $ 382,996 | $ 364,689 | $ 328,605 | $ 307,908 |
| **Operating Statistics** | | | | | |
| Selected operating results as a percentage of operating revenues: | | | | | |
| Operations and maintenance | 35.5% | 37.2% | 38.0% | 37.0% | 37.2% |
| Depreciation and amortization | 16.9% | 16.2% | 15.8% | 16.2% | 16.3% |
| Taxes other than income taxes | 7.0% | 6.9% | 6.8% | 6.5% | 6.9% |
| Interest expense, net | 10.9% | 9.8% | 9.4% | 9.8% | 10.1% |
| Income from continuing operations | 29.6% | 28.6% | 24.8% | 27.4% | 26.6% |
| Return on Aqua America stockholders' equity | 12.2% | 12.7% | 11.7% | 14.1% | 14.4% |
| Ratio of capital expenditures to depreciation expense | 3.5 | 2.9 | 2.9 | 2.7 | 2.6 |
| Effective tax rate | 6.6% | 8.2% | 6.9% | 10.5% | 9.5% |

(1) Represents a $21,433 ($32,975 pre-tax) joint venture impairment charge. This amount represents our share of the impairment charge recognized by our joint venture that operates a private pipeline to supply raw water to firms with natural gas well drilling operations.

## RESULTS OF OPERATIONS

Our income from continuing operations has grown at an annual compound rate of approximately 5.7% and our net income has grown at an annual compound rate of approximately 4.1% during the five-year period ended December 31, 2017. During the past five years, operating revenues grew at a compound rate of 1.5% and operating expenses grew at a compound rate of 2.1%.

**Operating Segments**

We have identified ten operating segments and we have one reportable segment based on the following:

- Eight segments are composed of our water and wastewater regulated utility operations in the eight states where we provide these services. These operating segments are aggregated into one reportable segment since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution and/or wastewater collection methods, and the nature of the regulatory environment. Our single reportable segment is named the Regulated segment.

- Two segments are not quantitatively significant to be reportable and are composed of Aqua Resources and Aqua Infrastructure. These segments are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

The following table provides the Regulated segment and consolidated information for the years ended December 31, 2017, 2016, and 2015:

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 804,905 | $ 4,620 | $ 809,525 | $ 800,107 | $ 19,768 | $ 819,875 |
| Operations and maintenance expense | 286,962 | 244 | 287,206 | 285,347 | 19,550 | 304,897 |
| Taxes other than income taxes | 54,524 | 2,104 | 56,628 | 53,916 | 2,469 | 56,385 |
| Earnings (loss) before interest, taxes, depreciation and amortization | $ 463,419 | $ 2,272 | 465,691 | $ 460,844 | $ (2,251) | 458,593 |
| Depreciation and amortization | | | 136,724 | | | 133,008 |
| Operating income | | | 328,967 | | | 325,585 |
| Other expense (income): | | | | | | |
| Interest expense, net | | | 88,341 | | | 80,594 |
| Allowance for funds used during construction | | | (15,211) | | | (8,815) |
| Gain on sale of other assets | | | (484) | | | (378) |
| Equity income in joint venture | | | (331) | | | (976) |
| Provision for income taxes | | | 16,914 | | | 20,978 |
| Net income | | | $ 239,738 | | | $ 234,182 |

| | 2015 | | |
|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 779,613 | $ 34,591 | $ 814,204 |
| Operations and maintenance expense | 282,866 | 26,444 | 309,310 |
| Taxes other than income taxes | 52,361 | 2,696 | 55,057 |
| Earnings before interest, taxes, depreciation and amortization | $ 444,386 | $ 5,451 | 449,837 |
| Depreciation and amortization | | | 128,737 |
| Operating income | | | 321,100 |
| Other expense (income): | | | |
| Interest expense, net | | | 76,536 |
| Allowance for funds used during construction | | | (6,219) |
| Gain on sale of other assets | | | (468) |
| Gain on extinguishment of debt | | | (678) |
| Equity loss in joint venture | | | 35,177 |
| Provision for income taxes | | | 14,962 |
| Net income | | | $ 201,790 |

**Consolidated Results**

***Operating Revenues –*** Operating revenues totaled $809,525 in 2017, $819,875 in 2016, and $814,204 in 2015. Our Regulated segment's revenues totaled $804,905 in 2017, $800,107 in 2016, and $779,613 in 2015. The growth in our Regulated segment's revenues over the past three years is a result of increases in our water and wastewater rates and our customer base. Rate increases implemented during the past three years have provided additional operating revenues of $6,143 in 2017, $4,319 in 2016, and $8,503 in 2015. Negatively impacting revenues in 2017 was a decrease in customer water consumption primarily due to unfavorable weather conditions during the year. The number of customers increased at an annual compound rate of 1.4% over the past three years due to acquisitions and organic growth, adjusted to exclude customers associated with utility system dispositions. Acquisitions in our Regulated segment have provided additional water and wastewater revenues of $1,695 in 2017, $8,201 in 2016, and $8,900, in 2015.

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its last rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that historically had been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change which provides for the flow-through of income tax benefits that resulted in a substantial reduction in income tax expense and greater net income and cash flow. As a result, Aqua Pennsylvania was able to suspend its water Distribution System Improvement Charges from January 1, 2013 to September 30, 2017, when it resumed the use of a water Distribution System Improvement Charge on October 1, 2017. Aqua Pennsylvania was able to lengthen the amount of time until its next base rate case, which is expected to be filed in 2018. During 2017, 2016, and 2015, the income tax accounting change resulted in income tax benefits of $84,766, $78,530, and $72,944 that reduced the Company's current income tax expense and increased net income. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 for qualifying capital expenditures made prior to 2012. Based on the settlement agreement, beginning in 2013, the Company began to amortize 1/10th of these expenditures, or $38,000 annually, which reduced income tax expense and increased the Company's net income by $16,734, which is included in the income tax benefits noted previously. In accordance with the settlement agreement, this amortization is expected to reduce income tax expense during periods when qualifying parameters are met.

Our operating subsidiaries received rate increases representing estimated annualized revenues of $7,558 in 2017 resulting from five base rate decisions, $3,434 in 2016 resulting from six rate decisions, and $3,347 in 2015 resulting from four rate decisions. Revenues from these increases realized in the year of grant were $6,343 in 2017, $1,788 in 2016, and $2,887 in 2015. As of December 31, 2017, our operating subsidiaries have filed two rate requests, which are being reviewed by the state utility commissions, proposing an aggregate increase of $13,888 in annual revenues. During 2018, we intend to file five additional rate requests proposing an aggregate of approximately $80,000 of increased annual revenues; the timing and extent to which our rate increase requests may be granted will vary by state. Our planned rate filings for 2018 are subject to the issuance of procedural orders directing how the Federal tax law changes are to be reflected in our utility customer rates.

Currently, Pennsylvania, Illinois, Ohio, Indiana, New Jersey, and North Carolina allow for the use of a surcharge for replacing and rehabilitating infrastructure systems. The rate increases under this surcharge typically adjust periodically based on additional qualified capital expenditures completed or anticipated in a future period. This surcharge is capped as a percentage of base rates, generally at 5% to 12.75% of base rates, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. These surcharges provided revenues of $10,255 in 2017, $7,379 in 2016, and $3,261 in 2015.

Our Regulated segment also includes operating revenues of $9,903 in 2017, $10,357 in 2016, and $10,746 in 2015 associated with contract operations that are integrated into the regulated utility business and operations. These amounts vary over time according to the level of activity associated with the utility contract operations.

In addition to the Regulated segment operating revenues, we recognized market-based revenues that are associated with Aqua Resources and Aqua Infrastructure of $4,798 in 2017, $20,091 in 2016, and $34,909 in 2015. The decrease in revenues in 2017 and 2016 is due to the disposition of business units within Aqua Resources.

***Operations and Maintenance Expenses –*** Operations and maintenance expenses totaled $287,206 in 2017, $304,897 in 2016, and $309,310 in 2015. Most elements of operating costs are subject to the effects of inflation and changes in the number of customers served. Several elements are subject to the effects of changes in water consumption, weather, and the degree of water treatment required due to variations in the quality of the raw water. The principal elements of operating costs are labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations. Electricity and chemical expenses vary in relationship to water consumption, raw water quality, and price changes. Maintenance expenses are sensitive to extremely cold weather, which can cause water mains to rupture, resulting in additional costs to repair the affected main.

Operations and maintenance expenses decreased in 2017, as compared to 2016, by $17,691 or 5.8%, primarily due to:

- decreases in market-based activities expenses of $15,933 due to the disposition of business units within Aqua Resources;
- a decrease in water production costs of $6,301 primarily due to a reduction in purchased water expense of $4,794 due to replacing a purchased water supply with the Company's own water supply source;
- a decrease in the Company's self-insured employee medical benefit program expense of $4,838;
- offset by $4,102 for the timing of expenses incurred for the maintenance of our utility systems and the purchase of supplies, as well as other increases in operations and maintenance expenses.

Operations and maintenance expenses decreased in 2016 as compared to 2015 by $4,413 or 1.4%, primarily due to:

- decreases in market-based activities expenses of $10,393 due to the disposition of business units within Aqua Resources;
- a decrease in water production costs of $3,156;
- the effects of the recognition in 2015 of:
  - leadership transition expenses of $2,510,
  - the recording of a reserve of $1,862 for water rights held for future use, and
  - the recording of a legal contingency reserve of $1,580;
- the reversal of a reserve for a legal contingency of $1,580;
- offset by an increase in postretirement benefits of $5,554; and
- additional operating costs associated with acquisitions of $4,538, as well as other increases in operations and maintenance expenses.

***Depreciation and Amortization Expenses –*** Depreciation expense was $136,302 in 2017, $130,987 in 2016, and $125,290 in 2015, and has increased principally as a result of the significant capital expenditures made to expand and improve our utility facilities, and our acquisitions of new utility systems.

Amortization expense was $422 in 2017, $2,021 in 2016, and $3,447 in 2015, and has decreased primarily due to the completion of the recovery of our costs associated with various rate filings. Expenses associated with filing rate cases are deferred and amortized over periods that generally range from one to three years.

***Taxes Other than Income Taxes –*** Taxes other than income taxes totaled $56,628 in 2017, $56,385 in 2016, and $55,057 in 2015. The increase in 2017 was primarily due to an increase in gross receipts, excise and franchise taxes of $949, and an increase in taxes assessed resulting from the pumping of ground water in Texas of $486 due to higher water production volume and rates, offset by a $978 decrease in property taxes primarily due to a favorable ruling on a property tax appeal in Ohio. The increase in 2016 was primarily due to an increase of $578 for pumping fees in Texas due to higher water production, a rate increase, and the addition of two water systems, and an increase in gross receipts, excise and franchise taxes of $502.

***Interest Expense, net –*** Net interest expense was $88,341 in 2017, $80,594 in 2016, and $76,536 in 2015. Interest income of $202 in 2017, $217 in 2016, and $272 in 2015 was netted against interest expense. Net interest expense increased in 2017 due to an increase in average borrowings of $157,768 and an increase in short-term and long-term interest rates. Net interest expense increased in 2016 due to an increase in average short-term borrowings of $9,808 at higher short-term interest rates and an increase in average outstanding fixed rate long-term debt of $98,006 partially offset by a decline in long-term interest rates. Interest income decreased in 2017 due to lower investment rates. The weighted average cost of fixed rate long-term debt was 4.35% at December 31, 2017, 4.26% at December 31, 2016, and 4.57% at December 31, 2015. The weighted average cost of fixed and variable rate long-term debt was 4.29% at December 31, 2017, 4.23% at December 31, 2016, and 4.44% at December 31, 2015.

***Allowance for Funds Used During Construction –*** The allowance for funds used during construction ("AFUDC") was $15,211 in 2017, $8,815 in 2016, and $6,219 in 2015, and varies as a result of changes in the average balance of utility plant construction work in progress, to which AFUDC is applied, changes in the AFUDC rate which is based predominantly on short-term interest rates, changes in the balance of short-debt, and changes in the amount of AFUDC related to equity. The increase in 2017 and 2016 is primarily due to an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity and in 2017 and 2016, and an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied. The amount of AFUDC related to equity was $11,633 in 2017, $6,561 in 2016, and $4,621 in 2015.

***Gain on Sale of Other Assets –*** Gain on sale of other assets totaled $484 in 2017, $378 in 2016, and $468 in 2015, and consists of the sales of property, plant and equipment and marketable securities.

***Gain on Extinguishment of Debt –*** The gain on extinguishment of debt of $678 in 2015 results from the recognition of the unamortized issuance premium for the early redemption of $95,985 of tax-exempt bonds at 5.00% that were originally maturing between 2035 and 2038.

***Equity (Earnings) Loss in Joint Venture –*** Equity (earnings) loss in joint venture totaled $(331) in 2017, $(976) in 2016, and $35,177 in 2015. The equity earnings in 2017 primarily resulted from the sale of raw water to firms in the natural gas drilling industry. The equity earnings in 2016 resulted from the recognition of a connection fee earned by the joint venture in 2016 for which our share was $1,831 and a reduction in depreciation expense resulting from the noncash impairment charge recognized by the joint venture on its long-lived assets in 2015. In 2015, a noncash impairment charge was recognized by the joint venture on its long-lived assets for which our share was $32,975. The impairment charge was recognized in 2015 as a result of a determination that the long-lived assets, primarily consisting of a pipeline and pump station, had become impaired due to a marked decline in natural gas prices in 2015, a distinguishable reduction in the volume of water sales by the joint venture which led to a lowered forecast in 2015 on future water sales volumes by the joint venture, as well as changes in the natural gas industry and market conditions. At the time of the impairment, these market conditions were largely associated with natural gas prices, which sharply declined in 2015 and this downturn no longer appeared to be temporary and instead was expected to be a long-term condition.

***Income Taxes*** – Our effective income tax rate was 6.6% in 2017, 8.2% in 2016, and 6.9% in 2015. The effective income tax rate for 2017, 2016, and 2015 was affected by the 2012 income tax accounting change for qualifying utility asset improvements at Aqua Pennsylvania which resulted in a $84,766, $78,530, and $72,944 net reduction to the Company's 2017, 2016, and 2015 Federal and state income tax expense, respectively. As of December 31, 2017, the Company has an unrecognized tax benefit related to the Company's change in its tax accounting method for qualifying utility asset improvement costs, of which up to $24,243 of these tax benefits would further reduce the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position in the period this information is determined. Offsetting this reduction was the effect of the revaluation of our deferred income tax assets and liabilities, triggered by the TCJA, which resulted in the recognition of additional income tax expense of $3,141 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates.

***Summary –***

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Operating income | $ 328,967 | $ 325,585 | $ 321,100 |
| Net income | 239,738 | 234,182 | 201,790 |
| Diluted net income per share | 1.35 | 1.32 | 1.14 |

The changes in diluted net income per share in 2017 and 2016 over the previous years were due to the aforementioned changes.

Although we have experienced increased income in the recent past, continued adequate rate increases reflecting increased operating costs and new capital investments, are important to the future realization of improved profitability.

***Fourth Quarter Results –*** The following table provides our fourth quarter results:

| | Three Months Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Operating revenues | $ 203,312 | $ 196,799 |
| Operations and maintenance | 79,243 | 77,550 |
| Depreciation | 34,794 | 33,342 |
| Amortization | 64 | 654 |
| Taxes other than income taxes | 12,238 | 13,291 |
| | 126,339 | 124,837 |
| Operating income | 76,973 | 71,962 |
| Other expense (income): | | |
| Interest expense, net | 23,217 | 20,458 |
| Allowance for funds used during construction | (4,641) | (2,369) |
| (Gain) loss on sale of other assets | (162) | 12 |
| Equity loss in joint venture | 71 | 167 |
| Income before income taxes | 58,488 | 53,694 |
| Provision for income taxes | 5,015 | 4,045 |
| Net income | $ 53,473 | $ 49,649 |

The increase in operating revenues of $6,513 was primarily due to an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $4,247, an increase in customer water consumption, and additional revenues of $438 associated with a larger customer base due to utility acquisitions, offset by a decrease in market-based activities revenue of $2,323 due to dispositions.

The increase in operations and maintenance expense of $1,693 is due primarily to $3,490 associated with the timing of expenses incurred for the maintenance of our utility systems and the purchase of supplies, an increase in postretirement benefits expense of $1,249, offset by a decrease in market-based activities expenses of $2,952, and a decrease in water production costs of $1,842 due to replacing a purchased water supply with the Company’s own water supply source.

Depreciation expense increased by $1,452 primarily due to the utility plant placed in service since December 31, 2016.

The decrease in other taxes of $1,053 is primarily due to a decrease in property taxes of $1,466 due to a favorable property tax appeal in Ohio, offset by an increase in capital stock taxes of $199 due to the effect of a reversal of a reserve from the prior year, and an increase in taxes assessed resulting from the pumping of ground water in Texas of $166 due to higher water production volume and rates.

Interest expense increased by $2,759 due to an increase in the average outstanding debt balance.

AFUDC increased by $2,272 due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied, and an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity.

The provision for income taxes increased by $970 primarily as a result of the revaluation of our deferred income tax assets and liabilities, triggered by the TCJA, which resulted in the recognition of additional income tax expense of $3,141 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates, offset by the effect of additional tax deductions recognized in the fourth quarter of 2017 for certain qualifying infrastructure improvements for Aqua Pennsylvania.

## LIQUIDITY AND CAPITAL RESOURCES

**Consolidated Cash Flow and Capital Expenditures**

Net operating cash flows from continuing operations, dividends paid on common stock, capital expenditures used in continuing operations, including allowances for funds used during construction, and expenditures for acquiring water and wastewater systems for our continuing operations for the five years ended December 31, 2017 were as follows:

| | Net Operating Cash Flows | Dividends | Capital Expenditures | Acquisitions |
|---|---|---|---|---|
| 2013 | $ 365,803 | $ 102,889 | $ 307,908 | $ 14,997 |
| 2014 | 364,888 | 112,106 | 328,605 | 14,616 |
| 2015 | 370,794 | 121,248 | 364,689 | 28,989 |
| 2016 | 396,163 | 130,923 | 382,996 | 9,423 |
| 2017 | 381,318 | 140,660 | 478,089 | 5,860 |
| | $ 1,878,966 | $ 607,826 | $ 1,862,287 | $ 73,885 |

Included in capital expenditures for the five-year period are: expenditures for the rehabilitation of existing water and wastewater systems, the expansion of our water and wastewater systems, modernization and replacement of existing treatment facilities, water meters, office facilities, information technology, vehicles, and equipment. During this five-year period, we received $31,657 of customer advances and contributions in aid of construction to finance new water mains and related facilities that are not included in the capital expenditures presented in the above table. In addition, during this period, we have made repayments of debt of $978,762, and have refunded $22,607 of customers' advances for construction. Dividends increased during the past five years as a result of annual increases in the dividends declared and paid and increases in the number of shares outstanding.

Our planned 2018 capital program, exclusive of the costs of new mains financed by advances and contributions in aid of construction, is estimated to be approximately $500,000 in infrastructure improvements for the communities we serve. The 2018 capital program is expected to include $213,200 for infrastructure rehabilitation surcharge qualified projects. On January 1, 2013, Aqua Pennsylvania reset its water infrastructure rehabilitation surcharge to zero resulting from the change in its tax method of accounting for qualifying utility asset improvements as described below. Although we were not eligible to use an infrastructure rehabilitation surcharge with our Aqua Pennsylvania water customers from January 1, 2013 to September 30, 2017, we were able to use the income tax savings derived from the qualifying utility asset improvements to maintain Aqua Pennsylvania's capital investment program. Our planned 2018 capital program in Pennsylvania is estimated to be approximately $337,000, a portion of which is expected to be eligible as a deduction for qualifying utility asset improvements for Federal income tax purposes. Our overall 2018 capital program, along with $113,769 of debt repayments and $160,973 of other contractual cash obligations, as reported in the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations – *Contractual Obligations*", has been, or is expected to be, financed through internally-generated funds, our revolving credit facilities, and the issuance of long-term debt.

Future utility construction in the period 2019 through 2020, including recurring programs, such as the ongoing replacement or rehabilitation of water meters and water mains, water treatment plant upgrades, storage facility renovations, and additional transmission mains to meet customer demands, exclusive of the costs of new mains financed by advances and contributions in aid of construction, is estimated to require aggregate expenditures of approximately $875,000. We anticipate that approximately one-half of these expenditures will require external financing. We expect to refinance $189,025 of long-term debt during this period as they become due with new issues of long-term debt, internally-generated funds, and our revolving credit facilities. The estimates discussed above do not include any amounts for possible future acquisitions of water and wastewater systems or the financing necessary to support them.

Our primary sources of liquidity are cash flows from operations (including the allowed deferral of Federal income tax payments), borrowings under various short-term lines of credit and other credit facilities, and customer advances and contributions in aid of construction. Our cash flow from operations, or internally-generated funds, is impacted by the timing of rate relief, water consumption, and changes in Federal tax laws with respect to the reduction in the corporate income tax rate, and accelerated tax depreciation or deductions for utility construction projects. We fund our capital and typical acquisitions through internally-generated funds, supplemented by short-term lines of credit. Over time, we partially repay or pay-down our short-term lines of credit with long-term debt. The ability to finance our future construction programs, as well as our acquisition activities, depends on our ability to attract the necessary external financing and maintain internally-generated funds. Timely rate orders permitting compensatory rates of return on invested capital will be required by our operating subsidiaries to achieve an adequate level of earnings and cash flow to enable them to secure the capital they will need to operate and to maintain satisfactory debt coverage ratios.

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that have historically been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change, which resulted in a substantial reduction in income tax expense and greater net income and cash flow, and as a result allowed Aqua Pennsylvania to suspend its water Distribution System Improvement Charges from January 1, 2013 to September 30, 2017, and lengthen the amount of time until the next Aqua Pennsylvania rate case, which is expected to be filed in 2018. As a result of the Pennsylvania rate order, income tax benefits reduced the Company's current income tax expense and increased net income by $84,766 in 2017, $78,530 in 2016, and $72,944 in 2015. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 for qualifying capital expenditures made prior to 2012, and based on the settlement agreement, beginning in 2013, the Company began to amortize 1/10$^{th}$ of these expenditures or $38,000 annually, which reduced income tax expense and increased the Company's net income by $16,734. In accordance with the settlement agreement, this amortization is expected to reduce income tax expense during periods when qualifying parameters are met.

**Acquisitions**
As part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of six municipalities for a total combined purchase price in cash of $150,700. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur by the end of 2018, which is subject to the timing of the regulatory approval process. These acquisitions are expected to add approximately 16,325 customers in two of the states in which the Company operates.

During the past five years, we have expended cash of $73,885 and issued 439,943 shares of common stock, valued at $12,845 at the time of acquisition, related to the acquisition of utility systems, both water and wastewater utilities, as well as investments in supplying raw water to the natural gas drilling industry.

In 2017, we completed four acquisitions of water and wastewater utility systems for $5,860 in cash in two of the states in which we operate, adding 1,003 customers.

In January 2016, we acquired the water and wastewater utility system assets of Superior Water Company, Inc., which provided public water service to 4,108 customers in portions of Berks, Chester, and Montgomery counties in

Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. Additionally, during 2016, we completed 18 acquisitions of water and wastewater utility systems for $5,518 in cash in eight of the states in which we operate, adding 2,469 customers.

In April 2015, we acquired the water and wastewater utility system assets of North Maine Utilities, located in the Village of Glenview, Illinois serving 7,409 customers. The total purchase price consisted of $23,079 in cash. Additionally, during 2015, we completed 14 acquisitions of water and wastewater utility systems for $5,210 in cash in six of the states in which we operate, adding 3,170 customers.

During 2014, we completed 16 acquisitions of water and wastewater utility systems for $10,530 in cash in seven of the states in which we operate, adding 6,148 customers. Further, in 2014, we acquired two market-based businesses that specialized in inspecting, cleaning and repairing storm and sanitary sewer lines, as well as providing water distribution system services and training to waterworks operators. The total purchase price in aggregate was $4,810 and both these businesses were subsequently sold in November 2016 and January 2017.

During 2013, we completed 15 acquisitions of water and wastewater utility systems for $14,997 in cash in four of the states in which we operate, adding 5,991 customers.

We continue to pursue the acquisition of water and wastewater utility systems, and explore other utility acquisitions that may be in a new state. Our typical acquisitions are expected to be financed with short-term debt with subsequent repayment from the proceeds of long-term debt, retained earnings, or equity issuances.

**Joint Venture**

In September 2011, one of our subsidiaries entered into a joint venture with a firm that operates natural gas pipelines and processing plants for the construction and operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania (the "Joint Venture"). We own 49% of the Joint Venture. The 56 mile pipeline construction and permitted intake on the Susquehanna River cost $109,000. As of December 31, 2017, our capital contributions since inception totaled $53,643 in cash. This investment has been financed through the issuance of long-term debt. Our 49% investment in the Joint Venture is an unconsolidated affiliate and is accounted for under the equity method of accounting. Our initial investment is carried at cost. Subsequently, the carrying amount of our investment is adjusted to reflect capital contributions or distributions, our equity in earnings and losses since the commencement of the system's operations, and a decline in the fair value of our investment. In 2015, an impairment charge was recognized by the joint venture on its long-lived assets, of which the Company's share totaled $32,975 ($21,433 after-tax), representing our share of the noncash impairment charge as further described in Note 1 – *Summary of Significant Accounting Policies – Investment in Joint Venture* in this Annual Report.

**Dispositions**

We routinely review and evaluate areas of our business and operating divisions and, over time, may sell utility systems or portions of systems. In 2017, the Company sold two business units within Aqua Resources, which resulted in total proceeds of $867, and recognized a net loss of $324. In 2016, the Company sold two business units within Aqua Resources, which resulted in total proceeds of $4,459, and recognized a net loss of $543.

In December 2014, we completed the sale of our water utility system in southwest Allen County Indiana to the City of Fort Wayne, Indiana for $67,011, which is comprised of $50,100 in addition to $16,911 the city initially paid the Company towards its water and wastewater system assets in the northern part of Fort Wayne in 2008. We recognized a gain on sale of $29,210 ($17,611 after-tax) in the fourth quarter of 2014. In addition, as a result of this transaction, Aqua Indiana expanded its sewer customer base by accepting new wastewater flows from the City. Additionally, in March, 2014, we completed the sale of our wastewater treatment facility in Georgia.

In 2013, in accordance with our strategy to focus our resources on states where we have critical mass to improve our economies of scale and expect future economic growth, we sold water and wastewater systems in Florida, through five separate sales transactions. The Company received total net proceeds from these sales of $88,934, and recognized a gain on sale of $21,178 ($13,766 after-tax).

Additionally, in June 2013, the Company sold a water and wastewater utility system in Texas for net proceeds of $3,400. The sale resulted in the recognition of a gain on sale of these assets, net of expenses, of $1,025 ($615 after-tax).

Despite these transactions, one of our primary strategies continues to be to acquire additional utility systems, to maintain our existing systems where there is a strategic business benefit, and to actively oppose unilateral efforts by municipal governments to acquire any of our operations.

**Sources of Capital**

Since net operating cash flow plus advances and contributions in aid of construction have not been sufficient to fully fund cash requirements, we issued $1,670,223 of long-term debt and obtained other short-term borrowings during the past five years. At December 31, 2017, we have a $250,000 long-term revolving credit facility that expires in February 2021, of which $19,811 was designated for letter of credit usage, $170,189 was available for borrowing, and $60,000 of borrowings were outstanding at December 31, 2017. In addition, we have short-term lines of credit of $135,500, of which $131,850 was available as of December 31, 2017. These short-term lines of credit are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

Our consolidated balance sheet historically has had a negative working capital position, whereby routinely our current liabilities exceed our current assets. Management believes that internally-generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

Our loan and debt agreements require us to comply with certain financial covenants, which among other things, subject to specific exceptions, limit the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2017, we were in compliance with our debt covenants under our credit facilities. Failure to comply with our debt covenants could result in an event of default, which could result in us being required to repay or refinance our borrowings before their due date, possibly limiting our future borrowings, and increasing our borrowing costs.

The Company has a universal shelf registration statement, which was filed with the SEC in February 2015, which allows for the potential future offer and sale by us, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices. The Company's Board of Directors has authorized the Company to issue up to $500,000 of our common stock, preferred stock, debt securities, and other securities specified therein under this universal shelf registration statement. The Company has not issued any securities to date under this universal shelf registration statement. This registration statement expires in February 2018, and we intend to file a new three-year universal shelf registration statement.

In addition, we have a shelf registration statement, which was filed with the SEC on February 27, 2015, to permit the offering from time to time of an aggregate of $500,000 of our common stock and shares of preferred stock in connection with acquisitions. During 2016, we issued 439,943 shares of common stock totaling $12,845 to acquire a water system. The balance remaining available for use under the acquisition shelf registration as of December 31, 2017 is $487,155.

We will determine the form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement at the time of issuance.

We offer a Dividend Reinvestment and Direct Stock Purchase Plan (the "Plan") that provides a convenient and economical way to purchase shares of the Company. Under the direct stock purchase portion of the Plan, shares are issued throughout the year. The dividend reinvestment portion of the Plan offers a five percent discount on the purchase of shares of common stock with reinvested dividends. As of the December 2017 dividend payment, holders of 9.9% of the common shares outstanding participated in the dividend reinvestment portion of the Plan. The shares issued under the Plan are either original issue shares or shares purchased by the Company's transfer agent in the open-market. During the past five years, we have sold 551,788 original issue shares of common stock for net proceeds of $13,625 through the dividend reinvestment portion of the Plan, and we used the proceeds to invest in our operating subsidiaries, to repay short-term debt, and for general corporate purposes. In 2017, 2016, and 2015, 447,753, 484,645, and 535,439 shares of

common stock were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $15,168, $14,916, and $14,380, respectively.

The Company's Board of Directors has authorized us to repurchase our common stock, from time to time, in the open market or through privately negotiated transactions. In 2014, we repurchased 560,000 shares of our common stock in the open market for $13,280. In December 2014, the Company's Board of Directors authorized a share buyback program of up to 1,000,000 shares to minimize share dilution through timely and orderly share repurchases. In December 2015, the Company's Board of Directors added 400,000 shares to this program. In 2015, we repurchased 805,000 shares of our common stock in the open market for $20,502. In 2016, we did not repurchase any shares of our common stock in the open market under this program. This program expired on December 31, 2016.

**Off-Balance Sheet Financing Arrangements**

We do not engage in any off-balance sheet financing arrangements. We do not have any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities.

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**Contractual Obligations**

The following table summarizes our contractual cash obligations as of December 31, 2017:

| | | Payments Due By Period | | | |
|---|---|---|---|---|---|
| | Total | Less than 1 year | 1 - 3 years | 3 - 5 years | More than 5 years |
| Long-term debt | $ 2,143,127 | $ 113,769 | $ 189,025 | $ 121,966 | $ 1,718,367 |
| Interest on fixed-rate, long-term debt (1) | 1,366,407 | 77,497 | 148,277 | 131,248 | 1,009,385 |
| Operating leases (2) | 20,080 | 1,919 | 2,957 | 2,148 | 13,056 |
| Unconditional purchase obligations (3) | 31,510 | 4,853 | 8,989 | 8,024 | 9,644 |
| Other purchase obligations (4) | 63,064 | 63,064 | - | - | - |
| Pension plan obligation (5) | 12,484 | 12,484 | - | - | - |
| Other obligations (6) | 11,932 | 1,156 | 2,035 | 2,118 | 6,623 |
| Total | $ 3,648,604 | $ 274,742 | $ 351,283 | $ 265,504 | $ 2,757,075 |

(1) Represents interest payable on fixed rate, long-term debt. Amounts reported may differ from actual due to future refinancing of debt.

(2) Represents operating leases that are noncancelable, before expiration, for the lease of motor vehicles, buildings, land and other equipment.

(3) Represents our commitment to purchase minimum quantities of water as stipulated in agreements with other water purveyors. We use purchased water to supplement our water supply, particularly during periods of peak customer demand. Our actual purchases may exceed the minimum required levels.

(4) Represents an approximation of the open purchase orders for goods and services purchased in the ordinary course of business.

(5) Represents contributions to be made to pension plan.

(6) Represents expenditures estimated to be required under legal and binding contractual obligations.

In addition to these obligations, we pay refunds on customers' advances for construction over a specific period of time based on operating revenues related to developer-installed water mains or as new customers are connected to and take service from such mains. After all refunds are paid, any remaining balance is transferred to contributions in aid of construction. The refund amounts are not included in the above table because the refund amounts and timing are dependent upon several variables, including new customer connections, customer consumption levels and future rate increases, which cannot be accurately estimated. Portions of these refund amounts are payable annually through 2027 and amounts not paid by the contract expiration dates become non-refundable.

In addition to the obligations disclosed in the contractual obligations table above, we have uncertain tax positions of $17,583. Although we believe our tax positions comply with applicable law, we have made judgments as to the sustainability of each uncertain tax position based on its technical merits. Due to the uncertainty of future cash outflows, if any, associated with our uncertain tax positions, we are unable to make a reasonable estimate of the timing or amounts that may be paid. See Note 7 – *Income Taxes* in this Annual Report for further information on our uncertain tax positions.

We will fund these contractual obligations with cash flows from operations and liquidity sources held by or available to us.

The Company is routinely involved in legal matters, including both asserted and unasserted legal claims, during the ordinary course of business. See Note 9 – *Commitments and Contingencies* in this Annual Report for a discussion of the Company's legal matters. It is not always possible for management to make a meaningful estimate of the potential loss or range of loss associated with such litigation. Also, unanticipated changes in circumstances and/or revisions to the assessed probability of the outcomes of legal matters could result in expenses being incurred in future periods as well as an increase in actual cash required to resolve the legal matter.

**Capitalization**

The following table summarizes our capitalization during the past five years:

| December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Long-term debt (1) | 52.3% | 50.8% | 50.8% | 49.4% | 50.3% |
| Aqua America stockholders' equity | 47.7% | 49.2% | 49.2% | 50.6% | 49.7% |
| | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

(1) Includes current portion, as well as our borrowings under a variable rate revolving credit agreement of $60,000 at December 31, 2017, $25,000 at December 31, 2016, $60,000 at December 31, 2015, $72,000 at December 31, 2014, and $0 at December 31, 2013.

Over the past five years, the changes in the capitalization ratios primarily resulted from the issuance of debt to finance our acquisitions and capital program, growth in net income, the issuance of common stock, and the declaration of dividends.

## INCOME TAX MATTERS

**Tax Cuts and Jobs Act of 2017**

On December 22, 2017, President Trump signed the TCJA into law. Substantially all of the provisions of the TCJA are effective for tax years beginning after December 31, 2017, except as noted below. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes include a reduction in the corporate federal income tax rate from 35% to 21%, and a limitation on the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific provisions related to regulated public utilities in the TCJA generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017.

The Company's regulated operations accounting for income taxes are impacted by the FASB's accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rates to 21% under the provisions of the TCJA results in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes are to be passed back to customers for certain accelerated tax depreciation benefits. Potential refunds of other deferred taxes will be determined by our state regulators. Our state regulatory commissions have or are in the process of issuing procedural orders directing how the tax law changes are to be reflected in our utility customer rates. In addition, we have two rate cases currently in progress in two states in which TCJA is expected to be addressed in the new base rates. The December 31, 2017 consolidated balance sheet reflects the impact of the TCJA on our regulatory assets and liabilities, which reduced our regulatory assets by $357,262 and increased our regulatory liabilities by $303,320. These adjustments had no impact on our 2017 cash flows.

As of December 31, 2017, resulting from the TCJA enactment, our deferred income tax assets and liabilities were revalued based upon the new corporate income tax rate of 21%. The revaluation of our deferred income tax assets and liabilities resulted in the recognition of additional income tax expense of $3,141 to the extent revalued deferred income taxes are not believed to be recoverable in utility customer rates.

## CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our financial condition and results of operations are impacted by the methods, assumptions, and estimates used in the application of critical accounting policies. The following accounting policies are particularly important to our financial condition or results of operations, and require estimates or other judgments of matters of uncertainty. Changes in the estimates or other judgments included within these accounting policies could result in a significant change to the financial statements. We believe our most critical accounting policies include revenue recognition, the use of regulatory assets and liabilities, the valuation of our long-lived assets (which consist primarily of utility plant in service, regulatory assets, and goodwill) our accounting for post-retirement benefits, and our accounting for income taxes. We have discussed the selection and development of our critical accounting policies and estimates with the Audit Committee of the Board of Directors.

***Revenue Recognition*** — Our utility revenues recognized in an accounting period include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. The estimated usage is based on our judgment and assumptions; our actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates is determined.
In Virginia, we commence the billing of our utility customers, under new rates, upon authorization from the respective utility commission and before the final commission rate order is issued. The revenue recognized reflects an estimate based on our judgment of the final outcome of the commission's ruling. We monitor the applicable facts and circumstances regularly, and revise the estimate as required. The revenue billed and collected prior to the final ruling is subject to refund based on the commission's final ruling.

***Regulatory Assets and Liabilities*** — We defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that these costs and credits will be recognized in the rate-making process in a period different from when the costs and credits were incurred. These deferred amounts, both assets and liabilities, are then recognized in the income statement in the same period that they are reflected in our rates charged for water or wastewater service. In the event that our assessment as to the probability of the inclusion in the rate-making process is incorrect, the associated regulatory asset or liability would be adjusted to reflect the change in our assessment or change in regulatory approval.

***Valuation of Long-Lived Assets, Goodwill and Intangible Assets*** — We review our long-lived assets for impairment, including utility plant in service and investment in joint venture. We also review regulatory assets for the continued application of the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations. Our review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely. For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission. For our equity method investment in joint venture, the Company evaluates whether it has experienced a decline in the value of its investment that is other than temporary in nature. We would recognize an impairment loss if the fair value of our investment is less than the carrying amount of the investment, and the decline in value is considered other than temporary. Additionally, the Company would recognize its share of an impairment loss if the joint venture determines that the carrying amount of the joint venture's assets exceeds the sum of the joint venture's undiscounted estimated cash flows.

Our long-lived assets, which consist primarily of utility plant in service, regulatory assets and investment in joint venture, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, we determine whether it is more likely than not that the fair value of those assets is less than their carrying amount. If we determine that it is more likely than not (that is, the likelihood of more than 50 percent), we would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, we would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. This assessment requires significant management judgment and estimates that are

based on budgets, general strategic business plans, historical trends and other data and relevant factors. These estimates include significant inherent uncertainties, since they involve forecasting future events. If changes in circumstances or events occur, or estimates and assumptions that were used in this review are changed, we may be required to record an impairment charge on our long-lived assets.

We have an investment in a joint venture, for which we own 49%, and use the equity method of accounting to account for this joint venture. The joint venture operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north central Pennsylvania. In the fourth quarter of 2015, the joint venture recognized an impairment charge on its long-lived assets, of which the Company's share totaled $32,975 ($21,433 after-tax), representing our share of the noncash impairment charge. Refer to Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*, and *Investment in Joint Venture* in this Annual Report for additional information regarding the review of long-lived assets for impairment. See also *Consolidated Results – Equity (Earnings) Loss in Joint Venture* above in this Annual Report.

We test the goodwill attributable for each of our reporting units for impairment at least annually on July 31, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. If changes in circumstances or events occur, or estimates and assumptions that were used in our impairment test change, we may be required to record an impairment charge for goodwill. Refer to Note 1 – *Summary of Significant Accounting Policies – Goodwill* in this Annual Report for information regarding the results of our annual impairment test.

***Accounting for Post-Retirement Benefits*** ─ We maintain a qualified and a non-qualified defined benefit pension plan and plans that provide for post-retirement benefits other than pensions. Accounting for pension and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by our employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from our actuarial consultant, who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefits expense that we recognize.

Our discount rate assumption, which is used to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds, all of which were noncallable (or callable with make-whole provisions), and have at least $50,000 in outstanding value. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the projected benefit payments of the plans. A decrease in the discount rate would increase our post-retirement benefits expense and benefit obligation. After reviewing the hypothetical portfolio of bonds, we selected a discount rate of 3.66% for our pension plan and 3.73% for our other post-retirement benefit plans as of December 31, 2017, which represent a 47 and 52 basis-point decrease as compared to the discount rates selected at December 31, 2016, respectively. Our post-retirement benefits expense under these plans is determined using the discount rate as of the beginning of the year, which was 4.13% for our pension plan and 4.25% for our other-postretirement benefit plans for 2017, and will be 3.66% for our pension plan and 3.73% for our other post-retirement benefit plans for 2018.

Our expected return on plan assets is determined by evaluating the asset class return expectations with our advisors as well as actual, long-term, historical results of our asset returns. The Company's market-related value of plan assets is equal to the fair value of the plans' assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets, which is a component of post-retirement benefits expense. The allocation of our plans' assets impacts our

expected return on plan assets. In 2017, we changed the targeted allocation of the plans' assets to reflect 50% to 70% return seeking assets, and 30% to 50% liability hedging assets, which replaced the former targeted allocation of 25% to 75% domestic equities, 0% to 10% international equities, 25% to 50% fixed income, 0% to 5% alternative investments, and 0% to 20% cash and cash equivalents. Our post-retirement benefits expense increases as the expected return on plan assets decreases. We believe that our actual long-term asset allocations on average will approximate our targeted allocations. Our targeted allocations are driven by our investment strategy to earn a reasonable rate of return while maintaining risk at acceptable levels through the diversification of investments across and within various asset categories. For 2017, we used a 7.00% expected return on plan assets assumption which will decrease to 6.75% for 2018.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and our funding policy, during 2018 our pension contribution is expected to be $12,484. Future years' contributions will be subject to economic conditions, plan participant data and the funding rules in effect at such time as the funding calculations are performed, though we expect future changes in the amount of contributions and expense recognized to be generally included in customer rates.

***Accounting for Income Taxes*** ─ We estimate the amount of income tax payable or refundable for the current year and the deferred income tax liabilities and assets that results from estimating temporary differences resulting from the treatment of specific items, such as depreciation, for tax and financial statement reporting. Generally, these differences result in the recognition of a deferred tax asset or liability on our consolidated balance sheet and require us to make judgments regarding the probability of the ultimate tax impact of the various transactions we enter into. Based on these judgments, we may record tax reserves or adjustments to valuation allowances on deferred tax assets to reflect the expected realization of future tax benefits. Actual income taxes could vary from these estimates and changes in these estimates can increase income tax expense in the period that these changes in estimates occur.

Our determination of what qualifies as a capital cost versus a tax deduction, for qualifying utility asset improvements, as it relates to our income tax accounting method change beginning in 2012, is subject to subsequent adjustment as well as IRS audits, changes in income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures, or qualifying utility asset improvements, the expiration of a statute of limitations, or other unforeseen matters could impact the tax benefits that have already been recognized. We establish reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. We believe our tax positions comply with applicable law and that we have adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than our estimates recorded, we would then need to adjust our tax reserves which could result in additional income tax expense or benefits in the period that this information is known.

## IMPACT OF RECENT ACCOUNTING PRONOUNCEMENTS

We describe the impact of recent accounting pronouncements in Note 1 – *Summary of Significant Accounting Policies* in this Annual Report.

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Item 7A. *Quantitative and Qualitative Disclosures About Market Risk*

We are subject to market risks in the normal course of business, including changes in interest rates and equity prices. The exposure to changes in interest rates is a result of financings through the issuance of fixed rate long-term debt. Such exposure is typically related to financings between utility rate increases, since generally our rate increases include a revenue level to allow recovery of our current cost of capital. Interest rate risk is managed through the use of a combination of long-term debt, which is at fixed interest rates, and short-term debt, which is at floating interest rates. As of December 31, 2017, the debt maturities by period, in thousands of dollars, and the weighted average interest rate for long-term debt are as follows:

| | 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter | Total | Fair Value |
|---|---|---|---|---|---|---|---|---|
| Long-term debt: | | | | | | | | |
| Fixed rate | $ 113,769 | $ 144,622 | $ 44,403 | $ 36,811 | $ 25,155 | $ 1,718,367 | $ 2,083,127 | $ 2,202,785 |
| Variable rate | - | - | - | 60,000 | - | - | 60,000 | 60,000 |
| Total | $ 113,769 | $ 144,622 | $ 44,403 | $ 96,811 | $ 25,155 | $ 1,718,367 | $ 2,143,127 | $ 2,262,785 |
| Weighted average interest rate* | 4.36% | 4.09% | 5.06% | 3.40% | 4.95% | 3.66% | | |

*Weighted average interest rate of 2021 long-term debt maturity is as follows: fixed rate debt of 4.36% and variable rate debt of 2.20%.

From time to time, we make investments in marketable equity securities. As a result, we are exposed to the risk of changes in equity prices for the "available-for-sale" marketable equity securities. As of December 31, 2017, we have assets of, in thousands of dollars, $21,776 that are classified as "available-for-sale" securities to fund our deferred compensation and non-qualified pension plan liabilities. The market risk of the deferred compensation plan assets are borne by the participants in the deferred compensation plan.

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Item 8. *Financial Statements and Supplementary Data*

**Index to Consolidated Financial Statements**

## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Aqua America, Inc.:

***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheets and statements of capitalization of Aqua America Inc. and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of net income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2017, including the related notes and schedule of condensed parent company financial statements for each of the three years in the period ended December 31, 2017 appearing under Item 15 (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

***Basis for Opinions***

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

**/s/ PricewaterhouseCoopers LLP**

Philadelphia, Pennsylvania

February 28, 2018

We have served as the Company's auditor since 2000.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(In thousands of dollars, except per share amounts)

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| **Assets** | | |
| Property, plant and equipment, at cost | $ 7,003,993 | $ 6,509,117 |
| Less: accumulated depreciation | 1,604,133 | 1,507,502 |
| Net property, plant and equipment | 5,399,860 | 5,001,615 |
| | | |
| Current assets: | | |
| Cash and cash equivalents | 4,204 | 3,763 |
| Accounts receivable and unbilled revenues, net | 98,596 | 97,394 |
| Inventory, materials and supplies | 14,361 | 12,961 |
| Prepayments and other current assets | 12,542 | 12,804 |
| Assets held for sale | 1,543 | 1,728 |
| Total current assets | 131,246 | 128,650 |
| | | |
| Regulatory assets | 713,971 | 948,647 |
| Deferred charges and other assets, net | 38,485 | 30,845 |
| Investment in joint venture | 6,671 | 7,026 |
| Goodwill | 42,230 | 42,208 |
| Total assets | $ 6,332,463 | $ 6,158,991 |
| **Liabilities and Equity** | | |
| Aqua America stockholders' equity: | | |
| Common stock at $.50 par value, authorized 300,000,000 shares, issued 180,700,251 and 180,311,345 in 2017 and 2016 | $ 90,350 | $ 90,155 |
| Capital in excess of par value | 807,135 | 797,513 |
| Retained earnings | 1,132,556 | 1,032,844 |
| Treasury stock, at cost, 2,986,308 and 2,916,969 shares in 2017 and 2016 | (73,280) | (71,113) |
| Accumulated other comprehensive income | 860 | 669 |
| Total stockholders' equity | 1,957,621 | 1,850,068 |
| | | |
| Long-term debt, excluding current portion | 2,029,358 | 1,759,962 |
| Less: debt issuance costs | 21,605 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | 2,007,753 | 1,737,605 |
| Commitments and contingencies (See Note 9) | | |
| | | |
| Current liabilities: | | |
| Current portion of long-term debt | 113,769 | 150,671 |
| Loans payable | 3,650 | 6,535 |
| Accounts payable | 59,165 | 47,256 |
| Book overdraft | 21,629 | 12,616 |
| Accrued interest | 21,359 | 18,367 |
| Accrued taxes | 23,764 | 25,607 |
| Other accrued liabilities | 41,152 | 40,484 |
| Total current liabilities | 284,488 | 301,536 |
| | | |
| Deferred credits and other liabilities: | | |
| Deferred income taxes and investment tax credits | 769,073 | 1,269,253 |
| Customers' advances for construction | 93,186 | 91,843 |
| Regulatory liabilities | 541,910 | 250,635 |
| Other | 107,341 | 115,583 |
| Total deferred credits and other liabilities | 1,511,510 | 1,727,314 |
| | | |
| Contributions in aid of construction | 571,091 | 542,468 |
| Total liabilities and equity | $ 6,332,463 | $ 6,158,991 |

See accompanying notes to consolidated financial statements.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME

(In thousands of dollars)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Operating revenues | $ 809,525 | $ 819,875 | $ 814,204 |
| | | | |
| Operating expenses: | | | |
| Operations and maintenance | 287,206 | 304,897 | 309,310 |
| Depreciation | 136,302 | 130,987 | 125,290 |
| Amortization | 422 | 2,021 | 3,447 |
| Taxes other than income taxes | 56,628 | 56,385 | 55,057 |
| Total operating expenses | 480,558 | 494,290 | 493,104 |
| | | | |
| Operating income | 328,967 | 325,585 | 321,100 |
| Other expense (income): | | | |
| Interest expense, net | 88,341 | 80,594 | 76,536 |
| Allowance for funds used during construction | (15,211) | (8,815) | (6,219) |
| Gain on sale of other assets | (484) | (378) | (468) |
| Gain on extinguishment of debt | - | - | (678) |
| Equity (earnings) loss in joint venture | (331) | (976) | 35,177 |
| Income before income taxes | 256,652 | 255,160 | 216,752 |
| Provision for income taxes | 16,914 | 20,978 | 14,962 |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| | | | |
| Net income per common share: | | | |
| Basic | $ 1.35 | $ 1.32 | $ 1.14 |
| Diluted | $ 1.35 | $ 1.32 | $ 1.14 |
| | | | |
| Average common shares outstanding during the period: | | | |
| Basic | 177,612 | 177,273 | 176,788 |
| Diluted | 178,175 | 177,846 | 177,517 |
| | | | |
| Cash dividends declared per common share | $ 0.7920 | $ 0.7386 | $ 0.6860 |

See accompanying notes to consolidated financial statements.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands of dollars)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| Other comprehensive income, net of tax: | | | |
| Unrealized holding gain (loss) on investments, net of tax expense (benefit) of $102, $21, and $(53) for the years ended December 31, 2017, 2016, and 2015, respectively | 191 | 39 | (101) |
| Reclassification of gain on sale of investment to net income, net of tax expense of $30 for the twelve months ended December 31, 2016 (1) | - | (57) | - |
| Comprehensive income | $ 239,929 | $ 234,164 | $ 201,689 |

See accompanying notes to consolidated financial statements.

(1) Amount of pre-tax gain of $87 reclassified from accumulated other comprehensive income to gain on sale of other assets on the consolidated statement of net income for the year ended December 31, 2016.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CAPITALIZATION

(In thousands of dollars, except per share amounts)

| | | December 31, 2017 | December 31, 2016 |
|---|---|---|---|
| Aqua America stockholders' equity: | | | |
| Common stock, $.50 par value | | $ 90,350 | $ 90,155 |
| Capital in excess of par value | | 807,135 | 797,513 |
| Retained earnings | | 1,132,556 | 1,032,844 |
| Treasury stock, at cost | | (73,280) | (71,113) |
| Accumulated other comprehensive income | | 860 | 669 |
| Total stockholders' equity | | 1,957,621 | 1,850,068 |
| | | | |
| Long-term debt of subsidiaries (substantially collateralized by utility plant): | | | |
| Interest Rate Range | Maturity Date Range | | |
| 0.00% to 0.99% | 2023 to 2033 | 4,196 | 4,661 |
| 1.00% to 1.99% | 2019 to 2035 | 12,914 | 15,539 |
| 2.00% to 2.99% | 2019 to 2033 | 19,254 | 19,668 |
| 3.00% to 3.99% | 2019 to 2056 | 475,232 | 381,944 |
| 4.00% to 4.99% | 2020 to 2057 | 631,599 | 487,318 |
| 5.00% to 5.99% | 2019 to 2043 | 205,578 | 213,078 |
| 6.00% to 6.99% | 2018 to 2036 | 44,000 | 52,985 |
| 7.00% to 7.99% | 2022 to 2027 | 32,335 | 33,066 |
| 8.00% to 8.99% | 2021 to 2025 | 6,092 | 6,565 |
| 9.00% to 9.99% | 2018 to 2026 | 25,700 | 26,400 |
| 10.00% to 10.99% | 2018 | 6,000 | 6,000 |
| | | 1,462,900 | 1,247,224 |
| Notes payable to bank under revolving credit agreement, variable rate, due 2021 | | 60,000 | 25,000 |
| Unsecured notes payable: | | | |
| Bank notes at 1.975% and 2.48% due 2018 and 2019 | | 100,000 | 100,000 |
| Notes at 3.01% and 3.59% due 2027 and 2041 | | 245,000 | 245,000 |
| Notes ranging from 4.62% to 4.87%, due 2018 through 2024 | | 122,800 | 133,600 |
| Notes ranging from 5.20% to 5.95%, due 2018 through 2037 | | 152,427 | 159,809 |
| Total long-term debt | | 2,143,127 | 1,910,633 |
| | | | |
| Current portion of long-term debt | | 113,769 | 150,671 |
| Long-term debt, excluding current portion | | 2,029,358 | 1,759,962 |
| Less: debt issuance costs | | 21,605 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | | 2,007,753 | 1,737,605 |
| | | | |
| Total capitalization | | $ 3,965,374 | $ 3,587,673 |

See accompanying notes to consolidated financial statements.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF EQUITY

(In thousands of dollars)

| | Common stock | Capital in excess of par value | Retained earnings | Treasury stock | Accumulated Other Comprehensive Income | Noncontrolling Interest | Total |
|---|---|---|---|---|---|---|---|
| Balance at December 31, 2014 | $ 89,296 | $ 758,145 | $ 849,952 | $ (42,838) | $ 788 | $ 40 | $ 1,655,383 |
| Net income | - | - | 201,790 | - | - | - | 201,790 |
| Other comprehensive loss, net of income tax benefit of $53 | - | - | - | - | (101) | - | (101) |
| Dividends | - | - | (121,248) | - | - | - | (121,248) |
| Sale of stock (26,295 shares) | 13 | 664 | - | - | - | - | 677 |
| Repurchase of stock (981,585 shares) | - | - | - | (25,247) | - | - | (25,247) |
| Equity compensation plan (321,402 shares) | 161 | (161) | - | - | - | - | - |
| Exercise of stock options (424,709 shares) | 212 | 7,328 | - | - | - | - | 7,540 |
| Stock-based compensation | - | 5,860 | (433) | - | - | - | 5,427 |
| Employee stock plan tax benefits | - | 2,602 | - | - | - | - | 2,602 |
| Other | - | (853) | - | - | - | (40) | (893) |
| Balance at December 31, 2015 | 89,682 | 773,585 | 930,061 | (68,085) | 687 | - | 1,725,930 |
| Net income | - | - | 234,182 | - | - | - | 234,182 |
| Other comprehensive loss, net of income tax benefit of $9 | - | - | - | - | (18) | - | (18) |
| Dividends | - | - | (130,923) | - | - | - | (130,923) |
| Stock issued for acquisition (439,943 shares) | 220 | 12,625 | - | - | - | - | 12,845 |
| Sale of stock (47,478 shares) | 24 | 1,364 | - | | - | - | 1,388 |
| Repurchase of stock (97,400 shares) | - | - | - | (3,028) | - | - | (3,028) |
| Equity compensation plan (231,502 shares) | 115 | (115) | - | - | - | - | - |
| Exercise of stock options (228,762 shares) | 114 | 4,146 | - | - | - | - | 4,260 |
| Stock-based compensation | - | 5,390 | (476) | - | - | - | 4,914 |
| Employee stock plan tax benefits | - | 1,329 | - | - | - | - | 1,329 |
| Other | - | (811) | - | - | - | - | (811) |
| Balance at December 31, 2016 | 90,155 | 797,513 | 1,032,844 | (71,113) | 669 | - | 1,850,068 |
| Net income | - | - | 239,738 | - | - | - | 239,738 |
| Other comprehensive income, net of income tax of $102 | - | - | - | - | 191 | - | 191 |
| Dividends | - | - | (140,660) | - | - | - | (140,660) |
| Sale of stock (45,121 shares) | 23 | 1,430 | - | - | - | - | 1,453 |
| Repurchase of stock (69,339 shares) | - | - | - | (2,167) | - | - | (2,167) |
| Equity compensation plan (169,258 shares) | 85 | (85) | - | - | - | - | - |
| Exercise of stock options (174,527 shares) | 87 | 2,786 | - | - | - | - | 2,873 |
| Stock-based compensation | - | 6,342 | (348) | - | - | - | 5,994 |
| Cumulative effect of change in accounting principle - windfall tax benefit | - | - | 982 | - | - | - | 982 |
| Other | - | (851) | - | - | - | - | (851) |
| Balance at December 31, 2017 | $ 90,350 | $ 807,135 | $ 1,132,556 | $ (73,280) | $ 860 | $ - | $ 1,957,621 |

See accompanying notes to consolidated financial statements.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands of dollars)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Cash flows from operating activities: | | | |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| Adjustments to reconcile net income to net cash flows from operating activities: | | | |
| Depreciation and amortization | 136,724 | 133,008 | 128,737 |
| Deferred income taxes | 13,780 | 17,250 | 16,506 |
| Provision for doubtful accounts | 4,986 | 5,505 | 5,765 |
| Stock-based compensation | 6,342 | 5,390 | 5,860 |
| (Gain) loss on sale of utility system and market-based business unit | 774 | (744) | - |
| Gain on sale of other assets | (484) | (378) | (468) |
| Gain on extinguishment of debt | - | - | (678) |
| Equity (earnings) loss in joint venture | (331) | (976) | 35,177 |
| Net change in receivables, inventory and prepayments | (6,458) | (3,974) | (6,520) |
| Net change in payables, accrued interest, accrued taxes and other accrued liabilities | (763) | 4,756 | (3,469) |
| Pension and other postretirement benefits contributions | (16,240) | (9,505) | (16,184) |
| Other | 3,250 | 11,649 | 4,278 |
| Net cash flows from operating activities | 381,318 | 396,163 | 370,794 |
| Cash flows from investing activities: | | | |
| Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $3,578, $2,220, and $1,598 | (478,089) | (382,996) | (364,689) |
| Acquisitions of utility systems and other, net | (5,860) | (9,423) | (28,989) |
| Release of funds previously restricted for construction activity | - | - | 47 |
| Net proceeds from the sale of utility systems and other assets | 1,342 | 7,746 | 648 |
| Other | 2,223 | 1,464 | (1,079) |
| Net cash flows used in investing activities | (480,384) | (383,209) | (394,062) |
| Cash flows from financing activities: | | | |
| Customers' advances and contributions in aid of construction | 7,312 | 7,263 | 5,904 |
| Repayments of customers' advances | (6,536) | (3,763) | (3,977) |
| Net repayments of short-term debt | (2,885) | (10,186) | (1,677) |
| Proceeds from long-term debt | 591,024 | 503,586 | 560,544 |
| Repayments of long-term debt | (359,068) | (373,087) | (400,407) |
| Change in cash overdraft position | 9,012 | (8,076) | (739) |
| Proceeds from issuing common stock | 1,453 | 1,388 | 677 |
| Proceeds from exercised stock options | 2,873 | 4,260 | 7,540 |
| Share-based compensation windfall tax benefits | - | 1,332 | 1,842 |
| Repurchase of common stock | (2,167) | (3,028) | (25,247) |
| Dividends paid on common stock | (140,660) | (130,923) | (121,248) |
| Other | (851) | (1,186) | (853) |
| Net cash flows (used in) from financing activities | 99,507 | (12,420) | 22,359 |
| Net increase (decrease) in cash and cash equivalents | 441 | 534 | (909) |
| Cash and cash equivalents at beginning of year | 3,763 | 3,229 | 4,138 |
| Cash and cash equivalents at end of year | $ 4,204 | $ 3,763 | $ 3,229 |
| Cash paid during the year for: | | | |
| Interest, net of amounts capitalized | $ 81,771 | $ 72,662 | $ 74,724 |
| Income taxes | 3,177 | 2,739 | 6,902 |
| Non-cash investing activities: | | | |
| Property, plant and equipment additions purchased at the period end, but not yet paid | $ 45,385 | $ 35,145 | $ 25,612 |
| Non-cash customer advances for construction | 39,220 | 26,234 | 27,992 |

See accompanying notes to consolidated financial statements.

See Note 2 – *Acquisitions,* Note 10 – *Long-term Debt and Loans Payable*, and Note 14 – *Employee Stock and Incentive Plan* for a description of non-cash activities.

**Note 1 – *Summary of Significant Accounting Policies***

***Nature of Operations*** **─** Aqua America, Inc. ("Aqua America," the "Company," "we," "our", or "us") is the holding company for regulated utilities providing water or wastewater services concentrated in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary is Aqua Pennsylvania, Inc., which accounted for approximately 52% of our operating revenues and approximately 74% of our net income for 2017. As of December 31, 2017, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of people we serve. Aqua Pennsylvania's service territory is located in the suburban areas north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. The Company's other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater services through two operating and maintenance contracts with municipal authorities close to our utility companies' service territory; and offers, through a third party, water and wastewater line repair service and protection solutions to households. In 2017, we completed the sale of business units that are reported within the Company's market-based subsidiary, Aqua Resources, which installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, and repaired and performed maintenance on water and wastewater systems. Additionally, during 2016 we completed the sale of business units within Aqua Resources, which were reported as assets held for sale in the Company's consolidated balance sheets, which provided liquid waste hauling and disposal services, and inspection, and cleaning and repair of storm and sanitary wastewater lines.

The Company has identified ten operating segments and has one reportable segment named the Regulated segment. The reportable segment is comprised of eight operating segments for our water and wastewater regulated utility companies which are organized by the states where we provide these services. These operating segments are aggregated into one reportable segment since each of the Company's operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. In addition, Aqua Resources and Aqua Infrastructure are not quantitatively significant to be reportable and are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated segment and intersegment eliminations.

***Regulation*** **─** Most of the operating companies that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. The respective utility commissions have jurisdiction with respect to rates, service, accounting procedures, issuance of securities, acquisitions and other matters. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. Regulated public utilities follow the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in rates.

***Use of Estimates in Preparation of Consolidated Financial Statements*** **─** The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

***Basis of Presentation –*** The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated. Certain prior period amounts have been reclassified to conform to the current period presentation in the consolidated statements of cash flows:

- pension and other postretirement benefit contributions; and
- as a result of the adoption in 2017 of the FASB's accounting guidance on the classification of certain cash receipts and cash payments, the presentation of debt extinguishment costs (refer to Note 1 – *Summary of Significant Accounting Policies, Recent Accounting Pronouncements).*

Additionally, certain prior period amounts have been reclassified to conform to the current period presentation:

- in the consolidated balance sheets for the presentation of book overdraft, and
- in Note 17 – *Segment Information* of total assets for Other and Eliminations for the reclassification of regulatory assets previously reflected within Other and Eliminations that are now presented with the Regulated segment.

***Recognition of Revenues —*** Revenues in our Regulated segment principally include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the latest billing to the end of the accounting period. In addition, the Company's market-based subsidiary Aqua Resources recognizes revenues when services are performed and Aqua Infrastructure recognizes revenues when services are performed. The Company's market-based subsidiaries recognized revenues of $4,798 in 2017, $20,091 in 2016, and $34,909 in 2015.

***Property, Plant and Equipment and Depreciation —*** Property, plant and equipment consist primarily of utility plant. The cost of additions includes contracted cost, direct labor and fringe benefits, materials, overheads, and for additions meeting certain criteria, allowance for funds used during construction. Water systems acquired are typically recorded at estimated original cost of utility plant when first devoted to utility service and the applicable depreciation is recorded to accumulated depreciation. The difference between the estimated original cost, less applicable accumulated depreciation, and the purchase price is recorded as goodwill, or as an acquisition adjustment within utility plant as permitted by the applicable regulatory jurisdiction. At December 31, 2017, utility plant includes a net credit acquisition adjustment of $24,550, which is generally being amortized from 2 to 59 years. Amortization of the acquisition adjustments totaled $2,774 in 2017, $2,223 in 2016, and $2,556 in 2015.

Utility expenditures for maintenance and repairs, including major maintenance projects and minor renewals and betterments, are charged to operating expenses when incurred in accordance with the system of accounts prescribed by the utility commissions of the states in which the company operates. The cost of new units of property and betterments are capitalized. Utility expenditures for water main cleaning and relining of pipes are deferred and recorded in net property, plant and equipment in accordance with the FASB's accounting guidance for regulated operations. As of December 31, 2017, $16,430 of these costs have been incurred since the last respective rate proceeding and the Company expects to recover these costs in future rates.

The cost of software upgrades and enhancements are capitalized if they result in added functionality, which enables the software to perform tasks it was previously incapable of performing. Information technology costs associated with major system installations, conversions and improvements, such as software training, data conversion and business process reengineering costs, are deferred as a regulatory asset if the Company expects to recover these costs in future rates. If these costs are not deferred, then these costs are charged to operating expenses when incurred. As of December 31, 2017, $34,775 of these costs have been deferred since the last respective rate proceeding as a regulatory asset, and the deferral is reported as a component of net property, plant and equipment.

When units of utility property are replaced, retired or abandoned, the recorded value thereof is credited to the asset account and such value, together with the net cost of removal, is charged to accumulated depreciation. To the extent the Company anticipates recovery of the cost of removal or other retirement costs through rates after the retirement costs are incurred, a regulatory asset is recorded as those costs are incurred. In some cases, the Company recovers retirement costs through rates during the life of the associated asset and before the costs are incurred. These amounts, which are not yet utilized, result in a regulatory liability being reported based on the amounts previously recovered through customer rates.

The straight-line remaining life method is used to compute depreciation on utility plant. Generally, the straight-line method is used with respect to transportation and mechanical equipment, office equipment and laboratory equipment.

Long-lived assets of the Company, which consist primarily of utility plant in service, regulatory assets, and investment in joint venture, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a disallowance of utility plant in service or regulatory assets by the respective utility commission, a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, the Company determines whether it is more likely than not that the fair value of those assets is less than their carrying amount. If the Company determines that it is more likely than not (that is, the likelihood of more than 50 percent), the Company would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, the Company would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. There has been no change in circumstances or events that have occurred that require adjustments to the carrying values of the Company's long-lived assets, except for an impairment charge recognized by the joint venture on its long-lived assets in 2015.

***Allowance for Funds Used During Construction —*** The allowance for funds used during construction ("AFUDC") represents the capitalized cost of funds used to finance the construction of utility plant. In general, AFUDC is applied to construction projects requiring more than one month to complete. No AFUDC is applied to projects funded by customer advances for construction, contributions in aid of construction, or applicable state-revolving fund loans. AFUDC includes the net cost of borrowed funds and a rate of return on other funds when used, and is recovered through water rates as the utility plant is depreciated. The amount of AFUDC related to equity funds in 2017 was $11,633, 2016 was $6,561, and 2015 was $4,621. No interest was capitalized by our market-based businesses.

***Cash and Cash Equivalents —*** The Company considers all highly liquid investments with an original maturity of three months or less, which are not restricted for construction activity, to be cash equivalents.

The Company had a book overdraft, which represents transactions that have not cleared the bank accounts at the end of the period, for specific disbursement cash accounts of $21,629 and $12,616 at December 31, 2017 and 2016, respectively. The Company transfers cash on an as-needed basis to fund these items as they clear the bank in subsequent periods. The balance of the book overdraft is reported as book overdraft and the change in the book overdraft balance is reported as cash flows from financing activities, due to our ability to fund the overdraft with the Company's credit facility.

***Funds Restricted for Construction Activity —*** The proceeds received from specific financings for construction and capital improvement of utility facilities are held in escrow until the designated expenditures are incurred. These amounts are reported as funds restricted for construction activity and are expected to be released over time as the capital projects are funded. As of December 31, 2017 and 2016, the Company did not have any funds restricted for construction activity.

***Accounts Receivable* —** Accounts receivable are recorded at the invoiced amounts, which consists of billed and unbilled revenues. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in our existing accounts receivable, and is determined based on historical write-off experience and the aging of account balances. The Company reviews the allowance for doubtful accounts quarterly. Account balances are written off against the allowance when it is probable the receivable will not be recovered. When utility customers request extended payment terms, credit is extended based on regulatory guidelines, and collateral is not required.

***Inventories, Materials and Supplies* —** Inventories are stated at cost. Cost is determined using the first-in, first-out method.

***Regulatory Assets, Deferred Charges and Other Assets* —** Deferred charges and other assets consist primarily of assets held to compensate employees in the future who participate in the Company's deferred compensation plan and other costs. Other costs, for which the Company has received or expects to receive prospective rate recovery, are deferred as a regulatory asset and amortized over the period of rate recovery in accordance with the FASB's accounting guidance for regulated operations. See Note – 6 *Regulatory Assets and Liabilities* for further information regarding the Company's regulatory assets.

Marketable equity securities are carried on the balance sheet at fair market value, and changes in fair value are included in other comprehensive income.

***Investment in Joint Venture* –** The Company uses the equity method of accounting to account for our 49% investment in a joint venture with a firm in the natural gas industry for the construction and operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania, which commenced operations in 2012. Our initial investment is carried at cost. Subsequently, the carrying amount of our investment is adjusted to reflect capital contributions or distributions, and our equity in earnings or losses since the commencement of the system's operations, as well as a decline in the fair value of our investment. Our share of equity earnings or losses in the joint venture is reported in the consolidated statements of net income as equity (earnings) losses in joint venture. During 2017 and 2016 we received distributions of $686 and $1,666, respectively. For our equity method investment in joint venture, the Company evaluates whether it has experienced a decline in the value of its investment that is other than temporary in nature. We would recognize an impairment loss if the fair value of our investment is less than the carrying amount of the investment, and the decline in value is considered other than temporary. Additionally, the Company would recognize its share of an impairment loss if the joint venture determines that the carrying amount of the joint venture's assets exceeds the sum of the joint venture's undiscounted estimated cash flows.

During 2015, the joint venture experienced the following events:

- a decline in natural gas prices, in 2015,
- a distinguishable reduction in the volume of water sales by the joint venture which led to a lowered forecast in 2015 on future water sales volumes by the joint venture, and
- changes in the natural gas industry and market conditions.

At the time, these market conditions were largely associated with natural gas prices, which sharply declined in 2015 and this downturn no longer appeared temporary and instead was expected to be a long-term condition. It was then determined that the carrying amount of the joint venture's long-lived assets exceeded the sum of the joint venture's undiscounted estimated cash flows, which resulted in the recognition of a noncash impairment charge of $32,975 ($21,433 after-tax) in 2015, representing the Company's share of the impairment charge. The impairment charge, on a pre-tax basis, is reported as equity loss in joint venture on the Company's consolidated statements of income. The amount of the impairment charge recognized by the joint venture is equal to the difference between the carrying value and the fair value of the long-lived assets. Fair value is estimated to be the present value of the future net cash flows associated with the assets, discounted using a rate commensurate with the risk and remaining life of the assets.

(In thousands of dollars, except per share amounts)

***Goodwill —*** Goodwill represents the excess cost over the fair value of net tangible and identifiable intangible assets acquired through acquisitions. Goodwill is not amortized but is tested for impairment annually, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The Company tested the goodwill attributable for each of our reporting units for impairment as of July 31, 2017, and concluded that the estimated fair value of each reporting unit, which has goodwill recorded, exceeded the reporting unit's carrying amount, indicating that none of the Company's goodwill was impaired. The following table summarizes the changes in the Company's goodwill:

| | Regulated Segment | Other | Consolidated |
|---|---|---|---|
| Balance at December 31, 2015 | $ 27,246 | $ 6,620 | $ 33,866 |
| Goodwill acquired during year | 10,378 | - | 10,378 |
| Reclassifications to utility plant acquisition adjustment | (98) | - | (98) |
| Disposition | (159) | (1,232) | (1,391) |
| Classified as assets held for sale | | (547) | (547) |
| Balance at December 31, 2016 | 37,367 | 4,841 | 42,208 |
| Goodwill acquired during year | 72 | - | 72 |
| Reclassifications to utility plant acquisition adjustment | (50) | - | (50) |
| Balance at December 31, 2017 | $ 37,389 | $ 4,841 | $ 42,230 |

The reclassification of goodwill to utility plant acquisition adjustment results from a mechanism approved by the applicable utility commission. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

The goodwill allocated to a disposition or classified as assets held for sale results from the allocation of goodwill for market-based business units based on their relative fair value as compared to Aqua Resource's fair value.

***Income Taxes —*** The Company accounts for some income and expense items in different time periods for financial and tax reporting purposes. Deferred income taxes are provided on specific temporary differences between the tax basis of the assets and liabilities, and the amounts at which they are carried in the consolidated financial statements. The income tax effect of temporary differences not currently recovered in rates is recorded as deferred taxes with an offsetting regulatory asset or liability. These deferred income taxes are based on the enacted tax rates expected to be in effect when such temporary differences are projected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amount more likely than not to be realized. Investment tax credits are deferred and amortized over the estimated useful lives of the related properties. Judgment is required in evaluating the Company's Federal and state tax positions. Despite management's belief that the Company's tax return positions are fully supportable, the Company establishes reserves when it believes that its tax positions are likely to be challenged and it may not fully prevail in these challenges. The Company's provision for income taxes includes interest, penalties and reserves for uncertain tax positions.

In 2012, the Company changed its tax method of accounting for qualifying utility asset improvement costs in Aqua Pennsylvania effective with the tax year ended December 31, 2012 and for prior tax years. The tax accounting method was changed to permit the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. This change was implemented in response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania, which provides for a reduction in current income tax expense as a result of the recognition of income tax benefits for qualifying utility asset improvements. This change results in a significant reduction in the effective income tax rate, a reduction in current income tax expense, and reduces the amount of taxes currently payable. For qualifying capital expenditures made prior to 2012, the resulting tax benefits have been deferred as of December 31, 2012 and, in accordance with the rate order, a ten year amortization of the income tax benefits, which reduces future income tax expense, commenced in 2013.

***Customers' Advances for Construction and Contributions in Aid of Construction*** – Water mains, other utility property or, in some instances, cash advances to reimburse the Company for its costs to construct water mains or other utility property, are contributed to the Company by customers, real estate developers and builders in order to extend utility service to their properties. The value of these contributions is recorded as customers' advances for construction. Over time, the amount of non-cash contributed property will vary based on the timing of the contribution of the non-cash property and the volume of non-cash contributed property received in connection with development in our service territories. The Company makes refunds on these advances over a specific period of time based on operating revenues related to the property, or as new customers are connected to and take service from the applicable water main. After all refunds are made, any remaining balance is transferred to contributions in aid of construction. Contributions in aid of construction include direct non-refundable contributions and the portion of customers' advances for construction that become non-refundable.

Based on regulatory conventions in states where the Company operates, generally our subsidiaries depreciate contributed property and amortize contributions in aid of construction at the composite rate of the related property. Contributions in aid of construction and customers' advances for construction are deducted from the Company's rate base for rate-making purposes, and therefore, no return is earned on contributed property.

***Stock-Based Compensation*** – The Company records compensation expense in the financial statements for stock-based awards based on the grant date fair value of those awards. Stock-based compensation expense includes an estimate for pre-vesting forfeitures and is recognized over the requisite service periods of the awards on either a straight-line basis, or the graded vesting method, which is generally commensurate with the vesting term.

***Fair Value Measurements*** – The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;
- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or
- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. Additionally, assets that are measured at fair value using the net asset value ("NAV") per share practical expedient are not classified in the fair value hierarchy. There have been no changes in the valuation techniques used to measure fair value or asset or liability transfers between the levels of the fair value hierarchy for the years ended December 31, 2017 and 2016.

***Recent Accounting Pronouncements*** **—** In March 2017, the FASB issued updated accounting guidance on the presentation of net periodic pension and postretirement benefit cost (net benefit cost). Historically, net benefit cost is reported as an employee cost within operating income, net of amounts capitalized. The guidance requires the bifurcation of net benefit cost. The service cost component will be presented with other employee compensation costs in operating income and the other components of net benefit cost will be reported separately outside of operating income, and will not be eligible for capitalization. The guidance is effective for annual reporting periods beginning after December 15, 2017, and interim periods within that reporting period, and is to be applied retrospectively for the presentation of the service cost component and the other components of net benefit cost, and on a prospective basis for the capitalization of only the service cost component of net benefit cost. On January 1, 2018, the Company adopted the updated guidance, which did not have a material impact on its results of operations or financial position.

I n January 2017, the FASB issued updated accounting guidance that eliminates step 2 of the current goodwill impairment test, which requires a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment loss will instead be measured at the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance will be effective for annual reporting periods beginning after December 15, 2019, and interim periods within that reporting period, with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. The Company elected to early adopt the provisions of the updated guidance, for its annual impairment valuation performed in the third quarter of 2017, and the provisions of the updated guidance did not have an impact on its results of operations or financial position.

In August 2016, the FASB issued updated accounting guidance on the classification of certain cash receipts and cash payments in the statement of cash flows, which is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. This guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is permitted. The Company has elected to early adopt the provisions of the updated guidance, which resulted in the reclassification of $375 debt extinguishment costs for 2016, from cash flows from operating to financing activities to conform to the new classification.

In March 2016, the FASB issued updated accounting guidance on simplifying the accounting for share-based payments, which includes several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The updated guidance was effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years, with early adoption available. On January 1, 2017, the Company adopted the updated guidance, prospectively, and recognized a previously unrecognized windfall tax benefit for stock-based compensation of $982, associated with the Company's 2012 Federal net operating loss, which was recorded as an adjustment to deferred income taxes and retained earnings (refer to the presentation of "cumulative effect of change in accounting principle – windfall tax benefit" on the Company's Consolidated Statement of Equity). Additionally, income tax benefits in excess of compensation costs or tax deficiencies for share-based compensation are now recorded to our income tax provision, instead of historically to stockholder's equity, which impacts our effective tax rate. Lastly, all tax-related cash flows resulting from share-based payments are reported prospectively as operating activities on the statement of cash flows, a change from the historical requirement to present tax benefits as an inflow from financing activities and an outflow from operating activities.

In February 2016, the FASB issued updated accounting guidance on accounting for leases, which requires lessees to establish a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The updated accounting guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption available. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption. Refer to Note 9 – *Commitments and Contingencies* for further information on the Company's leases.

In January 2016, the FASB issued updated accounting guidance on the recognition and measurement of financial assets and financial liabilities, which amends certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including the requirement to measure certain equity investments at fair value with changes in fair value recognized in net income. The updated guidance is effective for interim and annual periods beginning after December 31, 2017. On January 1, 2018, the Company adopted the updated guidance, which did not have a material impact on its results of operations or financial position.

In May 2014, the FASB issued updated accounting guidance on recognizing revenue from contracts with customers, which outlines a single comprehensive model that an entity will apply to determine the measurement of revenue and timing of recognition. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The updated guidance also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. The updated guidance is effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the updated guidance in each prior reporting period, or (ii) a modified retrospective approach with the cumulative effect of initially adopting the updated guidance recognized through retained earnings at the date of adoption. In 2016, the Company performed an evaluation of the requirements of the updated guidance and believes that the impact of adoption will not result in a material change in the Company's measurement of revenue. In 2017, the American Institute of Certified Public Accountants ("AICPA") power and utility entities revenue recognition task force determined that contributions in aid of construction are not in the scope of the new standard, and submitted its recommendation to the AICPA's revenue recognition working group for approval. The Company implemented the updated guidance using the modified retrospective approach on January 1, 2018, which did not result in a change in the Company's measurement of revenue, and reached the following conclusions:

- The Company's tariff sale contracts, including those with lower credit quality customers, are generally deemed to be probable of collection, and thus the timing of revenue recognition will continue to be concurrent with the delivery of water and wastewater services, consistent with our current practice.
- Contributions in aid of construction are outside of the scope of the standard, and will continue to be accounted for as a noncurrent liability.

**Note 2 – *Acquisitions***

As part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of six municipalities for a total combined purchase price in cash of $150,700. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur by the end of 2018, which is subject to the timing of the regulatory approval process. These acquisitions are expected to add approximately 16,325 customers in two of the states in which the Company operates.

Pursuant to the Company's growth-through-acquisition strategy, the Company completed the following acquisitions:

In 2017, the Company completed four acquisitions of water and wastewater utility systems in two states adding 1,003 customers. The total purchase price of these utility systems consisted of $5,860 in cash, which resulted in $72 of goodwill being recorded. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2017 are $461. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

In January 2016, the Company acquired Superior Water Company, Inc., which provides public water service to 4,108 customers in portions of Berks, Chester, and Montgomery counties in Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $25,167, contributions in aid of construction of $16,565, and goodwill of $8,622. Additionally, during 2016, the Company completed 18 acquisitions of water and wastewater utility systems in various states adding 2,469 customers. The total purchase price of these utility systems consisted of $5,518 in cash. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired were $4,896 in 2017 and $3,809 in 2016. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

In April 2015, the Company acquired the water and wastewater utility system assets of North Maine Utilities, located in the Village of Glenview, Illinois serving approximately 7,400 customers. The total purchase price consisted of $23,079 in cash. The purchase price allocation for this acquisition consists primarily of acquired property, plant and equipment. Additionally, in 2015, the Company completed 14 acquisitions of water and wastewater utility systems in various states adding 3,170 customers. The total purchase price of these utility systems consisted of $5,210 in cash. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired were $10,868 in 2017, $10,708 in 2016, and $6,662 in 2015. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

**Note 3 –*Dispositions***

The following dispositions have not been presented as discontinued operations in the Company's consolidated financial statements as they do not qualify as discontinued operations, since their disposal does not represent a strategic shift that has a major effect on our operations or financial results. The gains or loss disclosed below are reported in the consolidated statements of net income as a component of operations and maintenance expense. These business units were reported within the Company's market-based subsidiary, Aqua Resources, and were included in "Other" in the Company's segment information.

*Dispositions Completed in 2017 and 2016*

In the second quarter of 2016, the Company decided to market for sale two business units that are reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, for which the sale was completed in January 2017. The other business unit repaired and performed maintenance on water and wastewater systems, for which the sale was completed in June 2017. These business units were reported as assets held for sale in the Company's December 31, 2016 consolidated balance sheet included in this Annual Report. These transactions resulted in total proceeds of $867 and the recognition of a net loss of $324.

In the third quarter of 2016, the Company marketed for sale a business unit which inspects, cleans and repairs storm and sanitary wastewater lines. In November 2016, this business unit was sold for $1,059 in cash and resulted in a loss on sale of $1,081. Further, in December 2015, the Company decided to sell a business unit which provides liquid waste hauling and disposal services. During the second quarter of 2016, this business unit was sold for $3,400 in cash and resulted in a gain on sale of $537.

(In thousands of dollars, except per share amounts)

*Dispositions Reported as Assets Held for Sale at December 31, 2017*

In the first quarter of 2017, the Company decided to market for sale a water system that serves approximately 265 customers. This water system is reported as assets held for sale in the Company's consolidated balance sheet.

### Note 4 – *Property, Plant and Equipment*

| | December 31, 2017 | December 31, 2016 | Approximate Range of Useful Lives | Weighted Average Useful Life |
|---|---|---|---|---|
| Utility plant and equipment: | | | | |
| Mains and accessories | $ 3,134,900 | $ 2,898,560 | 30 - 93 years | 79 years |
| Services, hydrants, treatment plants and reservoirs | 1,753,433 | 1,621,972 | 5 - 85 years | 51 years |
| Operations structures and water tanks | 296,736 | 283,635 | 14 - 85 years | 47 years |
| Miscellaneous pumping and purification equipment | 768,962 | 733,074 | 12 - 90 years | 41 years |
| Meters, data processing, transportation and operating equipment | 768,655 | 733,837 | 4 - 63 years | 25 years |
| Land and other non-depreciable assets | 103,357 | 98,529 | - | - |
| Utility plant and equipment | 6,826,043 | 6,369,607 | | |
| Utility construction work in progress | 201,902 | 163,565 | - | - |
| Net utility plant acquisition adjustment | (24,550) | (25,683) | 2 - 59 years | 31 years |
| Non-utility plant and equipment | 598 | 1,628 | 3 - 25 years | 13 years |
| Total property, plant and equipment | $ 7,003,993 | $ 6,509,117 | | |

### Note 5 – *Accounts Receivable*

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Billed utility revenue | $ 65,695 | $ 63,518 |
| Unbilled revenue | 35,042 | 34,635 |
| Other | 4,930 | 6,336 |
| | 105,667 | 104,489 |
| Less allowance for doubtful accounts | 7,071 | 7,095 |
| Net accounts receivable | $ 98,596 | $ 97,394 |

The Company's utility customers are located principally in the following states: 47% in Pennsylvania, 15% in Ohio, 10% in North Carolina, 8% in Texas, and 7% in Illinois. No single customer accounted for more than one percent of the Company's regulated operating revenues during the years ended December 31, 2017, 2016, and 2015. The following table summarizes the changes in the Company's allowance for doubtful accounts:

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Balance at January 1, | $ 7,095 | $ 5,873 | $ 5,365 |
| Amounts charged to expense | 4,986 | 5,500 | 5,762 |
| Accounts written off | (6,135) | (5,410) | (6,513) |
| Recoveries of accounts written off | 1,125 | 1,132 | 1,259 |
| Balance at December 31, | $ 7,071 | $ 7,095 | $ 5,873 |

(In thousands of dollars, except per share amounts)

**Note 6 – *Regulatory Assets and Liabilities***

The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. Except for income taxes, regulatory assets and regulatory liabilities are excluded from the Company's rate base and do not earn a return. The components of regulatory assets and regulatory liabilities are as follows:

| | December 31, 2017 | | December 31, 2016 | |
|---|---|---|---|---|
| | Regulatory Assets | Regulatory Liabilities | Regulatory Assets | Regulatory Liabilities |
| Income taxes | $ 584,067 | $ 438,750 | $ 814,418 | $ 157,266 |
| Utility plant retirement costs | 5,367 | 35,249 | 4,986 | 31,288 |
| Post-retirement benefits | 112,532 | 65,964 | 119,519 | 59,882 |
| Accrued vacation | 2,198 | - | 1,984 | - |
| Water tank painting | 3,259 | 1,855 | 2,111 | 2,143 |
| Fair value adjustment of long-term debt assumed in acquisition | 2,901 | - | 3,268 | - |
| Rate case filing expenses and other | 3,647 | 92 | 2,361 | 56 |
| | $ 713,971 | $ 541,910 | $ 948,647 | $ 250,635 |

Items giving rise to deferred state income taxes, as well as a portion of deferred Federal income taxes related to specific differences between tax and book depreciation expense, are recognized in the rate setting process on a cash basis or as a reduction in current income tax expense and will be recovered as they reverse. Amounts include differences that arise between specific utility asset improvement costs capitalized for book and deducted as an expense for tax purposes. Additionally, the recording of AFUDC for equity funds results in the recognition of a regulatory asset for income taxes, which represents amounts due related to the revenue requirement.

A portion of the regulatory liability for income taxes is related to Aqua Pennsylvania's income tax accounting change for the tax benefits realized on the Company's 2012 tax return, which have not yet reduced current income tax expense due to the ten year amortization period which began in 2013. This amortization was stipulated in a June 2012 rate order issued to Aqua Pennsylvania and is subject to specific parameters being met each year. Beginning in 2013, the Company amortized $38,000, annually, of its deferred income tax benefits, which reduced current income tax expense and increased the Company's net income by $16,734.

On December 22, 2017, President Trump signed the TCJA into law, which reduced the Federal corporate income tax rate from 35% to 21%. Reductions in accumulated deferred income tax balances due to the reduction in the corporate income tax rate to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes relating to certain accelerated tax depreciation benefits are to be passed back to customers. Potential refunds of other deferred taxes will be determined by our state regulators. The December 31, 2017 consolidated balance sheet reflects the impact of the TCJA on our regulatory assets and liabilities, and reduces our regulatory assets by $357,262 and increases our regulatory liabilities by $303,320. These adjustments had no impact on our 2017 cash flows.

The regulatory asset for utility plant retirement costs, including cost of removal, represents costs already incurred that are expected to be recovered in future rates over a five year recovery period. The regulatory liability for utility plant retirement costs represents amounts recovered through rates during the life of the associated asset and before the costs are incurred.

The regulatory asset for accrued vacation represents costs that would otherwise be charged to operations and maintenance expense for vacation that is earned by employees, which is recovered as a cost of service.

(In thousands of dollars, except per share amounts)

The regulatory asset for post-retirement benefits, which includes pension and other post-retirement benefits, primarily reflects a regulatory asset that has been recorded for the costs that would otherwise be charged to stockholders' equity for the underfunded status of the Company's pension and other post-retirement benefit plans. The Company also has a regulatory asset related to post-retirement benefits costs that represent costs already incurred which are now being recovered in rates over 10 years. The regulatory liability for post-retirement benefits represents costs recovered in rates in excess of post-retirement benefits expense.

Expenses associated with water tank painting are deferred and amortized over a period of time as approved in the regulatory process. Water tank painting costs are generally being amortized over a period ranging from 1 to 15 years. The regulatory liability for water tank painting costs represents amounts recovered through rates and before the costs are incurred.

The Company recorded a fair value adjustment for fixed rate, long-term debt assumed in acquisitions that matures in various years ranging from 2022 to 2029. The regulatory asset or liability results from the rate setting process continuing to recognize the historical interest cost of the assumed debt.

The regulatory asset related to rate case filing expenses and other represents the costs associated with filing for rate increases that are deferred and amortized over periods that generally range from one to five years, and costs incurred by the Company for which it has received or expects to receive rate recovery.

The regulatory asset related to the costs incurred for information technology software projects and water main cleaning and relining projects are described in Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*.

**Note 7 – *Income Taxes***

The provision for income taxes consists of:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Current: | | | |
| Federal | $ 1,297 | $ 2,046 | $ 2,624 |
| State | 1,837 | 1,682 | (4,168) |
| | 3,134 | 3,728 | (1,544) |
| Deferred: | | | |
| Federal | 21,376 | 21,489 | 12,649 |
| State | (7,596) | (4,239) | 3,857 |
| | 13,780 | 17,250 | 16,506 |
| Total tax expense | $ 16,914 | $ 20,978 | $ 14,962 |

The statutory Federal tax rate is 35% and for states with a corporate net income tax, the state corporate net income tax rates range from 3% to 9.99% for all years presented.

(In thousands of dollars, except per share amounts)

The reasons for the differences between amounts computed by applying the statutory Federal corporate income tax rate to income before income tax expense are as follows:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Computed Federal tax expense at statutory rate | $ 89,828 | $ 89,306 | $ 75,863 |
| Decrease in Federal tax expense related to an income tax accounting change for qualifying utility asset improvement costs | (69,325) | (62,831) | (59,488) |
| State income taxes, net of Federal tax benefit | (3,743) | (1,662) | (202) |
| Increase in tax expense for depreciation expense to be recovered in future rates | 199 | 199 | 199 |
| Stock-based compensation | (595) | (227) | (174) |
| Deduction for Aqua America common dividends paid under employee benefit plan | (455) | (455) | (456) |
| Amortization of deferred investment tax credits | (376) | (405) | (421) |
| Federal tax rate change | 3,141 | - | - |
| Other, net | (1,760) | (2,947) | (359) |
| Actual income tax expense | $ 16,914 | $ 20,978 | $ 14,962 |

In 2012, the Company changed its tax method of accounting for qualifying utility system repairs in Aqua Pennsylvania effective with the tax year ended December 31, 2012 and for prior tax years. The tax accounting method was changed to permit the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. This change was implemented in response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania which provides for a reduction in current income tax expense as a result of the flow-through recognition of some income tax benefits due to the income tax accounting change. The Company recorded income tax benefits of $84,766, $78,530, and $72,944 during 2017, 2016, and 2015, respectively. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 for qualifying capital expenditures made prior to 2012, and based on the rate order, in 2013, the Company began to amortize 1/10$^{th}$ of these expenditures. In accordance with the rate order, the amortization is expected to reduce current income tax expense during periods when qualifying parameters are met. Beginning in 2013, the Company amortized the qualifying capital expenditures made prior to 2012 and recognized $38,000, annually, of deferred income tax benefits, which reduced current income tax expense and increased the Company's net income by $16,734. The Company's effective income tax rate for 2017, 2016, and 2015 was 6.6%, 8.2%, and 6.9%, respectively.

The Company establishes reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. The Company believes its tax positions comply with applicable law and that it has adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than the estimates recorded, the Company would then adjust its tax reserves or unrecognized tax benefits in the period that this information becomes known. The Company has elected to recognize accrued interest and penalties related to uncertain tax positions as income tax expense.

(In thousands of dollars, except per share amounts)

The following table provides the changes in the Company's unrecognized tax benefits:

| | 2017 | 2016 |
|---|---|---|
| Balance at January 1, | $ 28,099 | $ 28,016 |
| Additions based on tax position related to the current year | 705 | 83 |
| Effect of Federal tax rate change | (11,221) | - |
| Balance at December 31, | $ 17,583 | $ 28,099 |

The unrecognized tax benefits relate to the income tax accounting change, and the tax position is attributable to a temporary difference. The Company does not anticipate material changes to its unrecognized tax benefits within the next year. As a result of the regulatory treatment afforded by the income tax accounting change in Pennsylvania and despite this position being a temporary difference, as of December 31, 2017 and 2016, $24,243 and $20,674 and, respectively, of these tax benefits would have an impact on the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position.

The following table provides the components of net deferred tax liability:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Deferred tax assets: | | |
| Customers' advances for construction | $ 17,123 | $ 21,738 |
| Costs expensed for book not deducted for tax, principally accrued expenses | 12,956 | 15,751 |
| Utility plant acquisition adjustment basis differences | 1,752 | 3,114 |
| Post-retirement benefits | 36,353 | 38,269 |
| Tax loss and credit carryforwards | 56,642 | 77,911 |
| Other | 2,348 | 2,137 |
| | 127,174 | 158,920 |
| Less valuation allowance | 11,623 | 9,486 |
| | 115,551 | 149,434 |
| Deferred tax liabilities: | | |
| Utility plant, principally due to depreciation and differences in the basis of fixed assets due to variation in tax and book accounting | 795,537 | 1,104,032 |
| Deferred taxes associated with the gross-up of revenues necessary to recover, in rates, the effect of temporary differences | 46,143 | 269,773 |
| Tax effect of regulatory asset for post-retirement benefits | 36,353 | 38,269 |
| Deferred investment tax credit | 6,591 | 6,613 |
| | 884,624 | 1,418,687 |
| Net deferred tax liability | $ 769,073 | $ 1,269,253 |

At December 31, 2017, the Company has a cumulative Federal NOL of $63,302. The Company believes the Federal NOLs are more likely than not to be recovered and require no valuation allowance. The Company's Federal NOLs do not begin to expire until 2032.

In 2012 and 2011, as a result of the Company's Federal cumulative NOLs the Company ceased recognizing the windfall tax benefit associated with stock-based compensation, because the deduction did not reduce income taxes payable. As of December 31, 2015, the Company utilized all of the 2011 NOL and recognized a windfall tax benefit of $588. As a result of the adoption on January 1, 2017 of the FASB's updated accounting guidance on simplifying the accounting for share-based payments, the Company recognized a windfall tax benefit of $982 associated with the Company's 2012 Federal NOL, which was recorded as an adjustment to retained earnings.

At December 31, 2017, the Company has a cumulative state NOL of $627,258, a portion of which is offset by a valuation allowance because the Company does not believe these NOLs are more likely than not to be realized. The state NOLs do not begin to expire until 2023.

The Company has unrecognized tax positions that result in the associated tax benefit being unrecognized. The Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $64,476 and $85,380, respectively, which results from the Company's adoption in 2013 of the FASB's accounting guidance on the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions are $127,778 and $712,638, respectively. The Company records its unrecognized tax benefit as a reduction to its deferred income tax liability.

As of December 31, 2017, the Company's Federal income tax returns for all years through 2011 have been closed. Tax years 2012 through 2017 remain open to Federal examination. The statute remains open for the Company's state income tax returns for tax years 2014 through 2017 in the various states in which it conducts business.

On December 22, 2017, President Trump signed the TCJA into law. Substantially all of the provisions of the TCJA are effective for taxable years beginning after December 31, 2017. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes that impact the Company included in the TCJA are a reduction in the corporate federal income tax rate from 35% to 21%, effective January 1, 2018, and a limitation of the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific TCJA provisions related to our regulated entities generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017.

Changes in the Code from the TCJA had a material impact on our financial statements in 2017. In accordance with the FASB's accounting guidance for income taxes, the tax effects of changes in tax laws must be recognized in the period in which the law is enacted, or December 22, 2017 for the TCJA. Additionally, deferred tax assets and liabilities are required to be measured at the enacted tax rate expected to apply when temporary differences are to be realized or settled. Thus, at the date of enactment, the Company's deferred taxes were re-measured based upon the new tax rate. For our regulated entities, the change in deferred taxes is recorded as either an offset to a regulatory asset or liability and may be subject to refund to customers. In instances where the deferred tax balances are not in ratemaking, such as the Company's market-based operations, the change in deferred taxes is recorded as an adjustment to our deferred tax provision. To the extent the revalued deferred income tax assets and liabilities were outside of our regulated operations and are not believed to be recoverable in utility customer rates, the revalued amount of $3,141 was recognized as additional deferred income tax expense during the quarter ended December 31, 2017.

The staff of the SEC has recognized the complexity of reflecting the impacts of the TCJA, and on December 22, 2017 issued guidance, which clarifies accounting for income taxes if information is not yet available or complete and provides for up to a one year period in which to complete the required analyses and accounting (the measurement period). The guidance describes three scenarios (or "buckets") associated with a company's status of accounting for income tax reform: (1) a company is complete with its accounting for certain effects of tax reform, (2) a company is able to determine a reasonable estimate for certain effects of tax reform and records that estimate as a provisional amount, or (3) a company is not able to determine a reasonable estimate and therefore continues to apply the FASB's accounting guidance, based on the provisions of the tax laws that were in effect immediately prior to the TCJA being enacted.

(In thousands of dollars, except per share amounts)

The Company has completed or has made a reasonable estimate for the measurement and accounting of the effect of the TCJA which have been reflected in the December 31, 2017 financial statements. The accounting for these completed and provisional items, described below, increased the 2017 deferred income tax provision by $3,141 for the year ending December 31, 2017, and decreased the accumulated deferred income tax liability by $303,320 at December 31, 2017.

One of our states, Pennsylvania, has not yet issued an accounting or procedural order addressing how the TCJA changes are to be reflected in our utility customer rates. As of December 31, 2017, the Company has provisionally estimated that $175,108 of deferred income tax liabilities for our Pennsylvania subsidiary will be a regulatory liability. Additionally, two operating divisions in one of our states operate under locally-negotiated contractual rates with their respective counties, and it is expected that negotiations will results in a contract that will pass back the effects of the reduction in the corporate net income tax rate under the TCJA; however, these negotiations have not yet started. As of December 31, 2017, the Company has provisionally estimated that $9,419 of deferred income tax liabilities for these two divisions will be a regulatory liability. Overall, the Company has applied a reasonable interpretation of the impact of the TCJA and a reasonable estimate of the regulatory resolution. Further clarification of the TCJA and regulatory resolution may change the amounts estimated of the deferred income tax provision and the accumulated deferred income tax liability.

The Company's regulated operations accounting for income taxes are impacted by the FASB's accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the Federal corporate income tax rates to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes related to certain accelerated tax depreciation deduction benefits are to be passed back to customers. Potential refunds of other deferred taxes will be determined by our state regulators. Our state regulatory commissions have or are in the process of issuing procedural orders directing how the tax law changes are to be reflected in our utility customer rates. In addition, we have two rate cases currently in progress in two states in which the TCJA is expected to be addressed in the new base rates. The December 31, 2017 consolidated balance sheet reflects the impact of the TCJA on our regulatory assets and liabilities which reduced our regulatory assets by $357,262 and increased our regulatory liabilities by $303,320. These adjustments had no impact on our 2017 cash flows.

**Note 8 –** ***Taxes Other than Income Taxes***

The following table provides the components of taxes other than income taxes:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Property | $ 25,810 | $ 26,788 | $ 26,545 |
| Gross receipts, excise and franchise | 13,458 | 12,510 | 11,847 |
| Payroll | 9,477 | 9,772 | 9,539 |
| Regulatory assessments | 2,552 | 2,630 | 2,689 |
| Pumping fees | 5,057 | 4,571 | 3,993 |
| Other | 274 | 114 | 444 |
| Total taxes other than income taxes | $ 56,628 | $ 56,385 | $ 55,057 |

(In thousands of dollars, except per share amounts)

**Note 9 – *Commitments and Contingencies***

***Commitments*** – The Company leases motor vehicles, buildings and other equipment under operating leases that are noncancelable. The future annual minimum lease payments due are as follows:

| 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter |
|---|---|---|---|---|---|
| $ 1,312 | $ 1,010 | $ 743 | $ 585 | $ 365 | $ 250 |

The Company leases parcels of land on which treatment plants and other facilities are situated and adjacent parcels that are used for watershed protection. The operating leases are noncancelable, expire between 2019 and 2052, and contain renewal provisions. Some leases are subject to an adjustment every five years based on changes in the Consumer Price Index. Subject to the aforesaid adjustment, during each of the next five years, an average of $602 of annual lease payments for land is due, and the aggregate of the years remaining approximates $12,806.

The Company maintains agreements with other water purveyors for the purchase of water to supplement its water supply, particularly during periods of peak demand. The agreements stipulate purchases of minimum quantities of water to the year 2026. The estimated annual commitments related to such purchases through 2022 are expected to average $4,373 and the aggregate of the years remaining approximates $9,644.

The Company has entered into purchase obligations, in the ordinary course of business, that include agreements for water treatment processes at some of its wells in a small number of its divisions. The 20 year term agreement provides for the use of treatment equipment and media used in the treatment process and are subject to adjustment based on changes in the Consumer Price Index. The future contractual cash obligations related to these agreements are as follows:

| 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter |
|---|---|---|---|---|---|
| $ 1,157 | $ 1,007 | $ 1,028 | $ 1,048 | $ 1,069 | $ 6,623 |

Rent expense under operating leases, purchased water expense, and water treatment expenses under these agreements were as follows:

| | Years Ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Operating lease expense | $ 2,241 | $ 2,776 | $ 2,440 |
| Purchased water under long-term agreements | 8,558 | 13,955 | 13,718 |
| Water treatment expense under contractual agreement | 945 | 940 | 972 |

***Contingencies*** – The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of December 31, 2017, the aggregate amount of $18,961 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. While the final outcome of these loss contingencies cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of these matters are not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Further, Aqua America has insurance coverage for a number of these loss contingencies, and as of December 31, 2017, estimates that approximately $7,131 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets, net.

(In thousands of dollars, except per share amounts)

Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which the Company or any of its subsidiaries is a party or to which any of its properties is the subject that are material or are expected to have a material effect on the Company's financial position, results of operations or cash flows.

Additionally, the Company self-insures its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,451 and $1,770 at December 31, 2017 and 2016 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

**Note 10 – *Long-term Debt and Loans Payable***

***Long-term Debt*** **–** The consolidated statements of capitalization provide a summary of long-term debt as of December 31, 2017 and 2016. The supplemental indentures with respect to specific issues of the first mortgage bonds restrict the ability of Aqua Pennsylvania and other operating subsidiaries of the Company to declare dividends, in cash or property, or repurchase or otherwise acquire the stock of these companies. Loan agreements for Aqua Pennsylvania and other operating subsidiaries of the Company have restrictions on minimum net assets. As of December 31, 2017, restrictions on the net assets of the Company were $1,443,473 of the total $1,957,621 in net assets. Included in this amount were restrictions on Aqua Pennsylvania's net assets of $1,090,062 of their total net assets of $1,528,172. As of December 31, 2017, $1,396,003 of Aqua Pennsylvania's retained earnings of $1,416,003 and $142,700 of the retained earnings of $189,000 of other subsidiaries were free of these restrictions. Some supplemental indentures also prohibit Aqua Pennsylvania and some other subsidiaries of the Company from making loans to, or purchasing the stock of, the Company.

Sinking fund payments are required by the terms of specific issues of long-term debt. Excluding amounts due under the Company's revolving credit agreement, the future sinking fund payments and debt maturities of the Company's long-term debt are as follows:

| Interest Rate Range | 2018 | 2019 | 2020 | 2021 | 2022 | Thereafter |
|---|---|---|---|---|---|---|
| 0.00% to 0.99% | $ 464 | $ 464 | $ 463 | $ 464 | $ 466 | $ 1,875 |
| 1.00% to 1.99% | 51,327 | 1,222 | 1,158 | 910 | 888 | 7,409 |
| 2.00% to 2.99% | 1,766 | 51,813 | 1,863 | 1,913 | 1,965 | 9,934 |
| 3.00% to 3.99% | 2,807 | 2,758 | 2,555 | 2,594 | 2,541 | 706,977 |
| 4.00% to 4.99% | 11,195 | 50,404 | 16,616 | 15,297 | 237 | 660,650 |
| 5.00% to 5.99% | 20,595 | 36,126 | 18,120 | 8,402 | 17,979 | 256,783 |
| 6.00% to 6.99% | 13,000 | - | - | - | - | 31,000 |
| 7.00% to 7.99% | 484 | 569 | 615 | 666 | 358 | 29,643 |
| 8.00% to 8.99% | 431 | 566 | 613 | 1,665 | 721 | 2,096 |
| 9.00% to 9.99% | 5,700 | 700 | 2,400 | 4,900 | - | 12,000 |
| 10.00% to 10.99% | 6,000 | - | - | - | - | - |
| Total | $ 113,769 | $ 144,622 | $ 44,403 | $ 36,811 | $ 25,155 | $ 1,718,367 |

In October 2017, Aqua Pennsylvania issued $75,000 of first mortgage bonds, of which $35,000 is due in 2054, $20,000 is due in 2055, and $20,000 is due in 2057 with interest rates of 4.06%, 4.07%, and 4.09%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

(In thousands of dollars, except per share amounts)

In July 2017 Aqua Illinois issued $100,000 of first mortgage bonds consisting of the following:

| Amount | Interest Rate | Maturity |
|---|---|---|
| $25,000 | 3.64% | 2032 |
| $6,000 | 3.89% | 2037 |
| $15,000 | 3.90% | 2038 |
| $10,000 | 4.18% | 2047 |
| $22,000 | 4.22% | 2049 |
| $22,000 | 4.24% | 2050 |

The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In July 2017, Aqua Pennsylvania issued $80,000 of first mortgage bonds, of which $40,000 is due in 2055 and $40,000 is due in 2057 with interest rates of 4.04% and 4.06%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In January 2017, Aqua Pennsylvania issued $50,000 of first mortgage bonds, of which $10,000 is due in 2042 and $40,000 is due in 2044 with interest rates of 3.65% and 3.69%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In December 2016, Aqua Pennsylvania issued $85,000 of first mortgage bonds, of which $25,000 is due in 2051 and $60,000 is due in 2056 with interest rates of 3.85% and 3.95%, respectively. In January 2017, Aqua Pennsylvania issued $50,000 of first mortgage bonds, of which $10,000 is due in 2042 and $40,000 is due in 2044 with interest rates of 3.65% and 3.69%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In November 2016, the Company issued $125,000 of senior notes, of which $35,000 is due in 2031, $30,000 is due in 2034, $25,000 is due in 2035, $10,000 is due in 2038, and $25,000 is due in 2041 with interest rates of 3.01%, 3.19%, 3.25%, 3.41%, and 3.57%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

As of December 31, 2017 and 2016, the Company did not have any funds restricted for construction activity.

The weighted average cost of long-term debt at December 31, 2017 and 2016 was 4.29% and 4.23%, respectively. The weighted average cost of fixed rate long-term debt at December 31, 2017 and 2016 was 4.36% and 4.26%, respectively.

The Company has a five-year $250,000 unsecured revolving credit facility, with four banks that expires in February 2021. This facility includes a $15,000 sublimit for daily demand loans. Funds borrowed under this facility are classified as long-term debt and are used to provide working capital as well as support for letters of credit for insurance policies and other financing arrangements. As of December 31, 2017, the Company has the following sublimits and available capacity under the credit facility: $50,000 letter of credit sublimit, $30,189 of letters of credit available capacity, $0 borrowed under the swing-line commitment, and $60,000 of funds borrowed under the agreement. Interest under this facility is based at the Company's option, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. A facility fee is charged on the total commitment amount of the agreement. Under this facility the average cost of borrowings was 1.91% and 1.54%, and the average borrowing was $48,333 and $89,374, during 2017 and 2016, respectively.

The Company is obligated to comply with covenants under some of its loan and debt agreements. These covenants contain a number of restrictive financial covenants, which among other things limit, subject to specific exceptions, the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2017, the Company was in compliance with its debt covenants under its loan and debt agreements. Failure to comply with the Company's debt covenants could result in an event of default, which could result in the Company being required to repay or finance its borrowings before their due date, possibly limiting the Company's future borrowings, and increasing its borrowing costs.

***Loans Payable –*** In November 2017, Aqua Pennsylvania renewed its $100,000 364-day unsecured revolving credit facility with four banks. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. As of December 31, 2017 and 2016, funds borrowed under the agreement were $3,650 and $5,545, respectively. Interest under this facility is based, at the borrower's option, on the prime rate, an adjusted federal funds rate, an adjusted London Interbank Offered Rate corresponding to the interest period selected, an adjusted Euro-Rate corresponding to the interest period selected or at rates offered by the banks. This agreement restricts short-term borrowings of Aqua Pennsylvania. A commitment fee of 0.05% is charged on the total commitment amount of Aqua Pennsylvania's revolving credit agreement. The average cost of borrowing under the facility was 1.78% and 1.18%, and the average borrowing was $21,913 and $29,760, during 2017 and 2016, respectively. The maximum amount outstanding at the end of any one month was $66,466 and $52,905 in 2017 and 2016, respectively.

At December 31, 2017 and 2016, the Company had other combined short-term lines of credit of $35,500. Funds borrowed under these lines are classified as loans payable and are used to provide working capital. As of December 31, 2017 and 2016, funds borrowed under the short-term lines of credit were $0 and $990, respectively. The average borrowing under the lines was $908 and $2,944 during 2017 and 2016, respectively. The maximum amount outstanding at the end of any one month was $990 in 2017 and $9,440 in 2016, respectively. Interest under the lines is based at the Company's option, depending on the line, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. The average cost of borrowings under all lines during 2017 and 2016 was 1.81% and 1.24%, respectively.

***Interest Income and Expense–*** Interest income of $202, $217, and $272 was netted against interest expense on the consolidated statement of net income for the years ended December 31, 2017, 2016, and 2015, respectively. The total interest cost was $88,543, $80,811, and $76,808 in 2017, 2016, and 2015, including amounts capitalized for borrowed funds of $3,578, $2,220, and $1,598, respectively.

**Note 11 – *Fair Value of Financial Instruments***

Financial instruments are recorded at carrying value in the financial statements and approximate fair value, with the exception of long-term debt, as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of cash and cash equivalents, which is comprised of uninvested cash, is determined based on level 1 methods and assumptions. As of December 31, 2017 and 2016, the carrying amounts of the Company's cash and cash equivalents were $4,204 and $3,763, which equates to their fair value. The fair value of "available-for-sale" securities to fund our deferred compensation and non-qualified pension plan liabilities, which represents mutual and money market funds, is determined based on quoted market prices from active markets utilizing level 1 methods and assumptions. As of December 31, 2017 and 2016, the carrying amount of these securities was $21,776 and $20,342. As of December 31, 2017 and 2016, the carrying amount of the Company's loans payable was $3,650 and $6,535, respectively, which equates to their estimated fair value.

(In thousands of dollars, except per share amounts)

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Carrying amount | $ 2,143,127 | $ 1,910,633 |
| Estimated fair value | 2,262,785 | 2,018,933 |

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $93,186 and $91,843 at December 31, 2017 and 2016, respectively. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels and future rate increases. Portions of these non-interest bearing instruments are payable annually through 2027 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

**Note 12 – *Stockholders' Equity***

At December 31, 2017, the Company had 300,000,000 shares of common stock authorized; par value $0.50. Shares outstanding and treasury shares held were as follows:

| | December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Shares outstanding | 177,713,943 | 177,394,376 | 176,544,091 |
| Treasury shares | 2,986,308 | 2,916,969 | 2,819,569 |

At December 31, 2017, the Company had 1,770,819 shares of authorized but unissued Series Preferred Stock, $1.00 par value.

The Company has a universal shelf registration statement with the SEC to allow for the potential future sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities and other securities specified therein at indeterminate prices. This registration statement expires in February 2018, and we intend to file a new three-year universal shelf registration statement.

In 2015, the Company filed a registration statement with the SEC which permits the offering, from time to time, of an aggregate of $500,000 in shares of common stock and shares of preferred stock in connection with acquisitions. During 2016, 439,943 shares of common stock totaling $12,845 were issued by the Company to acquire a water utility system. The balance remaining available for use under the acquisition shelf registration as of December 31, 2017 is $487,155.

The form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement will be determined at the time of issuance.

The Company has a Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") that allows reinvested dividends to be used to purchase shares of common stock at a five percent discount from the current market value. Under the direct stock purchase program, shares are purchased by investors at a five percent discount from the market price. The shares issued under the Plan are either shares purchased by the Company's transfer agent in the open-market or original issue shares. In 2017, 2016, and 2015, 447,753 484,645, and 535,439 shares of the Company were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $15,168, $14,916, and $14,380, respectively. During 2017 and 2016, under the dividend reinvestment portion of the Plan, 45,121 and 47,478 original issue shares of common stock were sold, providing the Company with proceeds of $1,453 and $1,388, respectively.

In December 2014, the Company's Board of Directors authorized a share buyback program, commencing in 2015, of up to 1,000,000 shares to minimize share dilution through timely and orderly share repurchases. In December 2015, the Company's Board of Directors added 400,000 shares to this program. The specific timing, amount and other terms of repurchases depend on market conditions, regulatory requirements and other factors. In 2016, we did not repurchase any shares of our common stock in the open market. In 2015, we repurchased 805,000 shares of the Company's common stock in the open market for $20,502. In 2014, we repurchased 560,000 shares of our common stock in the open market for $13,280. This program expired on December 31, 2016.

The Company's accumulated other comprehensive income is reported in the stockholders' equity section of the consolidated balance sheets, the consolidated statements of equity, and the related components of other comprehensive income are reported in the consolidated statements of comprehensive income. The Company reports its unrealized gains or losses on investments as other comprehensive income and accumulated other comprehensive income. The Company recorded a regulatory asset for its underfunded status of its pension and other post-retirement benefit plans that would otherwise be charged to other comprehensive income, as it anticipates recovery of its costs through customer rates.

**Note 13 – *Net Income per Common Share and Equity per Common Share***

Basic net income per share is based on the weighted average number of common shares outstanding. Diluted net income per share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation is included in the computation of diluted net income per share. The dilutive effect of stock-based compensation is calculated by using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per share:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Average common shares outstanding during the period for basic computation | 177,612 | 177,273 | 176,788 |
| Effect of dilutive securities: | | | |
| Employee stock-based compensation | 563 | 573 | 729 |
| Average common shares outstanding during the period for diluted computation | 178,175 | 177,846 | 177,517 |

For the years ended December 31, 2017, 2016, and 2015, all of the Company's employee stock options were included in the calculation of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods.

Equity per common share was $11.02 and $10.43 at December 31, 2017 and 2016, respectively. These amounts were computed by dividing Aqua America stockholders' equity by the number of shares of common stock outstanding at the end of each year.

**Note 14 – *Employee Stock and Incentive Plan***

Under the Company's 2009 Omnibus Equity Compensation Plan, as amended as of February 27, 2014 (the "2009 Plan"), as approved by the Company's shareholders to replace the 2004 Equity Compensation Plan (the "2004 Plan"), stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. No further grants may be made under the 2004 Plan. The 2009 Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the 2009 Plan may be issued pursuant to stock award, stock units and other stock-based awards, subject to adjustment as provided in the 2009 Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the 2009 Plan for more than 500,000 shares of common stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the 2009 Plan. Awards to employees and consultants under the 2009 Plan are made by a committee of the Board of Directors, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At December 31, 2017, 3,720,624 shares underlying stock-based compensation awards were still available for grant under the 2009 Plan.

(In thousands of dollars, except per share amounts)

The recording of compensation expense for share-based compensation has no impact on net cash flows and results in the reclassification on the consolidated cash flow statements of related tax benefits from cash flows from operating activities to cash flows from financing activities to the extent these tax benefits exceed the associated compensation cost.

***Performance Share Units*** – During 2017, 2016, and 2015, the Company granted performance share units. A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three year performance period specified in the grant, subject to exceptions through the respective vesting periods, generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals.

The performance goals of the 2017, 2016, and 2015 PSU grants consisted of the following metrics:

| | Performance Grant of: | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Metric 1 – Company's total shareholder return ("TSR") compared to the TSR for a specific peer group of investor-owned water companies (a market-based condition) | 26.47% | 27.5% | 30% |
| Metric 2 – Company's TSR compared to the TSR for the companies listed in the Standard and Poor's Midcap Utilities Index (a market-based condition) | 26.47% | 27.5% | 30% |
| Metric 3 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition) | 23.53% | - | - |
| Metric 4 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three year measurement period (a performance-based condition) | 23.53% | - | - |
| Metric 5 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition) | - | 25.0% | - |
| Metric 6 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three year measurement period (a performance-based condition) | - | 20.0% | - |
| Metric 7 – Maintaining an average ratio of operations and maintenance expenses as a percentage of revenues at Aqua Pennsylvania compared to a target average ratio for the three year performance period (a performance-based condition) | - | - | 20% |
| Metric 8 – Earning a cumulative total earnings before taxes for the Company's operations other than Aqua Pennsylvania for the three year performance period compared to a target (a performance-based condition) | - | - | 20% |

The following table provides the compensation expense and income tax benefit for PSUs:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expense | $ 4,351 | $ 3,823 | $ 4,419 |
| Income tax benefit | 1,766 | 1,552 | 1,796 |

(In thousands of dollars, except per share amounts)

The following table summarizes nonvested PSU transactions for the year ended December 31, 2017:

| | Number of Share Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested share units at beginning of period | 476,896 | $ 27.96 |
| Granted | 125,202 | 30.79 |
| Performance criteria adjustment | (33,502) | 28.14 |
| Forfeited | (22,664) | 28.68 |
| Share units vested in prior period and issued in current period | 32,400 | 25.31 |
| Share units issued | (125,999) | 36.37 |
| Nonvested share units at end of period | 452,333 | 26.16 |

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions associated with the PSUs using the Monte Carlo valuation method, which assesses the probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs associated with performance-based conditions was based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The fair value of each PSU grant is amortized into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on an estimate of the final expected value of the award, and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows. The following table provides the assumptions used in the pricing model for the grant, the resulting grant date fair value of PSUs, and the intrinsic value and fair value of PSUs that vested during the year:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Expected term (years) | 3.0 | 3.0 | 3.0 |
| Risk-free interest rate | 1.49% | 0.91% | 1.03% |
| Expected volatility | 17.9% | 17.9% | 16.9% |
| Weighted average fair value of PSUs granted | $ 30.79 | $ 28.89 | $ 26.46 |
| Intrinsic value of vested PSUs | $ 3,926 | $ 5,912 | $ 7,964 |
| Fair value of vested PSUs | $ 3,207 | $ 5,104 | $ 6,416 |

As of December 31, 2017, $4,945 of unrecognized compensation costs related to PSUs is expected to be recognized over a weighted average period of approximately 1.7 years. The aggregate intrinsic value of PSUs as of December 31, 2017 was $18,114. The aggregate intrinsic value of PSUs is based on the number of nonvested share units and the market value of the Company's common stock as of the period end date.

(In thousands of dollars, except per share amounts)

***Restricted Stock Units*** – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock and is valued based on the fair market value of the Company's stock on the date of grant. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. In some cases, the right to receive the shares is subject to specific performance goals established at the time the grant is made. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation expense and income tax benefit for RSUs:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expense | $ 1,183 | $ 1,061 | $ 1,076 |
| Income tax benefit | 489 | 438 | 444 |

The following table summarizes nonvested RSU transactions for the year ended December 31, 2017:

| | Number of Stock Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock units at beginning of period | 109,273 | $ 28.48 |
| Granted | 41,293 | 30.37 |
| Stock units vested but not paid | (1,467) | 31.47 |
| Stock units vested and issued | (26,914) | 26.45 |
| Forfeited | (5,398) | 31.03 |
| Nonvested stock units at end of period | 116,787 | 29.46 |

The following table summarizes the value of RSUs:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Weighted average fair value of RSUs granted | $ 30.37 | $ 32.08 | $ 26.00 |
| Intrinsic value of vested RSUs | 896 | 805 | 2,327 |
| Fair value of vested RSUs | 751 | 605 | 1,904 |

As of December 31, 2017, $1,401 of unrecognized compensation costs related to RSUs is expected to be recognized over a weighted average period of approximately 1.7 years. The aggregate intrinsic value of RSUs as of December 31, 2017 was $4,582. The aggregate intrinsic value of RSUs is based on the number of nonvested stock units and the market value of the Company's common stock as of the period end date.

(In thousands of dollars, except per share amounts)

***Stock Options –*** A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire ten years from the grant date. The vesting of stock options granted in 2017 are subject to the achievement of the following performance goal: the Company achieves at least an adjusted return on equity equal to 150 basis points below the return on equity granted by the Pennsylvania Public Utility Commission during the Company's Pennsylvania subsidiary's last rate proceeding. The adjusted return on equity equals net income, excluding net income or loss from acquisitions which have not yet been incorporated into a rate application as of the last year end, divided by equity which excludes equity applicable to acquisitions which are not yet incorporated in a rate application during the award period.

The fair value of each stock option is amortized into compensation expense using the graded vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides compensation expense and income tax benefit for stock options:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expenses | $ 245 | $ - | $ - |
| Income tax benefit | 208 | 260 | 193 |

There were no stock options granted during the years ended December 31, 2016, and 2015.

Options under the plans were issued at the closing market price of the stock on the day of the grant.
The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model, which relies on assumptions that require management's judgment. The following table provides the assumptions used in the pricing model for grants and the resulting grant date fair value of stock options granted in the period reported:

| | Year ended December 31, |
|---|---|
| | 2017 |
| Expected term (years) | 5.45 |
| Risk-free interest rate | 2.01% |
| Expected volatility | 17.7% |
| Dividend yield | 2.51% |
| Grant date fair value per option | $ 4.07 |

The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense.

(In thousands of dollars, except per share amounts)

The following table summarizes stock option transactions for the year ended December 31, 2017:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Life (years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding, beginning of year | 427,335 | $ 15.55 | | |
| Granted | 120,127 | 30.47 | | |
| Forfeited | (5,191) | 30.47 | | |
| Expired / Cancelled | (2,812) | 14.26 | | |
| Exercised | (174,527) | 16.46 | | |
| Outstanding at end of year | 364,932 | $ 19.83 | 3.7 | $ 7,081 |
| | | | | |
| Exercisable at end of year | 249,996 | $ 14.93 | 1.2 | $ 6,074 |

The intrinsic value of stock options is the amount by which the market price of the stock on a given date, such as at the end of the period or on the day of exercise, exceeded the closing market price of stock on the date of grant. The following table summarizes the intrinsic value of stock options exercised:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Intrinsic value of options exercised | $ 2,767 | $ 2,945 | $ 4,154 |

The following table summarizes information about the options outstanding and options exercisable as of December 31, 2017:

| | Options Outstanding | | | Options Exercisable | |
|---|---|---|---|---|---|
| | Shares | Weighted Average Remaining Life (years) | Weighted Average Exercise Price | Shares | Weighted Average Exercise Price |
| Range of prices: | | | | | |
| $13.00 - 14.99 | 89,770 | 2.1 | $ 13.72 | 89,770 | $ 13.72 |
| $15.00 - 15.99 | 101,167 | 1.2 | 15.30 | 101,167 | 15.30 |
| $16.00 - 16.99 | 59,059 | 0.2 | 16.15 | 59,059 | 16.15 |
| $17.00 - 30.99 | 114,936 | 9.1 | 30.47 | - | - |
| | 364,932 | 3.7 | 19.83 | 249,996 | 14.93 |

As of December 31, 2017, there was $223 of total unrecognized compensation costs related to nonvested stock options granted under the plans. The cost is expected to be recognized over a weighted average period of approximately 1.5 years.

***Restricted Stock*** – Restricted stock awards provide the grantee with the rights of a shareholder, including the right to receive dividends and to vote such shares, but not the right to sell or otherwise transfer the shares during the restriction period. Restricted stock awards result in compensation expense which is equal to the fair market value of the stock on the date of the grant and is amortized ratably over the restriction period. The Company expects forfeitures of restricted stock to be de minimis.

(In thousands of dollars, except per share amounts)

The following table summarizes the value of restricted stock awards:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Intrinsic value of restricted stock awards vested | $ - | $ - | $ 860 |
| Fair value of restricted stock awards vested | - | - | 553 |

As of December 31, 2017, there were no unrecognized compensation costs related to nonvested restricted stock as restricted stock was fully amortized in 2014. Additionally, there was no restricted stock granted during the years ended December 31, 2017, 2016, and 2015.

***Stock Awards*** – The following table provides compensation costs for stock-based compensation related to stock awards:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Stock-based compensation within operations and maintenance expense | $ 563 | $ 506 | $ 365 |
| Income tax benefit | 233 | 210 | 151 |

The following table summarizes the value of stock awards:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Intrinsic and fair value of stock awards vested | $ 563 | $ 506 | $ 365 |
| Weighted average fair value of stock awards granted | 34.42 | 31.87 | 26.44 |

The following table summarizes stock award transactions for year ended December 31, 2017:

| | Number of Stock Awards | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock awards at beginning of period | - | $ - |
| Granted | 16,345 | 34.42 |
| Vested | (16,345) | 34.42 |
| Nonvested stock awards at end of period | - | - |

**Note 15 – *Pension Plans and Other Post-retirement Benefits***

The Company maintains a qualified, defined benefit pension plan that covers its full-time employees who were hired prior to April 1, 2003. Retirement benefits under the plan are generally based on the employee's total years of service and compensation during the last five years of employment. The Company's policy is to fund the plan annually at a level which is deductible for income tax purposes and which provides assets sufficient to meet its pension obligations over time. To offset some limitations imposed by the Internal Revenue Code with respect to payments under qualified plans, the Company has a non-qualified Supplemental Pension Benefit Plan for Salaried Employees in order to prevent some employees from being penalized by these limitations, and to provide certain retirement benefits based on employee's years of service and compensation. The Company also had non-qualified Supplemental Executive Retirement Plans, which were terminated in 2016, for some current and retired employees. The net pension costs and obligations of the qualified and non-qualified plans are included in the tables which follow. Employees hired after April 1, 2003 may participate in a defined contribution plan that provides a Company matching contribution on amounts contributed by participants and an annual profit-sharing contribution based upon a percentage of the eligible participants' compensation.

Effective July 1, 2015, the Company added a permanent lump sum option to the form of benefit payments offered to participants of the qualified defined benefit pension plan upon retirement or termination. The plan paid $8,858 and $9,990 to participants who elected this option during 2017 and 2016.

In addition to providing pension benefits, the Company offers post-retirement benefits other than pensions to employees hired before April 1, 2003 and retiring with a minimum level of service. These benefits include continuation of medical and prescription drug benefits, or a cash contribution toward such benefits, for eligible retirees and life insurance benefits for eligible retirees. The Company funds these benefits through various trust accounts. The benefits of retired officers and other eligible retirees are paid by the Company and not from plan assets due to limitations imposed by the Internal Revenue Code.

In 2016, the Company recognized a settlement loss of $2,895, which results from lump sum payments from the non-qualified plans exceeding the threshold of service and interest cost for the period. A settlement loss is the recognition of unrecognized pension benefit costs that would have been incurred in subsequent periods. The Company recorded this settlement loss as a regulatory asset, as it is probable of recovery in future rates, which will be amortized into pension benefit costs.

(In thousands of dollars, except per share amounts)

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid in the years indicated:

| | Pension Benefits | Other Post-retirement Benefits |
|---|---|---|
| Years: | | |
| 2018 | $ 20,516 | $ 2,249 |
| 2019 | 20,462 | 2,553 |
| 2020 | 21,580 | 2,777 |
| 2021 | 20,674 | 2,957 |
| 2022 | 21,538 | 3,177 |
| 2023-2027 | 106,397 | 18,764 |

The changes in the benefit obligation and fair value of plan assets, the funded status of the plans and the assumptions used in the measurement of the company's benefit obligation are as follows:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Change in benefit obligation: | | | | |
| Benefit obligation at January 1, | $ 308,172 | $ 306,539 | $ 69,312 | $ 65,137 |
| Service cost | 3,174 | 3,179 | 1,020 | 1,014 |
| Interest cost | 12,434 | 13,038 | 2,947 | 2,927 |
| Actuarial loss | 18,516 | 15,321 | 4,047 | 1,400 |
| Plan participants' contributions | - | - | 124 | 170 |
| Benefits paid | (21,317) | (21,861) | (1,490) | (1,336) |
| Settlements | - | (7,742) | - | - |
| Special termination benefits | - | (302) | - | - |
| Benefit obligation at December 31, | 320,979 | 308,172 | 75,960 | 69,312 |
| | | | | |
| Change in plan assets: | | | | |
| Fair value of plan assets at January 1, | 242,360 | 238,605 | 46,085 | 43,704 |
| Actual return on plan assets | 33,278 | 17,375 | 5,188 | 2,149 |
| Employer contributions | 16,032 | 16,285 | 500 | 1,360 |
| Benefits paid | (21,317) | (21,861) | (1,323) | (1,128) |
| Settlements | - | (7,742) | - | - |
| Special termination benefits | - | (302) | - | - |
| Asset transfer | - | - | (2,700) | - |
| Fair value of plan assets at December 31, | 270,353 | 242,360 | 47,750 | 46,085 |
| | | | | |
| Funded status of plan: | | | | |
| Net liability recognized at December 31, | $ 50,626 | $ 65,812 | $ 28,210 | $ 23,227 |

(In thousands of dollars, except per share amounts)

The following table provides the net liability recognized on the consolidated balance sheets at December 31,:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Current liability | $ 396 | $ 613 | $ - | $ - |
| Noncurrent liability | 50,230 | 65,199 | 28,210 | 23,227 |
| Net liability recognized | $ 50,626 | $ 65,812 | $ 28,210 | $ 23,227 |

At December 31, 2017 and 2016, the Company's pension plans had benefit obligations in excess of its plan assets. The following tables provide the projected benefit obligation, the accumulated benefit obligation and fair market value of the plan assets as of December 31,:

| | Projected Benefit Obligation Exceeds the Fair Value of Plan Assets | |
|---|---|---|
| | 2017 | 2016 |
| Projected benefit obligation | $ 320,979 | $ 308,172 |
| Fair value of plan assets | 270,353 | 242,360 |

| | Accumulated Benefit Obligation Exceeds the Fair Value of Plan Assets | |
|---|---|---|
| | 2017 | 2016 |
| Accumulated benefit obligation | $ 301,473 | $ 291,889 |
| Fair value of plan assets | 270,353 | 242,360 |

The following table provides the components of net periodic benefit costs for the years ended December 31,:

| | Pension Benefits | | | Other Post-retirement Benefits | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Service cost | $ 3,174 | $ 3,179 | $ 3,349 | $ 1,020 | $ 1,014 | $ 1,224 |
| Interest cost | 12,434 | 13,038 | 12,955 | 2,947 | 2,927 | 2,802 |
| Expected return on plan assets | (17,077) | (16,910) | (18,702) | (2,589) | (2,647) | (2,923) |
| Amortization of prior service cost (credit) | 579 | 578 | 174 | (509) | (549) | (687) |
| Amortization of actuarial loss | 8,003 | 7,153 | 5,993 | 1,165 | 926 | 1,282 |
| Settlement loss | - | 2,895 | - | - | - | - |
| Special termination benefits | - | 302 | - | - | - | - |
| Net periodic benefit cost | $ 7,113 | $ 10,235 | $ 3,769 | $ 2,034 | $ 1,671 | $ 1,698 |

The Company records the underfunded status of its pension and other post-retirement benefit plans on its consolidated balance sheets and records a regulatory asset for these costs that would otherwise be charged to stockholders' equity, as the Company anticipates recoverability of the costs through customer rates to be probable. The Company's pension and other post-retirement benefit plans were underfunded at December 31, 2017 and 2016. Changes in the plans' funded status will affect the assets and liabilities recorded on the balance sheet. Due to the Company's regulatory treatment, the recognition of the funded status is recorded as a regulatory asset pursuant to the FASB's accounting guidance for regulated operations.

(In thousands of dollars, except per share amounts)

The following table provides the amounts recognized in regulatory assets that have not been recognized as components of net periodic benefit cost as of December 31,:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Net actuarial loss | $ 86,750 | $ 92,436 | $ 15,724 | $ 15,441 |
| Prior service cost (credit) | 3,262 | 3,841 | (1,869) | (2,378) |
| Total recognized in regulatory assets | $ 90,012 | $ 96,277 | $ 13,855 | $ 13,063 |

The following table provides the estimated net actuarial loss and prior service cost for the Company's pension plans that will be amortized from regulatory asset into net periodic benefit cost for the year ending December 31, 2018:

| | Pension Benefits | Other Post-retirement Benefits |
|---|---|---|
| Net actuarial loss | $ 7,291 | $ 1,182 |
| Prior service cost (credit) | 527 | (509) |

Accounting for pensions and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from the Company's actuarial consultant who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefit expense that the Company recognizes.

The significant assumptions related to the Company's benefit obligations are as follows:

| | Pension Benefits | | Other Post-retirement Benefits | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Weighted Average Assumptions Used to Determine Benefit Obligations as of December 31, | | | | |
| Discount rate | 3.66% | 4.13% | 3.73% | 4.25% |
| Rate of compensation increase | 3.0-4.0% | 3.0-4.0% | n/a | n/a |
| Assumed Health Care Cost Trend Rates Used to Determine Benefit Obligations as of December 31, | | | | |
| Health care cost trend rate | n/a | n/a | 7.0% | 6.6% |
| Rate to which the cost trend is assumed to decline (the ultimate trend rate) | n/a | n/a | 5.0% | 5.0% |
| Year that the rate reaches the ultimate trend rate | n/a | n/a | 2022 | 2020 |

*n/a – Assumption is not applicable.*

(In thousands of dollars, except per share amounts)

The significant assumptions related to the Company's net periodic benefit costs are as follows:

| | Pension Benefits | | | Other Post-retirement Benefits | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Weighted Average Assumptions Used to Determine Net Periodic Benefit Costs for Years Ended December 31, | | | | | | |
| Discount rate | 4.13% | 4.48% | 4.20% | 4.25% | 4.60% | 4.17% |
| Expected return on plan assets | 7.00% | 7.25% | 7.50% | 4.67-7.00% | 4.83-7.25% | 5.00-7.50% |
| Rate of compensation increase | 3.0-4.0% | 3.0-4.0% | 3.0-4.0% | n/a | n/a | n/a |
| Assumed Health Care Cost Trend Rates Used to Determine Net Periodic Benefit Costs for Years Ended December 31, | | | | | | |
| Health care cost trend rate | n/a | n/a | n/a | 6.6% | 7.0% | 7.0% |
| Rate to which the cost trend is assumed to decline (the ultimate trend rate) | n/a | n/a | n/a | 5.0% | 5.0% | 5.0% |
| Year that the rate reaches the ultimate trend rate | n/a | n/a | n/a | 2021 | 2021 | 2019 |

*n/a – Assumption is not applicable.*

Assumed health-care trend rates have a significant effect on the expense and liabilities for other post-retirement benefit plans. The health care trend rate is based on historical rates and expected market conditions. A one-percentage point change in the assumed health-care cost trend rates would have the following effects:

| | 1-Percentage-Point Increase | 1-Percentage-Point Decrease |
|---|---|---|
| Effect on the health-care component of the accrued other post-retirement benefit obligation | $ 4,797 | $ (4,369) |
| Effect on aggregate service and interest cost components of net periodic post-retirement health-care benefit cost | $ 277 | $ (244) |

The Company's discount rate assumption, which is utilized to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds, all of which were noncallable (or callable with make-whole provisions), and have at least $50,000 in outstanding value. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the plan's benefit payments. The Company's pension expense and liability (benefit obligations) increases as the discount rate is reduced.

The Company's expected return on plan assets is determined by evaluating the asset class return expectations with its advisors as well as actual, long-term, historical results of our asset returns. The Company's market related value of plan assets is equal to the fair value of the plan's assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets which is a component of post-retirement benefits expense. The Company's pension expense increases as the expected return on plan assets decreases. For 2017, the Company used a 7.00% expected return on plan assets assumption which will decrease to 6.75% for 2018. The Company believes its actual long-term asset allocation on average will approximate the targeted allocation. The Company's investment strategy is to earn a reasonable rate of return while maintaining risk at acceptable levels. Risk is managed through fixed income investments to manage interest rate exposures that impact the valuation of liabilities and through the diversification of investments across and within various asset categories. Investment returns are compared to a total plan benchmark constructed by applying the plan's asset allocation target weightings to passive index returns representative of the respective asset classes in which the plan invests. The Retirement and Employee Benefits Committee meets quarterly to review plan investments and management monitors investment performance quarterly through a performance report prepared by an external consulting firm.

(In thousands of dollars, except per share amounts)

The Company's pension plan asset allocation and the target allocation by asset class are as follows:

| | Target Allocation | Percentage of Plan Assets at December 31, 2017 |
|---|---|---|
| Return seeking assets | 50 to 70% | 64% |
| Liability hedging assets | 30 to 50% | 36% |
| Total | 100% | 100% |

| | Target Allocation | Percentage of Plan Assets at December 31, 2016 |
|---|---|---|
| Domestic equities | 25 to 75% | 65% |
| International equities | 0 to 10% | 6% |
| Fixed income | 25 to 50% | 19% |
| Alternative investments | 0 to 5% | 2% |
| Cash and cash equivalents | 0 to 20% | 8% |
| Total | 100% | 100% |

The fair value of the Company's pension plans' assets at December 31, 2017 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Assets measured at NAV (a) | Total |
|---|---|---|---|---|---|
| Common stock | $ 26,902 | $ - | $ - | $ - | $ 26,902 |
| Return seeking assets: | | | | | |
| Global equities | - | - | - | 66,281 | 66,281 |
| Real estate securities | - | - | - | 14,110 | 14,110 |
| Hedge / diversifying strategies | - | - | - | 38,143 | 38,143 |
| Credit | - | - | - | 28,395 | 28,395 |
| Liability hedging assets | - | - | - | 91,872 | 91,872 |
| Cash and cash equivalents | 4,650 | - | - | - | 4,650 |
| Total pension assets | $ 31,552 | $ - | $ - | $ 238,801 | $ 270,353 |

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

(In thousands of dollars, except per share amounts)

The fair value of the Company’s pension plans’ assets at December 31, 2016 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Domestic equities: | | | | |
| Common stocks | $ 152,740 | $ - | $ - | $ 152,740 |
| Mutual funds | 3,668 | - | - | 3,668 |
| International equities | 13,813 | - | - | 13,813 |
| Fixed income: | | | | |
| U.S. Treasury and government agency bonds | - | 11,170 | - | 11,170 |
| Corporate and foreign bonds | - | 24,385 | - | 24,385 |
| Mutual funds | 9,752 | | - | 9,752 |
| Alternative investments: | | | | |
| Real estate | 2,613 | - | - | 2,613 |
| Commodity funds | 1,279 | - | - | 1,279 |
| Cash and cash equivalents | 348 | 22,592 | - | 22,940 |
| Total pension assets | $ 184,213 | $ 58,147 | $ - | $ 242,360 |

Equity securities include our common stock in the amounts of $16,471 or 6.1% and $20,632 or 8.5% of total pension plans’ assets as of December 31, 2017 and 2016, respectively.

The asset allocation for the Company’s other post-retirement benefit plans and the target allocation by asset class are as follows:

| | Target Allocation | Percentage of Plan Assets at December 31, 2017 |
|---|---|---|
| Return seeking assets | 50 to 70% | 62% |
| Liability hedging assets | 30 to 50% | 38% |
| Total | 100% | 100% |

| | Target Allocation | Percentage of Plan Assets at December 31, 2016 |
|---|---|---|
| Domestic equities | 25 to 75% | 52% |
| International equities | 0 to 10% | 3% |
| Fixed income | 25 to 50% | 25% |
| Alternative investments | 0 to 5% | 0% |
| Cash and cash equivalents | 0 to 20% | 20% |
| Total | 100% | 100% |

(In thousands of dollars, except per share amounts)

The fair value of the Company’s other post-retirement benefit plans’ assets at December 31, 2017 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Assets measured at NAV (a) | Total |
|---|---|---|---|---|---|
| Return seeking assets: | | | | | |
| Global equities | $ 9,477 | $ - | $ - | $ 15,158 | $ 24,635 |
| Real estate securities | 1,731 | - | - | 3,211 | 4,942 |
| Liability hedging assets | 5,265 | - | - | 8,961 | 14,226 |
| Cash and cash equivalents | 3,947 | - | - | - | 3,947 |
| Total other post-retirement assets | $ 20,420 | $ - | $ - | $ 27,330 | $ 47,750 |

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company’s other post-retirement benefit plans’ assets at December 31, 2016 by asset class are as follows:

| | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Domestic equities: | | | | |
| Common stocks | $ 10,667 | $ - | $ - | $ 10,667 |
| Mutual funds | 13,464 | - | - | 13,464 |
| International equities | 1,242 | - | - | 1,242 |
| Fixed income: | | | | |
| U.S. Treasury and government agency bonds | - | 4,968 | - | 4,968 |
| Corporate and foreign bonds | - | 6,347 | - | 6,347 |
| Alternative investments | 172 | - | - | 172 |
| Cash and cash equivalents | - | 9,225 | - | 9,225 |
| Total other post-retirement assets | $ 25,545 | $ 20,540 | $ - | $ 46,085 |

***Valuation Techniques Used to Determine Fair Value***

- *Common Stocks* - Investments in common stocks are valued using unadjusted quoted prices obtained from active markets.
- *Return Seeking Assets* – Investments in return seeking assets consists of the following:
  - Global equities, which consist of common and preferred shares of stock, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or commingled fund vehicles, consisting of such securities valued using NAV, which are not classified within the fair value hierarchy.
  - Real estate securities, which consist of securities, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or for real estate commingle fund vehicles that are not publicly quoted, the fund administrators value the funds using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.

  - Hedge / diversifying strategies, which consist of a multi-manager fund vehicle having underlying exposures that collectively seek to provide low correlation of return to equity and fixed income markets, thereby offering diversification. As a multi-manager fund investment, NAV is derived from underlying manager NAVs, which are derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
  - Credit, which consist of certain opportunistic, return-oriented credits which primarily include below investment grade bonds (i.e. high yield bonds), bank loans, and securitized debt. Credits are valued using the NAV per fund share, derived from either quoted prices in active markets of the underlying securities, or less active markets, or quotes of similar assets, and are not classified within the fair value hierarchy.
- *Liability Hedging Assets* – Investments in liability hedging assets consist of funds investing in high-quality fixed income (i.e. U.S. Treasury securities and government bonds), and for funds for which market quotations are readily available, are valued at the last reported closing price on the primary market or exchange on which they are traded. Funds for which market quotations are not readily available, are valued using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
- *Cash and Cash Equivalents* – Investments in cash and cash equivalents are comprised of both uninvested cash and money market funds. The uninvested cash is valued based on its carrying value, and the money market funds are valued utilizing the net asset value per unit based on the fair value of the underlying assets as determined by the fund's investment managers.
- *Mutual Funds* – Investments in mutual funds which consist of either equity or fixed income investments are valued using the net asset value per unit as obtained from quoted market prices from active markets.
- *International Equities* – Investments in international equities are valued using unadjusted quoted prices obtained from active markets.
- *Fixed Income* – Investments in fixed income that comprise U.S. Treasury and government agency bonds, and corporate and foreign bonds are valued utilizing pricing models that incorporate available trade, bid, and other market information to value the fixed income securities.
- *Alternative Investments* – Investments in alternative investments are comprised of either real estate funds, real estate investment trusts, or commodity funds, and are valued using unadjusted quoted prices obtained from active markets.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and the Company's funding policy, during 2018 our pension contribution is expected to be $12,484.

The Company has a 401(k) savings plan, which is a defined contribution plan and covers substantially all employees. The Company makes matching contributions that are based on a percentage of an employee's contribution, subject to specific limitations, as well as, non-discretionary contributions based on eligible hourly wages for certain union employees, discretionary year-end contributions based on an employee's eligible compensation, and employer profit sharing contributions. Participants may diversify their Company matching account balances into other investments offered under the 401(k) savings plan. The Company's contributions, which are recorded as compensation expense, were $5,374, $4,988, and $5,001, for the years ended December 31, 2017, 2016, and 2015, respectively.

**Note 16 – *Water and Wastewater Rates***

On June 7, 2012, Aqua Pennsylvania reached a settlement agreement in its rate filing with the Pennsylvania Public Utility Commission, which in addition to a water rate increase, provided for a reduction in current income tax expense as a result of the recognition of qualifying income tax benefits upon Aqua Pennsylvania changing its tax accounting method to permit the expensing of qualifying utility asset improvement costs that historically have been capitalized and depreciated for book and tax purposes. In December 2012, Aqua Pennsylvania implemented this change which provides for the flow-through of income tax benefits that resulted in a substantial reduction in income tax expense and greater net income and cash flow. This change allowed Aqua Pennsylvania to suspend its water Distribution System Improvement Charges in 2013 and lengthen the amount of time until the next Aqua Pennsylvania rate case. Beginning on October 1, 2017, Aqua Pennsylvania initiated a water infrastructure rehabilitation surcharge for the capital invested since the last rate proceeding and expects to file a base rate case in 2018.

The Company's operating subsidiaries were allowed rate increases totaling $7,558 in 2017, $3,434 in 2016, and $3,347 in 2015, represented by five, six, and four rate decisions, respectively. Revenues from these increases realized in the year of grant were approximately $6,343, $1,788, and $2,887 in 2017, 2016, and 2015, respectively.

Six states in which the Company operates permit water utilities, and in five states wastewater utilities, to add a surcharge to their water or wastewater bills to offset the additional depreciation and capital costs related to infrastructure system replacement and rehabilitation projects completed and placed into service between base rate filings. Currently, Pennsylvania, Illinois, Ohio, Indiana, New Jersey, and North Carolina allow for the use of this surcharge. The surcharge for infrastructure system replacements and rehabilitations is typically adjusted periodically based on additional qualified capital expenditures completed or anticipated in a future period, is capped as a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. The surcharge for infrastructure system replacements and rehabilitations provided revenues in 2017, 2016, and 2015 of $10,255, $7,379, and $3,261, respectively.

**Note 17 – *Segment Information***

The Company has ten operating segments and one reportable segment. The Regulated segment, the Company's single reportable segment, is comprised of eight operating segments representing our water and wastewater regulated utility companies which are organized by the states where we provide water and wastewater services. These operating segments are aggregated into one reportable segment since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment.

Two operating segments are included within the Other category below. These segments are not quantitatively significant and are comprised of Aqua Infrastructure and Aqua Resources. In addition to these segments, Other is comprised of other business activities not included in the reportable segment, including corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

(In thousands of dollars, except per share amounts)

The following table presents information about the Company's reportable segment:

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 804,905 | $ 4,620 | $ 809,525 | $ 800,107 | $ 19,768 | $ 819,875 |
| Operations and maintenance expense | 286,962 | 244 | 287,206 | 285,347 | 19,550 | 304,897 |
| Depreciation | 136,246 | 56 | 136,302 | 131,835 | (848) | 130,987 |
| Amortization | 240 | 182 | 422 | 2,076 | (55) | 2,021 |
| Operating income (loss) | 326,935 | 2,032 | 328,967 | 326,933 | (1,348) | 325,585 |
| Interest expense, net | 81,974 | 6,367 | 88,341 | 76,222 | 4,372 | 80,594 |
| Allowance for funds used during construction | 15,211 | - | 15,211 | 8,815 | - | 8,815 |
| Equity earnings in joint venture | - | (331) | (331) | - | (976) | (976) |
| Income tax (benefit) | 14,107 | 2,807 | 16,914 | 24,956 | (3,978) | 20,978 |
| Net income (loss) | 246,548 | (6,810) | 239,738 | 234,922 | (740) | 234,182 |
| Capital expenditures | 478,077 | 12 | 478,089 | 381,965 | 1,031 | 382,996 |
| Total assets | 6,236,109 | 96,354 | 6,332,463 | 6,066,477 | 92,514 | 6,158,991 |
| Goodwill | 37,389 | 4,841 | 42,230 | 37,367 | 4,841 | 42,208 |

| | 2015 | | |
|---|---|---|---|
| | Regulated | Other and Eliminations | Consolidated |
| Operating revenues | $ 779,613 | $ 34,591 | $ 814,204 |
| Operations and maintenance expense | 282,866 | 26,444 | 309,310 |
| Depreciation | 125,146 | 144 | 125,290 |
| Amortization | 3,364 | 83 | 3,447 |
| Operating income | 315,876 | 5,224 | 321,100 |
| Interest expense, net | 72,703 | 3,833 | 76,536 |
| Allowance for funds used during construction | 6,219 | - | 6,219 |
| Equity loss in joint venture | - | 35,177 | 35,177 |
| Income tax (benefit) | 26,379 | (11,417) | 14,962 |
| Net Income (loss) | 224,122 | (22,332) | 201,790 |
| Capital expenditures | 363,594 | 1,095 | 364,689 |
| Total assets | 5,645,780 | 72,093 | 5,717,873 |
| Goodwill | 27,246 | 6,620 | 33,866 |

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Selected Quarterly Financial Data (Unaudited)

Aqua America, Inc. and Subsidiaries

(In thousands of dollars, except per share amounts)

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter | Year |
|---|---|---|---|---|---|
| 2017 | | | | | |
| Operating revenues | $ 187,787 | $ 203,418 | $ 215,008 | $ 203,312 | $ 809,525 |
| Operations and maintenance expense | 69,128 | 70,853 | 67,982 | 79,243 | 287,206 |
| Operating income | 69,896 | 84,612 | 97,486 | 76,973 | 328,967 |
| Net income | 49,072 | 60,968 | 76,225 | 53,473 | 239,738 |
| Basic net income per common share | 0.28 | 0.34 | 0.43 | 0.30 | 1.35 |
| Diluted net income per common share | 0.28 | 0.34 | 0.43 | 0.30 | 1.35 |
| Dividend paid per common share | 0.1913 | 0.1913 | 0.2047 | 0.2047 | 0.7920 |
| Dividend declared per common share | 0.1913 | 0.1913 | 0.2047 | 0.2047 | 0.7920 |
| Price range of common stock: | | | | | |
| high | 32.32 | 34.41 | 34.66 | 39.55 | 39.55 |
| low | 29.41 | 31.18 | 32.30 | 33.12 | 29.41 |
| 2016 | | | | | |
| Operating revenues | $ 192,607 | $ 203,876 | $ 226,593 | $ 196,799 | $ 819,875 |
| Operations and maintenance expense | 73,541 | 73,994 | 79,812 | 77,550 | 304,897 |
| Operating income | 72,331 | 83,493 | 97,799 | 71,962 | 325,585 |
| Net income | 51,737 | 59,626 | 73,170 | 49,649 | 234,182 |
| Basic net income per common share | 0.29 | 0.34 | 0.41 | 0.28 | 1.32 |
| Diluted net income per common share | 0.29 | 0.33 | 0.41 | 0.28 | 1.32 |
| Dividend paid per common share | 0.178 | 0.178 | 0.1913 | 0.1913 | 0.7386 |
| Dividend declared per common share | 0.178 | 0.178 | 0.1913 | 0.1913 | 0.7386 |
| Price range of common stock: | | | | | |
| high | 32.44 | 35.66 | 35.83 | 31.29 | 35.83 |
| low | 28.35 | 30.31 | 29.53 | 28.03 | 28.03 |

High and low prices of the Company’s common stock are as reported on the New York Stock Exchange.

Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

None.

Item 9A. *Controls and Procedures*

(a) Evaluation of Disclosure Controls and Procedures – Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this Annual Report are effective to provide reasonable assurance that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure. A controls system cannot provide absolute assurance, however, that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

(b) Management's Report on Internal Control Over Financial Reporting
Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. The Company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In assessing the effectiveness of internal control over financial reporting, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework* (2013). As a result of management's assessment and based on the criteria in the framework, management has concluded that, as of December 31, 2017, the Company's internal control over financial reporting was effective.

(c) Attestation Report of the Registered Public Accounting Firm – The effectiveness of our internal control over financial reporting as of December 31, 2017 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

(d) Changes in Internal Control Over Financial Reporting – No change in our internal control over financial reporting occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. *Other Information*

None.

## PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information appearing in the sections captioned *Information Regarding Nominees and Directors*, *Corporate Governance – Code of Ethics*, *– Board and Board Committees*, and *Section 16(a) Beneficial Ownership Reporting Compliance* of the definitive Proxy Statement relating to our 2018, annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K (the "Form 10-K), is incorporated by reference herein.

We make available free of charge within the Corporate Governance portion of the investor relations section of our web site, at www.aquaamerica.com, our Corporate Governance Guidelines, the Charters of each Committee of our Board of Directors, and our Code of Ethical Business Conduct (the "Code of Ethics"). Amendments to the Code of Ethics, and any grant of a waiver from a provision of the Code requiring disclosure under applicable rules of the SEC, will be disclosed on our web site. The reference to our web site is intended to be an inactive textual reference only, and the contents of such web site are not incorporated by reference herein and should not be considered part of this or any other report that we file with or furnish to the SEC.

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Our Executive Officers

The following table and the notes thereto set forth information with respect to our executive officers, including their names, ages, positions with Aqua America and business experience during the last five years:

| Name | Age | Position with Aqua America (1) |
|---|---|---|
| Christopher H. Franklin | 52 | Chairman (January 2018 to present); President and Chief Executive Officer (July 2015 to present); Executive Vice President and President and Chief Operating Officer, Regulated Operations (January 2012 to July 2015); Regional President – Midwest and Southern Operations and Senior Vice President, Corporate and Public Affairs (January 2010 to January 2012); Regional President, Aqua America – Southern Operations and Senior Vice President, Public Affairs and Customer Operations (February 2007 to January 2010); Vice President, Public Affairs and Customer Operations (May 2005 to February 2007); Vice President, Corporate and Public Affairs (February 1997 to May 2005); Manager Corporate and Public Affairs (December 1992 to February 1997) |
| David P. Smeltzer | 59 | Executive Vice President and Chief Financial Officer (January 2012 to present); Chief Financial Officer (February 2007 to January 2012); Senior Vice President - Finance and Chief Financial Officer (December 1999 to February 2007); Vice President - Finance and Chief Financial Officer (May 1999 to December 1999); Vice President - Rates and Regulatory Relations, Philadelphia Suburban Water Company (March 1991 to May 1999); Vice President - Controller of Philadelphia Suburban Water Company (March 1986 to March 1991) |
| Richard S. Fox | 56 | Chief Operating Officer (July 2015 to present); Regional President, Regulated Utilities (January 2012 to July 2015); President Aqua Utilities, Florida, Inc. (August 2011 to January 2012); Vice President, Customer Service (June 2002 to August 2011) |
| Christopher P. Luning | 50 | Senior Vice President, General Counsel, and Secretary (April 2012 to present); Vice President Corporate Development and Corporate Counsel (June 2008 to April 2012); Vice President and Deputy General Counsel (May 2005 to June 2008); Assistant General Counsel (March 2003 to May 2005) |
| William C. Ross | 72 | Senior Vice President, Engineering and Environmental Affairs (January 2012 to present); Vice President, Engineering and Environmental Affairs (February 2001 to January 2012); Senior Manager Planning and Engineering Philadelphia Suburban Water Company (February 1998 to February 2001) |
| Robert A. Rubin | 55 | Senior Vice President, Controller and Chief Accounting Officer (January 2012 to present); Vice President, Controller and Chief Accounting Officer (May 2005 to January 2012); Controller and Chief Accounting Officer (March 2004 to May 2005); Controller (March 1999 to March 2004); Assistant Controller (June 1994 to March 1999); Accounting Manager (June 1989 to June 1994) |
| Daniel J. Schuller | 48 | Executive Vice President, Strategy and Corporate Development (July 2015 to present); Investment Principal – J.P. Morgan Asset Management – Infrastructure Investments Group (2007 to 2015) |

Prior to January 16, 2004, Aqua Pennsylvania was known as Philadelphia Suburban Water Company.

(1) In addition to the capacities indicated, the individuals named in the above table hold other offices or directorships with subsidiaries of the Company. Officers serve at the discretion of the Board of Directors.

Item 11. *Executive Compensation*

The information appearing in the sections captioned *Executive Compensation* and *Director Compensation* of the definitive Proxy Statement relating to our 2018 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Form 10-K, is incorporated by reference herein.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Ownership of Common Stock - The information appearing in the section captioned Ownership of Common Stock of the Proxy Statement relating to our 2018 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Form 10-K, is incorporated by reference herein.

Securities Authorized for Issuance under Equity Compensation Plans - The following table provides information for our equity compensation plans as of December 31, 2017:

Equity Compensation Plan Information

| Plan Category | Number of securities to be issued upon exercise of outstanding options, warrants and rights (a) | Weighted-average exercise price of outstanding options, warrants and rights (b) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) |
|---|---|---|---|
| Equity compensation plans approved by security holders | 943,452 (1) | $19.83 (2) | 3,720,624 |
| Equity compensation plans not approved by security holders | - | - | - |
| Total | 943,452 | 19.83 | 3,720,624 |

(1) Consists of 364,932 shares issuable upon exercise of outstanding options, 461,733 shares issuable upon conversion of outstanding performance share units, and 116,787 shares issuable upon conversion of outstanding restricted share units.

(2) Calculated based upon outstanding options of 364,932 shares of our common stock.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information appearing in the sections captioned *Corporate Governance – Director Independence* and *– Policies and Procedures For Approval of Related Person Transactions* of the definitive Proxy Statement relating to our 2018 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Form 10-K, is incorporated by reference herein.

Item 14. *Principal Accountant Fees and Services*

The information appearing in the section captioned *Proposal No. 2 – Services and Fees* of the definitive Proxy Statement relating to our 2018 annual meeting of shareholders, to be filed within 120 days after the end of the fiscal year covered by this Form 10-K, is incorporated by reference herein.

# PART IV

## Item 15. *Exhibits and Financial Statement Schedules*

Financial Statements. The consolidated financial statements and supplementary data included in Part II, Item 8 are hereby incorporated by reference herein.

Financial Statement Schedules.

Schedule 1. – Condensed Parent Company Financial Statements. All other schedules are omitted because they are not applicable or not required, or because the required information is included in the consolidated financial statements or notes thereto.

Exhibits, Including Those Incorporated by Reference. A list of exhibits filed as part of this Form 10-K is set forth in the Exhibit Index hereto which is incorporated by reference herein. Where so indicated, exhibits which were previously filed are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated in the exhibit index.

## Item 16. *Form 10-K Summary*

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has elected not to include such summary information in this Annual Report.

EXHIBIT INDEX

| Exhibit Number | Exhibit Description | Incorporated by Reference to | | | |
|---|---|---|---|---|---|
| | | Form | File No. | Exhibit(s) | Filing Date |
| 3.1 | Amended and Restated Articles of Incorporation of Aqua America, Inc., dated as of May 10, 2012 | 8-K | 001-06659 | 3.1 | May 11, 2012 |
| 3.2 | Amended and Restated Bylaws of Aqua America, Inc. (as amended effective as of May 10, 2012) | 8-K | 001-06659 | 3.2 | May 11, 2012 |
| 4.1.1 | Indenture of Mortgage dated as of January 1, 1941 between Aqua Pennsylvania, Inc. (f/k/a Philadelphia Suburban Water Company) and The Bank of New York Mellon Trust Company, as successor trustee to First Pennsylvania Bank, N.A. (f/k/a The Pennsylvania Company for Insurance on Lives and Granting Annuities) | 10-K | 001-06659 | 4.1.1 | February 26, 2016 |
| 4.1.2 | Twenty-fourth Supplemental Indenture dated as of June 1, 1988 | 10-K | 001-06659 | 4.1.2 | February 26, 2016 |
| 4.1.3 | Twenty-sixth Supplemental Indenture dated as of November 1, 1991 | 10-K | 001-06659 | 4.1.3 | February 26, 2016 |
| 4.1.4 | Twenty-ninth Supplemental Indenture dated as of March 30, 1995 | 10-Q | 001-06659 | 4.17 | May 10, 1995 |
| 4.1.5 | Thirty-third Supplemental Indenture, dated as of November 15, 1999 | 10-K | 001-06659 | 4.27 | March 29, 2000 |
| 4.1.6 | Thirty-fifth Supplemental Indenture, dated as of January 1, 2002 | 10-K | 001-06659 | 4.22 | March 20, 2002 |
| 4.1.7 | Forty-second Supplemental Indenture, dated as of December 1, 2007 | 10-K | 001-06659 | 4.36 | February 27, 2008 |
| 4.1.8 | Forty-third Supplemental Indenture, dated as of December 1, 2008 | 10-K | 001-06659 | 4.37 | February 27, 2009 |
| 4.1.9 | Forty-fourth Supplemental Indenture, dated as of July 1, 2009 | 10-Q | 001-06659 | 4.38 | August 6, 2009 |
| 4.1.10 | Forty-fifth Supplemental Indenture, dated as of October 15, 2009 | 10-K | 001-06659 | 4.39 | February 26, 2010 |
| 4.1.11 | Forty-sixth Supplemental Indenture, dated as of October 15, 2010 | 10-K | 001-06659 | 4.35 | February 25, 2011 |
| 4.1.12 | Forty-seventh Supplemental Indenture, dated as of October 15, 2012 | 10-K | 001-06659 | 4.24 | February 28, 2013 |
| 4.1.13 | Forty-eighth Supplemental Indenture, dated as of October 1, 2013 | 10-K | 001-06659 | 4.1.17 | March 3, 2014 |
| 4.1.14 | Form of Supplemental Indenture during and after 2014 | 10-K | 001-06659 | 4.1.15 | February 26, 2016 |
| 4.1.14.1 | Schedule of Outstanding Supplemental Indentures during and after 2014 | ^ | ^ | ^ | ^ |

| | | | | | |
|---|---|---|---|---|---|
| 4.2 | Note Purchase Agreement, dated July 31, 2003, by and among the Aqua America, Inc. and the note purchasers thereto | 10-Q | 001-06659 | 4.27 | November 13, 2003 |
| 4.3 | Bond Purchase Agreement, dated December 12, 2007, by and among the Montgomery County Industrial Development Authority, Aqua Pennsylvania, Inc. and Sovereign Securities Corporation, LLC | 10-K | 001-06659 | 10.34 | February 27, 2008 |
| 4.4 | Bond Purchase Agreement, dated December 4, 2008, by and among the Pennsylvania Economic Development Financing Authority, Aqua Pennsylvania, Inc. and Sovereign Securities Corporation, LLC | 10-K | 001-06659 | 10.35 | February 27, 2009 |
| 4.5 | Bond Purchase Agreement, dated June 30, 2009, by and among the Pennsylvania Economic Development Financing Authority, Aqua Pennsylvania, Inc., Jeffries and Company, Inc., and Janney Montgomery Scott LLC | 10-Q | 001-06659 | 10.52 | August 6, 2009 |
| 4.6 | Bond Purchase Agreement , dated October 20, 2009, by and among the Pennsylvania Economic Development Financing Authority, Aqua Pennsylvania, Inc., Jeffries and Company, Inc., Janney Montgomery Scott LLC, and PNC Capital Markets LLC | 10-K | 001-06659 | 10.59 | February 26, 2010 |
| 4.7 | Bond Purchase Agreement, dated October 27, 2010, by and among the Pennsylvania Economic Development Financing Authority, Aqua Pennsylvania, Inc., Jeffries and Company, Inc., PNC Capital Markets LLC, and TD Securities (USA) LLC | 10-K | 001-06659 | 10.51 | February 25, 2011 |
| 4.8 | Bond Purchase Agreement , dated November 8, 2012, by and among Aqua Pennsylvania, Inc., Teachers Insurance and Annuity Association, John Hancock Life Insurance Company, John Hancock Life Insurance Company of New York, John Hancock Life & Health Insurance Company, The Lincoln National Life Insurance Company, Lincoln Life & Annuity Company of New York, New York Life Insurance Company, New York Life Insurance and Annuity Corporation, Minnesota Life Insurance Company, United Health Care Insurance Company, American Republic Insurance Company, Western Fraternal Life Association | 10-K | 001-06659 | 10.54 | February 28, 2013 |

| | | | | | |
|---|---|---|---|---|---|
| 4.9 | Bond Purchase Agreement, dated October 24, 2013, by and among Aqua Pennsylvania, Inc., John Hancock Life Insurance Company (U.S.A), John Hancock Life Insurance Company of New York, John Hancock Life & Health Insurance Company, The Lincoln National Life Insurance Company, Thrivent Financial for Lutherans, United Insurance Company of America, Equitable Life & Casualty Insurance Company, Catholic United Financial, and Great Western Insurance Company | 10-K | 001-06659 | 10.45 | March 3, 2014 |
| 4.10 | Bond Purchase Agreement, dated December 29, 2014, by and among Aqua Pennsylvania, Inc., Thrivent Financial for Lutherans, State Farm Life Insurance Company, John Hancock Life Insurance Company (U.S.A), Phoenix Life Insurance Company, PHL Variable Insurance Company, United of Omaha Life Insurance Company, Mutual of Omaha Insurance Company, and Companion Life Insurance Company | 10-K | 001-06659 | 10.58 | February 27, 2015 |
| 4.11 | Bond Purchase Agreement, dated December 3, 2015 by and among Aqua Pennsylvania, Inc., Thrivent Financial for Lutherans, State Farm Life Insurance Company, John Hancock Life Insurance Company (U.S.A), The Lincoln National Life Insurance Company, Teachers Insurance And Annuity Association Of America, CMFG Life Insurance Company, Genworth Life Insurance Company, Phoenix Life Insurance Company, PHL Variable Insurance Company, United Of Omaha Life Insurance Company, The State Life Insurance Company, Pioneer Mutual Life Insurance Company, MONY Life Insurance Company | 10-K | 001-06659 | 4.12 | February 26, 2016 |
| 4.12 | Note Purchase Agreement, dated November 3, 2016, by and among Aqua America Inc. and the note purchasers thereto | 10-K | 001-06659 | 4.13 | February 24, 2017 |
| 4.13 | Bond Purchase Agreement, dated December 15, 2016 by and among Aqua Pennsylvania, Inc., Teachers Insurance and Annuity Association of America, New York Life Insurance Company, New York Life Insurance and Annuity Corporation, John Hancock Life Insurance Company, American Equity Investment Life Insurance Company, Genworth Life and Annuity Insurance Company, Phoenix Life Insurance Company, PHL Variable Insurance Company, American United Life Insurance Company, The State Life Insurance Company, and Pioneer Mutual Life Insurance Company | 10-K | 001-06659 | 4.14 | February 24, 2017 |
| 4.14 | Bond Purchase Agreement, dated July 10, 2017 by and among Aqua Illinois, Inc., Teachers Insurance and Annuity Association of America | 10-Q | 001-06659 | 4.1 | November 2, 2017 |

| | | | | | |
|---|---|---|---|---|---|
| 4.15 | Bond Purchase Agreement, dated July 20, 2017 by and among Aqua Pennsylvania, Inc., New York Life Insurance Company, New York Life Insurance and Annuity Corporation, New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Account (BOLI 3), New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Account (BOLI 3-2) | 10-Q | 001-06659 | 4.2 | November 2, 2017 |
| 10.1 | Revolving Credit Agreement, dated as of March 23, 2012, between Aqua America, Inc. and PNC Bank, National Association, CoBank, ACB, and Huntington National Bank | 10-Q | 001-06659 | 10.60 | May 7, 2012 |
| 10.1.1 | First Amendment to Revolving Credit Agreement , dated as of January 31, 2013, between Aqua America, Inc. and PNC Bank, National Association, CoBank, ACB, and Huntington National Bank | 10-Q | 001-06659 | 10.53 | November 6, 2014 |
| 10.1.2 | Second Amendment to Revolving Credit Agreement, dated as of August 20, 2014, between Aqua America, Inc. and PNC Bank, National Association, CoBank, ACB, and Huntington National Bank | 10-Q | 001-06659 | 10.54 | November 6, 2014 |
| 10.1.3 | Third Amendment to Revolving Credit Agreement, dated as of February 24, 2016, between Aqua America, Inc. and PNC Bank, National Association, CoBank, ACB, Huntingdon National Bank, and Bank of America, N.A. | 10-Q | 001-06659 | 10.2.3 | May 6, 2016 |
| 10.1.4 | Amended and Restated Revolving Credit Agreement, dated as of November 17, 2016 between Aqua Pennsylvania and PNC Bank, National Association, TD Bank, N.A., Citizens Bank of Pennsylvania, and Huntington National Bank | 10-K | 001-06659 | 10.2.4 | February 24, 2017 |
| 10.1.5 | First Amendment to Revolving Credit Agreement, dated as of November 16, 2017 between Aqua Pennsylvania and PNC Bank, National Association, Citizens Bank of Pennsylvania, TD Bank, N.A., and Huntington National Bank | ^ | ^ | ^ | ^ |
| 10.2 | Aqua America, Inc. Deferred Compensation Plan Master Trust Agreement with PNC Bank, National Association, dated as of December 31, 1996* | 10-K | 001-06659 | 10.24 | March 25, 1997 |
| 10.2.1 | Amendment 2008-1 to the Aqua America, Inc. Deferred Compensation Plan Master Trust Agreement, dated as of December 15, 2008* | 10-K | 001-06659 | 10.50 | February 27, 2009 |
| 10.3 | Aqua America, Inc. 2009 Executive Deferral Plan (as amended and restated effective January 1, 2009)* | S-8 | 333-156047 | 4.1 | December 10, 2008 |
| 10.4 | Aqua America, Inc. Supplemental Pension Benefit Plan for Salaried Employees (as amended and restated effective January 1, 2011)* | 10-K | 001-06659 | 10.58 | February 27, 2012 |
| 10.5 | Aqua America. Inc. Dividend Reinvestment and Direct Stock Purchase Plan* | S-3ASR | 333-219545 | N/A | July 28, 2017 |

| | | | | | |
|---|---|---|---|---|---|
| 10.6 | Aqua America, Inc. 2004 Equity Compensation Plan (as amended and restated as of January 1, 2009)* | 10-K | 001-06659 | 10.36 | February 27, 2009 |
| 10.6.1 | Form of Incentive Stock Option and Dividend Equivalent Grant Agreement* | 10-K | 001-06659 | 10.49 | February 27, 2009 |
| 10.6.2 | Form of Amendment to Incentive Stock Option and Dividend Equivalent Grant Agreements for executive officers * | 10-K | 001-06659 | 10.8.2 | February 26, 2016 |
| 10.7 | Aqua America, Inc. 2009 Omnibus Equity Compensation Plan (as amended effective February 22, 2017) * | 10-K | 001-06659 | 10.8 | February 24, 2017 |
| 10.7.1 | Form of Performance-Based Share Unit Grant for Chief Executive Officer* | 10-K | 001-06659 | 10.9.1 | February 26, 2016 |
| 10.7.2 | Performance-Based Share Unit Grant Terms and Conditions for Chief Executive Officer* | 10-Q | 001-06659 | 10.51(B) | May 8, 2014 |
| 10.7.3 | Form of Performance-Based Share Unit Grant for all other executive officers* | 10-Q | 001-06659 | 10.36 | May 6, 2015 |
| 10.7.4 | Performance-Based Share Unit Grant Terms and Conditions for all other executive officers* | 10-Q | 001-06659 | 10.37 | May 6, 2015 |
| 10.7.5 | Form of Restricted Stock Unit Grant for Chief Executive Officer* | 10-K | 001-06659 | 10.9.5 | February 26, 2016 |
| 10.7.6 | Restricted Stock Unit Grant Terms and Conditions for Chief Executive Officer* | 10-Q | 001-06659 | 10.52(B) | May 8, 2014 |
| 10.7.7 | Form of Restricted Stock Unit Grant for all other executive officers* | 10-Q | 001-06659 | 10.40 | May 6, 2015 |
| 10.7.8 | Restricted Stock Unit Grant Terms and Conditions for all other executive officers* | 10-Q | 001-06659 | 10.41 | May 6, 2015 |
| 10.7.9 | Performance-Based Share Unit Grant Terms and Conditions* | 10-Q | 001-06659 | 10.1 | May 4, 2017 |
| 10.7.10 | Restricted Stock Unit Grant Terms and Conditions for Chief Executive Officer* | 10-Q | 001-06659 | 10.2 | May 4, 2017 |
| 10.7.11 | Restricted Stock Unit Grant Terms and Conditions for all other executive officers* | 10-Q | 001-06659 | 10.3 | May 4, 2017 |
| 10.7.12 | Stock Option Grant Terms and Conditions* | 10-Q | 001-06659 | 10.4 | May 4, 2017 |
| 10.8 | Aqua America, Inc. 2012 Employee Stock Purchase Plan* | 10-K | 001-06659 | 10.10 | February 26, 2016 |
| 10.9 | Aqua America, Inc. and Subsidiaries Annual Cash Incentive Compensation Plan (adopted February 26, 2013)* | 10-K | 001-06659 | 10.56 | February 28, 2013 |
| 10.10 | Form of Change in Control Agreement between the Company and executive officers* | 10-Q | 001-06659 | 10.1 | November 6, 2015 |
| 10.10.1 | Schedule of Change in Control Agreement between the Company and executive officers* | 10-K | 001-06659 | 10.12.1 | February 26, 2016 |
| 10.11 | Change in Control Agreement, dated December 31, 2008, between Aqua America, Inc. and Christopher H. Franklin* | 10-K | 001-06659 | 10.46 | February 27, 2009 |
| 10.12 | Non-Employee Directors' Compensation for 2016* | 10-K | 001-06659 | 10.16 | February 26, 2016 |
| 10.13 | Employment Agreement, dated June 2, 2015, between Aqua America, Inc. and Christopher Franklin* | 8-K | 001-06659 | 10.1 | June 3, 2015 |
| 10.14 | Non-Employee Directors' Compensation effective January 1, 2018* | 8-K | 001-06659 | 10.1 | December 15, 2017 |

| | | | | | |
|---|---|---|---|---|---|
| 21.1 | Subsidiaries of Aqua America, Inc. | ^ | ^ | ^ | ^ |
| 23.1 | Consent of Independent Registered Public Accounting Firm – PricewaterhouseCoopers LLP | ^ | ^ | ^ | ^ |
| 31.1 | Certification of Chief Executive Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934 | ^ | ^ | ^ | ^ |
| 31.2 | Certification of Chief Financial Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934 | ^ | ^ | ^ | ^ |
| 32.1 | Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350 | ^^ | ^^ | ^^ | ^^ |
| 32.2 | Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350 | ^^ | ^^ | ^^ | ^^ |
| 101.INS | XBRL Instance Document | ^ | ^ | ^ | ^ |
| 101.SCH | XBRL Taxonomy Extension Schema Document | ^ | ^ | ^ | ^ |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document | ^ | ^ | ^ | ^ |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document | ^ | ^ | ^ | ^ |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document | ^ | ^ | ^ | ^ |
| 101.PRES | XBRL Taxonomy Extension Presentation Linkbase Document | ^ | ^ | ^ | ^ |

In accordance with Item 601(b)(4)(iii)(A) of Regulation S-K, copies of specific instruments defining the rights of holders of long-term debt of the Company or its subsidiaries are not filed herewith. Pursuant to this regulation, we hereby agree to furnish a copy of any such instrument to the SEC upon request.

*Indicates management contract or compensatory plan or arrangement

^ Filed herewith

^^Furnished herewith

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AQUA AMERICA, INC.

/s/ Christopher H. Franklin
Christopher H. Franklin
Chairman, President and Chief Executive Officer

Date: February 28, 2018

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report on Form 10-K has been signed below by the following persons on behalf of the Registrant on February 28, 2018 in the capacities indicated below.

| Signature | Title |
|---|---|
| /s/ Christopher H. Franklin<br>Christopher H. Franklin | Chairman, President and Chief Executive Officer, Director (Principal Executive Officer) |
| /s/ David P. Smeltzer<br>David P. Smeltzer | Executive Vice President and Chief Financial Officer (Principal Financial Officer) |
| /s/ Robert A. Rubin<br>Robert A. Rubin | Senior Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer) |
| /s/ Carolyn J. Burke<br>Carolyn J. Burke | Director |
| /s/ Nicholas DeBenedictis<br>Nicholas DeBenedictis | Chairman Emeritus and Director |
| /s/ Richard H. Glanton<br>Richard H. Glanton | Director |
| /s/ William P. Hankowsky<br>William P. Hankowsky | Director |
| /s/ Daniel J. Hilferty<br>Daniel J. Hilferty | Director |
| /s/ Wendell F. Holland<br>Wendell F. Holland | Director |
| /s/ Ellen T. Ruff<br>Ellen T. Ruff | Director |

Aqua America, Inc.

Schedule 1 – Condensed Parent Company Financial Statements

Condensed Balance Sheets

(In thousands of dollars)

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Accounts receivable, net | $ 139 | $ 441 |
| Accounts receivable - affiliates | 55,108 | 60,264 |
| Prepayments and other current assets | 3,578 | 3,782 |
| Total current assets | 58,825 | 64,487 |
| | | |
| Deferred charges and other assets, net | 29,397 | 22,231 |
| Notes receivable - affiliates | 329,738 | 345,149 |
| Deferred income tax asset | 32,782 | 67,508 |
| Investment in subsidiaries | 2,213,102 | 2,029,395 |
| Total assets | $ 2,663,844 | $ 2,528,770 |
| **Liabilities and Equity** | | |
| Stockholders' equity | $ 1,957,621 | $ 1,850,068 |
| | | |
| Long-term debt, excluding current portion, net of debt issuance costs | 497,958 | 483,817 |
| | | |
| Current liabilities: | | |
| Current portion of long-term debt | 30,800 | 26,050 |
| Accrued interest | 3,267 | 3,469 |
| Accounts payable - affiliates | 34,537 | 23,582 |
| Other accrued liabilities | 9,329 | 10,707 |
| Total current liabilities | 77,933 | 63,808 |
| | | |
| Other liabilities | 130,332 | 131,077 |
| Total liabilities and equity | $ 2,663,844 | $ 2,528,770 |

The accompanying condensed notes are an integral part of these condensed financial statements.

Aqua America, Inc.

Schedule 1 – Condensed Parent Company Financial Statements

Condensed Statements of Income and Comprehensive Income

(In thousands, except per share amounts)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Other income | $ 1,629 | $ 3,301 | $ 3,034 |
| Operating expense and other expenses | 53 | 4,569 | 1,440 |
| Operating income (loss) | 1,576 | (1,268) | 1,594 |
| Interest expense, net | 5,210 | 2,901 | 1,833 |
| Gain on sale of other asset | - | (87) | - |
| Loss before equity in earnings of subsidiaries and income taxes | (3,634) | (4,082) | (239) |
| Equity in earnings of subsidiaries | 244,327 | 236,309 | 201,003 |
| Income before income taxes | 240,693 | 232,227 | 200,764 |
| Provision for income taxes | 955 | (1,955) | (1,026) |
| Net income | $ 239,738 | $ 234,182 | $ 201,790 |
| | | | |
| Comprehensive income | $ 239,929 | $ 234,164 | $ 201,689 |
| | | | |
| Net income per common share: | | | |
| Basic | $ 1.35 | $ 1.32 | $ 1.14 |
| Diluted | $ 1.35 | $ 1.32 | $ 1.14 |
| | | | |
| Average common shares outstanding during the period: | | | |
| Basic | 177,612 | 177,273 | 176,788 |
| Diluted | 178,175 | 177,846 | 177,517 |

The accompanying condensed notes are an integral part of these condensed financial statements.

Aqua America, Inc.

Schedule 1 – Condensed Parent Company Financial Statements

Condensed Statements of Cash Flows

(In thousands of dollars)

| | Years ended December 31, | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Net cash flows from operating activities | $ 98,821 | $ 84,649 | $ 152,916 |
| Cash flows from investing activities: | | | |
| Acquisitions of utility systems and other, net | (220) | (3,713) | (26,722) |
| Net proceeds from the sale of utility systems and other assets | - | 205 | - |
| Decrease (increase) in investment of subsidiary | 20,021 | (26,470) | (27,596) |
| Other | 1,811 | 204 | (1,031) |
| Net cash flows from (used in) investing activities | 21,612 | (29,774) | (55,349) |
| Cash flows from financing activities: | | | |
| Proceeds from long-term debt | 286,969 | 418,957 | 298,879 |
| Repayments of long-term debt | (268,050) | (346,050) | (259,158) |
| Proceeds from issuing common stock | 1,453 | 1,388 | 677 |
| Proceeds from exercised stock options | 2,873 | 4,260 | 7,540 |
| Share-based compensation windfall tax benefits | - | 1,332 | 1,843 |
| Repurchase of common stock | (2,167) | (3,028) | (25,247) |
| Dividends paid on common stock | (140,660) | (130,923) | (121,248) |
| Other | (851) | (811) | (853) |
| Net cash flows used in financing activities | (120,433) | (54,875) | (97,567) |
| Net change in cash and cash equivalents | - | - | - |
| Cash and cash equivalents at beginning of year | - | - | - |
| Cash and cash equivalents at end of year | $ - | $ - | $ - |

See Note 1 - *Basis of Presentation*

The accompanying condensed notes are an integral part of these condensed financial statements.

Aqua America, Inc.

Notes to Condensed Parent Company Financial Statements

(In thousands of dollars)

**Note 1 – *Basis of Presentation*** – The accompanying condensed financial statements of Aqua America, Inc. (the "Parent") should be read in conjunction with the consolidated financial statements and notes thereto of Aqua America, Inc. and subsidiaries (collectively, the "Registrant") included in Part II, Item 8 of the Form 10-K. The Parent's significant accounting policies are consistent with those of the Registrant.

The Parent borrows from third parties and provides funds to its subsidiaries, in support of their operations. Amounts owed to the Parent for borrowings under this facility are reflected as inter-company receivables on the condensed balance sheets. The interest rate charged to the subsidiaries is sufficient to cover the Parent's interest costs under its associated borrowings.

As of December 31, 2017 and 2016, the Parent had a current accounts receivable – affiliates balance of $55,108 and $60,264. As of December 31, 2017 and 2016, the Parent had a notes receivable – affiliates balance of $329,738 and $345,149. The changes in these balances represent non-cash adjustments that are recorded through the Parent's investment in subsidiaries.

In the ordinary course of business, the Parent indemnifies a third-party for surety bonds issued on behalf of subsidiary companies, guarantees the performance of one of its regulated utilities in a jurisdiction that requires such guarantees, and guarantees several projects associated with the treatment of water in a jurisdiction.

**Note 2 – *Dividends from subsidiaries*** – Dividends in the amount of $51,100, $45,750, and $74,866 were paid to the Parent by its wholly-owned subsidiaries during the years ended December 31, 2017, 2016, and 2015, respectively.

**Note 3 – *Long-term debt*** – the Parent has long-term debt under unsecured note purchase agreements with investors in addition to its $250,000 revolving credit agreement. Excluding amounts due under the revolving credit agreement, the debt maturities of the Parent's long-term debt are as follows:

| Year | Debt Maturity |
|---|---|
| 2018 | $ 30,800 |
| 2019 | 50,000 |
| 2020 | 28,200 |
| 2021 | 17,250 |
| 2022 | 17,250 |
| Thereafter | 325,800 |

Exhibit 4.1.14.1

**SCHEDULE OF SUPPLEMENTAL INDENTURES SUBSTANTIALLY IDENTICAL TO FORM OF SUPPLEMENTAL INDENTURE DURING AND AFTER 2014**

In accordance with Instruction 2 to Item 601 of Regulation S-K, the Registrant has omitted filing the following Supplemental Indentures by and between Aqua Pennsylvania, Inc. and The Bank of New York Mellon Trust Company, N.A. because they are substantially identical in all material respects to the form of Supplemental Indenture filed as Exhibit 4.1.15 to Aqua America, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2015:

1. Forty-ninth Supplemental Indenture, dated as of December 1, 2014
2. Fiftieth Supplemental Indenture, dated as of November 1, 2015
3. Fifty-first Supplemental Indenture, dated as of November 1, 2016
4. Fifty-second Supplemental Indenture, dated as of June 15, 2017

Exhibit 10.1.5

# FIRST AMENDMENT TO CREDIT AGREEMENT

THIS FIRST AMENDMENT TO CREDIT AGREEMENT is made as of this 16th day of November, 2017, by and among AQUA PENNSYLVANIA, INC., a Pennsylvania corporation ("Borrower"), the several banks which are parties to this Agreement (each a "Bank" and collectively, the "Banks") and PNC BANK, NATIONAL ASSOCIATION in its capacity as agent for the Banks (in such capacity, the "Agent").

## BACKGROUND

A. The Borrower, the Agent and the Banks are parties to an Amended and Restated Credit Agreement, dated as of November 17, 2016 (as heretofore amended, supplemented, modified, or restated, the "Credit Agreement"), pursuant to which the Banks have made available to the Borrower a revolving credit facility in an aggregate amount of $100,000,000 (the "Facility"). The loans under the Facility are evidenced by the Borrower's Notes to the Banks in the aggregate principal amount of $100,000,000.

B. The Borrower, the Agent and the Banks desire to extend the Termination Date of the Facility and modify certain other provisions of the Credit Agreement, all on the terms and subject to the conditions herein set forth.

NOW THEREFORE, the parties hereto, intending to be legally bound hereby, agree as follows:

## AGREEMENT

1. Terms. Capitalized terms used herein and not otherwise defined herein shall have the meanings given to such terms in the Credit Agreement.

2. Amendment to Credit Agreement. Effective on November 16, 2017 (the "Effective Date"), the Credit Agreement is hereby amended as follows:

(a) The definition of "Termination Date" in Section 1.1 is hereby amended and restated to read in full as follows:

> "Termination Date" : the earlier of (a) November 14, 2018 or any later date to which the Termination Date shall have been extended pursuant to subsection 2.8(d) hereof and (b) the date the Commitments are terminated as provided herein.

(b) Effective on the Effective Date, Schedule 3.13 of the Credit Agreement shall be updated and replaced by the corresponding Schedule 3.13 set forth in Exhibit A hereto.

3. Loan Documents. Except where the context clearly requires otherwise, all references to the Credit Agreement in any of the Loan Documents or any other document

delivered to the Banks or the Agent in connection therewith shall be to the Credit Agreement as amended by this Agreement.

4. Borrower's Ratification. The Borrower agrees that it has no defenses or set-offs against the Banks or the Agent or their respective officers, directors, employees, agents or attorneys, with respect to the Loan Documents, all of which are in full force and effect, and that all of the terms and conditions of the Loan Documents not inconsistent herewith shall remain in full force and effect unless and until modified or amended in writing in accordance with their terms. The Borrower hereby ratifies and confirms its obligations under the Loan Documents as amended hereby and agrees that the execution and delivery of this Agreement does not in any way diminish or invalidate any of its obligations thereunder.

5. Representations and Warranties. The Borrower hereby represents and warrants to the Agent and the Banks that:

(a) The representations and warranties made in the Credit Agreement are true and correct in all material respects as of the date hereof; provided, however, that for purposes of the representations in Section 3.1 thereof, the annual and quarterly financial information referred to in such Section shall be deemed to be the most recent such information furnished to each Bank;

(b) No Default or Event of Default under the Credit Agreement exists on the date hereof; and

(c) This Agreement has been duly authorized, executed and delivered so as to constitute the legal, valid and binding obligation of the Borrower, enforceable in accordance with its terms.

All of the above representations and warranties shall survive the making of this Agreement.

6. Conditions Precedent. The effectiveness of the amendments set forth herein is subject to the fulfillment, to the satisfaction of the Agent and its counsel, of the following conditions precedent on or before the Effective Date:

(a) The Agent shall have received, with copies or counterparts for each Bank as appropriate, the following, all of which shall be in form and substance satisfactory to the Agent and shall be duly completed and executed by the Borrower, the Agent and the Banks, as applicable:

(i) This Agreement;

(ii) Copies, certified by the Secretary or an Assistant Secretary of the Borrower as of a recent date, of resolutions of the board of directors of the Borrower in effect on the date hereof authorizing the execution, delivery and performance of this Agreement and the other documents and transactions contemplated hereby;

(iii) Copies, certified by its corporate secretary as of a recent date, of the articles of incorporation, certificate of formation, and by-laws of the Borrower as in effect, or a certificate stating that there have been no changes to any such documents since the most recent date, true and correct copies thereof were delivered to the Agent; and

(iv) Such additional documents, certificates and information as the Agent or the Banks may require pursuant to the terms hereof or otherwise reasonably request.

(b) After giving effect to this Agreement, the representations and warranties set forth in the Credit Agreement shall be true and correct in all material respects on and as of the date hereof; provided, however, that for purposes of the representations in Section 3.1 thereof, the annual and quarterly financial information referred to in such Section shall be deemed to be the most recent such information furnished to each Bank.

(c) No Default or Event of Default shall have occurred and be continuing as of the date hereof.

7. Miscellaneous.

(a) All terms, conditions, provisions and covenants in the Loan Documents and all other documents delivered to the Agent and the Banks in connection therewith shall remain unaltered and in full force and effect except as modified or amended hereby. To the extent that any term or provision of this Agreement is or may be deemed expressly inconsistent with any term or provision in any Loan Document or any other document executed in connection therewith, the terms and provisions hereof shall control.

(b) The execution, delivery and effectiveness of this Agreement shall neither operate as a waiver of any right, power or remedy of the Agent or the Banks under any of the Loan Documents nor constitute a waiver of any Default or Event of Default thereunder.

(c) In consideration of the Agent's and the Banks' agreement to amend the existing term loan facility, the Borrower hereby waives and releases the Agent and the Banks and their respective officers, attorneys, agents and employees from any liability, suit, damage, claim, loss or expense of any kind or failure whatsoever and howsoever arising that it ever had up until, or has as of, the date of this Agreement.

(d) This Agreement constitutes the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous understandings and agreements.

(e) In the event any provisions of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

(f) This Agreement shall be governed by and construed according to the laws of the Commonwealth of Pennsylvania.

(g) This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective successors and assigns and may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

(h) The headings used in this Agreement are for convenience of reference only, do not form a part of this Agreement and shall not affect in any way the meaning or interpretation of this Agreement.

(i) This Agreement may be executed in one or more counterparts, each of which counterparts when executed and delivered shall be deemed to be an original, and all of which shall constitute one and the same instrument. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or other electronic transmission will be effective as delivery of a manually executed counterpart hereof.

[signature pages follow]

IN WITNESS WHEREOF, the Borrower, the Agent and the Banks have caused this Agreement to be executed by their duly authorized officers as of the date first above written.

AQUA PENNSYLVANIA, INC.

By: /s/ David P. Smeltzer
Name: David P. Smeltzer
Title: Executive Vice President and CFO

PNC BANK, NATIONAL ASSOCIATION,
as Agent and as a Bank

By: /s/ Dominic D'Ginto
Name: Dominic D'Ginto
Title: Senior Vice President

CITIZENS BANK OF PENNSYLVANIA,
as a Bank

By: /s/ Leslie D. Broderick
Name: Leslie D. Broderick
Title: Senior Vice President

TD BANK, N.A., as a Bank

By: /s/ Jennifer L. Suspenski
Name: Jennifer L. Suspenski
Title: Vice President

THE HUNTINGTON NATIONAL BANK,
as a Bank

By: /s/ Michael Kiss
Name: Michael Kiss
Title: Vice President

Exhibit A

Schedule 3.13
Environmental Matters

(See Attached)

Schedule 3.13

Environmental Matters

In its water treatment process, the Borrower uses chemicals, including chlorine, caustic soda and sodium chlorite, which are listed as hazardous substances.  These chemicals are, in all material respects, stored and used at the Borrower's plants and facilities in accordance with the Environmental Laws.

The Borrower operates a central laboratory at its Bryn Mawr facility for analysis of drinking water samples.  To perform required analyses, the Borrower maintains small quantities of solvents, reagents and chemical standards, some of which are listed as hazardous substances.  These materials, in all material respects, are stored and used in compliance with the Environmental Laws.

The handling and disposal of waste generated from water and wastewater treatment facilities is governed by federal and state laws and regulations.  A program is in place to monitor our facilities for compliance with regulatory requirements, and we are not aware of any significant environmental remediation costs necessary from our handling and disposal of waste material from our water and wastewater operations.

Exhibit 21.1

AQUA AMERICA, INC. AND SUBSIDIARIES

The following table lists the significant subsidiaries and other active subsidiaries of Aqua America, Inc. at December 31, 2017:

Aqua Pennsylvania, Inc. (Pennsylvania)
Aqua Resources, Inc. (Delaware)
Aqua Services, Inc. (Pennsylvania)
Aqua Infrastructure, LLC (Pennsylvania)
Aqua Ohio, Inc. (Ohio)
Aqua Illinois, Inc. (Illinois)
Aqua New Jersey, Inc. (New Jersey)
Aqua North Carolina, Inc. (North Carolina)
Aqua Texas, Inc. (Texas)
Aqua Indiana, Inc. (Indiana)
Aqua Virginia, Inc. (Virginia)

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-219545), on Form S-4 (No. 333-202393), and on Form S-8 (Nos. 033-52557, 033-53689, 333-26613, 333-70859, 333-81085, 333-61768, 333-107673, 333-113502, 333-116776, 333-126042, 333-148206, 333-156047, 333-159897, and 333-181389) of Aqua America, Inc. of our report dated February 28, 2018 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

PRICEWATERHOUSECOOPERS LLP

Philadelphia, Pennsylvania
February 28, 2018

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER, PURSUANT TO RULE 13A-14(A) AS ADOPTED UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, Christopher H. Franklin, certify that:

1. I have reviewed this annual report on Form 10-K of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Christopher H. Franklin

Christopher H. Franklin

Chairman, President and Chief Executive Officer
February 28, 2018

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER, PURSUANT TO RULE 13A-14(A) AS ADOPTED UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, David P. Smeltzer, certify that:

1. I have reviewed this annual report on Form 10-K of Aqua America, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

\s\ David P. Smeltzer

David P. Smeltzer

Executive Vice President and Chief Financial Officer
February 28, 2018

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Annual Report on Form 10-K for the year ended December 31, 2017 of Aqua America, Inc. (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Christopher H. Franklin, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m(a) or Section 78o(d)); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Christopher H. Franklin

Christopher H. Franklin

Chairman, President and Chief Executive Officer
February 28, 2018

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Annual Report on Form 10-K for the year ended December 31, 2017 of Aqua America, Inc. (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, David P. Smeltzer, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m(a) or Section 78o(d)); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David P. Smeltzer

David P. Smeltzer

Executive Vice President and Chief Financial Officer
February 28, 2018

**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON DC 20549**

**FORM 10-Q**

(Mark One)
☒ QUARTERLY REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the quarterly period ended March 31, 2018

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the transition period from________________ to ________________

Commission File Number 1-6659

**AQUA AMERICA, INC.**
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Pennsylvania<br>(State or other jurisdiction of incorporation or organization) | 23-1702594<br>(I.R.S. Employer Identification No.) |
| 762 W. Lancaster Avenue, Bryn Mawr, Pennsylvania<br>(Address of principal executive offices) | 19010 -3489<br>(Zip Code) |

(610) 527-8000
(Registrant's telephone number, including area code)

(Former Name, former address and former fiscal year, if changed since last report.)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12(b)-2 of the Exchange Act.:

| | |
|---|---|
| Large accelerated filer ☒ | Accelerated filer ☐ |
| Non-accelerated filer ☐ (do not check if a smaller reporting company) | Smaller reporting company ☐ |
| Emerging growth company ☐ | |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of April 30, 2018: 177,897,654

AQUA AMERICA, INC. AND SUBSIDIARIES

TABLE OF CONTENTS

# AQUA AMERICA, INC. AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS
(In thousands of dollars, except per share amounts)
(UNAUDITED)

| Assets | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Property, plant and equipment, at cost | $ 7,088,016 | $ 7,003,993 |
| Less: accumulated depreciation | 1,627,797 | 1,604,133 |
| Net property, plant and equipment | 5,460,219 | 5,399,860 |
| | | |
| Current assets: | | |
| Cash and cash equivalents | 3,202 | 4,204 |
| Accounts receivable and unbilled revenues, net | 91,818 | 98,596 |
| Inventory, materials and supplies | 15,290 | 14,361 |
| Prepayments and other current assets | 12,274 | 12,542 |
| Assets held for sale | 1,558 | 1,543 |
| Total current assets | 124,142 | 131,246 |
| | | |
| Regulatory assets | 731,417 | 713,971 |
| Deferred charges and other assets, net | 38,696 | 38,485 |
| Investment in joint venture | 7,004 | 6,671 |
| Goodwill | 42,230 | 42,230 |
| Total assets | $ 6,403,708 | $ 6,332,463 |
| Liabilities and Equity | | |
| Stockholders' equity: | | |
| Common stock at $.50 par value, authorized 300,000,000 shares, issued 180,955,861 and 180,700,251 as of March 31, 2018 and December 31, 2017 | $ 90,478 | $ 90,350 |
| Capital in excess of par value | 809,624 | 807,135 |
| Retained earnings | 1,147,828 | 1,132,556 |
| Treasury stock, at cost, 3,058,248 and 2,986,308 shares as of March 31, 2018 and December 31, 2017 | (75,771) | (73,280) |
| Accumulated other comprehensive income | - | 860 |
| Total stockholders' equity | 1,972,159 | 1,957,621 |
| | | |
| Long-term debt, excluding current portion | 2,084,283 | 2,029,358 |
| Less: debt issuance costs | 21,217 | 21,605 |
| Long-term debt, excluding current portion, net of debt issuance costs | 2,063,066 | 2,007,753 |
| Commitments and contingencies (See Note 14) | | |
| | | |
| Current liabilities: | | |
| Current portion of long-term debt | 103,832 | 113,769 |
| Loans payable | 20,342 | 3,650 |
| Accounts payable | 40,211 | 59,165 |
| Book overdraft | 12,685 | 21,629 |
| Accrued interest | 24,624 | 21,359 |
| Accrued taxes | 22,971 | 23,764 |
| Other accrued liabilities | 34,470 | 41,152 |
| Total current liabilities | 259,135 | 284,488 |
| | | |
| Deferred credits and other liabilities: | | |
| Deferred income taxes and investment tax credits | 786,014 | 769,073 |
| Customers' advances for construction | 90,599 | 93,186 |
| Regulatory liabilities | 543,449 | 541,910 |
| Other | 107,746 | 107,341 |
| Total deferred credits and other liabilities | 1,527,808 | 1,511,510 |
| | | |
| Contributions in aid of construction | 581,540 | 571,091 |
| Total liabilities and equity | $ 6,403,708 | $ 6,332,463 |

See notes to consolidated financial statements beginning on page 8 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME
(In thousands, except per share amounts)
(UNAUDITED)

| | Three Months Ended March 31, 2018 | Three Months Ended March 31, 2017 |
|---|---|---|
| Operating revenues | $ 194,347 | $ 187,787 |
| | | |
| Operating expenses: | | |
| Operations and maintenance | 73,946 | 67,890 |
| Depreciation | 35,967 | 33,837 |
| Amortization | 130 | 189 |
| Taxes other than income taxes | 14,967 | 14,737 |
| Total operating expenses | 125,010 | 116,653 |
| | | |
| Operating income | 69,337 | 71,134 |
| | | |
| Other expense (income): | | |
| Interest expense, net | 23,471 | 21,326 |
| Allowance for funds used during construction | (2,867) | (3,193) |
| Gain on sale of other assets | (196) | (269) |
| Equity (earnings) loss in joint venture | (382) | 30 |
| Other | 603 | 1,238 |
| Income before income taxes | 48,708 | 52,002 |
| Provision for income tax (benefit) expense | (2,131) | 2,930 |
| Net income | $ 50,839 | $ 49,072 |
| | | |
| Net income per common share: | | |
| Basic | $ 0.29 | $ 0.28 |
| Diluted | $ 0.29 | $ 0.28 |
| | | |
| Average common shares outstanding during the period: | | |
| Basic | 177,801 | 177,479 |
| Diluted | 178,238 | 177,969 |
| | | |
| Cash dividends declared per common share | $ 0.2047 | $ 0.1913 |

See notes to consolidated financial statements beginning on page 8 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands of dollars)
(UNAUDITED)

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Net income | $ 50,839 | $ 49,072 |
| Other comprehensive income, net of tax: | | |
| Unrealized holding gain on investments, net of tax expense of $31 for the three months ended March 31, 2017 | - | 58 |
| Comprehensive income | $ 50,839 | $ 49,130 |

See notes to consolidated financial statements beginning on page 8 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CAPITALIZATION
(In thousands of dollars, except per share amounts)
(UNAUDITED)

| | | March 31, 2018 | December 31, 2017 |
|---|---|---|---|
| Stockholders' equity: | | | |
| Common stock, $.50 par value | | $ 90,478 | $ 90,350 |
| Capital in excess of par value | | 809,624 | 807,135 |
| Retained earnings | | 1,147,828 | 1,132,556 |
| Treasury stock, at cost | | (75,771) | (73,280) |
| Accumulated other comprehensive income | | - | 860 |
| Total stockholders' equity | | 1,972,159 | 1,957,621 |
| Long-term debt of subsidiaries (substantially collateralized by utility plant): | | | |
| Interest Rate Range | Maturity Date Range | | |
| 0.00% to 0.99% | 2023 to 2033 | 4,148 | 4,196 |
| 1.00% to 1.99% | 2019 to 2035 | 12,626 | 12,914 |
| 2.00% to 2.99% | 2019 to 2033 | 18,817 | 19,254 |
| 3.00% to 3.99% | 2019 to 2056 | 474,525 | 475,232 |
| 4.00% to 4.99% | 2020 to 2057 | 631,513 | 631,599 |
| 5.00% to 5.99% | 2019 to 2043 | 205,445 | 205,578 |
| 6.00% to 6.99% | 2018 to 2036 | 44,000 | 44,000 |
| 7.00% to 7.99% | 2022 to 2027 | 32,146 | 32,335 |
| 8.00% to 8.99% | 2021 to 2025 | 5,968 | 6,092 |
| 9.00% to 9.99% | 2018 to 2026 | 25,700 | 25,700 |
| 10.00% to 10.99% | 2018 | 6,000 | 6,000 |
| | | 1,460,888 | 1,462,900 |
| Notes payable to bank under revolving credit agreement, variable rate, due 2021 | | 117,000 | 60,000 |
| Unsecured notes payable: | | | |
| Bank notes at 1.975% and 2.48% due 2018 and 2019 | | 100,000 | 100,000 |
| Notes at 3.01% and 3.59% due 2027 and 2041 | | 245,000 | 245,000 |
| Notes ranging from 4.62% to 4.87%, due 2018 through 2024 | | 122,800 | 122,800 |
| Notes ranging from 5.20% to 5.95%, due 2018 through 2037 | | 142,427 | 152,427 |
| Total long-term debt | | 2,188,115 | 2,143,127 |
| Current portion of long-term debt | | 103,832 | 113,769 |
| Long-term debt, excluding current portion | | 2,084,283 | 2,029,358 |
| Less: debt issuance costs | | 21,217 | 21,605 |
| Long-term debt, excluding current portion, net of debt issuance costs | | 2,063,066 | 2,007,753 |
| Total capitalization | | $ 4,035,225 | $ 3,965,374 |

See notes to consolidated financial statements beginning on page 8 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF EQUITY
(In thousands of dollars)
(UNAUDITED)

| | Common Stock | Capital in Excess of Par Value | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income | Total |
|---|---|---|---|---|---|---|
| Balance at December 31, 2017 | $ 90,350 | $ 807,135 | $1,132,556 | $ (73,280) | $ 860 | $1,957,621 |
| Net income | - | - | 50,839 | - | - | 50,839 |
| Dividends | - | - | (36,386) | - | - | (36,386) |
| Sale of stock (11,252 shares) | 6 | 355 | - | - | - | 361 |
| Repurchase of stock (71,940 shares) | - | - | - | (2,491) | - | (2,491) |
| Equity compensation plan (181,670 shares) | 91 | (91) | - | - | - | - |
| Exercise of stock options (62,688 shares) | 31 | 979 | - | - | - | 1,010 |
| Stock-based compensation | - | 1,443 | (41) | - | - | 1,402 |
| Cumulative effect of change in accounting principle - financial instruments | - | - | 860 | - | (860) | - |
| Other | - | (197) | - | - | - | (197) |
| Balance at March 31, 2018 | $ 90,478 | $ 809,624 | $1,147,828 | $ (75,771) | $ - | $1,972,159 |

Refer to Note 15 - *Recent Accounting Pronouncements* for a discussion of the cumulative effect of change in accounting principle - financial instruments

See notes to consolidated financial statements beginning on page 8 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOW
(In thousands of dollars)
(UNAUDITED)

| | Three Months Ended March 31, 2018 | Three Months Ended March 31, 2017 |
|---|---|---|
| Cash flows from operating activities: | | |
| Net income | $ 50,839 | $ 49,072 |
| Adjustments to reconcile net income to net cash flows from operating activities: | | |
| Depreciation and amortization | 36,097 | 34,026 |
| Deferred income taxes | (2,849) | 2,681 |
| Provision for doubtful accounts | 896 | 1,111 |
| Stock-based compensation | 1,444 | 1,312 |
| Loss on sale of market-based business unit | - | 278 |
| Gain on sale of other assets | (196) | (269) |
| Net change in receivables, inventory and prepayments | 5,402 | 5,729 |
| Net change in payables, accrued interest, accrued taxes and other accrued liabilities | (996) | (4,519) |
| Pension and other postretirement benefits contributions | (5,217) | (7,711) |
| Other | 2,934 | (507) |
| Net cash flows from operating activities | 88,354 | 81,203 |
| Cash flows from investing activities: | | |
| Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $782 and $721 | (105,136) | (94,562) |
| Acquisitions of utility systems and other, net | (190) | (220) |
| Net proceeds from the sale of market-based business unit and other assets | 174 | 639 |
| Other | (75) | (171) |
| Net cash flows used in investing activities | (105,227) | (94,314) |
| Cash flows from financing activities: | | |
| Customers' advances and contributions in aid of construction | 1,742 | 1,585 |
| Repayments of customers' advances | (1,014) | (511) |
| Net proceeds of short-term debt | 16,692 | 21,197 |
| Proceeds from long-term debt | 66,996 | 117,879 |
| Repayments of long-term debt | (21,898) | (89,666) |
| Change in cash overdraft position | (8,944) | (2,403) |
| Proceeds from issuing common stock | 361 | 360 |
| Proceeds from exercised stock options | 1,010 | 1,536 |
| Repurchase of common stock | (2,491) | (2,053) |
| Dividends paid on common stock | (36,386) | (33,945) |
| Other | (197) | (206) |
| Net cash flows from financing activities | 15,871 | 13,773 |
| Net change in cash and cash equivalents | (1,002) | 662 |
| Cash and cash equivalents at beginning of period | 4,204 | 3,763 |
| Cash and cash equivalents at end of period | $ 3,202 | $ 4,425 |
| | | |
| Non-cash investing activities: | | |
| Property, plant and equipment additions purchased at the period end, but not yet paid for | $ 23,629 | $ 27,084 |
| Non-cash customer advances and contributions in aid of construction | 4,979 | 4,282 |

See notes to consolidated financial statements beginning on page 8 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In thousands of dollars, except per share amounts)
(UNAUDITED)

**Note 1 – *Basis of Presentation***

The accompanying consolidated balance sheets and statements of capitalization of Aqua America, Inc. and subsidiaries (the "Company") at March 31, 2018, the consolidated statements of net income and comprehensive income for the three months ended March 31, 2018 and 2017 the consolidated statements of cash flow for the three months ended March 31, 2018 and 2017, and the consolidated statement of equity for the three months ended March 31, 2018 are unaudited, but reflect all adjustments, consisting of only normal recurring accruals, which are, in the opinion of management, necessary to present a fair statement of its consolidated financial position, consolidated changes in equity, consolidated results of operations, and consolidated cash flow for the periods presented. Because they cover interim periods, the statements and related notes to the financial statements do not include all disclosures and notes normally provided in annual financial statements and, therefore, should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2017. The results of operations for interim periods may not be indicative of the results that may be expected for the entire year. The December 31, 2017 consolidated balance sheet data presented herein was derived from the Company's December 31, 2017 audited consolidated financial statements, but does not include all disclosures and notes normally provided in annual financial statements. Certain prior period amounts have been reclassified to conform to the current period presentation in the consolidated statements of net income as a result of the adoption, in the first quarter of 2018, of the Financial Accounting Standards Board's ("FASB") accounting guidance on the presentation of net periodic pension and postretirement benefit cost (refer to Note 15 – *Recent Accounting Pronouncements*).

The preparation of financial statements often requires the selection of specific accounting methods and policies. Further, significant estimates and judgments may be required in selecting and applying those methods and policies in the recognition of the assets and liabilities in its consolidated balance sheets, the revenues and expenses in its consolidated statements of net income, and the information that is contained in its summary of significant accounting policies and notes to consolidated financial statements. Making these estimates and judgments requires the analysis of information concerning events that may not yet be complete and of facts and circumstances that may change over time. Accordingly, actual amounts or future results can differ materially from those estimates that the Company includes currently in its consolidated financial statements, summary of significant accounting policies, and notes.

There have been no changes to the summary of significant accounting policies, other than as described in Note 2 – *Revenue Recognition* as a result of the adoption of a new accounting pronouncement adopted on January 1, 2018, previously identified in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

(In thousands of dollars, except per share amounts)

**Note 2 – *Revenue Recognition***

The Company recognizes revenue as water and wastewater services are provided to our customers, which happens over time as the service is delivered and the performance obligation is satisfied. The Company's utility revenues recognized in an accounting period include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. Unbilled amounts are calculated by deriving estimates based on average usage of the prior month. The Company's actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates is determined. Unbilled amounts are included in accounts receivable and unbilled revenues, net on the consolidated balance sheet.

Generally, payment is due within 30 days once a bill is issued to a customer. Sales tax and other taxes we collect on behalf of government authorities, concurrent with our revenue-producing activities, are primarily excluded from revenue. The Company has determined that its revenue recognition is not materially different under the FASB's new accounting standard for revenue from contracts with customer, and has not made any changes to our accounting policy. The Company's revenues are being reported identical to how they were reported under the FASB's former accounting standard for revenue recognition. The following table presents our revenues disaggregated by major source and customer class:

| | Three Months Ended March 31,2018 | | |
|---|---|---|---|
| | Water Revenues | Wastewater Revenues | Other Revenues |
| Regulated: | | | |
| Residential | $ 113,837 | $ 17,532 | $ - |
| Commercial | 30,342 | 2,888 | - |
| Fire protection | 7,938 | - | - |
| Industrial | 6,360 | 463 | - |
| Other water | 11,021 | - | - |
| Other wastewater | - | 791 | - |
| Other utility | - | - | 2,335 |
| Regulated segment total | 169,498 | 21,674 | 2,335 |
| Other and eliminations | - | - | 840 |
| Consolidated | $ 169,498 | $ 21,674 | $ 3,175 |

***Regulated Segment Revenues –*** These revenues are composed of three main categories: water, wastewater, and other. Water revenues represent revenues earned for supplying customers with water service. Wastewater revenues represent revenues earned for treating wastewater and releasing it into the water supply. Other revenues are associated fees that relate to the regulated business but are not water and wastewater revenues. See description below for a discussion on the performance obligation for each of these revenue streams.

(In thousands of dollars, except per share amounts)

***Tariff Revenues –*** These revenues are categorized by customer class: residential, commercial, fire protection, industrial, and other water and other wastewater. The rates that generate these revenues are approved by the respective state utility commission, and revenues are billed cyclically and accrued for when unbilled. Other water and other wastewater revenues consist primarily of fines, penalties, surcharges, and availability lot fees. Our performance obligation for tariff revenues is to provide potable water or wastewater treatment service to customers. This performance obligation is satisfied over time as the services are rendered.

***Other Utility Revenues –*** Other utility revenues represent revenues earned primarily from: antenna revenues, which represent fees received from telecommunication operators that have put cellular antennas on our water towers, operation and maintenance and billing contracts, which represent fees earned from municipalities for our operation of their water or wastewater treatment services or performing billing services, and fees earned from developers for accessing our water mains. The performances obligations vary for these revenues, but all are primarily recognized over time as the service is delivered.

***Other and Eliminations –*** Other and eliminations consist of our market-based revenues, which comprises: Aqua Infrastructure and Aqua Resources (described below), and intercompany eliminations for revenue billed between our subsidiaries.

Aqua Infrastructure is the holding company for our 49% investment in a joint venture that operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale of north central Pennsylvania. The joint venture earns revenues through providing non-utility raw water supply services to companies which enter into a water supply contract in the natural gas drilling industry. The performance obligation is to deliver non-potable water to its customers. Aqua Infrastructure's share of the revenues recognized by the joint venture is reflected, net, in equity earnings in joint venture on our consolidated statements of net income.

Aqua Resources earns revenues by providing non-regulated water and wastewater services through operating and maintenance contracts, and third party water and sewer line repair service. The performance obligations are performing agreed upon services in the contract, most commonly operation of third party water or wastewater treatment services, or billing services, or allowing the use of our logo to a third party water and sewer line repair service. Revenues are primarily recognized over time as service is delivered.

**Note 3 – *Goodwill***

The following table summarizes the changes in the Company's goodwill, by business segment:

| | Regulated Segment | Other | Consolidated |
|---|---|---|---|
| Balance at December 31, 2017 | $ 37,389 | $ 4,841 | $ 42,230 |
| Goodwill acquired | - | - | - |
| Balance at March 31, 2018 | $ 37,389 | $ 4,841 | $ 42,230 |

**Note 4 – *Acquisitions***

During the first three months of 2018, the Company completed three acquisitions of water and wastewater utility systems in various states adding 448 customers. The total purchase price of these utility systems consisted of $190 in cash. The purchase price allocation for these acquisition consisted primarily of acquired property, plant and equipment. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

During 2017, the Company completed four acquisitions of water and wastewater utility systems in various states adding 1,003 customers. The total purchase price of these utility systems consisted of $5,860 in cash, which resulted in $72 of goodwill being recorded. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

As part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of six municipalities for a total combined purchase price in cash of $150,700, which we plan to finance by the issuance of long-term debt. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur by the end of 2018, subject to the timing of the regulatory approval process. These acquisitions are expected to add approximately 16,325 customers in two of the states that the Company operates in.

**Note 5 – *Assets Held for Sale***

In the first quarter of 2017, the Company decided to market for sale a water system that serves approximately 265 customers. This water system is reported as assets held for sale in the Company's consolidated balance sheet.

**Note 6 –*Financial Instruments***

The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;
- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or

(In thousands of dollars, except per share amounts)

- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. There have been no changes in the valuation techniques used to measure fair value, or asset or liability transfers between the levels of the fair value hierarchy for the quarter ended March 31, 2018.

Financial instruments are recorded at carrying value in the financial statements and approximate fair value as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of loans payable is determined based on its carrying amount and utilizing Level 1 methods and assumptions. As of March 31, 2018 and December 31, 2017, the carrying amount of the Company's loans payable was $20,342 and $3,650, respectively, which equates to their estimated fair value. The Company's assets underlying the deferred compensation and non-qualified pension plans are determined by the fair value of mutual funds, which are based on quoted market prices from active markets utilizing Level 1 methods and assumptions. As of March 31, 2018 and December 31, 2017, the carrying amount of these securities was $21,576 and $21,776, which equates to their fair value, and is reported in the consolidated balance sheet in deferred charges and other assets. The fair value of cash and cash equivalents, which is comprised of uninvested cash, is determined based on the net asset value per unit utilizing Level 1 methods and assumptions. As of March 31, 2018 and December 31, 2017, the carrying amounts of the Company's cash and cash equivalents was $3,202 and $4,204, respectively, which equates to their fair value.

Unrealized gain and losses on equity securities held in conjunction with our non-qualified pension plan is as follows:

| | Three Months Ended March 31, 2018 |
|---|---|
| Net loss recognized during the period on equity securities | $ 21 |
| Less: net gain / loss recognized during the period on equity securities sold during the period | - |
| Unrealized loss recognized during the reporting period on equity securities still held at the reporting date | $ 21 |

The net loss recognized on equity securities is presented on the consolidated statements of net income on the line item "Other." Additionally, the unrealized gain recognized during the three months ended March 31, 2017, was reported on the consolidated statements of comprehensive income.

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Carrying amount | $ 2,188,115 | $ 2,143,127 |
| Estimated fair value | 2,235,447 | 2,262,785 |

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing Level 2 methods and assumptions.

The Company's customers' advances for construction have a carrying value of $90,599 as of March 31, 2018, and $93,186 as of December 31, 2017. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels, and future rates. Portions of these non-interest bearing instruments are payable annually through 2028 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

**Note 7 – *Net Income per Common Share***

Basic net income per common share is based on the weighted average number of common shares outstanding. Diluted net income per common share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation is included in the computation of diluted net income per common share. The dilutive effect of stock-based compensation is calculated using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation. The treasury stock method assumes that the proceeds from stock-based compensation are used to purchase the Company's common stock at the average market price during the period. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per common share:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Average common shares outstanding during the period for basic computation | 177,801 | 177,479 |
| Dilutive effect of employee stock-based compensation | 437 | 490 |
| Average common shares outstanding during the period for diluted computation | 178,238 | 177,969 |

(In thousands of dollars, except per share amounts)

For the three months ended March 31, 2018 and 2017, all of the Company's employee stock options were included in the calculations of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods.

**Note 8 – *Stock-based Compensation***

Under the Company's 2009 Omnibus Equity Compensation Plan, as amended as of February 27, 2014 (the "2009 Plan"), as approved by the Company's shareholders to replace the 2004 Equity Compensation Plan (the "2004 Plan"), stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. No further grants may be made under the 2004 Plan. The 2009 Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the 2009 Plan may be issued pursuant to stock awards, stock units and other stock-based awards, subject to adjustment as provided in the 2009 Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the 2009 Plan. Awards to employees and consultants under the 2009 Plan are made by a committee of the Board of Directors of the Company, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At March 31, 2018, 3,454,922 shares were still available for issuance under the 2009 Plan.

***Performance Share Units*** – A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three-year performance period specified in the grant, subject to exceptions through the respective vesting period, generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals. The following table provides compensation costs for stock-based compensation related to PSUs:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Stock-based compensation within operations and maintenance expenses | $ 859 | $ 870 |
| Income tax benefit | 241 | 353 |

(In thousands of dollars, except per share amounts)

The following table summarizes the PSU transactions for the three months ended March 31, 2018:

| | Number of Share Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested share units at beginning of period | 452,333 | $ 26.16 |
| Granted | 87,593 | 37.65 |
| Performance criteria adjustment | (33,109) | 29.71 |
| Forfeited | (5,522) | 29.59 |
| Share units vested in prior period and issued in current period | 9,400 | 26.54 |
| Share units issued | (136,081) | 31.70 |
| Nonvested share units at end of period | 374,614 | 26.48 |

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions using the Monte Carlo valuation method, which assesses probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs is based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The per unit weighted-average fair value at the date of grant for PSUs granted during the three months ended March 31, 2018 and 2017 was $37.65 and $30.79, respectively. The fair value of each PSU grant is amortized monthly into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on the Company's estimate of the final expected value of the award, and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows.

***Restricted Stock Units*** – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation cost and income tax benefit for stock-based compensation related to RSUs:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Stock-based compensation within operations and maintenance expenses | $ 351 | $ 281 |
| Income tax benefit | 100 | 116 |

(In thousands of dollars, except per share amounts)

The following table summarizes the RSU transactions for the three months ended March 31, 2018:

| | Number of Stock Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock units at beginning of period | 116,787 | $ 29.46 |
| Granted | 54,073 | 34.91 |
| Stock units vested in prior period and issued in current period | 1,467 | 31.47 |
| Stock units vested and issued | (42,836) | 26.39 |
| Forfeited | - | - |
| Nonvested stock units at end of period | 129,491 | 31.78 |

The per unit weighted-average fair value at the date of grant for RSUs granted during the three months ended March 31, 2018 and 2017 was $34.91 and $30.37, respectively.

***Stock Options*** – A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire 10 years from the grant date. The fair value of each stock option is amortized into compensation expense using the graded-vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides the compensation cost and income tax benefit for stock-based compensation related to stock options:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Stock-based compensation within operations and maintenance expenses | $ 94 | $ 30 |
| Income tax benefit | 58 | 92 |

The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model. The following assumptions were used in the application of this valuation model:

| | 2018 | 2017 |
|---|---|---|
| Expected term (years) | 5.46 | 5.45 |
| Risk-free interest rate | 2.72% | 2.01% |
| Expected volatility | 17.2% | 17.7% |
| Dividend yield | 2.37% | 2.51% |
| Grant date fair value per option | $ 5.10 | $ 4.07 |

Historical information was the principal basis for the selection of the expected term and dividend yield. The expected volatility is based on a weighted-average combination of historical and implied volatilities over a time period that approximates the expected term of the option. The risk-free interest rate was selected based upon the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option.

(In thousands of dollars, except per share amounts)

The following table summarizes stock option transactions for the three months ended March 31, 2018:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Life (years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding at beginning of period | 364,932 | $ 19.83 | | |
| Granted | 160,859 | 34.51 | | |
| Forfeited | (2,371) | 30.47 | | |
| Expired / Cancelled | (41) | 30.47 | | |
| Exercised | (62,688) | 16.11 | | |
| Outstanding at end of period | 460,691 | $ 25.40 | 6.2 | $ 4,060 |
| | | | | |
| Exercisable at end of period | 225,594 | $ 17.24 | 2.6 | $ 3,794 |

***Stock Awards*** – Stock awards represent the issuance of the Company's common stock, without restriction. The issuance of stock awards results in compensation expense which is equal to the fair market value of the stock on the grant date, and is expensed immediately upon grant. The following table provides the compensation cost and income tax benefit for stock-based compensation related to stock awards:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Stock-based compensation within operations and maintenance expenses | $ 140 | $ 131 |
| Income tax benefit | 40 | 54 |

The following table summarizes stock award transactions for the three months ended March 31, 2018:

| | Number of Stock Awards | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock awards at beginning of period | - | $ - |
| Granted | 4,130 | 33.90 |
| Vested | (4,130) | 33.90 |
| Nonvested stock awards at end of period | - | $ - |

The per unit weighted-average fair value at the date of grant for stock awards granted during the three months ended March 31, 2018 and 2017 was $33.90 and $32.15, respectively.

(In thousands of dollars, except per share amounts)

**Note 9 – *Pension Plans and Other Postretirement Benefits***

The Company maintains a qualified defined benefit pension plan (the "Pension Plan"), a nonqualified pension plan, and other postretirement benefit plans for certain of its employees. The net periodic benefit cost is based on estimated values and an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover, and medical costs. The following tables provide the components of net periodic benefit cost:

| | Pension Benefits Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Service cost | $ 812 | $ 794 |
| Interest cost | 2,874 | 3,108 |
| Expected return on plan assets | (4,553) | (4,270) |
| Amortization of prior service cost | 132 | 145 |
| Amortization of actuarial loss | 1,823 | 2,001 |
| Net periodic benefit cost | $ 1,088 | $ 1,778 |

| | Other Postretirement Benefits Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Service cost | $ 262 | $ 255 |
| Interest cost | 708 | 737 |
| Expected return on plan assets | (677) | (647) |
| Amortization of prior service cost | (127) | (127) |
| Amortization of actuarial loss | 296 | 291 |
| Net periodic benefit cost | $ 462 | $ 509 |

The components of net periodic benefit cost other than service cost are presented on the consolidated statements of net income on the line item "Other."

The Company made cash contributions of $5,198 to its Pension Plan during the first three months of 2018, and intends to make additional cash contributions of $7,286 to the Pension Plan during the remainder of 2018.

**Note 10 – *Water and Wastewater Rates***

During the first three months of 2018, the Company's operating divisions in Illinois and Ohio were granted base rate increases designed to increase total operating revenues on an annual basis by $8,640. On April 6, 2018, the base rate case in Illinois was petitioned for a rehearing; however, this petition was denied on April 19, 2018. The other parties to the case have thirty days to file an appeal. The approved rates, for which we have billed $300 to date in March 2018, are in effect, but could be subject to refund if an appeal is granted. Further, during the first three months of 2018, the Company's operating divisions in Pennsylvania and North Carolina received approval to bill infrastructure rehabilitation surcharges designed to increase total operating revenues on an annual basis by $9,731.

(In thousands of dollars, except per share amounts)

As of February 10, 2018, the Company has been billing interim rates in Virginia, which has a base rate case filing in progress. As of March 31, 2018, $821 of billings is subject to refund pending the conclusion of the rate case.

**Note 11 – *Taxes Other than Income Taxes***

The following table provides the components of taxes other than income taxes:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Property | $ 6,749 | $ 6,785 |
| Gross receipts, excise and franchise | 3,265 | 3,175 |
| Payroll | 3,275 | 3,124 |
| Regulatory assessments | 627 | 629 |
| Pumping fees | 991 | 944 |
| Other | 60 | 80 |
| Total taxes other than income | $ 14,967 | $ 14,737 |

**Note 12 – *Segment Information***

The Company has ten operating segments and one reportable segment. The Regulated segment, the Company's single reportable segment, is comprised of eight operating segments representing its water and wastewater regulated utility companies which are organized by the states where the Company provides water and wastewater services. These operating segments are aggregated into one reportable segment because each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment.

Two operating segments are included within the Other category below. These segments are not quantitatively significant and are comprised of Aqua Infrastructure and Aqua Resources. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through operating and maintenance contracts with municipal authorities and other parties close to its utility companies' service territories; and offers, through a third party, water and sewer line repair service and protection solutions to households. In addition to these segments, Other is comprised of other business activities not included in the reportable segment, including corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

(In thousands of dollars, except per share amounts)

The following table presents information about the Company's reportable segment:

| | Three Months Ended March 31, 2018 | | | Three Months Ended March 31, 2017 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other | Consolidated | Regulated | Other | Consolidated |
| Operating revenues | $ 193,507 | $ 840 | $ 194,347 | $ 186,349 | $ 1,438 | $ 187,787 |
| Operations and maintenance expense | 71,303 | 2,643 | 73,946 | 66,272 | 1,618 | 67,890 |
| Depreciation | 35,958 | 9 | 35,967 | 33,666 | 171 | 33,837 |
| Amortization | 88 | 42 | 130 | 209 | (20) | 189 |
| Operating income (loss) | 72,058 | (2,721) | 69,337 | 72,305 | (1,171) | 71,134 |
| Interest expense, net | 21,708 | 1,763 | 23,471 | 19,777 | 1,549 | 21,326 |
| Allowance for funds used during construction | 2,867 | - | 2,867 | 3,193 | - | 3,193 |
| Income tax expense (benefit) | (643) | (1,488) | (2,131) | 3,856 | (926) | 2,930 |
| Net income (loss) | 54,027 | (3,188) | 50,839 | 50,896 | (1,824) | 49,072 |
| Capital expenditures | 105,136 | - | 105,136 | 94,409 | 153 | 94,562 |

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Total assets: | | |
| Regulated | $ 6,321,372 | $ 6,236,109 |
| Other | 82,336 | 96,354 |
| Consolidated | $ 6,403,708 | $ 6,332,463 |

**Note 13 –** ***Commitments and Contingencies***

The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of March 31, 2018, the aggregate amount of $20,231 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. While the final outcome of these loss contingencies cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of these matters are not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Further, the Company has insurance coverage for certain of these loss contingencies, and as of March 31, 2018, estimates that approximately $8,231 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets, net.

Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which the Company or any of its subsidiaries is a party or to which any of its properties is the subject that are material or are expected to have a material effect on the Company's financial position, results of operations, or cash flows.

In addition to the aforementioned loss contingencies, the Company self-insures its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,451 at March 31, 2018 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

**Note 14 – *Income Taxes***

During the three months ended March 31, 2018, the Company's Federal net operating loss ("NOL") carryforward decreased by $6,760. In addition, during the three months ended March 31, 2018, the Company's state NOL carryforward increased by $3,866. As of March 31, 2018, the balance of the Company's Federal NOL was $56,542. The Company believes its Federal NOL carryforward is more likely than not to be recovered and requires no valuation allowance. As of March 31, 2018, the balance of the Company's gross state NOL was $631,124, a portion of which is offset by a valuation allowance because the Company does not believe the state NOLs are more likely than not to be realized. The Company's Federal and state NOL carryforwards begin to expire in 2032 and 2023, respectively. The Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $64,814 and $85,380, respectively. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions were $121,356 and $716,504 respectively. The Company records its unrecognized tax benefit as a reduction to its deferred income tax liability.

In accordance with a 2012 settlement agreement with the Pennsylvania Public Utility Commission, Aqua Pennsylvania expenses, for tax purposes, qualifying utility asset improvement costs, which results in a substantial reduction in income tax expense and greater net income and cash flows. The Company's effective income tax rate for the first quarter of 2018 and 2017 was -4.4% and 5.6%, respectively.

As of March 31, 2018, the total gross unrecognized tax benefit was $18,143. As a result of the regulatory treatment afforded for qualifying infrastructure improvements in Pennsylvania, $24,834, if recognized, would affect the Company's effective tax rate. At December 31, 2017, the Company had unrecognized tax benefits of $17,583.

Accounting rules for uncertain tax positions specify that tax positions for which the timing of resolution is uncertain should be classified as long-term liabilities. Judgment is required in evaluating the Company's uncertain tax positions and determining the provision for income taxes. Management believes that an adequate provision has been made for any adjustments that may result from tax examinations. Although the timing of income tax audit resolutions and negotiations with taxing authorities is highly uncertain, the Company does not anticipate a significant change to the total amount of unrecognized income tax benefits within the next 12 months.

On December 22, 2017, President Trump signed the "Tax Cuts and Jobs Acts" (the "TCJA") into law. Substantially all of the provisions of the TCJA are effective for taxable years beginning after December 31, 2017. The TCJA includes significant changes to the Code and the taxation of business entities, and includes specific provisions related to regulated public utilities. Significant changes that impact the Company included in the TCJA are a reduction in the corporate federal income tax rate from 35% to 21%, effective January 1, 2018, and a limitation of the utilization of NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward. The specific TCJA provisions related to our regulated entities generally allow for the continued deductibility of interest expense, the elimination of full expensing for tax purposes of certain property acquired after September 27, 2017 and the continuation of certain rate normalization requirements for accelerated depreciation benefits. Our market-based companies still qualify for 100% deductibility of qualifying property acquired after September 27, 2017.

In accordance with the FASB's accounting guidance for income taxes, the tax effects of changes in tax laws must be recognized in the period in which the law is enacted, or December 22, 2017 for the TCJA. Additionally, deferred tax assets and liabilities are required to be measured at the enacted tax rate expected to apply when temporary differences are to be realized or settled. Thus, at the date of enactment, the Company's deferred taxes were re-measured based upon the new tax rate. For our regulated entities, the change in deferred taxes is recorded as either an offset to a regulatory asset or liability and may be subject to refund to customers. In instances where the deferred tax balances are not in ratemaking, such as the Company's market-based operations, the change in deferred taxes is recorded as an adjustment to our deferred tax provision.

The staff of the SEC has recognized the complexity of reflecting the impacts of the TCJA, and on December 22, 2017 issued guidance, which clarifies accounting for income taxes if information is not yet available or complete and provides for up to a one year period in which to complete the required analyses and accounting (the measurement period). The guidance describes three scenarios (or "buckets") associated with a company's status of accounting for income tax reform: (1) a company is complete with its accounting for certain effects of tax reform, (2) a company is able to determine a reasonable estimate for certain effects of tax reform and records that estimate as a provisional amount, or (3) a company is not able to determine a reasonable estimate and therefore continues to apply the FASB's accounting guidance, based on the provisions of the tax laws that were in effect immediately prior to the TCJA being enacted.

The Company has completed or has made a reasonable estimate for the measurement and accounting of the effect of the TCJA which were reflected in the December 31, 2017 financial statements, which resulted in a decrease to the accumulated deferred income tax liability of $303,320. Additionally, due to the reduction in the Company's corporate income tax rate, in the first quarter of 2018, the Company reserved $2,532 for amounts expected to be refundable to utility customers. During the first quarter of 2018, in Illinois and Virginia, the Company's base rates have been adjusted to reflect the lower corporate income tax rate, and Texas and New Jersey implemented adjusted tariff rates in the second quarter of 2018.

One of our states, Pennsylvania, has not yet issued an accounting or procedural order addressing how the TCJA changes are to be reflected in our utility customer rates. As of December 31, 2017, the Company had provisionally estimated that $175,108 of deferred income tax liabilities for our Pennsylvania subsidiary will be a regulatory liability. Additionally, two operating divisions in Ohio operate under locally-negotiated contractual rates with their respective counties, and it is expected that negotiations will result in a contract that will return to customers the effects of the reduction in the corporate net income tax rate under the TCJA; however, these negotiations have not yet started. As of December 31, 2017, the Company had provisionally estimated that $9,419 of deferred income tax liabilities for these two divisions will be a regulatory liability. Overall, the Company has applied a reasonable interpretation of the impact of the TCJA and a reasonable estimate of the regulatory resolution. Further clarification of the TCJA and regulatory resolution may change the amounts estimated of the deferred income tax provision and the accumulated deferred income tax liability.

The Company's regulated operations accounting for income taxes are impacted by the FASB's accounting guidance for regulated operations. Reductions in accumulated deferred income tax balances due to the reduction in the Federal corporate income tax rates to 21% under the provisions of the TCJA will result in amounts previously collected from utility customers for these deferred taxes to be refundable to such customers, generally through reductions in future rates. The TCJA includes provisions that stipulate how these excess deferred taxes related to certain accelerated tax depreciation deduction benefits are to be passed back to customers. Potential refunds of other deferred taxes will be determined by our state regulators. Our state regulatory commissions have or are in the process of issuing procedural orders directing how the tax law changes are to be reflected in our utility customer rates.

**Note 15 – *Recent Accounting Pronouncements***

In March 2017, the FASB issued updated accounting guidance on the presentation of net periodic pension and postretirement benefit cost (net benefit cost). Historically, net benefit cost is reported as an employee cost within operating income, net of amounts capitalized. The guidance requires the bifurcation of net benefit cost. The service cost component will be presented with other employee compensation costs in operating income and the other components of net benefit cost will be reported separately outside of operating income, and will not be eligible for capitalization. The guidance is effective for annual reporting periods beginning after December 15, 2017, and interim periods within that reporting period, and is to be applied retrospectively for the presentation of the service cost component and the other components of net benefit cost, and on a prospective basis for the capitalization of only the service cost component of net benefit cost. On January 1, 2018, the Company adopted the updated guidance, which did not have a material impact on its results of operations or financial position, and resulted in the reclassification, for the three months ended March 31, 2017, of $1,238 for the other components of net benefit cost from operations and maintenance expense to other in the consolidated statements of net income.

In February 2016, the FASB issued updated accounting guidance on accounting for leases, which requires lessees to establish a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The updated accounting guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption available. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption.

In January 2016, the FASB issued updated accounting guidance on the recognition and measurement of financial assets and financial liabilities, which amends certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including the requirement to measure certain equity investments at fair value with changes in fair value recognized in net income. The updated guidance is effective for interim and annual periods beginning after December 31, 2017. On January 1, 2018, the Company adopted the updated guidance, which did not have a material impact on its results of operations or financial position, and resulted in the recognition of $860 of previous unrealized gains, which was recorded as an adjustment to beginning retained earnings (refer to the presentation of “cumulative effect of change in accounting principle – financial instruments” on the Company’s consolidated statement of equity).

In May 2014, the FASB issued updated accounting guidance on recognizing revenue from contracts with customers, which outlines a single comprehensive model that an entity will apply to determine the measurement of revenue and timing of recognition. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The updated guidance also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. The updated guidance is effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the updated guidance in each prior reporting period, or (ii) a modified retrospective approach with the cumulative effect of initially adopting the updated guidance recognized through retained earnings at the date of adoption. In 2016, the Company performed an evaluation of the requirements of the updated guidance and believes that the impact of adoption will not result in a material change in the Company’s measurement of revenue. In 2017, the American Institute of Certified Public Accountants (“AICPA”) power and utility entities revenue recognition task force determined that contributions in aid of construction are not in the scope of the new standard, and submitted its recommendation to the AICPA’s revenue recognition working group for approval. The Company implemented the updated guidance using the modified retrospective approach on January 1, 2018, which did not result in a change in the Company’s measurement of revenue, and reached the following conclusions:

- The Company’s tariff sale contracts, including those with lower credit quality customers, are generally deemed to be probable of collection, and thus the timing of revenue recognition will continue to be concurrent with the delivery of water and wastewater services, consistent with our current practice.
- Contributions in aid of construction are outside of the scope of the standard, and will continue to be accounted for as a noncurrent liability.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS
(In thousands of dollars, except per share amounts)

Item 2 – Management's Discussion and Analysis of Financial Condition and Results of Operations

## Forward-looking Statements

*This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Quarterly Report contain, in addition to historical information, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements address, among other things: the projected impact of various legal proceedings; the projected effects of recent accounting pronouncements; prospects, plans, objectives, expectations and beliefs of management, as well as information contained in this report where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions. Forward-looking statements are based on a number of assumptions concerning future events, and are subject to a number of risks, uncertainties and other factors, many of which are outside our control, which could cause actual results to differ materially from those expressed or implied by such statements. These risks and uncertainties include, among others: the effects of regulation, abnormal weather, changes in capital requirements and funding, acquisitions, changes to the capital markets, and our ability to assimilate acquired operations, as well as those risks, uncertainties and other factors discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in such report. As a result, readers are cautioned not to place undue reliance on any forward-looking statements. We undertake no obligation to update or revise forward-looking statements, whether as a result of new information, future events or otherwise.*

## General Information

Aqua America, Inc. ("we", "us", "our" or the "Company"), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to what we estimate to be almost three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary, Aqua Pennsylvania, provides water or wastewater services to approximately one-half of the total number of people we serve, who are located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through operating and maintenance contracts with municipal authorities and other parties close to our utility companies' service territories; and offers, through a third party, water and wastewater line repair service and protection solutions to households.

AQUA AMERICA, INC. AND SUBSIDIARIES

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)
(In thousands of dollars, except per share amounts)

Aqua America, Inc., which prior to its name change in 2004 was known as Philadelphia Suburban Corporation, was formed in 1968 as a holding company for its primary subsidiary, Aqua Pennsylvania, formerly known as Philadelphia Suburban Water Company. In the early 1990s, we embarked on a growth-through-acquisition strategy focused on water and wastewater operations. Our most significant transactions to date have been the merger with Consumers Water Company in 1999, the acquisition of the regulated water and wastewater operations of AquaSource, Inc. in 2003, the acquisition of Heater Utilities, Inc. in 2004, and the acquisition of American Water Works Company, Inc.'s regulated operations in Ohio in 2012. Since the early 1990s, our business strategy has been primarily directed toward the regulated water and wastewater utility industry, where we have more than quadrupled the number of regulated customers we serve, and has extended our regulated operations from southeastern Pennsylvania to include operations in seven other states. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to opportunistically pursue growth ventures in select market-based activities, such as infrastructure opportunities that are supplementary and complementary to our regulated businesses.

*The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and related notes.*

## Financial Condition

During the first three months of 2018, we had $105,136 of capital expenditures, expended $190 for the acquisition of water and wastewater utility systems, issued $66,996 of long-term debt, and repaid debt and made sinking fund contributions and other loan repayments of $21,898. The capital expenditures were related to new and replacement water mains, improvements to treatment plants, tanks, hydrants, and service lines, well and booster improvements, and other enhancements and improvements. The issuance of long-term debt was comprised principally of the funds borrowed under our revolving credit facility.

At March 31, 2018, we had $3,202 of cash and cash equivalents compared to $4,204 at December 31, 2017. During the first three months of 2018, we used the proceeds from the issuance of long-term debt and internally generated funds to fund the cash requirements discussed above and to pay dividends.

At March 31, 2018, our $250,000 unsecured revolving credit facility, which expires in February 2021, had $113,189 available for borrowing. At March 31, 2018, we had short-term lines of credit of $135,500, of which $115,158 was available for borrowing. One of our short-term lines of credit is an Aqua Pennsylvania $100,000 364-day unsecured revolving credit facility with four banks, which is used to provide working capital, and as of March 31, 2018, $79,658 was available for borrowing.

Our short-term lines of credit of $135,500 are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

The Company's consolidated balance sheet historically has had a negative working capital position whereby routinely our current liabilities exceed our current assets. Management believes that internally generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

## Results of Operations

### Analysis of First Quarter of 2018 Compared to First Quarter of 2017

Revenues increased by $6,560 or 3.5%, primarily due to an increase in customer water consumption, an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $5,097, and additional water and wastewater revenues of $1,634 associated with a larger customer base due to organic growth and utility acquisitions, offset by a reserve, recognized in the first quarter of 2018, of $2,532 for amounts expected to be refundable to utility customers associated with the decrease in the corporate income tax rate from 35% to 21% due to the TCJA.

Operations and maintenance expenses increased by $6,056 or 8.9%, primarily due to an increase in labor expense of $1,559, which included additional overtime expenses for increased maintenance activities, an increase in postretirement benefits of $1,442, and an increase in maintenance expenses of $1,057, mainly resulting from expenses incurred due to more severe winter weather conditions.

Depreciation expense increased by $2,130 or 6.3%, primarily due to the utility plant placed in service since March 31, 2017.

Interest expense increased by $2,145 or 10.1%, primarily due to an increase in average borrowings, offset by a decrease in our effective interest rate.

Allowance for funds used during construction ("AFUDC") decreased by $326, due to a decrease in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Equity earnings in joint venture increased by $412 due to an increase in the sale of raw water to firms in the natural gas drilling industry.

Other decreased by $635 primarily due to a decrease in the non-service cost components of our net benefit cost for pension and postretirement benefits.

Our effective income tax rate was -4.4% in the first quarter of 2018 and 5.6% in the first quarter of 2017. The effective income tax rate decreased due to the reduction in the corporate income tax rate from 35% to 21%, and the effect of additional tax deductions recognized in the first quarter of 2018 for certain qualifying infrastructure improvements for Aqua Pennsylvania. A revenue reserve has been recognized in the first quarter of 2018 for the amounts expected to be refundable to utility customers associated with the decrease in the corporate income tax rate from 35% to 21% due to the TCJA.

Net income increased by $1,767 or 3.6%, primarily as a result of the factors described above.

## Impact of Recent Accounting Pronouncements

We describe the impact of recent accounting pronouncements in Note 15, *Recent Accounting Pronouncements*, to the consolidated financial statements in this report.

## Item 3 – Quantitative and Qualitative Disclosures About Market Risk

We are subject to market risks in the normal course of business, including changes in interest rates and equity prices. There have been no significant changes in our exposure to market risks since December 31, 2017. Refer to Item 7A of the Company's Annual Report on Form 10-K for the year ended December 31, 2017, filed February 28, 2018, for additional information.

## Item 4 – Controls and Procedures

### (a) Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this report are effective such that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure.

### (b) Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting occurred during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

# Part II. Other Information

## Item 1 – Legal Proceedings

We are party to various legal proceedings. Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which we or any of our subsidiaries is a party or to which any of our properties is the subject that we believe are material or are expected to have a material adverse effect on our financial position, results of operations or cash flows.

## Item 1A – Risk Factors

There have been no material changes to the risks disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017, filed February 28, 2018, under "Part 1, Item 1A – Risk Factors."

Item 2 – Unregistered Sales of Equity Securities and Use of Proceeds

The following table summarizes the Company's purchases of its common stock for the quarter ended March 31, 2018:

Issuer Purchases of Equity Securities

| Period | Total Number of Shares Purchased (1) | | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | Maximum Number of Shares that May Yet be Purchased Under the Plan or Programs |
|---|---|---|---|---|---|
| January 1-31, 2018 | 2,662 | $ | 36.37 | - | - |
| February 1-28, 2018 | 68,805 | $ | 34.56 | - | - |
| March 1-31, 2018 | 473 | $ | 33.84 | - | - |
| Total | 71,940 | $ | 34.63 | - | - |

(1) These amounts include the following: (a) 63,941 shares we acquired from employees associated with the withholding of shares to pay certain withholding taxes upon the vesting of stock-based compensation; and (b) 7,999 shares we acquired from our employees who elected to pay the exercise price of their stock options (and then hold shares of the stock), upon exercise, by delivering to us shares of our common stock in accordance with the terms of our equity compensation plan that were previously approved by our shareholders and disclosed in our proxy statements. These features of our equity compensation plan are available to all employees who receive stock-based compensation under the plan. We purchased these shares at their fair market value, as determined by reference to the closing price of our common stock on the day prior to the option exercise.

Item 6 – Exhibits

The information required by this Item is set forth in the Exhibit Index hereto which is incorporated herein by reference.

**EXHIBIT INDEX**

| Exhibit No. | Description |
|---|---|
| 31.1 | Certification of Chief Executive Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934. |
| 31.2 | Certification of Chief Financial Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934. |
| 32.1 | Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350. |
| 32.2 | Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350. |
| 101.INS | XBRL Instance Document |
| 101.SCH | XBRL Taxonomy Extension Schema Document |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRES | XBRL Taxonomy Extension Presentation Linkbase Document |

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be executed on its behalf by the undersigned thereunto duly authorized.

May 9, 2018

Aqua America, Inc.
Registrant

/s/ Christopher H. Franklin
Christopher H. Franklin
Chairman, President and
Chief Executive Officer

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and
Chief Financial Officer

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER, PURSUANT TO RULE 13A-14(A) UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, Christopher H. Franklin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting, and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Christopher H. Franklin
Christopher H. Franklin
President and Chief Executive Officer
May 9, 2018

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER, PURSUANT TO RULE 13A-14(A) UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, David P. Smeltzer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting, and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and Chief Financial Officer
May 9, 2018

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report on Form 10-Q for the period ended March 31, 2018 of Aqua America, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Christopher H. Franklin, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or Section 78o); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Christopher H. Franklin
Christopher H. Franklin
President and Chief Executive Officer
May 9, 2018

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report on Form 10-Q for the period ended March 31, 2018 of Aqua America, Inc. (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, David P. Smeltzer, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or Section 78o); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and Chief Financial Officer
May 9, 2018

**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON DC 20549**

# FORM 10-Q

(Mark One)
☒ QUARTERLY REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the quarterly period ended June 30, 2017

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the transition period from_______________ to _______________

Commission File Number 1-6659

**AQUA AMERICA, INC.**
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Pennsylvania<br>(State or other jurisdiction of incorporation or organization) | 23-1702594<br>(I.R.S. Employer Identification No.) |
| 762 W. Lancaster Avenue, Bryn Mawr, Pennsylvania<br>(Address of principal executive offices) | 19010 -3489<br>(Zip Code) |

(610) 527-8000
(Registrant's telephone number, including area code)

(Former Name, former address and former fiscal year, if changed since last report.)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12(b)-2 of the Exchange Act.:

| | |
|---|---|
| Large accelerated filer ☒ | Accelerated filer ☐ |
| Non-accelerated filer ☐ (do not check if a smaller reporting company) | Smaller reporting company ☐ |
| Emerging growth company ☐ | |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of
July 24, 2017: 177,651,543

AQUA AMERICA, INC. AND SUBSIDIARIES

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AQUA AMERICA, INC. AND SUBSIDIARIES

# CONSOLIDATED BALANCE SHEETS
(In thousands of dollars, except per share amounts)
(UNAUDITED)

| Assets | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Property, plant and equipment, at cost | $ 6,717,832 | $ 6,509,117 |
| Less: accumulated depreciation | 1,558,681 | 1,507,502 |
| Net property, plant and equipment | 5,159,151 | 5,001,615 |
| Current assets: | | |
| Cash and cash equivalents | 7,811 | 3,763 |
| Accounts receivable and unbilled revenues, net | 98,890 | 97,394 |
| Inventory, materials and supplies | 16,838 | 12,961 |
| Prepayments and other current assets | 13,009 | 12,804 |
| Assets held for sale | 1,543 | 1,728 |
| Total current assets | 138,091 | 128,650 |
| | | |
| Regulatory assets | 1,003,808 | 948,647 |
| Deferred charges and other assets | 33,597 | 30,845 |
| Investment in joint venture | 6,786 | 7,026 |
| Goodwill | 42,266 | 42,208 |
| Total assets | $ 6,383,699 | $ 6,158,991 |
| Liabilities and Equity | | |
| Stockholders' equity: | | |
| Common stock at $.50 par value, authorized 300,000,000 shares, issued 180,635,368 and 180,311,345 as of June 30, 2017 and December 31, 2016 | $ 90,317 | $ 90,155 |
| Capital in excess of par value | 802,799 | 797,513 |
| Retained earnings | 1,075,856 | 1,032,844 |
| Treasury stock, at cost, 2,984,264 and 2,916,969 shares as of June 30, 2017 and December 31, 2016 | (73,206) | (71,113) |
| Accumulated other comprehensive income | 764 | 669 |
| Total stockholders' equity | 1,896,530 | 1,850,068 |
| | | |
| Long-term debt, excluding current portion | 1,844,342 | 1,759,962 |
| Less: debt issuance costs | 21,761 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | 1,822,581 | 1,737,605 |
| Commitments and contingencies (See Note 13) | | |
| | | |
| Current liabilities: | | |
| Current portion of long-term debt | 143,567 | 150,671 |
| Loans payable | 67,456 | 6,535 |
| Accounts payable | 46,376 | 59,872 |
| Accrued interest | 17,007 | 18,367 |
| Accrued taxes | 18,858 | 25,607 |
| Other accrued liabilities | 39,283 | 40,484 |
| Total current liabilities | 332,547 | 301,536 |
| | | |
| Deferred credits and other liabilities: | | |
| Deferred income taxes and investment tax credits | 1,339,583 | 1,269,253 |
| Customers' advances for construction | 91,131 | 91,843 |
| Regulatory liabilities | 244,613 | 250,635 |
| Other | 105,051 | 115,583 |
| Total deferred credits and other liabilities | 1,780,378 | 1,727,314 |
| | | |
| Contributions in aid of construction | 551,663 | 542,468 |
| Total liabilities and equity | $ 6,383,699 | $ 6,158,991 |

See notes to consolidated financial statements beginning on page 9 of this report.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME
(In thousands, except per share amounts)
(UNAUDITED)

| | Three Months Ended June 30, | |
|---|---|---|
| | 2017 | 2016 |
| Operating revenues | $ 203,418 | $ 203,876 |
| | | |
| Operating expenses: | | |
| Operations and maintenance | 70,853 | 73,994 |
| Depreciation | 33,407 | 31,619 |
| Amortization | 127 | 528 |
| Taxes other than income taxes | 14,419 | 14,242 |
| Total operating expenses | 118,806 | 120,383 |
| | | |
| Operating income | 84,612 | 83,493 |
| | | |
| Other expense (income): | | |
| Interest expense, net | 21,387 | 20,115 |
| Allowance for funds used during construction | (3,463) | (1,871) |
| Gain on sale of other assets | (10) | (121) |
| Equity loss in joint venture | 161 | 229 |
| Income before income taxes | 66,537 | 65,141 |
| Provision for income taxes | 5,569 | 5,515 |
| Net income | $ 60,968 | $ 59,626 |
| | | |
| Net income per common share: | | |
| Basic | $ 0.34 | $ 0.34 |
| Diluted | $ 0.34 | $ 0.33 |
| | | |
| Average common shares outstanding during the period: | | |
| Basic | 177,609 | 177,288 |
| Diluted | 178,045 | 178,084 |
| | | |
| Cash dividends declared per common share | $ 0.1913 | $ 0.178 |

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME
(In thousands, except per share amounts)
(UNAUDITED)

| | Six Months Ended June 30, 2017 | Six Months Ended June 30, 2016 |
|---|---|---|
| Operating revenues | $ 391,205 | $ 396,483 |
| | | |
| Operating expenses: | | |
| Operations and maintenance | 139,981 | 147,535 |
| Depreciation | 67,244 | 63,764 |
| Amortization | 316 | 978 |
| Taxes other than income taxes | 29,156 | 28,382 |
| Total operating expenses | 236,697 | 240,659 |
| | | |
| Operating income | 154,508 | 155,824 |
| | | |
| Other expense (income): | | |
| Interest expense, net | 42,713 | 39,968 |
| Allowance for funds used during construction | (6,656) | (4,179) |
| Gain on sale of other assets | (279) | (328) |
| Equity loss in joint venture | 191 | 478 |
| Income before income taxes | 118,539 | 119,885 |
| Provision for income taxes | 8,499 | 8,522 |
| Net income | $ 110,040 | $ 111,363 |
| | | |
| Net income per common share: | | |
| Basic | $ 0.62 | $ 0.63 |
| Diluted | $ 0.62 | $ 0.63 |
| | | |
| Average common shares outstanding during the period: | | |
| Basic | 177,545 | 177,196 |
| Diluted | 178,042 | 177,920 |
| | | |
| Cash dividends declared per common share | $ 0.3826 | $ 0.356 |

See notes to consolidated financial statements beginning on page 9 of this report.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands of dollars)
(UNAUDITED)

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Net income | $ 60,968 | $ 59,626 | $110,040 | $111,363 |
| Other comprehensive income, net of tax: | | | | |
| Unrealized holding gain on investments, net of tax expense of $20 and $7 for the three months, and $51 and $3 for the six months ended June 30, 2017 and 2016, respectively | 37 | 12 | 95 | 6 |
| Reclassification of gain on sale of investment to net income, net of tax of $30 for the six months ended June 30, 2016 (1) | - | - | - | (57) |
| Comprehensive income | $ 61,005 | $ 59,638 | $110,135 | $111,312 |

(1) Amount of pre-tax gain of $87 reclassified from accumulated other comprehensive income to gain on sale of other assets on the consolidated statements of net income for the six months ended June 30, 2016.

See notes to consolidated financial statements beginning on page 9 of this report.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CAPITALIZATION
(In thousands of dollars, except per share amounts)
(UNAUDITED)

| | | June 30, 2017 | December 31, 2016 |
|---|---|---|---|
| Stockholders' equity: | | | |
| Common stock, $.50 par value | | $ 90,317 | $ 90,155 |
| Capital in excess of par value | | 802,799 | 797,513 |
| Retained earnings | | 1,075,856 | 1,032,844 |
| Treasury stock, at cost | | (73,206) | (71,113) |
| Accumulated other comprehensive income | | 764 | 669 |
| Total stockholders' equity | | 1,896,530 | 1,850,068 |
| | | | |
| Long-term debt of subsidiaries (substantially collateralized by utility plant): | | | |
| Interest Rate Range | Maturity Date Range | | |
| 0.00% to 0.99% | 2023 to 2033 | 4,339 | 4,661 |
| 1.00% to 1.99% | 2019 to 2035 | 13,664 | 15,539 |
| 2.00% to 2.99% | 2024 to 2033 | 20,120 | 19,668 |
| 3.00% to 3.99% | 2019 to 2056 | 430,600 | 381,944 |
| 4.00% to 4.99% | 2020 to 2054 | 422,896 | 487,318 |
| 5.00% to 5.99% | 2019 to 2043 | 205,828 | 213,078 |
| 6.00% to 6.99% | 2017 to 2036 | 52,995 | 52,985 |
| 7.00% to 7.99% | 2022 to 2027 | 32,706 | 33,066 |
| 8.00% to 8.99% | 2021 to 2025 | 6,334 | 6,565 |
| 9.00% to 9.99% | 2018 to 2026 | 26,400 | 26,400 |
| 10.00% to 10.99% | 2018 | 6,000 | 6,000 |
| | | 1,221,882 | 1,247,224 |
| | | | |
| Notes payable to bank under revolving credit agreement, variable rate, due 2021 | | 135,000 | 25,000 |
| Unsecured notes payable: | | | |
| Bank notes at 1.921% and 1.975% due 2017 and 2018 | | 100,000 | 100,000 |
| Notes ranging from 3.01% to 3.59% due 2027 through 2041 | | 245,000 | 245,000 |
| Notes ranging from 4.62% to 4.87%, due 2017 through 2024 | | 133,600 | 133,600 |
| Notes ranging from 5.20% to 5.95%, due 2018 through 2037 | | 152,427 | 159,809 |
| Total long-term debt | | 1,987,909 | 1,910,633 |
| | | | |
| Current portion of long-term debt | | 143,567 | 150,671 |
| Long-term debt, excluding current portion | | 1,844,342 | 1,759,962 |
| Less: debt issuance costs | | 21,761 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | | 1,822,581 | 1,737,605 |
| | | | |
| Total capitalization | | $ 3,719,111 | $ 3,587,673 |

See notes to consolidated financial statements beginning on page 9 of this report.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF EQUITY
(In thousands of dollars)
(UNAUDITED)

| | Common Stock | Capital in Excess of Par Value | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income | Total |
|---|---|---|---|---|---|---|
| Balance at December 31, 2016 | $ 90,155 | $ 797,513 | $1,032,844 | $ (71,113) | $ 669 | $1,850,068 |
| Net income | - | - | 110,040 | - | - | 110,040 |
| Other comprehensive income, net of income tax of $51 | - | - | - | - | 95 | 95 |
| Dividends | - | - | (67,920) | - | - | (67,920) |
| Sale of stock (23,194 shares) | 12 | 703 | - | - | - | 715 |
| Repurchase of stock (67,295 shares) | - | - | - | (2,093) | - | (2,093) |
| Equity compensation plan (160,279 shares) | 80 | (80) | - | - | - | - |
| Exercise of stock options (140,550 shares) | 70 | 2,257 | - | - | - | 2,327 |
| Stock-based compensation | - | 2,810 | (90) | - | - | 2,720 |
| Cumulative effect of change in accounting principle - windfall tax benefit | - | - | 982 | - | - | 982 |
| Other | - | (404) | - | - | - | (404) |
| Balance at June 30, 2017 | $ 90,317 | $ 802,799 | $1,075,856 | $ (73,206) | $ 764 | $1,896,530 |

Refer to Note 15 - Recent Accounting Pronouncements for a discussion of the cumulative effect of change in accounting principle - windfall tax benefit

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOW
(In thousands of dollars)
(UNAUDITED)

| | Six Months Ended June 30, 2017 | Six Months Ended June 30, 2016 |
|---|---|---|
| Cash flows from operating activities: | | |
| Net income | $ 110,040 | $ 111,363 |
| Adjustments to reconcile net income to net cash flows from operating activities: | | |
| Depreciation and amortization | 67,560 | 64,742 |
| Deferred income taxes | 6,299 | 5,051 |
| Provision for doubtful accounts | 2,052 | 2,101 |
| Stock-based compensation | 2,810 | 2,200 |
| Loss (gain) on sale of utility system and market-based business unit | 324 | (1,782) |
| Gain on sale of other assets | (279) | (328) |
| Net change in receivables, inventory and prepayments | (7,417) | (4,130) |
| Net change in payables, accrued interest, accrued taxes and other accrued liabilities | (10,969) | (2,695) |
| Postretirement benefit contributions | (15,421) | (6,787) |
| Other | 2,262 | 7,923 |
| Net cash flows from operating activities | 157,261 | 177,658 |
| Cash flows from investing activities: | | |
| Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $1,543 and $1,097 | (208,472) | (168,587) |
| Acquisitions of utility systems and other, net | (5,765) | (5,626) |
| Net proceeds from the sale of utility system and other assets | 1,102 | 6,439 |
| Other | (144) | (45) |
| Net cash flows used in investing activities | (213,279) | (167,819) |
| Cash flows from financing activities: | | |
| Customers' advances and contributions in aid of construction | 3,629 | 3,205 |
| Repayments of customers' advances | (1,774) | (1,282) |
| Net proceeds of short-term debt | 60,921 | 9,518 |
| Proceeds from long-term debt | 222,780 | 169,297 |
| Repayments of long-term debt | (145,499) | (112,650) |
| Change in cash overdraft position | (12,616) | (15,338) |
| Proceeds from issuing common stock | 715 | 670 |
| Proceeds from exercised stock options | 2,327 | 3,569 |
| Stock-based compensation windfall tax benefits | - | 1,198 |
| Repurchase of common stock | (2,093) | (2,859) |
| Dividends paid on common stock | (67,920) | (63,071) |
| Other | (404) | (402) |
| Net cash flows from (used in) financing activities | 60,066 | (8,145) |
| Net change in cash and cash equivalents | 4,048 | 1,694 |
| Cash and cash equivalents at beginning of period | 3,763 | 3,229 |
| Cash and cash equivalents at end of period | $ 7,811 | $ 4,923 |
| | | |
| Non-cash investing activities: | | |
| Property, plant and equipment additions purchased at the period end, but not yet paid for | $ 32,770 | $ 20,863 |
| Non-cash customer advances and contributions in aid of construction | 11,488 | 11,199 |

Refer to Note 3 - Acquisitions for a description of non-cash activities
See notes to consolidated financial statements beginning on page 9 of this report.

(In thousands of dollars, except per share amounts)

**Note 1 – *Basis of Presentation***

The accompanying consolidated balance sheets and statements of capitalization of Aqua America, Inc. and subsidiaries (the "Company") at June 30, 2017, the consolidated statements of net income and comprehensive income for the three and six months ended June 30, 2017 and 2016 the consolidated statements of cash flow for the six months ended June 30, 2017 and 2016, and the consolidated statement of equity for the six months ended June 30, 2017 are unaudited, but reflect all adjustments, consisting of only normal recurring accruals, which are, in the opinion of management, necessary to present a fair statement of our consolidated financial position, consolidated changes in equity, consolidated results of operations, and consolidated cash flow for the periods presented. Because they cover interim periods, the statements and related notes to the financial statements do not include all disclosures and notes normally provided in annual financial statements and, therefore, should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2016. The results of operations for interim periods may not be indicative of the results that may be expected for the entire year. The December 31, 2016 consolidated balance sheet data presented herein was derived from the Company's December 31, 2016 audited consolidated financial statements, but does not include all disclosures and notes normally provided in annual financial statements. Certain prior period amounts have been reclassified to conform to the current period presentation of postretirement benefit contributions in the consolidated statements of cash flows.

The preparation of financial statements often requires the selection of specific accounting methods and policies. Further, significant estimates and judgments may be required in selecting and applying those methods and policies in the recognition of the assets and liabilities in our consolidated balance sheets, the revenues and expenses in our consolidated statements of net income, and the information that is contained in our summary of significant accounting policies and notes to consolidated financial statements. Making these estimates and judgments requires the analysis of information concerning events that may not yet be complete and of facts and circumstances that may change over time. Accordingly, actual amounts or future results can differ materially from those estimates that we include currently in our consolidated financial statements, summary of significant accounting policies, and notes.

There have been no changes to the summary of significant accounting policies previously identified in the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

**Note 2 – *Goodwill***

The following table summarizes the changes in the Company's goodwill, by business segment:

| | Regulated Segment | Other | Consolidated |
|---|---|---|---|
| Balance at December 31, 2016 | $ 37,367 | $ 4,841 | $ 42,208 |
| Goodwill acquired | 72 | - | 72 |
| Reclassification to utility plant acquisition adjustment | (14) | - | (14) |
| Balance at June 30, 2017 | $ 37,425 | $ 4,841 | $ 42,266 |

The reclassification of goodwill to utility plant acquisition adjustment results from a mechanism approved by the applicable utility commission. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

**Note 3 –** ***Acquisitions***

During the first half of 2017, the Company completed three acquisitions of water and wastewater utility systems in various states adding 1,002 customers. The total purchase price of these utility systems consisted of $5,765 in cash, which resulted in $72 of goodwill being recorded. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

Pursuant to our strategy to grow through acquisitions, in January 2016, the Company acquired Superior Water Company, Inc., which provides public water service to approximately 3,900 customers in portions of Berks, Chester, and Montgomery counties in Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $25,167, contributions in aid of construction of $16,565, and goodwill of $8,622. Additionally, during 2016, the Company completed eighteen acquisitions of water and wastewater utility systems in various states adding 2,469 customers. The total purchase price of these utility systems consisted of $5,518 in cash, which resulted in $1,756 of goodwill being recorded. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

**Note 4 –** ***Assets Held for Sale***

In the first quarter of 2017, the Company decided to market for sale a water system that serves approximately 265 customers. This water system is reported as assets held for sale in the Company's consolidated balance sheet.

In the second quarter of 2016, the Company decided to market for sale two business units that are reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, for which the sale was completed in January 2017. The other business unit repairs and performs maintenance on water and wastewater systems, for which the sale was completed in June 2017.

(In thousands of dollars, except per share amounts)

**Note 5 – *Capitalization***

In July 2017, Aqua Illinois issued $100,000 of first mortgage bonds consisting of the following:

| Amount | Interest Rate | Maturity |
|---|---|---|
| $25,000 | 3.64% | 2032 |
| $6,000 | 3.89% | 2037 |
| $15,000 | 3.90% | 2038 |
| $10,000 | 4.18% | 2047 |
| $22,000 | 4.22% | 2049 |
| $22,000 | 4.24% | 2050 |

The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In July 2017, Aqua Pennsylvania issued $80,000 of first mortgage bonds, of which $40,000 is due in 2055 and $40,000 is due in 2057 with interest rates of 4.04% and 4.06%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In January 2017, Aqua Pennsylvania issued $50,000 of first mortgage bonds, of which $10,000 is due in 2042 and $40,000 is due in 2044 with interest rates of 3.65% and 3.69%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

**Note 6 – *Fair Value of Financial Instruments***

The Company follows the Financial Accounting Standards Board's ("FASB") accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or

- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. There have been no changes in the valuation techniques used to measure fair value, or asset or liability transfers between the levels of the fair value hierarchy for the quarter ended June 30, 2017.

(In thousands of dollars, except per share amounts)

Financial instruments are recorded at carrying value in the financial statements and approximate fair value as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of loans payable is determined based on its carrying amount and utilizing Level 1 methods and assumptions. As of June 30, 2017 and December 31, 2016, the carrying amount of the Company's loans payable was $67,456 and $6,535, respectively, which equates to their estimated fair value. The fair value of mutual funds to fund our deferred compensation plan liability is determined based on quoted market prices from active markets utilizing Level 1 methods and assumptions. As of June 30, 2017 and December 31, 2016, the carrying amount of these securities was $18,000 and $17,072, which equates to their fair value, and is reported in the consolidated balance sheet in deferred charges and other assets. The fair value of cash and cash equivalents, which is comprised of a money market fund, is determined based on the net asset value per unit utilizing Level 2 methods and assumptions. As of June 30, 2017 and December 31, 2016, the carrying amounts of the Company's cash and cash equivalents was $7,811 and $3,763, respectively, which equates to their fair value.

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

| | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Carrying Amount | $ 1,987,909 | $ 1,910,633 |
| Estimated Fair Value | 2,049,090 | 2,018,933 |

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing Level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $91,131 as of June 30, 2017, and $91,843 as of December 31, 2016. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels, and future rate increases. Portions of these non-interest bearing instruments are payable annually through 2027 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

**Note 7 – *Net Income per Common Share***

Basic net income per common share is based on the weighted average number of common shares outstanding. Diluted net income per common share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation is included in the computation of diluted net income per common share. The dilutive effect of stock-based compensation is calculated using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation. The treasury stock method assumes that the proceeds from stock-based compensation are used to purchase the Company's common stock at the average market price during the period. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per common share:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Average common shares outstanding during the period for basic computation | 177,609 | 177,288 | 177,545 | 177,196 |
| Dilutive effect of employee stock-based compensation | 436 | 796 | 497 | 724 |
| Average common shares outstanding during the period for diluted computation | 178,045 | 178,084 | 178,042 | 177,920 |

For the three and six months ended June 30, 2017 and 2016, all of the Company's employee stock options were included in the calculations of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods.

**Note 8 – *Stock-based Compensation***

Under the Company's 2009 Omnibus Equity Compensation Plan, as amended as of February 27, 2014 (the "2009 Plan"), as approved by the Company's shareholders to replace the 2004 Equity Compensation Plan (the "2004 Plan"), stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. The 2009 Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the 2009 Plan may be issued pursuant to stock awards, stock units and other stock-based awards, subject to adjustment as provided in the 2009 Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the 2009 Plan. Awards to employees and consultants under the 2009 Plan are made by a committee of the Board of Directors of the Company, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At June 30, 2017, 3,741,035 shares were still available for issuance under the 2009 Plan. No further grants may be made under the 2004 Plan.

(In thousands of dollars, except per share amounts)

***Performance Share Units*** – A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three-year performance period specified in the grant, subject to exceptions through the respective vesting period, generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals. The following table provides compensation costs for stock-based compensation related to PSUs:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 971 | $ 967 | $ 1,841 | $ 1,492 |
| Income tax benefit | 394 | 392 | 747 | 601 |

The following table summarizes the PSU transactions for the six months ended June 30, 2017:

| | Number of Share Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested share units at beginning of period | 476,896 | $ 27.96 |
| Granted | 125,202 | 30.79 |
| Performance criteria adjustment | (64,034) | 27.75 |
| Forfeited | (12,915) | 28.01 |
| Share units vested in prior period and issued in current period | 32,400 | 25.31 |
| Share units issued | (125,999) | 36.37 |
| Nonvested share units at end of period | 431,550 | $ 26.16 |

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions using the Monte Carlo valuation method, which assesses probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs is based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The per unit weighted-average fair value at the date of grant for PSUs granted during the six months ended June 30, 2017 and 2016 was $30.79 and $28.89, respectively. The fair value of each PSU grant is amortized monthly into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on our estimate of the final expected value of the award, and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows.

(In thousands of dollars, except per share amounts)

***Restricted Stock Units*** – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation cost and income tax benefit for stock-based compensation related to RSUs:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 322 | $ 296 | $ 603 | $ 464 |
| Income tax benefit | 133 | 122 | 249 | 191 |

The following table summarizes the RSU transactions for the six months ended June 30, 2017:

| | Number of Stock Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock units at beginning of period | 109,273 | $ 28.48 |
| Granted | 41,293 | 30.37 |
| Stock units vested and issued | (26,279) | 26.12 |
| Forfeited | (2,287) | 30.52 |
| Nonvested stock units at end of period | 122,000 | $ 29.59 |

The per unit weighted-average fair value at the date of grant for RSUs granted during the six months ended June 30, 2017 and 2016 was $30.37 and $32.09, respectively.

(In thousands of dollars, except per share amounts)

***Stock Options*** – A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire 10 years from the grant date. The fair value of each stock option is amortized into compensation expense using the graded-vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides the compensation cost and income tax benefit for stock-based compensation related to stock options:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 74 | $ - | $ 104 | $ - |
| Income tax benefit | 33 | 18 | 125 | 234 |

The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model. The following assumptions were used in the application of this valuation model:

| | 2017 |
|---|---|
| Expected term (years) | 5.45 |
| Risk-free interest rate | 2.01% |
| Expected volatility | 17.7% |
| Dividend yield | 2.51% |
| Grant date fair value per option | $ 4.07 |

Historical information was the principal basis for the selection of the expected term and dividend yield. The expected volatility is based on a weighted-average combination of historical and implied volatilities over a time period that approximates the expected term of the option. The risk-free interest rate was selected based upon the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option.

For the six months ended June 30, 2016, there were no compensation costs for stock-based compensation related to stock options, as the previous stock option grant that occurred in 2010 became fully amortized in 2013. Additionally, there were no stock options granted during the six months ended June 30, 2016.

(In thousands of dollars, except per share amounts)

The following table summarizes stock option transactions for the six months ended June 30, 2017:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Life (years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding at beginning of period | 427,335 | $ 15.55 | | |
| Granted | 120,127 | 30.47 | | |
| Forfeited | (1,053) | 30.47 | | |
| Expired / Cancelled | (2,812) | 14.26 | | |
| Exercised | (140,550) | 16.56 | | |
| Outstanding at end of period | 403,047 | $ 19.62 | 4.0 | $ 5,514 |
| | | | | |
| Exercisable at end of period | 283,973 | $ 15.07 | 1.6 | $ 5,177 |

***Stock Awards*** – Stock awards represent the issuance of our common stock, without restriction. The issuance of stock awards results in compensation expense which is equal to the fair market value of the stock on the grant date, and is expensed immediately upon grant. The following table provides the compensation cost and income tax benefit for stock-based compensation related to stock awards:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 131 | $ 131 | $ 262 | $ 244 |
| Income tax benefit | 54 | 54 | 109 | 101 |

The following table summarizes stock award transactions for the six months ended June 30, 2017:

| | Number of Stock Awards | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock awards at beginning of period | - | $ - |
| Granted | 8,001 | 32.79 |
| Vested | (8,001) | 32.79 |
| Nonvested stock awards at end of period | - | $ - |

The per unit weighted-average fair value at the date of grant for stock awards granted during the six months ended June 30, 2017 and 2016 was $32.79 and $33.64, respectively.

(In thousands of dollars, except per share amounts)

**Note 9 – *Pension Plans and Other Postretirement Benefits***

The Company maintains a qualified defined benefit pension plan (the "Pension Plan"), a nonqualified pension plan and other postretirement benefit plans for certain of its employees. The net periodic benefit cost is based on estimated values and an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover, and medical costs. The following tables provide the components of net periodic benefit cost:

| | Pension Benefits | | | |
|---|---|---|---|---|
| | Three Months Ended June 30, | | Six Months Ended June 30, | |
| | 2017 | 2016 | 2017 | 2016 |
| Service cost | $ 794 | $ 784 | $ 1,587 | $ 1,610 |
| Interest cost | 3,108 | 3,251 | 6,217 | 6,536 |
| Expected return on plan assets | (4,270) | (4,215) | (8,539) | (8,481) |
| Amortization of prior service cost | 145 | 145 | 290 | 290 |
| Amortization of actuarial loss | 2,001 | 1,797 | 4,002 | 3,557 |
| Settlement charge | - | - | - | 3,028 |
| Special termination benefit charge | - | - | - | 302 |
| Net periodic benefit cost | $ 1,778 | $ 1,762 | $ 3,557 | $ 6,842 |

| | Other Postretirement Benefits | | | |
|---|---|---|---|---|
| | Three Months Ended June 30, | | Six Months Ended June 30, | |
| | 2017 | 2016 | 2017 | 2016 |
| Service cost | $ 255 | $ 253 | $ 510 | $ 508 |
| Interest cost | 737 | 726 | 1,473 | 1,476 |
| Expected return on plan assets | (647) | (645) | (1,294) | (1,356) |
| Amortization of prior service cost | (127) | (137) | (254) | (274) |
| Amortization of actuarial loss | 291 | 220 | 583 | 487 |
| Net periodic benefit cost | $ 509 | $ 417 | $ 1,018 | $ 841 |

Effective July 1, 2015, the Company added a permanent lump sum option to the form of benefit payments offered to participants of the qualified defined benefit pension plan and non-qualified retirement plans upon retirement or termination. During the first quarter of 2016, the lump sum payments paid to participants who elected this option for payments from the non-qualified retirement plans resulted in a settlement charge.

The Company made cash contributions of $15,421 to its Pension Plan during the first six months of 2017, which completed the Company's 2017 cash contributions.

(In thousands of dollars, except per share amounts)

**Note 10 – *Water and Wastewater Rates***

During the first six months of 2017, the Company's operating divisions in Indiana and Ohio were granted base rate increases designed to increase total operating revenues on an annual basis by $7,403. Further, during the first six months of 2017, the Company's operating divisions in Illinois, New Jersey, and North Carolina received approval to bill infrastructure rehabilitation surcharges designed to increase total operating revenues on an annual basis by $3,659.

**Note 11 – *Taxes Other than Income Taxes***

The following table provides the components of taxes other than income taxes:

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Property | $ 6,867 | $ 6,928 | $ 13,652 | $ 13,113 |
| Gross receipts, excise and franchise | 3,363 | 3,113 | 6,538 | 6,059 |
| Payroll | 2,132 | 2,299 | 5,256 | 5,635 |
| Regulatory assessments | 630 | 681 | 1,259 | 1,352 |
| Pumping fees | 1,350 | 1,140 | 2,294 | 2,059 |
| Other | 77 | 81 | 157 | 164 |
| Total taxes other than income | $ 14,419 | $ 14,242 | $ 29,156 | $ 28,382 |

**Note 12 – *Segment Information***

The Company has ten operating segments and one reportable segment. The Regulated segment, the Company's single reportable segment, is comprised of eight operating segments representing our water and wastewater regulated utility companies which are organized by the states where we provide water and wastewater services. These operating segments are aggregated into one reportable segment because each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment.

Two operating segments are included within the Other category below. These segments are not quantitatively significant and are comprised of Aqua Resources and Aqua Infrastructure. Aqua Resources provides water and wastewater service through operating and maintenance contracts with municipal authorities and other parties close to our utility companies' service territories; and offers, through a third party, water and sewer line repair service and protection solutions to households. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. In addition to these segments, Other is comprised of other business activities not included in the reportable segment, including corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense. Additionally, contained within total assets for the Other category, in the table below, is a regulatory asset for postretirement benefits for the underfunded status of the Company's pension and other postretirement benefit plans and an intercompany receivable.

(In thousands of dollars, except per share amounts)

The following table presents information about the Company's reportable segment:

| | Three Months Ended June 30, 2017 | | | Three Months Ended June 30, 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other | Consolidated | Regulated | Other | Consolidated |
| Operating revenues | $ 201,960 | $ 1,458 | $ 203,418 | $ 198,086 | $ 5,790 | $ 203,876 |
| Operations and maintenance expense | 72,560 | (1,707) | 70,853 | 69,676 | 4,318 | 73,994 |
| Depreciation | 34,141 | (734) | 33,407 | 32,214 | (595) | 31,619 |
| Operating income | 81,152 | 3,460 | 84,612 | 82,018 | 1,475 | 83,493 |
| Interest expense, net | 19,747 | 1,640 | 21,387 | 19,093 | 1,022 | 20,115 |
| Allowance for funds used during construction | 3,463 | - | 3,463 | 1,871 | - | 1,871 |
| Income tax expense (benefit) | 5,249 | 320 | 5,569 | 5,910 | (395) | 5,515 |
| Net income | 59,629 | 1,339 | 60,968 | 59,004 | 622 | 59,626 |

| | Six Months Ended June 30, 2017 | | | Six Months Ended June 30, 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other | Consolidated | Regulated | Other | Consolidated |
| Operating revenues | $ 388,309 | $ 2,896 | $ 391,205 | $ 384,092 | $ 12,391 | $ 396,483 |
| Operations and maintenance expense | 140,070 | (89) | 139,981 | 137,001 | 10,534 | 147,535 |
| Depreciation | 67,807 | (563) | 67,244 | 64,420 | (656) | 63,764 |
| Operating income | 152,219 | 2,289 | 154,508 | 154,868 | 956 | 155,824 |
| Interest expense, net | 39,524 | 3,189 | 42,713 | 37,894 | 2,074 | 39,968 |
| Allowance for funds used during construction | 6,656 | - | 6,656 | 4,179 | - | 4,179 |
| Income tax expense (benefit) | 9,105 | (606) | 8,499 | 9,583 | (1,061) | 8,522 |
| Net income (loss) | 110,525 | (485) | 110,040 | 111,898 | (535) | 111,363 |
| Capital expenditures | 208,174 | 298 | 208,472 | 167,900 | 687 | 168,587 |

| | June 30, 2017 | December 31, 2016 |
|---|---|---|
| Total assets: | | |
| Regulated | $ 6,145,289 | $ 5,953,702 |
| Other | 238,410 | 205,289 |
| Consolidated | $ 6,383,699 | $ 6,158,991 |

**Note 13 – *Commitments and Contingencies***

The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of June 30, 2017, the aggregate amount of $15,259 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. While the final outcome of these loss contingencies cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of these matters are not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Further, the Company has insurance coverage for certain of these loss contingencies, and as of June 30, 2017, estimates that approximately $3,407 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets.

In addition to the aforementioned loss contingencies, the Company self-insures its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,770 at June 30, 2017 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

**Note 14 –** ***Income Taxes***

During the six months ended June 30, 2017, the Company's Federal net operating loss ("NOL") carryforward decreased by $15,986. In addition, during the six months ended June 30, 2017, the Company's state NOL carryforward increased by $11,925. As of June 30, 2017, the balance of the Company's Federal NOL was $97,158. The Company believes its Federal NOL carryforward is more likely than not to be recovered and requires no valuation allowance. As of June 30, 2017, the balance of the Company's gross state NOL was $587,066, a portion of which is offset by a valuation allowance because the Company does not believe the state NOLs are more likely than not to be realized. The Company's Federal and state NOL carryforwards begin to expire in 2032 and 2023, respectively. The Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $63,631 and $85,232, respectively. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions were $160,789 and $672,298 respectively. The Company records its unrecognized tax benefit as a reduction to its deferred income tax liability.

In accordance with a 2012 settlement agreement with the Pennsylvania Public Utility Commission, Aqua Pennsylvania expenses, for tax purposes, qualifying utility asset improvement costs, which results in a substantial reduction in income tax expense and greater net income and cash flows. The Company's effective income tax rate for the second quarter of 2017 and 2016 was 8.4% and 8.5%, respectively, and for the first six months of 2017 and 2016 was 7.2% and 7.1%, respectively.

As of June 30, 2017, the total gross unrecognized tax benefit was $28,464, of which $22,364, if recognized, would affect the Company's effective tax rate as a result of the regulatory treatment afforded for qualifying infrastructure improvements in Pennsylvania. At December 31, 2016, the Company had unrecognized tax benefits of $28,099.

Accounting rules for uncertain tax positions specify that tax positions for which the timing of resolution is uncertain should be classified as long-term liabilities. Judgment is required in evaluating the Company's uncertain tax positions and determining the provision for income taxes. Management believes that an adequate provision has been made for any adjustments that may result from tax examinations. Although the timing of income tax audit resolutions and negotiations with taxing authorities is highly uncertain, the Company does not anticipate a significant change to the total amount of unrecognized income tax benefits within the next 12 months.

**Note 15 –** ***Recent Accounting Pronouncements***

In March 2017, the FASB issued updated accounting guidance on the presentation of net periodic pension and postretirement benefit cost (net benefit cost). Historically, net benefit cost is reported as an employee cost within operating income, net of amounts capitalized. The guidance requires the bifurcation of net benefit cost. The service cost component will be presented with other employee compensation costs in operating income and the other components of net benefit cost will be reported separately outside of operating income, and will not be eligible for capitalization. The guidance is effective for annual reporting periods beginning after December 15, 2017, and interim periods within that reporting period. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption.

In January 2017, the FASB issued updated accounting guidance that eliminates step 2 of the current goodwill impairment test, which requires a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment loss will instead be measured at the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance will be effective for annual reporting periods beginning after December 15, 2019, and interim periods within that reporting period, with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. The Company has elected to early adopt the provisions of the updated guidance, for its annual impairment valuation to be performed in the third quarter of 2017, and does not expect the provisions of the updated guidance to have an impact on its results of operations or financial position.

In August 2016, the FASB issued updated accounting guidance on the classification of certain cash receipts and cash payments in the statement of cash flows, which is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. This guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is permitted. The Company is currently evaluating the impact of this new standard on its consolidated cash flow statement, but does not expect there to be a significant impact.

In March 2016, the FASB issued updated accounting guidance on simplifying the accounting for share-based payments, which includes several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The updated guidance was effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years, with early adoption available. On January 1, 2017, the Company adopted the updated guidance, prospectively, and recognized a previously unrecognized windfall tax benefit for stock-based compensation of $982 associated with the Company's 2012 Federal net operating loss, which was recorded as an adjustment to deferred income taxes and retained earnings (refer to the presentation of "cumulative effect of change in accounting principle - windfall tax benefit" on our Consolidated Statement of Equity). Additionally, income tax benefits in excess of compensation costs or tax deficiencies for share-based compensation are now recorded to our income tax provision, instead of historically to stockholder's equity, which impacts our effective tax rate. Lastly, all tax-related cash flows resulting from share-based payments are reported prospectively as operating activities on the statement of cash flows, a change from the historical requirement to present tax benefits as an inflow from financing activities and an outflow from operating activities.

In February 2016, the FASB issued updated accounting guidance on accounting for leases, which requires lessees to establish a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The updated accounting guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption available. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption.

In January 2016, the FASB issued updated accounting guidance on the recognition and measurement of financial assets and financial liabilities, which amends certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including the requirement to measure certain equity investments at fair value with changes in fair value recognized in net income. The updated guidance is effective for interim and annual periods beginning after December 31, 2017. The Company does not expect the provisions of the updated guidance to have a material impact on its results of operations or financial position.

In May 2014, the FASB issued updated accounting guidance on recognizing revenue from contracts with customers, which outlines a single comprehensive model that an entity will apply to determine the measurement of revenue and timing of recognition. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The updated guidance also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. Additionally, the accounting for contributions in aid of construction may be impacted by the updated accounting guidance if the contributions are determined to be in scope. In July 2015, the FASB approved a one year deferral to the original effective date of this guidance. The updated guidance is effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the updated guidance in each prior reporting period, or (ii) a modified retrospective approach with the cumulative effect of initially adopting the updated guidance recognized through retained earnings at the date of adoption. In 2016, the Company performed an evaluation of the requirements of the updated guidance and based on current interpretations of the updated guidance believes that the impact of adoption may not result in a material change in our measurement of revenue and timing of recognition if contributions in aid of construction are determined to not be in scope. In 2017, the American Institute of Certified Public Accountants (AICPA) power and utility entities revenue recognition task force has determined that contributions in aid of construction are not in the scope of the new standard, and submitted its determination to the AICPA's revenue recognition working group for approval. We plan to implement the updated guidance using the modified retrospective approach on January 1, 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS
(In thousands of dollars, except per share amounts)

Item 2 – Management's Discussion and Analysis of Financial Condition and Results of Operations

## Forward-looking Statements

*This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Quarterly Report contain, in addition to historical information, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements address, among other things: the projected impact of various legal proceedings; the projected effects of recent accounting pronouncements; prospects, plans, objectives, expectations and beliefs of management, as well as information contained in this report where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions. Forward-looking statements are based on a number of assumptions concerning future events, and are subject to a number of risks, uncertainties and other factors, many of which are outside our control, which could cause actual results to differ materially from those expressed or implied by such statements. These risks and uncertainties include, among others: the effects of regulation, abnormal weather, changes in capital requirements and funding, acquisitions, changes to the capital markets, and our ability to assimilate acquired operations, as well as those risks, uncertainties and other factors discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in such report. As a result, readers are cautioned not to place undue reliance on any forward-looking statements. We undertake no obligation to update or revise forward-looking statements, whether as a result of new information, future events or otherwise.*

## General Information

Aqua America, Inc. ("we", "us", "our" or the "Company"), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to what we estimate to be almost three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary, Aqua Pennsylvania, provides water or wastewater services to approximately one-half of the total number of people we serve, who are located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through operating and maintenance contracts with municipal authorities and other parties close to our utility companies' service territories; and offers, through a third party, water and wastewater line repair service and protection solutions to households.

During 2016, we completed the sale of business units within Aqua Resources which provided liquid waste hauling and disposal services, and inspection, cleaning and repair of storm and sanitary wastewater lines. Additionally, in 2016, we decided to market for sale two business units that are reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, for which the sale was completed in January 2017. The other business unit repairs and performs maintenance on water and wastewater systems, for which the sale was completed in June 2017.

Aqua America, Inc., which prior to its name change in 2004 was known as Philadelphia Suburban Corporation, was formed in 1968 as a holding company for its primary subsidiary, Aqua Pennsylvania, formerly known as Philadelphia Suburban Water Company. In the early 1990s, we embarked on a growth-through-acquisition strategy focused on water and wastewater operations. Our most significant transactions to date have been the merger with Consumers Water Company in 1999, the acquisition of the regulated water and wastewater operations of AquaSource, Inc. in 2003, the acquisition of Heater Utilities, Inc. in 2004, and the acquisition of American Water Works Company, Inc.'s regulated operations in Ohio in 2012. Since the early 1990s, our business strategy has been primarily directed toward the regulated water and wastewater utility industry, where we have more than quadrupled the number of regulated customers we serve, and has extended our regulated operations from southeastern Pennsylvania to include operations in seven other states. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to opportunistically pursue growth ventures in select market-based activities, such as infrastructure opportunities that are supplementary and complementary to our regulated businesses.

*The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and related notes.*

## Financial Condition

During the first six months of 2017, we had $208,472 of capital expenditures, expended $5,765 for the acquisition of water and wastewater utility systems, issued $222,780 of long-term debt, and repaid debt and made sinking fund contributions and other loan repayments of $145,499. The capital expenditures were related to new and replacement water mains, improvements to treatment plants, tanks, hydrants, and service lines, well and booster improvements, and other enhancements and improvements. The issuance of long-term debt was comprised principally of the funds borrowed under our revolving credit facility and the issuance of $50,000 of first mortgage bonds by Aqua Pennsylvania in January 2017.

At June 30, 2017, we had $7,811 of cash and cash equivalents compared to $3,763 at December 31, 2016. During the first six months of 2017, we used the proceeds from the issuance of long-term debt and internally generated funds to fund the cash requirements discussed above and to pay dividends.

At June 30, 2017, our $250,000 unsecured revolving credit facility, which expires in February 2021, had $97,547 available for borrowing. At June 30, 2017, we had short-term lines of credit of $135,500, of which $68,044 was available for borrowing. One of our short-term lines of credit is an Aqua Pennsylvania $100,000 364-day unsecured revolving credit facility with four banks, which is used to provide working capital, and as of June 30, 2017, $33,534 was available for borrowing. Subsequently, in July we issued $180,000 of long-term debt, the proceeds of which were used to reduce our borrowings under our revolving credit facilities.

Our short-term lines of credit of $135,500 are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

The Company's consolidated balance sheet historically has had a negative working capital position whereby routinely our current liabilities exceed our current assets. Management believes that internally generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

## Results of Operations

### Analysis of Second Quarter of 2017 Compared to Second Quarter of 2016

Revenues decreased by $458 or 0.2%, primarily due to a decrease in market-based activities revenue of $4,376 associated with the dispositions of business units, offset by an increase in customer water consumption, an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $1,840, and additional water and wastewater revenues from organic growth of $733.

Operations and maintenance expenses decreased by $3,141 or 4.2%, due to a reduction in operating expenses for Aqua Resources of $4,174 associated with the disposition of business units.

Depreciation expense increased by $1,788 or 5.7%, primarily due to the utility plant placed in service since June 30, 2016.

Interest expense increased by $1,272 or 6.3%, primarily due to an increase in average borrowings, offset by a decrease in our effective interest rate.

Allowance for funds used during construction ("AFUDC") increased by $1,592, due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied, and an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity.

Our effective income tax rate was 8.4% in the second quarter of 2017 and 8.5% in the second quarter of 2016. The effective income tax rate decreased due to the effect of additional tax deductions recognized in the second quarter of 2017 for certain qualifying infrastructure improvements for Aqua Pennsylvania.

AQUA AMERICA, INC. AND SUBSIDIARIES

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS (continued)
(In thousands of dollars, except per share amounts)

Net income increased by $1,342 or 2.3%, primarily as a result of the factors described above.

## Analysis of First Six Months of 2017 Compared to First Six Months of 2016

Revenues decreased by $5,278 or 1.3%, primarily due to a decrease in market-based activities revenue of $9,539 associated with the dispositions of business units, offset by an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $2,827, and additional water and wastewater revenues from organic growth of $1,800.

Operations and maintenance expenses decreased by $7,554 or 5.1%, due to a reduction in operating expenses for Aqua Resources of $8,732 associated with the disposition of business units, offset by the prior year effect of a gain on sale of a utility system of $1,215. The gain on sale of a utility system is reported in the consolidated statement of net income as a component of operations and maintenance expense.

Depreciation expense increased by $3,480 or 5.5%, primarily due to the utility plant placed in service since June 30, 2016.

Taxes other than income taxes increased by $774 or 2.7% primarily due to an increase in property taxes of $539 primarily due to the effect of a benefit recorded in 2016 for Ohio based on the final settlement of a property tax bill.

Interest expense increased by $2,745 or 6.9%, primarily due to an increase in average borrowings, offset by a decrease in our effective interest rate.

Allowance for funds used during construction ("AFUDC") increased by $2,477, due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied, and an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity.

Our effective income tax rate was 7.2% in the first six months of 2017 and 7.1% in the first six months of 2016. The effective income tax rate increased due to the effect of less tax deductions recognized in the first six months of 2017 for certain qualifying infrastructure improvements for Aqua Pennsylvania.

Net income decreased by $1,323 or 1.2%, primarily as a result of the factors described above.

## Impact of Recent Accounting Pronouncements

We describe the impact of recent accounting pronouncements in Note 15, *Recent Accounting Pronouncements*, to the consolidated financial statements in this report.

## Item 3 – Quantitative and Qualitative Disclosures About Market Risk

We are subject to market risks in the normal course of business, including changes in interest rates and equity prices. There have been no significant changes in our exposure to market risks since December 31, 2016. Refer to Item 7A of the Company's Annual Report on Form 10-K for the year ended December 31, 2016 for additional information.

## Item 4 – Controls and Procedures

### (a) Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this report are effective such that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure.

### (b) Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting occurred during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

# Part II. Other Information

## Item 1 – Legal Proceedings

We are party to various legal proceedings. Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which we or any of our subsidiaries is a party or to which any of our properties is the subject that we believe are material or are expected to have a material adverse effect on our financial position, results of operations or cash flows.

## Item 1A – Risk Factors

There have been no material changes to the risks disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016 under "Part 1, Item 1A – Risk Factors."

Item 2 – Unregistered Sales of Equity Securities and Use of Proceeds

The following table summarizes the Company's purchases of its common stock for the quarter ended June 30, 2017:

Issuer Purchases of Equity Securities

| Period | Total Number of Shares Purchased (1) | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | Maximum Number of Shares that May Yet be Purchased Under the Plan or Programs |
|---|---|---|---|---|
| April 1-30, 2017 | - | $ - | - | - |
| May 1-31, 2017 | 1,259 | $ 31.49 | - | - |
| June 1-30, 2017 | - | $ - | - | - |
| Total | 1,259 | $ 31.49 | - | - |

(1) These amounts include the following: (a) 281 shares we acquired from employees associated with the withholding of shares to pay certain withholding taxes upon the vesting of stock-based compensation; and (b) 978 shares we acquired from our employees who elected to pay the exercise price of their stock options (and then hold shares of the stock), upon exercise, by delivering to us shares of our common stock in accordance with the terms of our equity compensation plan that were previously approved by our shareholders and disclosed in our proxy statements. These features of our equity compensation plan are available to all employees who receive stock-based compensation under the plan. We purchased these shares at their fair market value, as determined by reference to the closing price of our common stock on the day prior to the option exercise.

Item 6 – Exhibits

The information required by this Item is set forth in the Exhibit Index hereto which is incorporated herein by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be executed on its behalf by the undersigned thereunto duly authorized.

August 3, 2017

Aqua America, Inc.
Registrant

/s/ Christopher H. Franklin
Christopher H. Franklin
President and
Chief Executive Officer

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and
Chief Financial Officer

**EXHIBIT INDEX**

| Exhibit No. | Description |
|---|---|
| 31.1 | Certification of Chief Executive Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934. |
| 31.2 | Certification of Chief Financial Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934. |
| 32.1 | Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350. |
| 32.2 | Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350. |
| 101.INS | XBRL Instance Document |
| 101.SCH | XBRL Taxonomy Extension Schema Document |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRES | XBRL Taxonomy Extension Presentation Linkbase Document |

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER, PURSUANT TO RULE 13A-14(A) UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, Christopher H. Franklin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting, and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Christopher H. Franklin
Christopher H. Franklin
President and Chief Executive Officer
August 3, 2017

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER, PURSUANT TO RULE 13A-14(A) UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, David P. Smeltzer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting, and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and Chief Financial Officer
August 3, 2017

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report on Form 10-Q for the period ended June 30, 2017 of Aqua America, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Christopher H. Franklin, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or Section 78o); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Christopher H. Franklin
Christopher H. Franklin
President and Chief Executive Officer
August 3, 2017

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report on Form 10-Q for the period ended June 30, 2017 of Aqua America, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David P. Smeltzer, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or Section 78o); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and Chief Financial Officer
August 3, 2017

**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON DC 20549**

**FORM 10-Q**

(Mark One)
☒ QUARTERLY REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the quarterly period ended September 30, 2017

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the transition period from_______________ to _______________

Commission File Number 1-6659

**AQUA AMERICA, INC.**
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Pennsylvania<br>(State or other jurisdiction of incorporation or organization) | 23-1702594<br>(I.R.S. Employer Identification No.) |
| 762 W. Lancaster Avenue, Bryn Mawr, Pennsylvania<br>(Address of principal executive offices) | 19010 -3489<br>(Zip Code) |

(610) 527-8000
(Registrant's telephone number, including area code)

(Former Name, former address and former fiscal year, if changed since last report.)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12(b)-2 of the Exchange Act.:

| | |
|---|---|
| Large accelerated filer ☒ | Accelerated filer ☐ |
| Non-accelerated filer ☐ (do not check if a smaller reporting company) | Smaller reporting company ☐ |
| Emerging growth company ☐ | |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of October 20, 2017: 177,690,598

AQUA AMERICA, INC. AND SUBSIDIARIES

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In thousands of dollars, except per share amounts)
(UNAUDITED)

| Assets | September 30, 2017 | December 31, 2016 |
|---|---|---|
| Property, plant and equipment, at cost | $ 6,857,093 | $ 6,509,117 |
| Less: accumulated depreciation | 1,580,619 | 1,507,502 |
| Net property, plant and equipment | 5,276,474 | 5,001,615 |
| Current assets: | | |
| Cash and cash equivalents | 4,139 | 3,763 |
| Accounts receivable and unbilled revenues, net | 104,894 | 97,394 |
| Inventory, materials and supplies | 16,557 | 12,961 |
| Prepayments and other current assets | 11,209 | 12,804 |
| Assets held for sale | 1,543 | 1,728 |
| Total current assets | 138,342 | 128,650 |
| | | |
| Regulatory assets | 1,044,787 | 948,647 |
| Deferred charges and other assets | 36,169 | 30,845 |
| Investment in joint venture | 7,379 | 7,026 |
| Goodwill | 42,230 | 42,208 |
| Total assets | $ 6,545,381 | $ 6,158,991 |
| Liabilities and Equity | | |
| Stockholders' equity: | | |
| Common stock at $.50 par value, authorized 300,000,000 shares, issued 180,669,222 and 180,311,345 as of September 30, 2017 and December 31, 2016 | $ 90,334 | $ 90,155 |
| Capital in excess of par value | 804,753 | 797,513 |
| Retained earnings | 1,115,601 | 1,032,844 |
| Treasury stock, at cost, 2,984,973 and 2,916,969 shares as of September 30, 2017 and December 31, 2016 | (73,229) | (71,113) |
| Accumulated other comprehensive income | 806 | 669 |
| Total stockholders' equity | 1,938,265 | 1,850,068 |
| | | |
| Long-term debt, excluding current portion | 1,974,327 | 1,759,962 |
| Less: debt issuance costs | 21,854 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | 1,952,473 | 1,737,605 |
| Commitments and contingencies (See Note 13) | | |
| | | |
| Current liabilities: | | |
| Current portion of long-term debt | 84,704 | 150,671 |
| Loans payable | 20,990 | 6,535 |
| Accounts payable | 63,358 | 59,872 |
| Accrued interest | 23,210 | 18,367 |
| Accrued taxes | 21,745 | 25,607 |
| Other accrued liabilities | 38,943 | 40,484 |
| Total current liabilities | 252,950 | 301,536 |
| | | |
| Deferred credits and other liabilities: | | |
| Deferred income taxes and investment tax credits | 1,391,096 | 1,269,253 |
| Customers' advances for construction | 107,715 | 91,843 |
| Regulatory liabilities | 239,469 | 250,635 |
| Other | 110,412 | 115,583 |
| Total deferred credits and other liabilities | 1,848,692 | 1,727,314 |
| | | |
| Contributions in aid of construction | 553,001 | 542,468 |
| Total liabilities and equity | $ 6,545,381 | $ 6,158,991 |

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME
(In thousands, except per share amounts)
(UNAUDITED)

| | Three Months Ended September 30, | |
|---|---|---|
| | 2017 | 2016 |
| Operating revenues | $ 215,008 | $ 226,593 |
| | | |
| Operating expenses: | | |
| Operations and maintenance | 67,982 | 79,812 |
| Depreciation | 34,264 | 33,881 |
| Amortization | 42 | 389 |
| Taxes other than income taxes | 15,234 | 14,712 |
| Total operating expenses | 117,522 | 128,794 |
| | | |
| Operating income | 97,486 | 97,799 |
| | | |
| Other expense (income): | | |
| Interest expense, net | 22,411 | 20,168 |
| Allowance for funds used during construction | (3,914) | (2,267) |
| Gain on sale of other assets | (43) | (62) |
| Equity earnings in joint venture | (593) | (1,621) |
| Income before income taxes | 79,625 | 81,581 |
| Provision for income taxes | 3,400 | 8,411 |
| Net income | $ 76,225 | $ 73,170 |
| | | |
| Net income per common share: | | |
| Basic | $ 0.43 | $ 0.41 |
| Diluted | $ 0.43 | $ 0.41 |
| | | |
| Average common shares outstanding during the period: | | |
| Basic | 177,660 | 177,336 |
| Diluted | 178,124 | 177,817 |
| | | |
| Cash dividends declared per common share | $ 0.2047 | $ 0.191 |

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF NET INCOME
(In thousands, except per share amounts)
(UNAUDITED)

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2017 | 2016 |
| Operating revenues | $ 606,213 | $ 623,076 |
| | | |
| Operating expenses: | | |
| Operations and maintenance | 207,963 | 227,347 |
| Depreciation | 101,508 | 97,645 |
| Amortization | 358 | 1,367 |
| Taxes other than income taxes | 44,390 | 43,094 |
| Total operating expenses | 354,219 | 369,453 |
| | | |
| Operating income | 251,994 | 253,623 |
| | | |
| Other expense (income): | | |
| Interest expense, net | 65,124 | 60,136 |
| Allowance for funds used during construction | (10,570) | (6,446) |
| Gain on sale of other assets | (322) | (390) |
| Equity earnings in joint venture | (402) | (1,143) |
| Income before income taxes | 198,164 | 201,466 |
| Provision for income taxes | 11,899 | 16,933 |
| Net income | $ 186,265 | $ 184,533 |
| | | |
| Net income per common share: | | |
| Basic | $ 1.05 | $ 1.04 |
| Diluted | $ 1.05 | $ 1.04 |
| | | |
| Average common shares outstanding during the period: | | |
| Basic | 177,583 | 177,243 |
| Diluted | 178,103 | 177,781 |
| | | |
| Cash dividends declared per common share | $ 0.5873 | $ 0.5473 |

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands of dollars)
(UNAUDITED)

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Net income | $ 76,225 | $ 73,170 | $186,265 | $184,533 |
| Other comprehensive income, net of tax: | | | | |
| Unrealized holding gain on investments, net of tax expense of $22 and $11 for the three months, and $73 and $14 for the nine months ended September 30, 2017 and 2016, respectively | 42 | 20 | 137 | 26 |
| Reclassification of gain on sale of investment to net income, net of tax of $30 for the nine months ended September 30, 2016 (1) | - | - | - | (57) |
| Comprehensive income | $ 76,267 | $ 73,190 | $186,402 | $184,502 |

(1) Amount of pre-tax gain of $87 reclassified from accumulated other comprehensive income to gain on sale of other assets on the consolidated statements of net income for the nine months ended September 30, 2016.

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CAPITALIZATION
(In thousands of dollars, except per share amounts)
(UNAUDITED)

| | | September 30, 2017 | December 31, 2016 |
|---|---|---|---|
| Stockholders' equity: | | | |
| Common stock, $.50 par value | | $ 90,334 | $ 90,155 |
| Capital in excess of par value | | 804,753 | 797,513 |
| Retained earnings | | 1,115,601 | 1,032,844 |
| Treasury stock, at cost | | (73,229) | (71,113) |
| Accumulated other comprehensive income | | 806 | 669 |
| Total stockholders' equity | | 1,938,265 | 1,850,068 |
| Long-term debt of subsidiaries (substantially collateralized by utility plant): | | | |
| Interest Rate Range | Maturity Date Range | | |
| 0.00% to 0.99% | 2023 to 2033 | 4,196 | 4,661 |
| 1.00% to 1.99% | 2019 to 2035 | 13,196 | 15,539 |
| 2.00% to 2.99% | 2024 to 2033 | 19,689 | 19,668 |
| 3.00% to 3.99% | 2019 to 2056 | 475,904 | 381,944 |
| 4.00% to 4.99% | 2020 to 2054 | 556,681 | 487,318 |
| 5.00% to 5.99% | 2019 to 2043 | 205,703 | 213,078 |
| 6.00% to 6.99% | 2017 to 2036 | 44,000 | 52,985 |
| 7.00% to 7.99% | 2022 to 2027 | 32,521 | 33,066 |
| 8.00% to 8.99% | 2021 to 2025 | 6,214 | 6,565 |
| 9.00% to 9.99% | 2018 to 2026 | 25,700 | 26,400 |
| 10.00% to 10.99% | 2018 | 6,000 | 6,000 |
| | | 1,389,804 | 1,247,224 |
| Notes payable to bank under revolving credit agreement, variable rate, due 2021 | | 49,000 | 25,000 |
| Unsecured notes payable: | | | |
| Bank notes at 1.975% and 2.48% due 2018 and 2019 | | 100,000 | 100,000 |
| Notes ranging from 3.01% to 3.59% due 2027 through 2041 | | 245,000 | 245,000 |
| Notes ranging from 4.62% to 4.87%, due 2018 through 2024 | | 122,800 | 133,600 |
| Notes ranging from 5.20% to 5.95%, due 2018 through 2037 | | 152,427 | 159,809 |
| Total long-term debt | | 2,059,031 | 1,910,633 |
| Current portion of long-term debt | | 84,704 | 150,671 |
| Long-term debt, excluding current portion | | 1,974,327 | 1,759,962 |
| Less: debt issuance costs | | 21,854 | 22,357 |
| Long-term debt, excluding current portion, net of debt issuance costs | | 1,952,473 | 1,737,605 |
| Total capitalization | | $ 3,890,738 | $ 3,587,673 |

See notes to consolidated financial statements beginning on page 9 of this report.

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AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF EQUITY
(In thousands of dollars)
(UNAUDITED)

| | Common Stock | Capital in Excess of Par Value | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Income | Total |
|---|---|---|---|---|---|---|
| Balance at December 31, 2016 | $ 90,155 | $ 797,513 | $1,032,844 | $ (71,113) | $ 669 | $1,850,068 |
| Net income | - | - | 186,265 | - | - | 186,265 |
| Other comprehensive income, net of income tax of $73 | - | - | - | - | 137 | 137 |
| Dividends | - | - | (104,286) | - | - | (104,286) |
| Sale of stock (34,814 shares) | 17 | 1,067 | - | - | - | 1,084 |
| Repurchase of stock (68,004 shares) | - | - | - | (2,116) | - | (2,116) |
| Equity compensation plan (165,442) shares) | 83 | (83) | - | - | - | - |
| Exercise of stock options (157,621) shares) | 79 | 2,524 | - | - | - | 2,603 |
| Stock-based compensation | - | 4,379 | (204) | - | - | 4,175 |
| Cumulative effect of change in accounting principle - windfall tax benefit | - | - | 982 | - | - | 982 |
| Other | - | (647) | - | - | - | (647) |
| Balance at September 30, 2017 | $ 90,334 | $ 804,753 | $1,115,601 | $ (73,229) | $ 806 | $1,938,265 |

Refer to Note 15 - Recent Accounting Pronouncements for a discussion of the cumulative effect of change in accounting principle - windfall tax benefit

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOW
(In thousands of dollars)
(UNAUDITED)

| | Nine Months Ended September 30, 2017 | Nine Months Ended September 30, 2016 |
|---|---|---|
| Cash flows from operating activities: | | |
| Net income | $ 186,265 | $ 184,533 |
| Adjustments to reconcile net income to net cash flows from operating activities: | | |
| Depreciation and amortization | 101,866 | 99,012 |
| Deferred income taxes | 9,774 | 15,345 |
| Provision for doubtful accounts | 3,476 | 3,533 |
| Stock-based compensation | 4,379 | 3,642 |
| Loss (gain) on sale of utility system and market-based business unit | 324 | (1,824) |
| Gain on sale of other assets | (322) | (390) |
| Net change in receivables, inventory and prepayments | (13,550) | (15,235) |
| Net change in payables, accrued interest, accrued taxes and other accrued liabilities | 3,705 | (241) |
| Pension and other postretirement benefits contributions | (15,421) | (8,145) |
| Other | 1,565 | 8,404 |
| Net cash flows from operating activities | 282,061 | 288,634 |
| Cash flows from investing activities: | | |
| Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $2,533 and $1,626 | (337,731) | (270,019) |
| Acquisitions of utility systems and other, net | (5,860) | (5,626) |
| Net proceeds from the sale of utility system and other assets | 1,144 | 6,545 |
| Other | 1,448 | (32) |
| Net cash flows used in investing activities | (340,999) | (269,132) |
| Cash flows from financing activities: | | |
| Customers' advances and contributions in aid of construction | 5,648 | 6,006 |
| Repayments of customers' advances | (3,519) | (1,882) |
| Net proceeds of short-term debt | 14,455 | 31,269 |
| Proceeds from long-term debt | 441,294 | 234,288 |
| Repayments of long-term debt | (293,270) | (181,359) |
| Change in cash overdraft position | (1,932) | (12,586) |
| Proceeds from issuing common stock | 1,084 | 1,029 |
| Proceeds from exercised stock options | 2,603 | 3,836 |
| Stock-based compensation windfall tax benefits | - | 1,263 |
| Repurchase of common stock | (2,116) | (2,905) |
| Dividends paid on common stock | (104,286) | (96,994) |
| Other | (647) | (984) |
| Net cash flows from (used in) financing activities | 59,314 | (19,019) |
| Net change in cash and cash equivalents | 376 | 483 |
| Cash and cash equivalents at beginning of period | 3,763 | 3,229 |
| Cash and cash equivalents at end of period | $ 4,139 | $ 3,712 |
| | | |
| Non-cash investing activities: | | |
| Property, plant and equipment additions purchased at the period end, but not yet paid for | $ 35,145 | $ 23,548 |
| Non-cash customer advances and contributions in aid of construction | 31,615 | 20,065 |

Refer to Note 3 - Acquisitions for a description of non-cash activities

See notes to consolidated financial statements beginning on page 9 of this report.

AQUA AMERICA, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In thousands of dollars, except per share amounts)
(UNAUDITED)

**Note 1 – *Basis of Presentation***

The accompanying consolidated balance sheets and statements of capitalization of Aqua America, Inc. and subsidiaries (the "Company") at September 30, 2017, the consolidated statements of net income and comprehensive income for the three and nine months ended September 30, 2017 and 2016 the consolidated statements of cash flow for the nine months ended September 30, 2017 and 2016, and the consolidated statement of equity for the nine months ended September 30, 2017 are unaudited, but reflect all adjustments, consisting of only normal recurring accruals, which are, in the opinion of management, necessary to present a fair statement of its consolidated financial position, consolidated changes in equity, consolidated results of operations, and consolidated cash flow for the periods presented. Because they cover interim periods, the statements and related notes to the financial statements do not include all disclosures and notes normally provided in annual financial statements and, therefore, should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2016. The results of operations for interim periods may not be indicative of the results that may be expected for the entire year. The December 31, 2016 consolidated balance sheet data presented herein was derived from the Company's December 31, 2016 audited consolidated financial statements, but does not include all disclosures and notes normally provided in annual financial statements. Certain prior period amounts have been reclassified to conform to the current period presentation in the consolidated statements of cash flows:

- pension and other postretirement benefit contributions, and
- as a result of the early adoption, in the third quarter of 2017, of the Financial Accounting Standards Board's ("FASB") accounting guidance on the classification of certain cash receipts and cash payments, the presentation of debt extinguishment costs (refer to Note 15 – *Recent Accounting Pronouncements*).

The preparation of financial statements often requires the selection of specific accounting methods and policies. Further, significant estimates and judgments may be required in selecting and applying those methods and policies in the recognition of the assets and liabilities in its consolidated balance sheets, the revenues and expenses in its consolidated statements of net income, and the information that is contained in its summary of significant accounting policies and notes to consolidated financial statements. Making these estimates and judgments requires the analysis of information concerning events that may not yet be complete and of facts and circumstances that may change over time. Accordingly, actual amounts or future results can differ materially from those estimates that the Company includes currently in its consolidated financial statements, summary of significant accounting policies, and notes.

There have been no changes to the summary of significant accounting policies previously identified in the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

(In thousands of dollars, except per share amounts)

**Note 2 – *Goodwill***

The following table summarizes the changes in the Company's goodwill, by business segment:

| | Regulated Segment | Other | Consolidated |
|---|---|---|---|
| Balance at December 31, 2016 | $ 37,367 | $ 4,841 | $ 42,208 |
| Goodwill acquired | 72 | - | 72 |
| Reclassification to utility plant acquisition adjustment | (50) | - | (50) |
| Balance at September 30, 2017 | $ 37,389 | $ 4,841 | $ 42,230 |

The reclassification of goodwill to utility plant acquisition adjustment results from a mechanism approved by the applicable utility commission. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

Goodwill is not amortized but is tested for impairment annually, or more often, if circumstances indicate a possible impairment may exist, to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. When testing goodwill for impairment, the Company may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events. Alternatively, the Company may bypass this qualitative assessment for some of its reporting units and perform a quantitative goodwill impairment test by determining the fair value of a reporting unit based on a discounted cash flow analysis. The Company tested the goodwill attributable to each of its reporting units for impairment as of July 31, 2017, in conjunction with the timing of its annual strategic business plan, and concluded that the estimated fair value of each reporting unit, which has goodwill recorded, exceeded the reporting unit's carrying amount, indicating that none of the Company's goodwill was impaired.

**Note 3 – *Acquisitions***

During the first nine months of 2017, the Company completed four acquisitions of water and wastewater utility systems in various states adding 1,003 customers. The total purchase price of these utility systems consisted of $5,860 in cash, which resulted in $72 of goodwill being recorded. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

As part of the Company's growth-through-acquisition strategy, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of five municipalities for a total combined purchase price in cash of $145,700. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and is subject to regulatory approvals. Closing for these acquisitions are expected to occur by mid-year 2018, which is subject to the timing of the regulatory approval process. These acquisitions will add approximately 14,900 customers in two of the states that the Company operates in.

Pursuant to its strategy to grow through acquisitions, in January 2016, the Company acquired Superior Water Company, Inc., which provides public water service to approximately 3,900 customers in portions of Berks, Chester, and Montgomery counties in Pennsylvania. The total purchase price for the utility system was $16,750, which consisted of the issuance of 439,943 shares of the Company's common stock and $3,905 in cash. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $25,167, contributions in aid of construction of $16,565, and goodwill of $8,622. Additionally, during 2016, the Company completed eighteen acquisitions of water and wastewater utility systems in various states adding 2,469 customers. The total purchase price of these utility systems consisted of $5,518 in cash, which resulted in $1,756 of goodwill being recorded. The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

**Note 4 – *Assets Held for Sale***

In the first quarter of 2017, the Company decided to market for sale a water system that serves approximately 265 customers. This water system is reported as assets held for sale in the Company's consolidated balance sheet.

In the second quarter of 2016, the Company decided to market for sale two business units that are reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, for which the sale was completed in January 2017. The other business unit repairs and performs maintenance on water and wastewater systems, for which the sale was completed in June 2017.

(In thousands of dollars, except per share amounts)

**Note 5 – *Capitalization***

In October 2017, Aqua Pennsylvania issued $75,000 of first mortgage bonds, of which $35,000 is due in 2054, $20,000 is due in 2055, and $20,000 is due in 2057 with interest rates of 4.06%, 4.07%, and 4.09%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In July 2017, Aqua Illinois issued $100,000 of first mortgage bonds consisting of the following:

| Amount | Interest Rate | Maturity |
|---|---|---|
| $25,000 | 3.64% | 2032 |
| $6,000 | 3.89% | 2037 |
| $15,000 | 3.90% | 2038 |
| $10,000 | 4.18% | 2047 |
| $22,000 | 4.22% | 2049 |
| $22,000 | 4.24% | 2050 |

The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In July 2017, Aqua Pennsylvania issued $80,000 of first mortgage bonds, of which $40,000 is due in 2055 and $40,000 is due in 2057 with interest rates of 4.04% and 4.06%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

In January 2017, Aqua Pennsylvania issued $50,000 of first mortgage bonds, of which $10,000 is due in 2042 and $40,000 is due in 2044 with interest rates of 3.65% and 3.69%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

**Note 6 – *Fair Value of Financial Instruments***

The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or

- Level 3: inputs that are unobservable and significant to the fair value measurement.

(In thousands of dollars, except per share amounts)

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. There have been no changes in the valuation techniques used to measure fair value, or asset or liability transfers between the levels of the fair value hierarchy for the quarter ended September 30, 2017.

Financial instruments are recorded at carrying value in the financial statements and approximate fair value as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of loans payable is determined based on its carrying amount and utilizing Level 1 methods and assumptions. As of September 30, 2017 and December 31, 2016, the carrying amount of the Company's loans payable was $20,990 and $6,535, respectively, which equates to their estimated fair value. The Company's deferred compensation plan liability is determined by the fair value of mutual funds, which are based on quoted market prices from active markets utilizing Level 1 methods and assumptions. As of September 30, 2017 and December 31, 2016, the carrying amount of these securities was $18,145 and $17,072, which equates to their fair value, and is reported in the consolidated balance sheet in deferred charges and other assets. The fair value of cash and cash equivalents, which is comprised of a money market fund, is determined based on the net asset value per unit utilizing Level 2 methods and assumptions. As of September 30, 2017 and December 31, 2016, the carrying amounts of the Company's cash and cash equivalents was $4,139 and $3,763, respectively, which equates to their fair value.

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

| | September 30, 2017 | December 31, 2016 |
|---|---|---|
| Carrying Amount | $ 2,059,031 | $ 1,910,633 |
| Estimated Fair Value | 2,185,051 | 2,018,933 |

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing Level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $107,715 as of September 30, 2017, and $91,843 as of December 31, 2016. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels, and future rate increases. Portions of these non-interest bearing instruments are payable annually through 2027 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

**Note 7 – *Net Income per Common Share***

Basic net income per common share is based on the weighted average number of common shares outstanding. Diluted net income per common share is based on the weighted average number of common shares outstanding and potentially dilutive shares. The dilutive effect of employee stock-based compensation is included in the computation of diluted net income per common share. The dilutive effect of stock-based compensation is calculated using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation. The treasury stock method assumes that the proceeds from stock-based compensation are used to purchase the Company's common stock at the average market price during the period. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per common share:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Average common shares outstanding during the period for basic computation | 177,660 | 177,336 | 177,583 | 177,243 |
| Dilutive effect of employee stock-based compensation | 464 | 481 | 520 | 538 |
| Average common shares outstanding during the period for diluted computation | 178,124 | 177,817 | 178,103 | 177,781 |

For the three and nine months ended September 30, 2017 and 2016, all of the Company's employee stock options were included in the calculations of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods.

**Note 8 – *Stock-based Compensation***

Under the Company's 2009 Omnibus Equity Compensation Plan, as amended as of February 27, 2014 (the "2009 Plan"), as approved by the Company's shareholders to replace the 2004 Equity Compensation Plan (the "2004 Plan"), stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. The 2009 Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the 2009 Plan may be issued pursuant to stock awards, stock units and other stock-based awards, subject to adjustment as provided in the 2009 Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the 2009 Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the 2009 Plan. Awards to employees and consultants under the 2009 Plan are made by a committee of the Board of Directors of the Company, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At September 30, 2017, 3,741,526 shares were still available for issuance under the 2009 Plan. No further grants may be made under the 2004 Plan.

(In thousands of dollars, except per share amounts)

***Performance Share Units*** – A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three-year performance period specified in the grant, subject to exceptions through the respective vesting period, generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals. The following table provides compensation costs for stock-based compensation related to PSUs:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 1,035 | $ 1,012 | $ 2,875 | $ 2,504 |
| Income tax benefit | 420 | 411 | 1,167 | 1,013 |

The following table summarizes the PSU transactions for the nine months ended September 30, 2017:

| | Number of Share Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested share units at beginning of period | 476,896 | $ 27.96 |
| Granted | 125,202 | 30.79 |
| Performance criteria adjustment | (64,398) | 27.75 |
| Forfeited | (16,306) | 28.26 |
| Share units vested in prior period and issued in current period | 32,400 | 25.31 |
| Share units issued | (125,999) | 36.37 |
| Nonvested share units at end of period | 427,795 | $ 26.13 |

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions using the Monte Carlo valuation method, which assesses probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs is based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The per unit weighted-average fair value at the date of grant for PSUs granted during the nine months ended September 30, 2017 and 2016 was $30.79 and $28.89, respectively. The fair value of each PSU grant is amortized monthly into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on the Company's estimate of the final expected value of the award, and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows.

(In thousands of dollars, except per share amounts)

***Restricted Stock Units*** – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation cost and income tax benefit for stock-based compensation related to RSUs:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 311 | $ 299 | $ 915 | $ 763 |
| Income tax benefit | 129 | 124 | 378 | 315 |

The following table summarizes the RSU transactions for the nine months ended September 30, 2017:

| | Number of Stock Units | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock units at beginning of period | 109,273 | $ 28.48 |
| Granted | 41,293 | 30.37 |
| Stock units vested and issued | (26,914) | 26.18 |
| Forfeited | (2,287) | 30.52 |
| Nonvested stock units at end of period | 121,365 | $ 29.60 |

The per unit weighted-average fair value at the date of grant for RSUs granted during the nine months ended September 30, 2017 and 2016 was $30.37 and $32.09, respectively.

***Stock Options*** – A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire 10 years from the grant date. The fair value of each stock option is amortized into compensation expense using the graded-vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides the compensation cost and income tax benefit for stock-based compensation related to stock options:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 73 | $ - | $ 177 | $ - |
| Income tax benefit | 43 | 15 | 167 | 249 |

(In thousands of dollars, except per share amounts)

The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model. The following assumptions were used in the application of this valuation model:

| | 2017 |
|---|---|
| Expected term (years) | 5.45 |
| Risk-free interest rate | 2.01% |
| Expected volatility | 17.7% |
| Dividend yield | 2.51% |
| Grant date fair value per option | $ 4.07 |

Historical information was the principal basis for the selection of the expected term and dividend yield. The expected volatility is based on a weighted-average combination of historical and implied volatilities over a time period that approximates the expected term of the option. The risk-free interest rate was selected based upon the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option.

For the nine months ended September 30, 2016, there were no compensation costs for stock-based compensation related to stock options, as the previous stock option grant that occurred in 2010 became fully amortized in 2013. Additionally, there were no stock options granted during the nine months ended September 30, 2016.

The following table summarizes stock option transactions for the nine months ended September 30, 2017:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Life (years) | Aggregate Intrinsic Value |
|---|---|---|---|---|
| Outstanding at beginning of period | 427,335 | $ 15.55 | | |
| Granted | 120,127 | 30.47 | | |
| Forfeited | (2,439) | 30.47 | | |
| Expired / Cancelled | (2,812) | 14.26 | | |
| Exercised | (157,621) | 16.51 | | |
| Outstanding at end of period | 384,590 | $ 19.73 | 3.9 | $ 5,175 |
| | | | | |
| Exercisable at end of period | 266,902 | $ 15.00 | 1.4 | $ 4,855 |

(In thousands of dollars, except per share amounts)

***Stock Awards*** – Stock awards represent the issuance of the Company's common stock, without restriction. The issuance of stock awards results in compensation expense which is equal to the fair market value of the stock on the grant date, and is expensed immediately upon grant. The following table provides the compensation cost and income tax benefit for stock-based compensation related to stock awards:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Stock-based compensation within operations and maintenance expenses | $ 150 | $ 131 | $ 412 | $ 375 |
| Income tax benefit | 62 | 54 | 171 | 155 |

The following table summarizes stock award transactions for the nine months ended September 30, 2017:

| | Number of Stock Awards | Weighted Average Fair Value |
|---|---|---|
| Nonvested stock awards at beginning of period | - | $ - |
| Granted | 12,529 | 32.92 |
| Vested | (12,529) | 32.92 |
| Nonvested stock awards at end of period | - | $ - |

The per unit weighted-average fair value at the date of grant for stock awards granted during the nine months ended September 30, 2017 and 2016 was $32.92 and $32.57, respectively.

(In thousands of dollars, except per share amounts)

**Note 9 – *Pension Plans and Other Postretirement Benefits***

The Company maintains a qualified defined benefit pension plan (the "Pension Plan"), a nonqualified pension plan and other postretirement benefit plans for certain of its employees. The net periodic benefit cost is based on estimated values and an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover, and medical costs. The following tables provide the components of net periodic benefit cost:

| | Pension Benefits | | | |
|---|---|---|---|---|
| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
| | 2017 | 2016 | 2017 | 2016 |
| Service cost | $ 794 | $ 784 | $ 2,382 | $ 2,394 |
| Interest cost | 3,108 | 3,251 | 9,324 | 9,787 |
| Expected return on plan assets | (4,270) | (4,215) | (12,810) | (12,696) |
| Amortization of prior service cost | 145 | 145 | 435 | 435 |
| Amortization of actuarial loss | 2,001 | 1,797 | 6,003 | 5,354 |
| Settlement charge | - | - | - | 3,028 |
| Special termination benefit charge | - | - | - | 302 |
| Net periodic benefit cost | $ 1,778 | $ 1,762 | $ 5,334 | $ 8,604 |

| | Other Postretirement Benefits | | | |
|---|---|---|---|---|
| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
| | 2017 | 2016 | 2017 | 2016 |
| Service cost | $ 255 | $ 253 | $ 765 | $ 761 |
| Interest cost | 737 | 726 | 2,211 | 2,202 |
| Expected return on plan assets | (647) | (645) | (1,941) | (2,001) |
| Amortization of prior service cost | (127) | (137) | (381) | (411) |
| Amortization of actuarial loss | 291 | 220 | 873 | 707 |
| Net periodic benefit cost | $ 509 | $ 417 | $ 1,527 | $ 1,258 |

Effective July 1, 2015, the Company added a permanent lump sum option to the form of benefit payments offered to participants of the qualified defined benefit pension plan and non-qualified retirement plans upon retirement or termination. During the first quarter of 2016, the lump sum payments paid to participants who elected this option for payments from the non-qualified retirement plans resulted in a settlement charge.

The Company made cash contributions of $15,421 to its Pension Plan during the first six months of 2017, which completed the Company's 2017 cash contributions.

(In thousands of dollars, except per share amounts)

**Note 10 – *Water and Wastewater Rates***

During the first nine months of 2017, the Company's operating divisions in Indiana and Ohio were granted base rate increases designed to increase total operating revenues on an annual basis by $7,403. Further, during the first nine months of 2017, the Company's operating divisions in Illinois, New Jersey, and North Carolina received approval to bill infrastructure rehabilitation surcharges designed to increase total operating revenues on an annual basis by $3,659.

**Note 11 – *Taxes Other than Income Taxes***

The following table provides the components of taxes other than income taxes:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Property | $ 6,955 | $ 7,007 | $ 20,608 | $ 20,119 |
| Gross receipts, excise and franchise | 3,969 | 3,409 | 10,507 | 9,468 |
| Payroll | 2,066 | 2,140 | 7,322 | 7,775 |
| Regulatory assessments | 674 | 639 | 1,933 | 1,991 |
| Pumping fees | 1,526 | 1,442 | 3,820 | 3,501 |
| Other | 44 | 75 | 200 | 240 |
| Total taxes other than income | $ 15,234 | $ 14,712 | $ 44,390 | $ 43,094 |

**Note 12 – *Segment Information***

The Company has ten operating segments and one reportable segment. The Regulated segment, the Company's single reportable segment, is comprised of eight operating segments representing its water and wastewater regulated utility companies which are organized by the states where the Company provides water and wastewater services. These operating segments are aggregated into one reportable segment because each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment.

Two operating segments are included within the Other category below. These segments are not quantitatively significant and are comprised of Aqua Resources and Aqua Infrastructure. Aqua Resources provides water and wastewater service through operating and maintenance contracts with municipal authorities and other parties close to its utility companies' service territories; and offers, through a third party, water and sewer line repair service and protection solutions to households. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. In addition to these segments, Other is comprised of other business activities not included in the reportable segment, including corporate costs that have not been allocated to the Regulated segment and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense. Additionally, contained within total assets for the Other category, in the table below, is a regulatory asset for postretirement benefits for the underfunded status of the Company's pension and other postretirement benefit plans and an intercompany receivable.

(In thousands of dollars, except per share amounts)

The following table presents information about the Company's reportable segment:

| | Three Months Ended September 30, 2017 | | | Three Months Ended September 30, 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other | Consolidated | Regulated | Other | Consolidated |
| Operating revenues | $ 214,032 | $ 976 | $ 215,008 | $ 222,231 | $ 4,362 | $ 226,593 |
| Operations and maintenance expense | 70,772 | (2,790) | 67,982 | 73,013 | 6,799 | 79,812 |
| Depreciation | 34,533 | (269) | 34,264 | 34,025 | (144) | 33,881 |
| Operating income (loss) | 94,142 | 3,344 | 97,486 | 100,563 | (2,764) | 97,799 |
| Interest expense, net | 20,753 | 1,658 | 22,411 | 19,167 | 1,001 | 20,168 |
| Allowance for funds used during construction | 3,914 | - | 3,914 | 2,267 | - | 2,267 |
| Income tax expense (benefit) | 3,138 | 262 | 3,400 | 9,027 | (616) | 8,411 |
| Net income (loss) | 74,208 | 2,017 | 76,225 | 74,681 | (1,511) | 73,170 |

| | Nine Months Ended September 30, 2017 | | | Nine Months Ended September 30, 2016 | | |
|---|---|---|---|---|---|---|
| | Regulated | Other | Consolidated | Regulated | Other | Consolidated |
| Operating revenues | $ 602,341 | $ 3,872 | $ 606,213 | $ 606,323 | $ 16,753 | $ 623,076 |
| Operations and maintenance expense | 210,842 | (2,879) | 207,963 | 210,014 | 17,333 | 227,347 |
| Depreciation | 102,340 | (832) | 101,508 | 98,445 | (800) | 97,645 |
| Operating income (loss) | 246,361 | 5,633 | 251,994 | 255,431 | (1,808) | 253,623 |
| Interest expense, net | 60,277 | 4,847 | 65,124 | 57,061 | 3,075 | 60,136 |
| Allowance for funds used during construction | 10,570 | - | 10,570 | 6,446 | - | 6,446 |
| Income tax expense (benefit) | 12,243 | (344) | 11,899 | 18,610 | (1,677) | 16,933 |
| Net income (loss) | 184,733 | 1,532 | 186,265 | 186,579 | (2,046) | 184,533 |
| Capital expenditures | 337,321 | 410 | 337,731 | 269,046 | 973 | 270,019 |

| | September 30, 2017 | December 31, 2016 |
|---|---|---|
| Total assets: | | |
| Regulated | $ 6,355,896 | $ 5,953,702 |
| Other | 189,485 | 205,289 |
| Consolidated | $ 6,545,381 | $ 6,158,991 |

**Note 13 – *Commitments and Contingencies***

The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of September 30, 2017, the aggregate amount of $16,898 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. While the final outcome of these loss contingencies cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of these matters are not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows. Further, the Company has insurance coverage for certain of these loss contingencies, and as of September 30, 2017, estimates that approximately $5,415 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets.

In addition to the aforementioned loss contingencies, the Company self-insures its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $1,451 at September 30, 2017 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

**Note 14 – *Income Taxes***

During the nine months ended September 30, 2017, the Company's Federal net operating loss ("NOL") carryforward decreased by $31,935. In addition, during the nine months ended September 30, 2017, the Company's state NOL carryforward increased by $23,173. As of September 30, 2017, the balance of the Company's Federal NOL was $81,208. The Company believes its Federal NOL carryforward is more likely than not to be recovered and requires no valuation allowance. As of September 30, 2017, the balance of the Company's gross state NOL was $600,358, a portion of which is offset by a valuation allowance because the Company does not believe the state NOLs are more likely than not to be realized. The Company's Federal and state NOL carryforwards begin to expire in 2032 and 2023, respectively. The Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $64,738 and $85,523, respectively. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions were $145,947 and $685,880 respectively. The Company records its unrecognized tax benefit as a reduction to its deferred income tax liability.

In accordance with a 2012 settlement agreement with the Pennsylvania Public Utility Commission, Aqua Pennsylvania expenses, for tax purposes, qualifying utility asset improvement costs, which results in a substantial reduction in income tax expense and greater net income and cash flows. The Company's effective income tax rate for the third quarter of 2017 and 2016 was 4.3% and 10.3%, respectively, and for the first nine months of 2017 and 2016 was 6.0% and 8.4%, respectively.

As of September 30, 2017 regulatory assets increased by $96,140, as compared to the beginning of the year, primarily due to the effect of additional tax deductions for certain qualifying infrastructure improvements, which results in differences between costs capitalized for book and deducted as an expense for tax purposes.

As of September 30, 2017, the total gross unrecognized tax benefit was $28,938, of which $23,700, if recognized, would affect the Company's effective tax rate as a result of the regulatory treatment afforded for qualifying infrastructure improvements in Pennsylvania. At December 31, 2016, the Company had unrecognized tax benefits of $28,099.

Accounting rules for uncertain tax positions specify that tax positions for which the timing of resolution is uncertain should be classified as long-term liabilities. Judgment is required in evaluating the Company's uncertain tax positions and determining the provision for income taxes. Management believes that an adequate provision has been made for any adjustments that may result from tax examinations. Although the timing of income tax audit resolutions and negotiations with taxing authorities is highly uncertain, the Company does not anticipate a significant change to the total amount of unrecognized income tax benefits within the next 12 months.

**Note 15 – *Recent Accounting Pronouncements***

In March 2017, the FASB issued updated accounting guidance on the presentation of net periodic pension and postretirement benefit cost (net benefit cost). Historically, net benefit cost is reported as an employee cost within operating income, net of amounts capitalized. The guidance requires the bifurcation of net benefit cost. The service cost component will be presented with other employee compensation costs in operating income and the other components of net benefit cost will be reported separately outside of operating income, and will not be eligible for capitalization. The guidance is effective for annual reporting periods beginning after December 15, 2017, and interim periods within that reporting period, and is to be applied retrospectively for the presentation of the service cost component and the other components of net benefit cost, and on a prospective basis for the capitalization of only the service cost component of net benefit cost. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption, and does not believe it will have a material impact on its results of operations or financial position.

In January 2017, the FASB issued updated accounting guidance that eliminates step 2 of the current goodwill impairment test, which requires a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment loss will instead be measured at the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance will be effective for annual reporting periods beginning after December 15, 2019, and interim periods within that reporting period, with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. The Company has elected to early adopt the provisions of the updated guidance, for its annual impairment valuation performed in the third quarter of 2017, and the provisions of the updated guidance did not have an impact on its results of operations or financial position.

In August 2016, the FASB issued updated accounting guidance on the classification of certain cash receipts and cash payments in the statement of cash flows, which is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. This guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017, and early adoption is permitted. The Company has elected to early adopt the provisions of the updated guidance, which resulted in the reclassification of $375 debt extinguishment costs, for the nine months ended September 30, 2016, from cash flows from operating to financing activities to conform to the new classification.

In March 2016, the FASB issued updated accounting guidance on simplifying the accounting for share-based payments, which includes several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The updated guidance was effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years, with early adoption available. On January 1, 2017, the Company adopted the updated guidance, prospectively, and recognized a previously unrecognized windfall tax benefit for stock-based compensation of $982 associated with the Company's 2012 Federal net operating loss, which was recorded as an adjustment to deferred income taxes and retained earnings (refer to the presentation of "cumulative effect of change in accounting principle - windfall tax benefit" on the Company's Consolidated Statement of Equity). Additionally, income tax benefits in excess of compensation costs or tax deficiencies for share-based compensation are now recorded to the Company's income tax provision, instead of historically to stockholder's equity, which impacts its effective tax rate. Lastly, all tax-related cash flows resulting from share-based payments are reported prospectively as operating activities on the statement of cash flows, a change from the historical requirement to present tax benefits as an inflow from financing activities and an outflow from operating activities.

In February 2016, the FASB issued updated accounting guidance on accounting for leases, which requires lessees to establish a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. For income statement purposes, leases will be classified as either operating or finance. Operating leases will result in straight-line expense while finance leases will result in a front-loaded expense pattern. The updated accounting guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years, with early adoption available. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption.

In January 2016, the FASB issued updated accounting guidance on the recognition and measurement of financial assets and financial liabilities, which amends certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including the requirement to measure certain equity investments at fair value with changes in fair value recognized in net income. The updated guidance is effective for interim and annual periods beginning after December 31, 2017. The Company does not expect the provisions of the updated guidance to have a material impact on its results of operations or financial position.

In May 2014, the FASB issued updated accounting guidance on recognizing revenue from contracts with customers, which outlines a single comprehensive model that an entity will apply to determine the measurement of revenue and timing of recognition. The underlying principle is that an entity will recognize revenue to depict the transfer of goods or services to customers at an amount that the entity expects to be entitled to in exchange for those goods or services. The updated guidance also requires additional disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to fulfill a contract. Additionally, the accounting for contributions in aid of construction may be impacted by the updated accounting guidance if the contributions are determined to be in scope. In July 2015, the FASB approved a one year deferral to the original effective date of this guidance. The updated guidance is effective for annual periods beginning after December 15, 2017, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the updated guidance in each prior reporting period, or (ii) a modified retrospective approach with the cumulative effect of initially adopting the updated guidance recognized through retained earnings at the date of adoption. In 2016, the Company performed an evaluation of the requirements of the updated guidance and based on current interpretations of the updated guidance believes that the impact of adoption will not result in a material change in the Company's measurement of revenue and timing of recognition if contributions in aid of construction are determined to not be in scope. In 2017, the American Institute of Certified Public Accountants (AICPA) power and utility entities revenue recognition task force has determined that contributions in aid of construction are not in the scope of the new standard, and submitted its recommendation to the AICPA's revenue recognition working group for approval. The Company plans to implement the updated guidance using the modified retrospective approach on January 1, 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS
(In thousands of dollars, except per share amounts)

## Item 2 – Management's Discussion and Analysis of Financial Condition and Results of Operations

### Forward-looking Statements

*This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Quarterly Report contain, in addition to historical information, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements address, among other things: the projected impact of various legal proceedings; the projected effects of recent accounting pronouncements; prospects, plans, objectives, expectations and beliefs of management, as well as information contained in this report where statements are preceded by, followed by or include the words "believes," "expects," "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions. Forward-looking statements are based on a number of assumptions concerning future events, and are subject to a number of risks, uncertainties and other factors, many of which are outside our control, which could cause actual results to differ materially from those expressed or implied by such statements. These risks and uncertainties include, among others: the effects of regulation, abnormal weather, changes in capital requirements and funding, acquisitions, changes to the capital markets, and our ability to assimilate acquired operations, as well as those risks, uncertainties and other factors discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in such report. As a result, readers are cautioned not to place undue reliance on any forward-looking statements. We undertake no obligation to update or revise forward-looking statements, whether as a result of new information, future events or otherwise.*

### General Information

Aqua America, Inc. ("we", "us", "our" or the "Company"), a Pennsylvania corporation, is the holding company for regulated utilities providing water or wastewater services to what we estimate to be almost three million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Our largest operating subsidiary, Aqua Pennsylvania, provides water or wastewater services to approximately one-half of the total number of people we serve, who are located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated utility subsidiaries provide similar services in seven other states. In addition, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources provides water and wastewater service through operating and maintenance contracts with municipal authorities and other parties close to our utility companies' service territories; and offers, through a third party, water and wastewater line repair service and protection solutions to households.

During 2016, we completed the sale of business units within Aqua Resources which provided liquid waste hauling and disposal services, and inspection, cleaning and repair of storm and sanitary wastewater lines. Additionally, in 2016, we decided to market for sale two business units that are reported within the Company's market-based subsidiary, Aqua Resources. One business unit installed and tested devices that prevent the contamination of potable water and repaired water and wastewater systems, for which the sale was completed in January 2017. The other business unit repairs and performs maintenance on water and wastewater systems, for which the sale was completed in June 2017.

Aqua America, Inc., which prior to its name change in 2004 was known as Philadelphia Suburban Corporation, was formed in 1968 as a holding company for its primary subsidiary, Aqua Pennsylvania, formerly known as Philadelphia Suburban Water Company. In the early 1990s, we embarked on a growth-through-acquisition strategy focused on water and wastewater operations. Our most significant transactions to date have been the merger with Consumers Water Company in 1999, the acquisition of the regulated water and wastewater operations of AquaSource, Inc. in 2003, the acquisition of Heater Utilities, Inc. in 2004, and the acquisition of American Water Works Company, Inc.'s regulated operations in Ohio in 2012. Since the early 1990s, our business strategy has been primarily directed toward the regulated water and wastewater utility industry, where we have more than quadrupled the number of regulated customers we serve, and has extended our regulated operations from southeastern Pennsylvania to include operations in seven other states. Currently, the Company seeks to acquire businesses in the U.S. regulated sector, which includes water and wastewater utilities and other regulated utilities, and to opportunistically pursue growth ventures in select market-based activities, such as infrastructure opportunities that are supplementary and complementary to our regulated businesses.

*The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and related notes.*

## Financial Condition

During the first nine months of 2017, we had $337,731 of capital expenditures, expended $5,860 for the acquisition of water and wastewater utility systems, issued $441,294 of long-term debt, and repaid debt and made sinking fund contributions and other loan repayments of $293,270. The capital expenditures were related to new and replacement water mains, improvements to treatment plants, tanks, hydrants, and service lines, well and booster improvements, and other enhancements and improvements. The issuance of long-term debt was comprised principally of the funds borrowed under our revolving credit facility and the issuances of $80,000 and $50,000 of first mortgage bonds by Aqua Pennsylvania in July and January 2017 and $100,000 of first mortgage bonds by Aqua Illinois in July 2017.

At September 30, 2017, we had $4,139 of cash and cash equivalents compared to $3,763 at December 31, 2016. During the first nine months of 2017, we used the proceeds from the issuance of long-term debt and internally generated funds to fund the cash requirements discussed above and to pay dividends.

At September 30, 2017, our $250,000 unsecured revolving credit facility, which expires in February 2021, had $183,547 available for borrowing. At September 30, 2017, we had short-term lines of credit of $135,500, of which $114,510 was available for borrowing. One of our short-term lines of credit is an Aqua Pennsylvania $100,000 364-day unsecured revolving credit facility with four banks, which is used to provide working capital, and as of September 30, 2017, $80,000 was available for borrowing. In July we issued $180,000 of long-term debt, the proceeds of which were used to reduce our borrowings under our revolving credit facilities. Subsequently, in October we issued $75,000 of long-term debt, the proceeds of which were used to reduce our borrowings under our revolving credit facilities.

Our short-term lines of credit of $135,500 are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

The Company's consolidated balance sheet historically has had a negative working capital position whereby routinely our current liabilities exceed our current assets. Management believes that internally generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

## Results of Operations

### Analysis of Third Quarter of 2017 Compared to Third Quarter of 2016

Revenues decreased by $11,585 or 5.1%, primarily due to a decrease in customer water consumption, and a decrease in market-based activities revenue of $3,431 associated with the dispositions of business units, offset by an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $1,759, and additional water and wastewater revenues of $505 associated with a larger customer base due to utility acquisitions.

Operations and maintenance expenses decreased by $11,830 or 14.8%, primarily due to a reduction in operating expenses for Aqua Resources of $4,249 associated with the completion of the disposition of business units, which was finalized in June 2017, a decrease in water production costs of $2,928, a decrease in the Company's self-insured employee medical benefit program expense of $2,425, and a decrease in postretirement benefits expense of $1,011. The decrease in water production costs is due to a reduction in purchased water expense of $1,907 due to replacing a purchased water supply coincident with the Company securing its own water supply source.

Depreciation expense increased by $383 or 1.1%, primarily due to the utility plant placed in service since September 30, 2016.

Interest expense increased by $2,243 or 11.1%, primarily due to an increase in average borrowings.

Allowance for funds used during construction ("AFUDC") increased by $1,647, due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied, and an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity.

Our effective income tax rate was 4.3% in the third quarter of 2017 and 10.3% in the third quarter of 2016. The effective income tax rate decreased due to the effect of additional tax deductions recognized in the third quarter of 2017 for certain qualifying infrastructure improvements for Aqua Pennsylvania.

Net income increased by $3,055 or 4.2%, primarily as a result of the factors described above.

Analysis of First Nine Months of 2017 Compared to First Nine Months of 2016

Revenues decreased by $16,863 or 2.7%, primarily due to a decrease in market-based activities revenue of $12,970 associated with the dispositions of business units, and a decrease in customer water consumption, offset by an increase in water and wastewater rates and infrastructure rehabilitation surcharges of $4,586, additional water and wastewater revenues from organic growth of $2,296, and additional water and wastewater revenues of $1,257 associated with a larger customer base due to utility acquisitions.

Operations and maintenance expenses decreased by $19,384 or 8.5%, primarily due to a reduction in operating expenses for Aqua Resources of $12,981 associated with the completion of the disposition of business units, which was finalized in June 2017, a decrease in water production costs of $4,459, a decrease in the Company's self-insured employee medical benefit program expense of $4,239, and a decrease in postretirement benefits expense of $2,946, offset by the prior year effect of a gain on sale of a utility system of $1,215. The gain on sale of a utility system is reported in the consolidated statement of net income as a component of operations and maintenance expense. The decrease in water production costs is due to a reduction in purchased water expense of $2,886 due to replacing a purchased water supply coincident with the Company securing its own water supply source.

Depreciation expense increased by $3,863 or 4.0%, primarily due to the utility plant placed in service since September 30, 2016.

Taxes other than income taxes increased by $1,296 or 3.0% primarily due to an increase in property taxes of $489 primarily due to the effect of a benefit recorded in 2016 for Ohio based on the final settlement of a property tax bill, and an increase in pumping fees of $319 in Texas due to higher rates and water production.

Interest expense increased by $4,988 or 8.3%, primarily due to an increase in average borrowings.

AFUDC increased by $4,124, due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied, and an increase in the AFUDC rate as a result of an increase in the amount of AFUDC related to equity.

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Our effective income tax rate was 6.0% in the first nine months of 2017 and 8.4% in the first nine months of 2016. The effective income tax rate decreased due to the effect of additional tax deductions recognized in the first nine months of 2017 for certain qualifying infrastructure improvements for Aqua Pennsylvania.

Net income increased by $1,732 or 0.9%, primarily as a result of the factors described above.

## Impact of Recent Accounting Pronouncements

We describe the impact of recent accounting pronouncements in Note 15, *Recent Accounting Pronouncements*, to the consolidated financial statements in this report.

## Item 3 – Quantitative and Qualitative Disclosures About Market Risk

We are subject to market risks in the normal course of business, including changes in interest rates and equity prices. There have been no significant changes in our exposure to market risks since December 31, 2016. Refer to Item 7A of the Company's Annual Report on Form 10-K for the year ended December 31, 2016 for additional information.

## Item 4 – Controls and Procedures

### (a) Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this report are effective such that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934 is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and (ii) accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding disclosure.

### (b) Changes in Internal Control over Financial Reporting

No change in our internal control over financial reporting occurred during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

# Part II. Other Information

## Item 1 – Legal Proceedings

We are party to various legal proceedings. Although the results of legal proceedings cannot be predicted with certainty, there are no pending legal proceedings to which we or any of our subsidiaries is a party or to which any of our properties is the subject that we believe are material or are expected to have a material adverse effect on our financial position, results of operations or cash flows.

## Item 1A – Risk Factors

There have been no material changes to the risks disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016 under "Part 1, Item 1A – Risk Factors."

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Item 2 – Unregistered Sales of Equity Securities and Use of Proceeds

The following table summarizes the Company’s purchases of its common stock for the quarter ended September 30, 2017:

Issuer Purchases of Equity Securities

| Period | Total Number of Shares Purchased (1) | | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | Maximum Number of Shares that May Yet be Purchased Under the Plan or Programs |
|---|---|---|---|---|---|
| July 1-31, 2017 | 196 | $ | 33.46 | - | - |
| August 1-31, 2017 | 513 | $ | 33.86 | - | - |
| September 1-30, 2017 | - | $ | - | - | - |
| Total | 709 | $ | 33.75 | - | - |

(1) These amounts include the following: (a) 196 shares we acquired from employees associated with the withholding of shares to pay certain withholding taxes upon the vesting of stock-based compensation; and (b) 513 shares we acquired from our employees who elected to pay the exercise price of their stock options (and then hold shares of the stock), upon exercise, by delivering to us shares of our common stock in accordance with the terms of our equity compensation plan that were previously approved by our shareholders and disclosed in our proxy statements. These features of our equity compensation plan are available to all employees who receive stock-based compensation under the plan. We purchased these shares at their fair market value, as determined by reference to the closing price of our common stock on the day prior to the option exercise.

Item 6 – Exhibits

The information required by this Item is set forth in the Exhibit Index hereto which is incorporated herein by reference.

**EXHIBIT INDEX**

| Exhibit No. | Description |
|---|---|
| 4.1 | Bond Purchase Agreement, dated July 10, 2017 by and among Aqua Illinois, Inc., Teachers Insurance and Annuity Association of America |
| 4.2 | Bond Purchase Agreement, dated July 20, 2017 by and among Aqua Pennsylvania, Inc., New York Life Insurance Company, New York Life Insurance and Annuity Corporation, New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Account (BOLI 3), New York Life Insurance and Annuity Corporation Institutionally Owned Life Insurance Separate Account (BOLI 3-2) |
| 31.1 | Certification of Chief Executive Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934. |
| 31.2 | Certification of Chief Financial Officer, pursuant to Rule 13a-14(a) under the Securities and Exchange Act of 1934. |
| 32.1 | Certification of Chief Executive Officer, pursuant to 18 U.S.C. Section 1350. |
| 32.2 | Certification of Chief Financial Officer, pursuant to 18 U.S.C. Section 1350. |
| 101.INS | XBRL Instance Document |
| 101.SCH | XBRL Taxonomy Extension Schema Document |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRES | XBRL Taxonomy Extension Presentation Linkbase Document |

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be executed on its behalf by the undersigned thereunto duly authorized.

November 2, 2017

Aqua America, Inc.
Registrant

/s/ Christopher H. Franklin
Christopher H. Franklin
President and
Chief Executive Officer

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and
Chief Financial Officer

AQUA ILLINOIS, INC.

$100,000,000

$25,000,000 First Mortgage Bonds, Series Y, 3.64% due July 15, 2032

$6,000,000 First Mortgage Bonds, Series Z, 3.89% due July 15, 2037

$15,000,000 First Mortgage Bonds, Series AA, 3.90% due January 15, 2038

$10,000,000 First Mortgage Bonds, Series BB, 4.18% due July 15, 2047

$22,000,000 First Mortgage Bonds, Series CC, 4.22% due July 15, 2049

$22,000,000 First Mortgage Bonds, Series DD, 4.24% due July 15, 2050

# BOND PURCHASE AGREEMENT

Dated as of July 10, 2017

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**AQUA ILLINOIS, INC.**
1000 S. Schuyler Avenue
P.O. Box 152
Kankakee, Illinois 60901

$100,000,000

$25,000,000 First Mortgage Bonds, Series Y, 3.64% due July 15, 2032
$6,000,000 First Mortgage Bonds, Series Z, 3.89% due July 15, 2037
$15,000,000 First Mortgage Bonds, Series AA, 3.90% due January 15, 2038
$10,000,000 First Mortgage Bonds, Series BB, 4.18% due July 15, 2047
$22,000,000 First Mortgage Bonds, Series CC, 4.22% due July 15, 2049
$22,000,000 First Mortgage Bonds, Series DD, 4.24% due July 15, 2050

As of July 10, 2017

To the Purchaser Listed in
Schedule A Hereto:

Ladies and Gentlemen:

Aqua Illinois, Inc. (successor to Consumers Illinois Water Company and formerly known as Kankakee Water Company), a corporation organized under the laws of the State of Illinois (the *"Company"*), agrees with the Purchaser whose name appears at the end hereof (the *"Purchaser"*) as follows:

SECTION 1. AUTHORIZATION OF BONDS.

The Company will authorize the issuance and sale of (i) First Mortgage Bonds, Series Y, 3.64% due July 15, 2032 (herein referred to as the *"Series Y Bonds"*) in an aggregate principal amount of $25,000,000, (ii) First Mortgage Bonds, Series Z, 3.89% due July 15, 2037 (herein referred to as the *"Series Z Bonds"*) in an aggregate principal amount of $6,000,000, (iii) First Mortgage Bonds, Series AA, 3.90% due January 15, 2038 (herein referred to as the *"Series AA Bonds"*) in an aggregate principal amount of $15,000,000, (iv) First Mortgage Bonds, Series BB, 4.18% due July 15, 2047 (herein referred to as the *"Series BB Bonds"*) in an aggregate principal amount of $10,000,000, (v) First Mortgage Bonds, Series CC, 4.22% due July 15, 2049 (herein referred to as the *"Series CC Bonds"*) in an aggregate principal amount of $22,000,000, and (vi) First Mortgage Bonds, Series DD, 4.24% due July 15, 2050 (herein referred to as the *"Series DD Bonds"*) in an aggregate principal amount of $22,000,000 (the Series Y Bonds, the Series Z Bonds, the Series AA Bonds, the Series BB Bonds, the Series CC Bonds, and the Series DD Bonds are collectively referred to as the *"Bonds"* and such term includes any such bonds issued in substitution therefor). The Bonds will be issued under and secured by the Mortgage and Deed of Trust dated June 1, 1939, from the Company to The Portland National Bank and Francis W. Dana, as Trustees (the *"Original Mortgage and Deed of Trust"*), as heretofore supplemented and amended by Supplemental Indenture A dated June 1, 1942, by Supplemental Indenture B dated

January 1, 1946, by Supplemental Indenture C dated November 1, 1951, by Supplemental Indenture D dated December 1, 1956, by Supplemental Indenture E dated July 14, 1967, by Supplemental Indenture F dated April 1, 1968, by Supplemental Indenture G dated December 21, 1970, by Supplemental Indenture H dated October 1, 1974, by Supplemental Indenture I dated November 1, 1976, by Supplemental Indenture J dated December 1, 1984, by Supplemental Indenture K dated April 30, 1987, by Supplemental Indenture L dated April 30, 1987, by Supplemental Indenture M dated January 5, 1988, by Supplemental Indenture N dated December 1, 1988, by Supplemental Indenture O dated March 1, 1991, by Supplemental Indenture P dated September 1, 1995, by Supplemental Indenture Q dated September 1, 1995, by Supplemental Indenture R dated September 1, 1995, by Supplemental Indenture S dated August 1, 2000, by Supplemental Indenture T dated November 1, 2002, by Supplemental Indenture U dated December 1, 2003, by Supplemental Indenture V dated November 1, 2004, by Supplemental Indenture W dated December 1, 2004, and by Supplemental Indenture X dated December 1, 2007 under which U.S. Bank National Association is now serving as trustee (the *"Trustee"*), copies of which have previously been furnished to the Purchaser and which are hereby, by reference, made a part hereof, and as the same is to be further supplemented and amended by an indenture supplemental thereto to be dated July 1, 2017 (hereinafter called *"Supplemental Indenture Y"*), in the form of Exhibit A hereto annexed and hereby made a part hereof, subject, however, to such changes as may be agreed upon by the Purchaser and its counsel, and by the Company and its counsel (the Original Mortgage and Deed of Trust as supplemented and amended by Supplemental Indentures A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X and Supplemental Indenture Y being hereinafter called the *"Indenture"*).

SECTION 2. SALE AND PURCHASE OF BONDS.

Subject to the terms and conditions of this Agreement, the Company will issue and sell to the Purchaser and the Purchaser will purchase from the Company, at the Closing provided for in Section 3, Bonds in the aggregate principal amount of $100,000,000 and of the six series specified opposite the Purchaser's name in Schedule A at the purchase price of 100% of the principal amount thereof.

SECTION 3. CLOSING.

The execution and delivery of this Agreement and the sale and purchase of the Bonds to be purchased by the Purchaser shall occur at the offices of Chapman and Cutler LLP, 111 West Monroe Street, Chicago, Illinois 60603, at 10:00 a.m., Chicago time, at a closing (the *"Closing"*) on July 10, 2017. At the Closing the Company will deliver to the Purchaser the Bonds to be purchased by the Purchaser in the form of one or more Bonds in each series to be purchased by the Purchaser, as applicable, in such denominations as the Purchaser may request (with a minimum denomination of $100,000 for each Bond), in the principal amounts as set forth in Schedule A, and substantially in the form contained in Supplemental Indenture Y, dated the date of the Closing and registered in the Purchaser's name (or in the name of its nominee), against delivery by the Purchaser to the Company or its order of immediately available funds in the amount of the purchase price therefor by wire transfer of immediately available funds for Account Number: 8541854208, Account Name: Aqua America, Inc. at PNC Bank, N.A., Philadelphia, Pennsylvania, ABA Number 031-000053. If at the Closing the Company shall fail to tender such Bonds to the Purchaser as provided above in this Section 3, or any of the conditions specified in Section 4 shall not have been fulfilled to the Purchaser's satisfaction, the Purchaser shall, at its election, be relieved of all further obligations under this Agreement, without thereby waiving any rights the Purchaser may have by reason of such failure by the Company to tender such Bonds or any of the conditions specified in Section 4 not having been fulfilled to the Purchaser's satisfaction.

SECTION 4. CONDITIONS TO CLOSING.

The Purchaser's obligation to execute and deliver this Agreement and to purchase and pay for the Bonds to be sold to the Purchaser at the Closing is subject to the fulfillment to the Purchaser's satisfaction prior to or at the Closing of the following conditions:

*Section 4.1. Representations and Warranties*. The representations and warranties of the Company in this Agreement shall be correct when made and at the time of the Closing.

*Section 4.2. Performance; No Default*. The Company shall have performed and complied with all agreements and conditions contained in each Financing Agreement required to be performed or complied with by the Company prior to or at the Closing, and after giving effect to the issue and sale of the Bonds (and the application of the proceeds thereof as contemplated by Section 5.14), no Default or completed default under the Indenture shall have occurred and be continuing.

*Section 4.3. Compliance Certificates*. The Company shall have performed and complied with all agreements and conditions contained in the Indenture (including Supplemental Indenture Y) that are required to be performed or complied with by the Company for the issuance of the Bonds at the Closing. In addition, the Company shall have delivered the following certificates:

(a) *Officer's Certificate*. The Company shall have delivered to the Purchaser (i) an Officer's Certificate, dated the date of the Closing, certifying that the conditions specified in Section 4 of this Agreement have been fulfilled, and (ii) copies of all certificates and opinions required to be delivered to the Trustee under the Indenture in connection with the issuance of each series of Bonds, as applicable, under the Indenture and Supplemental Indenture Y in each case, dated the date of the Closing.

(b) *Secretary's Certificate*. The Company shall have delivered to the Purchaser a certificate of its Secretary or Assistant Secretary, dated the date of the Closing, certifying as to the resolutions attached thereto and other corporate proceedings relating to the authorization, execution and delivery of this Agreement, each series of Bonds, as applicable, under the Indenture, and Supplemental Indenture Y.

(c) *Certification of Indenture*. The Purchaser shall have received a composite copy of the Indenture (together with all amendments and supplements thereto), certified by the Company as of the date of the Closing, exclusive of property exhibits, recording information and the like.

*Section 4.4. Opinions of Counsel*. The Purchaser shall have received opinions in form and substance satisfactory to the Purchaser, dated the date of the Closing (a) from Christopher P. Luning, counsel for the Company, covering the matters set forth in Exhibit 4.4(a) and covering such other matters incident to the transactions contemplated hereby as the Purchaser or its counsel may reasonably request (and the Company hereby instructs its counsel to deliver such opinion to the Purchaser), (b) from Dinsmore & Shohl, LLP, special counsel to the Company, covering the matters set forth in Exhibit 4.4(b) and covering such other matters incident to the transactions contemplated hereby as the Purchaser or the Purchaser's counsel may reasonably request (and the Company hereby instructs its counsel to deliver such opinion to the Purchaser), and (c) from Chapman and Cutler LLP, the Purchaser's special counsel in connection with such transactions, substantially in the form set forth in Exhibit 4.4(c) and covering such other matters incident to such transactions as the Purchaser may reasonably request. The Company hereby directs its counsel to deliver the opinions required by this Section 4.4 and understands and agrees that the Purchaser will and hereby is authorized to rely on such opinions.

*Section 4.5. Purchase Permitted by Applicable Law, Etc*. On the date of the Closing the Purchaser's purchase of Bonds shall (a) be permitted by the laws and regulations of each jurisdiction to which the Purchaser is subject, without recourse to provisions (such as section 1405(a)(8) of the New York Insurance Law) permitting limited investments by insurance companies without restriction as to the character of the particular investment, (b) not violate any applicable law or regulation (including, without limitation, Regulation T, U or X of the Board of Governors of the Federal Reserve System) and (c) not subject the Purchaser to any tax, penalty or liability under or pursuant to any applicable law or regulation, which law or regulation was not in effect on the date of the Closing. If requested by the Purchaser, the Purchaser shall have received an Officer's Certificate certifying as to such matters of fact as the Purchaser may reasonably specify to enable the Purchaser to determine whether such purchase is so permitted.

*Section 4.6. [Reserved]*.

*Section 4.7. Payment of Special Counsel Fees*. Without limiting the provisions of Section 12.2, the Company shall have paid on or before the Closing the reasonable fees, reasonable charges and reasonable disbursements of the Purchaser's special counsel referred to in Section 4.4(c) to the extent reflected in a statement of such counsel rendered to the Company at least one Business Day prior to the Closing.

*Section 4.8. Private Placement Number*. A Private Placement Number issued by Standard & Poor's CUSIP Service Bureau (in cooperation with the SVO) shall have been obtained for each series of Bonds issued at the Closing.

*Section 4.9. Changes in Corporate Structure*. The Company shall not have changed its jurisdiction of incorporation or organization, as applicable, or been a party to any merger or consolidation or succeeded to all or any substantial part of the liabilities of any other entity, at any time following the date of the most recent financial statements referred to in Schedule 5.5.

*Section 4.10. Funding Instructions*. At least three Business Days prior to the date of the Closing, the Purchaser shall have received written instructions signed by a Responsible

Officer on letterhead of the Company confirming the information specified in Section 3 including (a) the name and address of the transferee bank, (b) such transferee bank's ABA number and (c) the account name and number into which the purchase price for the Bonds is to be deposited.

*Section 4.11. Proceedings and Documents*. All corporate and other proceedings in connection with the transactions contemplated by this Agreement and all documents and instruments incident to the issuance and sale of the Bonds shall be reasonably satisfactory to the Purchaser and its special counsel, and the Purchaser and its special counsel shall have received all such counterpart originals or certified or other copies of such documents as the Purchaser or such special counsel may reasonably request.

*Section 4.12. Execution and Delivery and Filing and Recording of Supplemental Indenture Y*. Prior to or at the Closing, Supplemental Indenture Y shall have been duly executed and delivered by the Company, and the Company shall have filed, or delivered for recordation, Supplemental Indenture Y in all applicable locations in Illinois (and financing statements in respect thereof shall have been filed, if necessary) in such manner and in such places as is required by law (and no other instruments are required to be filed) to establish, preserve, perfect and protect the direct security interest and mortgage Lien of the Trust Estate created by the Indenture on all mortgaged and pledged property of the Company referred to in the Indenture as subject to the direct mortgage Lien thereof and the Company shall have delivered satisfactory evidence of such filings, recording or delivery for recording.

*Section 4.13. Regulatory Approvals.*[1] The issue and sale of each series of Bonds, as applicable, shall have been duly authorized and approved by an order of the Illinois Commerce Commission and such order shall be in full force and effect on the date of the Closing and all appeal periods, if any, applicable to such order shall have expired. The Company shall deliver satisfactory evidence that orders have been obtained approving the issuance of such Bonds from the Illinois Commerce Commission or that the Illinois Commerce Commission shall have waived jurisdiction thereof and such approval or waiver shall not be contested or subject to review, or that the Illinois Commerce Commission does not have jurisdiction.

## SECTION 5. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to the Purchaser at the Closing that:

*Section 5.1. Organization; Power and Authority*. The Company is a corporation duly organized, validly existing and subsisting under the laws of the State of Illinois, with corporate powers adequate for carrying on the business now conducted by it which is the supplying of water for public and private purposes and the operation of wastewater treatment facilities and collection systems in the State of Illinois, and the Company is not doing business in any other state. The Company has lawful authority for the conduct of its business and has the corporate power and authority to own or hold under lease the properties it purports to own or hold under lease, to transact the business it transacts and proposes to transact, to execute and deliver this Agreement,

[1] Company to confirm Regulatory Approvals.

the Bonds and Supplemental Indenture Y (and had the corporate power and authority to execute and deliver the Indenture at the time of execution and delivery thereof) and to perform the provisions of the Financing Agreements.

*Section 5.2. Authorization, Etc.* At the Closing, each Financing Agreement has been duly authorized by all necessary corporate action on the part of the Company, and each Financing Agreement (other than the Bonds) constitutes, and each Series of Bonds is executed and delivered by the Company and the Trustee and paid for by the Purchaser, each Series of Bonds will constitute, a legal, valid and binding obligation of the Company enforceable against the Company in accordance with its respective terms, except as such enforceability may be limited by (i) applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

*Section 5.3. Disclosure.* This Agreement and the documents, certificates or other writings delivered to the Purchaser by or on behalf of the Company in connection with the transactions contemplated hereby, including the financial statements listed in Schedule 5.5 (collectively, the *"Disclosure Documents"*), taken as a whole, do not contain any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein not misleading in light of the circumstances under which they were made. Since December 31, 2016, there has been no change in the financial condition, operations, business or properties of the Company except changes that individually or in the aggregate would not reasonably be expected to have a Material Adverse Effect. There is no fact known to management of the Company that, in the reasonable judgment of management of the Company, could be expected to have a Material Adverse Effect that has not been set forth herein or in the other documents, certificates and other writings delivered to the Purchaser by the Company specifically for use in connection with the transactions contemplated hereby.

*Section 5.4. Ownership; Investments.* The Company is a wholly-owned subsidiary of Aqua America, Inc., and owns no shares of stock or securities of, or any interest in, any other corporation, firm, partnership or association.

*Section 5.5. Financial Statements; Material Liabilities.* The Company has delivered to the Purchaser copies of the financial statements of the Company listed on Schedule 5.5. All of said financial statements (including in each case the related schedules and notes) fairly present in all material respects the financial position of the Company as of the respective dates specified in such financial statements and the results of its operations and cash flows for the respective periods so specified and have been prepared in accordance with GAAP consistently applied throughout the periods involved except as set forth in the notes thereto (subject, in the case of any interim financial statements, to normal year-end adjustments). The Company does not have any Material liabilities that are not disclosed on such financial statements or otherwise disclosed in the Disclosure Documents.

*Section 5.6. Compliance with Laws, Other Instruments, Etc.* The execution, delivery and performance by the Company of each Financing Agreement (including the prior execution and delivery of the Indenture), will not (a) contravene, result in any breach of, or constitute a default under, or result in the creation of any Lien, other than the Lien created under the Indenture, in respect of any property of the Company under, any indenture, mortgage, deed of trust, loan, purchase or credit agreement, lease, corporate charter, regulations or by-laws, or any other Material agreement or instrument to which the Company is bound or by which the Company or any of its properties may be bound or affected, (b) conflict with or result in a breach of any of the terms, conditions or provisions of any order, judgment, decree, or ruling of any court, arbitrator or Governmental Authority applicable to the Company or (c) violate any provision of any statute or other rule or regulation of any Governmental Authority applicable to the Company, except for any such default, breach, contravention or violation which would not reasonably be expected to have a Material Adverse Effect.

*Section 5.7. Governmental Authorizations, Etc.* Other than approval of the Illinois Commerce Commission, which has been obtained and is in full force and effect and final and is non-appealable, no consent, approval or authorization of, or registration, filing or declaration with, any Governmental Authority is required in connection with the execution, delivery or performance by the Company of this Agreement, the Bonds and Supplemental Indenture Y.

*Section 5.8. Litigation; Observance of Statutes and Orders*. (a) There are no actions, suits, investigations or proceedings pending or, to the knowledge of the Company, threatened against or affecting the Company or any property of the Company in any court or before any arbitrator of any kind or before or by any Governmental Authority that, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

(b) The Company is not (i) in default under any term of any agreement or instrument to which it is a party or by which it is bound, (ii) in violation of any order, judgment, decree or ruling of any court, any arbitrator of any kind or any Governmental Authority naming or referring to the Company or (iii) in violation of any applicable law, or, to the knowledge of the Company, any ordinance, rule or regulation of any Governmental Authority (including, without limitation, Environmental Laws, the USA Patriot Act or any of the other laws and regulations that are referred to in Section 5.16), which default or violation, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

*Section 5.9. Taxes*. The Company has filed or caused to be filed all income tax returns that are required to have been filed in any jurisdiction, and have paid all taxes shown to be due and payable on such returns and all other taxes and assessments payable by them, to the extent such taxes and assessments have become due and payable and before they have become delinquent, except for any taxes and assessments (i) the amount of which is not individually or in the aggregate Material, or (ii) the amount, applicability, or validity of which is currently being contested in good faith by appropriate proceedings and with respect to which the Company has established adequate reserves in accordance with GAAP. The charges, accruals, and reserves on the books of the Company in respect of federal, state or other taxes for all fiscal periods are adequate. The Federal income tax liabilities of the Company have been finally determined (whether by reason of completed audits or the statute of limitations having run) for all fiscal years up to and including the fiscal year ended December 31, 2011 and all amounts owing in respect of such audit have been paid.

*Section 5.10. Title to Property; Leases*. The Company has good and sufficient title to their respective Material properties, including all such properties reflected in the most recent financial statements referred to in Section 5.5 or purported to have been acquired by the Company after said date (except as sold or otherwise disposed of in the ordinary course of business), in each case free and clear of Liens prohibited by this Agreement or the Indenture, except for those defects in title and Liens that, individually or in the aggregate, would not have a Material Adverse Effect. All Material leases are valid and subsisting and are in full force and effect in all material respects.

*Section 5.11. Licenses, Permits, Etc*. The Company owns or possesses all licenses, permits, franchises, certificates of convenience and necessity, authorizations, patents, copyrights, proprietary software, service marks, trademarks and trade names, or rights thereto, that are Material, without known conflict with the rights of others, except for those conflicts that, individually or in the aggregate, would not have a Material Adverse Effect.

*Section 5.12. Compliance with Employee Benefit Plans*. (a) The Company and each ERISA Affiliate have operated and administered each Plan in compliance with all applicable laws except for such instances of noncompliance as have not resulted in and could not reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any ERISA Affiliate has incurred any liability pursuant to Title I or IV of ERISA or the penalty or excise tax provisions of the Code relating to employee benefit plans (as defined in section 3 of ERISA), and no event, transaction or condition has occurred or exists that would reasonably be expected to result in the incurrence of any such liability by the Company or any ERISA Affiliate, or in the imposition of any Lien on any of the rights, properties or assets of the Company or any ERISA Affiliate, in either case pursuant to Title I or IV of ERISA or to such penalty or excise tax provisions or to section 401(a)(29) or 412 of the Code or section 4068 of ERISA, other than such liabilities or Liens as would not be individually or in the aggregate Material.

(b) The present value of the aggregate benefit liabilities under each of the Plans subject to section 412 of the Code (other than Multiemployer Plans), determined as of January 1, 2016 based on such Plan's actuarial assumptions as of that date for funding purposes as documented in such Plan's actuarial valuation reports dated [September 2016] did not exceed the aggregate current value of the assets of such Plan allocable to such benefit liabilities by more than $5,000,000 in the case of any single Plan and by more than $5,000,000 in the aggregate for all Plans. The term "*benefit liabilities*" has the meaning specified in section 4001 of ERISA and the terms "current value" and "*present value*" have the meaning specified in section 3 of ERISA.

(c) The Company and its ERISA Affiliates have not incurred withdrawal liabilities (and are not subject to contingent withdrawal liabilities) under section 4201 or 4204 of ERISA in respect of Multiemployer Plans that individually or in the aggregate are Material.

(d) The expected postretirement benefit obligation (determined as of the last day of the Company's most recently ended fiscal year in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 715-60, without regard to liabilities attributable to continuation coverage mandated by section 4980B of the Code) of the Company is not Material.

(e) The execution and delivery of this Agreement and the issuance and sale of the Bonds hereunder will not involve any transaction that is subject to the prohibitions of section 406 of ERISA or in connection with which a tax could be imposed pursuant to section 4975(c)(1)(A)-(D) of the Code. The representation by the Company to the Purchaser in the first sentence of this Section 5.12(e) is made in reliance upon and subject to the accuracy of the Purchaser's representation in Section 6.2 as to the sources of the funds used to pay the purchase price of the Bonds to be purchased by the Purchaser.

(f) The Company does not have any Non-U.S. Plans.

*Section 5.13. Private Offering by the Company*. Neither the Company nor anyone acting on the Company's behalf has offered the Bonds or any similar securities for sale to, or solicited any offer to buy any of the same from, or otherwise approached or negotiated in respect thereof with, any Person other than the Purchaser and not more than ten (10) other Institutional Investors, each of which has been offered the Bonds in connection with a private sale for investment. Neither the Company nor anyone acting on its behalf has taken, or will take, any action that would subject the issuance or sale of the Bonds to the registration requirements of Section 5 of the Securities Act.

*Section 5.14. Use of Proceeds; Margin Regulations*. The Company will apply the proceeds of the sale of the Bonds to repay existing indebtedness and for general corporate purposes and in compliance with all laws referenced in Section 5.16. No part of the proceeds from the sale of the Bonds hereunder will be used, directly or indirectly, for the purpose of buying or carrying any margin stock within the meaning of Regulation U of the Board of Governors of the Federal Reserve System (12 CFR 221), or for the purpose of buying or carrying or trading in any securities under such circumstances as to involve the Company in a violation of Regulation X of said Board (12 CFR 224) or to involve any broker or dealer in a violation of Regulation T of said Board (12 CFR 220). Margin stock does not constitute more than 2% of the value of the consolidated assets of the Company and the Company does not have any present intention that margin stock will constitute more than 2% of the value of such assets. As used in this Section, the terms "margin stock" and "purpose of buying or carrying" shall have the meanings assigned to them in said Regulation U.

*Section 5.15. Existing Debt*. Except as described therein, Schedule 5.15(a) sets forth a complete and correct list of all outstanding Debt of the Company as of March 31, 2017, since which date except as described therein there has been no Material change in the amounts, interest rates, sinking funds, installment payments or maturities of the Debt of the Company. The Company is not in default and no waiver of default is currently in effect, in the payment of any principal or interest on any Debt of the Company and no event or condition exists with respect to any Debt of the Company, the outstanding principal amount of which exceeds $5,000,000 that would permit (or that with notice or the lapse of time, or both, would permit) one or more Persons to cause such Debt to become due and payable before its stated maturity or before its regularly scheduled dates of payment.

(b) Without limiting the representation in Section 5.6, the Company is not a party to, or otherwise subject to any provision contained in, any instrument evidencing Debt of the

Company, any agreement relating thereto or any other agreement (including, but not limited to, its charter or other organizational document) which limits the amount of, or otherwise imposes restrictions on the incurring of, Debt evidenced by the Bonds, except as specifically indicated in Schedule 5.15(b).

*Section 5.16. Foreign Assets Control Regulations, Etc*. (a) Neither the Company nor any Controlled Entity (i) is a Blocked Person, (ii) has been notified that its name appears or may in the future appear on a State Sanctions List or (iii) is a target of sanctions that have been imposed by the United Nations or the European Union.

(b) Neither the Company nor any Controlled Entity (i) has violated, been found in violation of, or been charged or convicted under, any applicable U.S. Economic Sanctions Laws, Anti-Money Laundering Laws or Anti-Corruption Laws or (ii) to the Company's knowledge, is under investigation by any Governmental Authority for possible violation of any U.S. Economic Sanctions Laws, Anti-Money Laundering Laws or Anti-Corruption Laws.

(c) No part of the proceeds from the sale of the Bonds hereunder:

(i) constitutes or will constitute funds obtained on behalf of any Blocked Person or will otherwise be used by the Company or any Controlled Entity, directly or indirectly, (A) in connection with any investment in, or any transactions or dealings with, any Blocked Person, (B) for any purpose that would cause the Purchaser to be in violation of any U.S. Economic Sanctions Laws or (C) otherwise in violation of any U.S. Economic Sanctions Laws;

(ii) will be used, directly or indirectly, in violation of, or cause the Purchaser to be in violation of, any applicable Anti-Money Laundering Laws; or

(iii) will be used, directly or indirectly, for the purpose of making any improper payments, including bribes, to any Governmental Official or commercial counterparty in order to obtain, retain or direct business or obtain any improper advantage, in each case which would be in violation of, or cause the Purchaser to be in violation of, any applicable Anti-Corruption Laws.

(d) The Company has established procedures and controls which it reasonably believes are adequate (and otherwise comply with applicable law) to ensure that the Company and each Controlled Entity is and will continue to be in compliance with all applicable U.S. Economic Sanctions Laws, Anti-Money Laundering Laws and Anti-Corruption Laws.

*Section 5.17. Status under Certain Statutes*. The Company is not subject to regulation under the Investment Company Act of 1940, as amended, the Public Utility Holding Company Act of 2005, as amended, the ICC Termination Act of 1995, as amended, or subject to rate regulation under the Federal Power Act, as amended.

*Section 5.18. Environmental Matters*. The Company has no knowledge of any claim or has received any notice of any claim, and no proceeding has been instituted of which it has received notice, raising any claim against the Company or any of its real properties now or formerly owned, leased or operated by it, or other assets, alleging damage to the environment or any violation of any Environmental Laws, except, in each case, such as could not reasonably be expected to result in a Material Adverse Effect. Except as otherwise disclosed to the Purchaser in writing:

(a) the Company has no knowledge of any facts which would give rise to any claim, public or private, for violation of Environmental Laws or damage to the environment emanating from, occurring on or in any way related to real properties or to other assets now or formerly owned, leased or operated by it or their use, except, in each case, such as could not reasonably be expected to result in a Material Adverse Effect;

(b) the Company has not stored any Hazardous Materials on real properties now or formerly owned, leased or operated by it or has disposed of any Hazardous Materials in each case in a manner contrary to any Environmental Laws and in any manner that could reasonably be expected to result in a Material Adverse Effect; and

(c) all buildings on all real properties now owned, leased or operated by the Company are in compliance with applicable Environmental Laws, except where failure to comply could not reasonably be expected to result in a Material Adverse Effect.

*Section 5.19. Lien of Indenture*. The Indenture (and for avoidance of doubt including Supplemental Indenture Y) constitutes a direct and valid Lien upon the Trust Estate, subject only to the exceptions referred to in the Indenture, and will create a similar Lien upon all properties and assets acquired by the Company after the date hereof which are required to be subjected to the Lien of the Indenture, when acquired by the Company, subject only to the exceptions referred to in the Indenture, and subject, further, as to real property interests, to the recordation of a supplement to the Indenture describing such after-acquired property; the descriptions of all such properties and assets contained in the granting clauses of the Indenture are correct and adequate for the purposes of the Indenture; the Indenture has been duly recorded as a mortgage and deed of trust of real estate, and any required filings with respect to personal property and fixtures subject to the Lien of the Indenture have been duly made in each place in which such recording or filing is required to protect, preserve and perfect the Lien of the Indenture; and all taxes and recording and filing fees required to be paid with respect to the execution, recording or filing of the Indenture, the filing of financing statements related thereto and similar documents and the issuance of the Bonds have been paid.

*Section 5.20. Filings*. No action, including any filings, registration or notice, is necessary or advisable in Illinois or any other jurisdictions to ensure the legality, validity and enforceability of the Financing Agreements, except such action as has been previously taken, which action remains in full force and effect. No action, including any filing, registration or notice, is necessary or advisable in Illinois or any other jurisdiction to establish or protect for the benefit of the Trustee and the holders of Bonds, the security interest and Liens purported to be created under the Indenture and the priority and perfection thereof and the other Financing Agreements, except such action as has been previously taken, which action remains in full force and effect.

SECTION 6. REPRESENTATIONS OF THE PURCHASER.

*Section 6.1. Purchase for Investment*. The Purchaser represents that it is purchasing the Bonds for its own account or for one or more separate accounts maintained by the Purchaser or for the account of one or more pension or trust funds and not with a view to the distribution thereof, provided that the disposition of the Purchaser's or their property shall at all times be within the Purchaser's or their control. The Purchaser understands that the Bonds have not been registered under the Securities Act and may be resold only if registered pursuant to the provisions of the Securities Act or if an exemption from registration is available, except under circumstances where neither such registration nor such an exemption is required by law, and that the Company is not required to register the Bonds.

*Section 6.2. Source of Funds*. The Purchaser represents that at least one of the following statements is an accurate representation as to each source of funds (a *"Source"*) to be used by the Purchaser to pay the purchase price of the Bonds to be purchased by the Purchaser hereunder:

(a) the Source is an "insurance company general account" (as the term is defined in the United States Department of Labor's Prohibited Transaction Exemption (*"PTE"*) 95-60) in respect of which the reserves and liabilities (as defined by the annual statement for life insurance companies approved by the NAIC (the *"NAIC Annual Statement"*)) for the general account contract(s) held by or on behalf of any employee benefit plan together with the amount of the reserves and liabilities for the general account contract(s) held by or on behalf of any other employee benefit plans maintained by the same employer (or affiliate thereof as defined in PTE 95-60) or by the same employee organization in the general account do not exceed 10% of the total reserves and liabilities of the general account (exclusive of separate account liabilities) plus surplus as set forth in the NAIC Annual Statement filed with the Purchaser's state of domicile; or

(b) the Source is a separate account that is maintained solely in connection with the Purchaser's fixed contractual obligations under which the amounts payable, or credited, to any employee benefit plan (or its related trust) that has any interest in such separate account (or to any participant or beneficiary of such plan (including any annuitant)) are not affected in any manner by the investment performance of the separate account; or

(c) the Source is either (i) an insurance company pooled separate account, within the meaning of PTE 90-1 or (ii) a bank collective investment fund, within the meaning of the PTE 91-38 and, except as disclosed by the Purchaser to the Company in writing pursuant to this clause (c), no employee benefit plan or group of plans maintained by the same employer or employee organization beneficially owns more than 10% of all assets allocated to such pooled separate account or collective investment fund; or

(d) the Source constitutes assets of an "investment fund" (within the meaning of Part VI of PTE 84-14 (the *"QPAM Exemption"*)) managed by a "qualified professional asset manager" or "QPAM" (within the meaning of Part VI of the QPAM

Exemption), no employee benefit plan's assets that are managed by the QPAM in such investment fund, when combined with the assets of all other employee benefit plans established or maintained by the same employer or by an affiliate (within the meaning of Part VI(c)(1) of the QPAM Exemption) of such employer or by the same employee organization and managed by such QPAM, represent more than 20% of the total client assets managed by such QPAM, the conditions of Part I(c) and (g) of the QPAM Exemption are satisfied, neither the QPAM nor a person controlling or controlled by the QPAM maintains an ownership interest in the Company that would cause the QPAM and the Company to be "related" within the meaning of Part VI(h) of the QPAM Exemption and (i) the identity of such QPAM and (ii) the names of any employee benefit plans whose assets in the investment fund, when combined with the assets of all other employee benefit plans established or maintained by the same employer or by an affiliate (within the meaning of Part VI(c)(1) of the QPAM Exemption) of such employer or by the same employee organization, represent 10% or more of the assets of such investment fund, have been disclosed to the Company in writing pursuant to this clause (d); or

(e) the Source constitutes assets of a "plan(s)" (within the meaning of Part IV(h) of PTE 96-23 (the *"INHAM Exemption"*)) managed by an "in-house asset manager" or "INHAM" (within the meaning of Part IV(a) of the INHAM Exemption), the conditions of Part I(a), (g) and (h) of the INHAM Exemption are satisfied, neither the INHAM nor a person controlling or controlled by the INHAM (applying the definition of "control" in Part IV(d)(3) of the INHAM Exemption) owns a 10% or more interest in the Company and (i) the identity of such INHAM and (ii) the name(s) of the employee benefit plan(s) whose assets constitute the Source have been disclosed to the Company in writing pursuant to this clause (e); or

(f) the Source is a governmental plan; or

(g) the Source is one or more employee benefit plans, or a separate account or trust fund comprised of one or more employee benefit plans, each of which has been identified to the Company in writing pursuant to this clause (g); or

(h) the Source does not include assets of any employee benefit plan, other than a plan exempt from the coverage of ERISA.

As used in this Section 6.2, the terms *"employee benefit plan," "governmental plan,"* and *"separate account"* shall have the respective meanings assigned to such terms in section 3 of ERISA.

SECTION 7. INFORMATION AS TO COMPANY.

*Section 7.1. Financial and Business Information*. The Company shall deliver to the Purchaser and each holder of Bonds that is an Institutional Investor:

(a) *Quarterly Statements* — within 60 days after the end of each quarterly fiscal period in each fiscal year of the Company (other than the last quarterly fiscal period of each such fiscal year), duplicate copies of:

(i) a consolidated balance sheet of the Company and its Subsidiaries at the end of such quarter, and

(ii) consolidated statements of income, changes in shareholders' equity and cash flows of the Company and its Subsidiaries, for such quarter and (in the case of the second and third quarters) for the portion of the fiscal year ending with such quarter,

setting forth in each case in comparative form the figures for the corresponding periods in the previous fiscal year, all in reasonable detail, prepared in accordance with GAAP applicable to quarterly financial statements generally, and certified by a Senior Financial Officer as fairly presenting, in all material respects, the financial position of the companies being reported on and their results of operations and cash flows, subject to changes resulting from year-end adjustments;

(b) *Annual Statements* — within 120 days after the end of each fiscal year of the Company, duplicate copies of:

(i) a consolidated balance sheet of the Company and its Subsidiaries, as at the end of such year, and

(ii) consolidated statements of income, changes in shareholders' equity and cash flows of the Company and its Subsidiaries for such year,

setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail, prepared in accordance with GAAP, and accompanied by an opinion thereon (without a "going concern" or similar qualification or exception and without any qualification or exception as to the scope of the audit on which such opinion is based) of independent public accountants of recognized national standing, which opinion shall state that such financial statements present fairly, in all material respects, the financial position of the companies being reported upon and their results of operations and cash flows and have been prepared in conformity with GAAP, and that the examination of such accountants in connection with such financial statements has been made in accordance with generally accepted auditing standards, and that such audit provides a reasonable basis for such opinion in the circumstances,

(c) *SEC and Other Reports* — promptly upon their becoming available, one copy of (i) each financial statement, report, notice, or proxy statement sent by the Company or any Subsidiary to its public securities holders generally, and (ii) each regular or periodic report, each registration statement that shall have become effective (without exhibits except as expressly requested by the Purchaser or holder), and each final prospectus and all amendments thereto filed by the Company or any Subsidiary with the SEC;

(d) *Notice of Default* — promptly, and in any event within five days after a Responsible Officer becomes aware of the existence of any Default or completed default under the Indenture, a written notice specifying the nature and period of existence thereof and what action the Company is taking or proposes to take with respect thereto;

(e) *Employee Benefits Matters* — promptly, and in any event within five days after a Responsible Officer becomes aware of any of the following, a written notice setting forth the nature thereof and the action, if any, that the Company or an ERISA Affiliate proposes to take with respect thereto:

(i) with respect to any Plan (other than any Multiemployer Plan) that is subject to Title IV of ERISA, any reportable event, as defined in section 4043(c) of ERISA and the regulations thereunder, for which notice thereof has not been waived pursuant to such regulations as in effect on the date hereof and on the date of the Closing; or

(ii) the taking by the PBGC of steps to institute, or the threatening by the PBGC of the institution of, proceedings under section 4042 of ERISA for the termination of, or the appointment of a trustee to administer, any such Plan, or the receipt by the Company or any ERISA Affiliate of a notice from a Multiemployer Plan that such action has been taken by the PBGC with respect to such Multiemployer Plan; or

(iii) any event, transaction or condition that could result in the incurrence of any liability by the Company or any ERISA Affiliate pursuant to Title I or IV of ERISA or the penalty or excise tax provisions of the Code relating to employee benefit plans, or in the imposition of any Lien on any of the rights, properties or assets of the Company or any ERISA Affiliate pursuant to Title I or IV of ERISA or such penalty or excise tax provisions, if such liability or Lien, taken together with any other such liabilities or Liens then existing, would reasonably be expected to have a Material Adverse Effect;

(f) *Notices from Governmental Authority* — promptly, and in any event within 30 days of receipt thereof, copies of any notice to the Company from any federal or state Governmental Authority relating to any order, ruling, statute or other law or regulation that could reasonably be expected to have a Material Adverse Effect;

(g) *Requested Information* — with reasonable promptness, following the receipt by the Company of a written request by such holder of Bonds, the names and contact information of holders of the outstanding bonds issued under the Indenture (i.e. the bonds in which the Company or a trustee is required to keep in a register and that are not publicly traded) of which the Company has knowledge and the principal amount of the outstanding bonds issued under the Indenture owed to each holder (unless disclosure of such names, contact information or holdings is prohibited by law), and such data and information relating to the business, operations, affairs, financial condition, assets or properties of the Company or any of its Subsidiaries or relating to the ability of the Company to perform its obligations under any Financing Agreement as from time to time may be reasonably requested by the Purchaser or holder of Bonds; and

(h) *Deliveries to Trustee* — promptly, and in any event within five days after delivery to the Trustee, a copy of any deliveries made by the Company to the Trustee.

*Section 7.2. Officer's Certificate*. Each set of financial statements delivered to the Purchaser or holder of Bonds pursuant to Section 7.1(a) or Section 7.1(b) shall be accompanied by a certificate of a Senior Financial Officer setting forth a statement that such Senior Financial Officer has reviewed the relevant terms hereof and of the Indenture and has made, or caused to be made, under his or her supervision, a review of the transactions and conditions of the Company and its Subsidiaries from the beginning of the quarterly or annual period covered by the statements then being furnished to the date of the certificate and that such review shall not have disclosed the existence during such period of any condition or event that constitutes a Default or completed default under the Indenture or, if any such condition or event existed or exists (including, without limitation, any such event or condition resulting from the failure of the Company or any Subsidiary to comply with any Environmental Law), specifying the nature and period of existence thereof and what action the Company shall have taken or proposes to take with respect thereto.

*Section 7.3. Visitation*. The Company shall permit the representatives of the Purchaser and each holder of Bonds that is an Institutional Investor:

(a) *No Default* — if no Default or completed default under the Indenture then exists, at the expense of the Purchaser or holder and upon reasonable prior notice to the Company, to visit the principal executive office of the Company, to discuss the affairs, finances and accounts of the Company and its Subsidiaries with the Company's officers, and, with the consent of the Company (which consent will not be unreasonably withheld), to visit the other offices and properties of the Company and each Subsidiary, all at such reasonable times during normal business hours and as often as may be reasonably requested in writing; and

(b) *Default* — if a Default or completed default under the Indenture then exists, at the expense of the Company to visit and inspect any of the offices or properties of the Company or any Subsidiary, to examine all their respective books of account, records, reports and other papers, to make copies and extracts therefrom, and to discuss their respective affairs, finances and accounts with their respective officers and independent public accountants (and by this provision the Company authorizes said accountants to discuss the affairs, finances and accounts of the Company and its Subsidiaries), all at such reasonable times and as often as may be requested.

SECTION 8. PURCHASE OF BONDS

The Company will not and will not permit any Affiliate to purchase, redeem, prepay or otherwise acquire, directly or indirectly, any of the outstanding Bonds except (a) upon the payment or prepayment of the Bonds in accordance with the terms of this Agreement and the Bonds or (b) pursuant to a written offer to purchase any outstanding Bonds made by the Company or an Affiliate pro rata to the holders of the Bonds upon the same terms and conditions. Any such offer shall provide each holder with sufficient information to enable it to make an informed decision with respect to such offer, and shall remain open for at least 15 Business Days. If the holders of more than 10% of the principal amount of the Bonds then outstanding accept such offer, the Company shall promptly notify the remaining holders of such fact and the expiration date for the acceptance by holders of Bonds of such offer shall be extended by the number of days necessary to give each such remaining holder at least 10 Business Days from its receipt of such notice to accept such offer. The Company will promptly cancel all Bonds acquired by it or any Affiliate pursuant to any payment, prepayment or purchase of Bonds pursuant to any provision of this Agreement and no Bonds may be issued in substitution or exchange for any such Bonds.

SECTION 9. AFFIRMATIVE COVENANTS.

The Company covenants that so long as any of the Bonds are outstanding:

*Section 9.1.* *Compliance with Law*. Without limiting Section 10.4, the Company will, and will cause each of its Subsidiaries to, comply with all laws, ordinances or governmental rules or regulations to which each of them is subject, including, without limitation, ERISA, Environmental Laws, the USA Patriot Act and the other laws and regulations that are referred to in Section 5.16, and will obtain and maintain in effect all licenses, certificates, permits, franchises and other governmental authorizations necessary to the ownership of their respective properties or to the conduct of their respective businesses, in each case to the extent necessary to ensure that non-compliance with such laws, ordinances or governmental rules or regulations or failures to obtain or maintain in effect such licenses, certificates, permits, franchises and other governmental authorizations could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

*Section 9.2.* *Insurance*. The Company will cause each of its Subsidiaries to maintain, with financially sound and reputable insurers, insurance with respect to their respective properties and businesses against such casualties and contingencies, of such types, on such terms and in such amounts (including deductibles, co-insurance and self-insurance, if adequate reserves are maintained with respect thereto) as is customary in the case of entities of established reputations engaged in the same or a similar business and similarly situated.

*Section 9.3.* *Maintenance of Properties*. The Company will cause each of its Subsidiaries to maintain and keep, or cause to be maintained and kept, their respective properties in good repair, working order and condition (other than ordinary wear and tear), so that the business carried on in connection therewith may be properly conducted at all times, *provided* that this Section 9.3 shall not prevent any Subsidiary from discontinuing the operation and the maintenance of any of its properties if such discontinuance is desirable in the conduct of its business and the Company and such Subsidiary have concluded that such discontinuance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

*Section 9.4.* *Payment of Taxes*. The Company will cause each of its Subsidiaries to file all income tax or similar tax returns required to be filed in any jurisdiction and to pay and discharge all taxes shown to be due and payable on such returns and all other taxes, assessments, governmental charges, or levies payable by any of them, to the extent the same have become due and payable and before they have become delinquent, provided that any Subsidiary does not need to pay any such tax, assessment, charge or levy if (a) the amount, applicability or validity thereof is contested by the Company or such Subsidiary on a timely basis in good faith and in appropriate proceedings, and the Subsidiary has established adequate reserves therefor in accordance with GAAP on the books of such Subsidiary or (b) the nonpayment of all such taxes, assessments, charges and levies in the aggregate would not reasonably be expected to have a Material Adverse Effect.

*Section 9.5.* *Corporate Existence, Etc*. The Company will at all times preserve and keep in full force and effect the corporate existence of each of its Subsidiaries (unless merged into the Company or a wholly-owned Subsidiary) and all rights and franchises of its Subsidiaries unless, in the good faith judgment of the Company or such Subsidiary, the termination of or failure to preserve and keep in full force and effect such corporate existence, right or franchise would not, individually or in the aggregate, have a Material Adverse Effect.

*Section 9.6.* *Books and Records*. The Company will, and will cause each of its Subsidiaries to, maintain proper books of record and account in conformity with GAAP and all applicable requirements of any Governmental Authority having legal or regulatory jurisdiction over the Company or such Subsidiary.

## SECTION 10. NEGATIVE COVENANTS.

The Company covenants that so long as any of the Bonds are outstanding:

*Section 10.1.* *Transactions with Affiliates*. The Company will not and will not permit any Subsidiary to enter into directly or indirectly any Material transaction or Material group of related transactions (including without limitation the purchase, lease, sale or exchange of properties of any kind or the rendering of any service) with any Affiliate (other than the Company or another Subsidiary), except pursuant to the reasonable requirements of the Company's or such Subsidiary's business.

*Section 10.2.* *Merger, Consolidation, Etc*. The Company will not consolidate with or merge with any other Person or convey, transfer or lease all or substantially all of its assets in a single transaction or series of transactions to any Person unless:

(a) the successor formed by such consolidation or the survivor of such merger or the Person that acquires by conveyance, transfer or lease all or substantially all of the assets of the Company as an entirety, as the case may be, shall be a solvent corporation or limited liability company organized and existing under the laws of the United States or any State thereof (including the District of Columbia), and, if the Company is not such corporation or limited liability company, such corporation or limited liability company shall have executed and delivered to each holder of any Bonds its assumption of the due and punctual performance and observance of each covenant and condition of the Financing Agreements (pursuant to such agreements and instruments as shall be reasonably satisfactory to the Required Holders), and the Company shall have caused to be delivered to each holder of Bonds an opinion of nationally recognized independent counsel, to the effect that all agreements or instruments effecting such assumption are enforceable in accordance with their terms and comply with the terms hereof; and

(b) immediately before and immediately after giving effect to such transaction, no Default or completed default under the Indenture shall have occurred and be continuing.

No such conveyance, transfer or lease of substantially all of the assets of the Company shall have the effect of releasing the Company or any successor corporation or limited liability company that shall theretofore have become such in the manner prescribed in this Section 10.2 from its liability under the Financing Agreements.

*Section 10.3. Line of Business*. The Company will not engage in any business if, as a result, the general nature of the business in which the Company and its Subsidiaries, taken as a whole, would then be engaged would be substantially changed from the general nature of the business in which the Company is engaged on the date of this Agreement.

*Section 10.4. Economic Sanctions, Etc.*. The Company will not, and will not permit any Controlled Entity to (a) become (including by virtue of being owned or controlled by a Blocked Person), own or control a Blocked Person or (b) directly or indirectly have any investment in or engage in any dealing or transaction (including any investment, dealing or transaction involving the proceeds of the Bonds) with any Person if such investment, dealing or transaction (i) would cause any holder or any affiliate of such holder to be in violation of, or subject to sanctions under, any law or regulation applicable to such holder, or (ii) is prohibited by or subject to sanctions under any U.S. Economic Sanctions Laws.

## SECTION 11. PAYMENTS ON BONDS.

So long as the Purchaser or its nominee shall be the holder of any Bond, and notwithstanding anything contained in the Indenture or in such Bond to the contrary, the Company will pay, or cause to be paid by a paying agent, a trustee or other similar party, all sums becoming due on such Bond for principal, Make-Whole Amount or premium, if any, and interest by the method and at the address specified for such purpose below the Purchaser's name in Schedule A, or by such other method or at such other address as the Purchaser shall have from time to time specified to the Company in writing for such purpose, without the presentation or surrender of such Bond or the making of any notation thereon, except that upon written request of the Company or any paying agent made concurrently with or reasonably promptly after payment or prepayment in full of any Bond, the Purchaser shall surrender such Bond for cancellation, reasonably promptly after any such request, to the Company at its principal executive office or at the place of payment most recently designated by the Company pursuant to Article II of the Indenture. Prior to any sale or other disposition of any Bond held by the Purchaser or its nominee, the Purchaser will, at its election, either endorse thereon the amount of principal paid thereon and the last date to which interest has been paid thereon or surrender such Bond to the Company in exchange for a new Bond or Bonds pursuant to Article II of the Indenture. The Company will afford the benefits of this Section 11 to any Institutional Investor that is the direct or indirect transferee of any Bond purchased by the Purchaser under this Agreement and that has made the same agreement relating to such Bond as the Purchaser has made in this Section 11.

## SECTION 12. REGISTRATION; EXCHANGE; EXPENSES, ETC.

*Section 12.1. Registration of Bonds*. The Company shall cause the Trustee to keep a register for the registration and registration of transfers of Bonds in accordance with Article II of the Indenture.

*Section 12.2. Transaction Expenses*. Whether or not the transactions contemplated hereby are consummated, the Company will pay all reasonable costs and expenses (including reasonable attorneys' fees of a special counsel and, if reasonably required by the Required Holders, local or other counsel) incurred by the Purchaser and each other holder of a Bond in connection with such transactions and in connection with any amendments, waivers or consents under or in respect of any Financing Agreement (whether or not such amendment, waiver or consent becomes effective), including, without limitation: (a) the costs and expenses incurred in enforcing or defending (or determining whether or how to enforce or defend) any rights under any Financing Agreement or in responding to any subpoena or other legal process or informal investigative demand issued in connection with any Financing Agreement, or by reason of being the Purchaser or holder of any Bond, (b) the costs and expenses, including financial advisors' fees, incurred in connection with the insolvency or bankruptcy of the Company or any Subsidiary or in connection with any work-out or restructuring of the transactions contemplated by any Financing Agreement and (c) the costs and expenses incurred in connection with the initial filing of any Financing Agreement and all related documents and financial information with the SVO, provided that such costs and expenses under this clause (c) shall not exceed $9,000 for the Bonds. The Company will pay, and will save the Purchaser and each other holder of a Bond harmless from, all claims in respect of any fees, costs or expenses if any, of brokers and finders (other than those, if any, retained by the Purchaser or other holder in connection with its purchase of the Bonds).

*Section 12.3. Survival*. The obligations of the Company under this Section 12 will survive the payment or transfer of any Bond, the enforcement, amendment or waiver of any provision of any Financing Agreement, and the termination of any Financing Agreement.

## SECTION 13. SURVIVAL OF REPRESENTATIONS AND WARRANTIES; ENTIRE AGREEMENT.

All representations and warranties contained herein shall survive the execution and delivery of this Agreement, the purchase or transfer by the Purchaser of any Bond or portion thereof or interest therein and the payment of any Bond, and may be relied upon by any subsequent holder of a Bond, regardless of any investigation made at any time by or on behalf of the Purchaser or any other holder of a Bond. All statements contained in any certificate or other instrument delivered by or on behalf of the Company pursuant to this Agreement shall be deemed representations and warranties of the Company under this Agreement. Subject to the preceding sentence, the Financing Agreements embody the entire agreement and understanding between the Purchaser and the Company and supersede all prior agreements and understandings relating to the subject matter hereof.

SECTION 14. AMENDMENT AND WAIVER.

*Section 14.1. Requirements*. This Agreement and the Bonds may be amended, and the observance of any term hereof or of the Bonds may be waived (either retroactively or prospectively), with (and only with) the written consent of the Company and the Required Holders, except that (i) no amendment or waiver of any of the provisions of Section 1, 2, 3, 4, 5, 6 or 19 hereof, or any defined term, will be effective as to any holder of Bonds unless consented to by such holder of Bonds in writing, and (ii) no such amendment or waiver may, without the written consent of the Purchaser and all of the holders of Bonds at the time outstanding affected thereby, (A) subject to the provisions of the Indenture relating to acceleration, change the amount or time of any prepayment or payment of principal of, or reduce the rate or change the time of payment or method of computation of interest (if such change results in a decrease in the interest rate) or of the Make-Whole Amount on, the Bonds, (B) change the percentage of the principal amount of the Bonds the Purchaser or holders of which are required to consent to any such amendment or waiver, or (C) amend any of Sections 8, 14 or 18.

*Section 14.2. Solicitation of Holders of Bonds*.

(a) *Solicitation.* The Company will provide the Purchaser and holder of the Bonds (irrespective of the amount of Bonds then owned by it) with sufficient information, sufficiently far in advance of the date a decision is required, to enable the Purchaser or holder to make an informed and considered decision with respect to any proposed amendment, waiver or consent in respect of any of the provisions hereof or of the Bonds. The Company will deliver executed or true and correct copies of each amendment, waiver or consent effected pursuant to the provisions of this Section 14 to the Purchaser and each holder of outstanding Bonds promptly following the date on which it is executed and delivered by, or receives the consent or approval of, the Purchaser or the requisite holders of Bonds.

(b) *Payment.* The Company will not directly or indirectly pay or cause to be paid any remuneration, whether by way of supplemental or additional interest, fee or otherwise (other than legal fees or other related expenses), or grant any security or provide other credit support, to the Purchaser or holder of Bonds as consideration for or as an inducement to the entering into by the Purchaser or any holder of Bonds of any waiver or amendment of any of the terms and provisions hereof or of the Bonds unless such remuneration is concurrently paid, or security is concurrently granted or other credit support concurrently provided, on the same terms, ratably to the Purchaser and each holder of Bonds then outstanding even if the Purchaser or holder did not consent to such waiver or amendment.

(c) *Consent in Contemplation of Transfer*. Any consent made pursuant to this Section 14 by a holder of Bonds that has transferred or has agreed to transfer its Bonds to (i) the Company, (ii) any Subsidiary or any other Affiliate or (iii) any other Person in connection with, or in anticipation of, such other Person acquiring, making a tender offer for or merging with the Company and/or any of its Affiliates, and has provided or has agreed to provide such written consent as a condition to such transfer shall be void and of no force or effect except solely as to such holder, and any amendments effected or waivers granted or to be effected or granted that would not have been or would not be so effected or granted but for such consent (and the consents of all other holders of Bonds that were acquired under the same or similar conditions) shall be void and of no force or effect except solely as to such holder.

*Section 14.3. Binding Effect, Etc*. Any amendment or waiver consented to as provided in this Section 14 applies equally to the Purchaser and all holders of Bonds and is binding upon them and upon each future holder of any Bond and upon the Company without regard to whether such Bond has been marked to indicate such amendment or waiver. No such amendment or waiver will extend to or affect any obligation, covenant, agreement, Default or completed default under the Indenture not expressly amended or waived or impair any right consequent thereon. No course of dealing between the Company and Purchaser and any holder of any Bond nor any delay in exercising any rights hereunder or under any Bond shall operate as a waiver of any rights of the Purchaser or any holder of such Bond.

*Section 14.4. Bonds Held by Company, Etc*. Solely for the purpose of determining whether the holders of the requisite percentage of the aggregate principal amount of Bonds then outstanding approved or consented to any amendment, waiver or consent to be given under this Agreement or the Bonds, or have directed the taking of any action provided herein or in the Bonds to be taken upon the direction of the holders of a specified percentage of the aggregate principal amount of Bonds then outstanding, Bonds directly or indirectly owned by the Company or any of its Affiliates shall be deemed not to be outstanding.

## SECTION 15. NOTICES.

All notices and communications provided for hereunder shall be in writing and sent (a) by telecopy if the sender on the same day sends a confirming copy of such notice by a recognized overnight delivery service (charges prepaid), or (b) by registered or certified mail with return receipt requested (postage prepaid), or (c) by a recognized overnight delivery service (with charges prepaid). Any such notice must be sent:

(i) if to the Purchaser or its nominee, to the Purchaser or nominee at the address specified for such communications in Schedule A, or at such other address as the Purchaser or nominee shall have specified to the Company in writing,

(ii) if to any other holder of any Bond, to such holder at such address as such other holder shall have specified to the Company in writing, or

(iii) if to the Company, to the Company at its address set forth at the beginning hereof to the attention of 1000 S. Schuyler Avenue, P.O. Box 152, Kankakee, Illinois

60901, or at such other address as the Company shall have specified to the holder of each Bond in writing.

Notices under this Section 15 will be deemed given only when actually received.

SECTION 16. INDEMNIFICATION.

The Company hereby agrees to indemnify and hold the Purchaser harmless from, against and in respect of any and all loss, liability and expense (including reasonable attorneys' fees) arising from any misrepresentation or nonfulfillment of any undertaking on the part of the Company under this Agreement. The indemnification obligations of the Company under this Section 16 shall survive the execution and delivery of this Agreement, the delivery of the Bonds to the Purchaser and the consummation of the transactions contemplated herein.

SECTION 17. REPRODUCTION OF DOCUMENTS.

This Agreement and all documents relating thereto, including, without limitation, (a) consents, waivers and modifications that may hereafter be executed, (b) documents received by the Purchaser at the Closing (except the Bonds themselves), and (c) financial statements, certificates and other information previously or hereafter furnished to the Purchaser, may be reproduced by the Purchaser by any photographic, photostatic, electronic, digital, or other similar process and the Purchaser may destroy any original document so reproduced. The Company agrees and stipulates that, to the extent permitted by applicable law, any such reproduction shall be admissible in evidence as the original itself in any judicial or administrative proceeding (whether or not the original is in existence and whether or not such reproduction was made by the Purchaser in the regular course of business) and any enlargement, facsimile or further reproduction of such reproduction shall likewise be admissible in evidence. This Section 17 shall not prohibit the Company or any other holder of Bonds from contesting any such reproduction to the same extent that it could contest the original, or from introducing evidence to demonstrate the inaccuracy of any such reproduction.

SECTION 18. CONFIDENTIAL INFORMATION.

For the purposes of this Section 18, *"Confidential Information"* means information delivered to the Purchaser by or on behalf of the Company or any Subsidiary in connection with the transactions contemplated by or otherwise pursuant to this Agreement that is proprietary in nature and that was clearly marked or labeled or otherwise adequately identified when received by the Purchaser as being confidential information of the Company or such Subsidiary, provided that such term does not include information that (a) was publicly known or otherwise known to the Purchaser prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by the Purchaser or any person acting on the Purchaser's behalf, (c) otherwise becomes known to the Purchaser other than through disclosure by the Company or any Subsidiary or (d) constitutes financial statements delivered to the Purchaser under Section 7.1 of this Agreement or under the Indenture that are otherwise publicly available. The Purchaser will maintain the confidentiality of such Confidential Information in accordance with procedures adopted by the Purchaser in good faith to protect confidential information of third parties delivered to the Purchaser, provided that the Purchaser may deliver or disclose Confidential Information to (i) its directors, trustees, officers, employees, agents, attorneys and affiliates (to the extent such disclosure reasonably relates to the administration of the investment represented by Bonds), (ii) its financial advisors and other professional advisors who agree to hold confidential the Confidential Information substantially in accordance with the terms of this Section 18, (iii) the Trustee or any other holder of any Bond, (iv) any Institutional Investor to which it sells or offers to sell such Bond or any part thereof or any participation therein (if such Person has agreed in writing prior to its receipt of such Confidential Information to be bound by the provisions of this Section 18), (v) any Person from which it offers to purchase any security of the Company (if such Person has agreed in writing prior to its receipt of such Confidential Information to be bound by the provisions of this Section 18), (vi) any federal or state or provincial regulatory authority having jurisdiction over the Purchaser, (vii) the NAIC or the SVO or, in each case, any similar organization, or any nationally recognized rating agency that requires access to information about the Purchaser's investment portfolio, or (viii) any other Person to which such delivery or disclosure may be necessary or appropriate (w) to effect compliance with any law, rule, regulation or order applicable to the Purchaser, (x) in response to any subpoena or other legal process, (y) in connection with any litigation to which the Purchaser is a party or (z) if a Default or completed default under the Indenture has occurred and is continuing, to the extent the Purchaser may reasonably determine such delivery and disclosure to be necessary or appropriate in the enforcement or for the protection of the rights and remedies under any Financing Agreement. Each holder of a Bond, by its acceptance of a Bond, will be deemed to have agreed to be bound by and to be entitled to the benefits of this Section 18 as though it were a party to this Agreement. On reasonable request by the Company in connection with the delivery to any holder of a Bond of information required to be delivered to such holder under this Agreement or requested by such holder (other than a holder that is a party to this Agreement or its nominee), such holder will enter into an agreement with the Company embodying the provisions of this Section 18.

In the event that as a condition to receiving access to information relating to the Company or its Subsidiaries in connection with the transactions contemplated by or otherwise pursuant to this Agreement, the Purchaser or holder of a Bond is required to agree to a confidentiality undertaking (whether through a secure website, a secure virtual workspace or otherwise) which is different from this Section 18, this Section 18 shall not be amended thereby and, as between the Purchaser or such holder and the Company, this Section 18 shall supersede any such other confidentiality undertaking.

## SECTION 19. MISCELLANEOUS.

*Section 19.1. Successors and Assigns*. All covenants and other agreements contained in this Agreement by or on behalf of any of the parties hereto bind and inure to the benefit of their respective successors and assigns (including, without limitation, any subsequent holder of a Bond) whether so expressed or not, except that, subject to Section 10.2, the Company may not assign or otherwise transfer any of its rights or obligations hereunder or under the Bonds without the prior written consent of each holder. Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto and their respective successors and assigns permitted hereby) any legal or equitable right, remedy or claim under or by reason of this Agreement.

*Section 19.2. Accounting Terms*. All accounting terms used herein which are not expressly defined in this Agreement have the meanings respectively given to them in accordance with GAAP. Except as otherwise specifically provided herein, (a) all computations made pursuant to this Agreement shall be made in accordance with GAAP, and (b) all financial statements shall be prepared in accordance with GAAP. For purposes of determining compliance with the financial covenants contained in the Financing Agreements, if any, any election by the Company to measure Debt using fair value (as permitted by Financial Accounting Standards Board Accounting Standards Codification Topic No. 825-10-25 – *Fair Value Option,* International Accounting Standard 39 – *Financial Instruments: Recognition and Measurement* or any similar accounting standard) shall be disregarded and such determination shall be made as if such election had not been made and such Debt shall be valued at not less than 100% of the principal amount thereof.

*Section 19.3. Severability*. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall (to the full extent permitted by law) not invalidate or render unenforceable such provision in any other jurisdiction.

*Section 19.4. Construction, Etc*. Each covenant contained herein shall be construed (absent express provision to the contrary) as being independent of each other covenant contained herein, so that compliance with any one covenant shall not (absent such an express contrary provision) be deemed to excuse compliance with any other covenant. Where any provision herein refers to action to be taken by any Person, or which such Person is prohibited from taking, such provision shall be applicable whether such action is taken directly or indirectly by such Person.

For the avoidance of doubt, all Schedules and Exhibits attached to this Agreement shall be deemed to be a part hereof.

*Section 19.5. Counterparts*. This Agreement may be executed in any number of counterparts, each of which shall be an original but all of which together shall constitute one instrument. Each counterpart may consist of a number of copies hereof, each signed by less than all, but together signed by all, of the parties hereto.

*Section 19.6. Governing Law*. This Agreement shall be construed and enforced in accordance with, and the rights of the parties shall be governed by, the law of the State of Illinois excluding choice-of-law principles of the law of such State that would permit the application of the laws of a jurisdiction other than such State.

*Section 19.7. Jurisdiction and Process; Waiver of Jury Trial*. (a) The Company irrevocably submits to the non-exclusive jurisdiction of any Illinois State or federal court sitting in Chicago, Illinois, over any suit, action or proceeding arising out of or relating to this

Agreement or the Bonds. To the fullest extent permitted by applicable law, the Company irrevocably waives and agrees not to assert, by way of motion, as a defense or otherwise, any claim that it is not subject to the jurisdiction of any such court, any objection that it may now or hereafter have to the laying of the venue of any such suit, action or proceeding brought in any such court and any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum.

(b) The Company consents to process being served by or on behalf of any holder of Bonds in any suit, action or proceeding of the nature referred to in Section 19.7(a) by mailing a copy thereof by registered or certified mail (or any substantially similar form of mail), postage prepaid, return receipt requested, to it at its address specified in Section 15 or at such other address of which such holder shall then have been notified pursuant to said Section. The Company agrees that such service upon receipt (i) shall be deemed in every respect effective service of process upon it in any such suit, action or proceeding and (ii) shall, to the fullest extent permitted by applicable law, be taken and held to be valid personal service upon and personal delivery to it. Notices hereunder shall be conclusively presumed received as evidenced by a delivery receipt furnished by the United States Postal Service or any reputable commercial delivery service.

(c) Nothing in this Section 19.7 shall affect the right of any holder of a Bond to serve process in any manner permitted by law, or limit any right that the holders of any of the Bonds may have to bring proceedings against the Company in the courts of any appropriate jurisdiction or to enforce in any lawful manner a judgment obtained in one jurisdiction in any other jurisdiction.

(d) The parties hereto hereby waive trial by jury in any action brought on or with respect to this Agreement, the Bonds or any other document executed in connection herewith or therewith.

*Section 19.8. Payments Due on Non-Business Days*. Anything in this Agreement or the Bonds to the contrary notwithstanding, any payment of principal of or Make-Whole Amount or interest on any Bond that is due on a date other than a Business Day shall be made on the next succeeding Business Day without including the additional days elapsed in the computation of the interest payable on such next succeeding Business Day; provided that if the maturity date of any Bond is a date other than a Business Day, the payment otherwise due on such maturity date shall be made on the next succeeding Business Day and shall include the additional days elapsed in the computation of interest payable on such next succeeding Business Day.

* * * * *

If you are in agreement with the foregoing, please sign the form of agreement on a counterpart of this Agreement and return it to the Company, whereupon this Agreement shall become a binding agreement between you and the Company.

Very truly yours,

AQUA ILLINOIS, INC.

By /s/ David P. Smeltzer
Name: David P. Smeltzer
Its: Executive Vice President and CFO

Accepted as of the date first written above.

TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA

By /s/ Matthew W. Smith
Name: Matthew W. Smith
Title: Director

## Defined Terms

As used herein, the following terms have the respective meanings set forth below or set forth in the Section hereof following such term:

*"Affiliate"* means, at any time, and with respect to any Person, any other Person that at such time directly or indirectly through one or more intermediaries Controls, or is Controlled by, or is under common Control with, such first Person. As used in this definition, "Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise. Unless the context otherwise clearly requires, any reference to an "Affiliate" is a reference to an Affiliate of the Company.

*"Agreement"* means this Bond Purchase Agreement, including all Schedules and Exhibits attached to this Agreement.

*"Anti-Corruption Laws"* means any law or regulation in a U.S. or any non-U.S. jurisdiction regarding bribery or any other corrupt activity, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act 2010.

*"Anti-Money Laundering Laws"* means any law or regulation in a U.S. or any non-U.S. jurisdiction regarding money laundering, drug trafficking, terrorist-related activities or other money laundering predicate crimes, including the Currency and Foreign Transactions Reporting Act of 1970 (otherwise known as the Bank Secrecy Act) and the USA Patriot Act.

*"Blocked Person"* means (a) a Person whose name appears on the list of Specially Designated Nationals and Blocked Persons published by OFAC, (b) a Person, entity, organization, country or regime that is blocked or a target of sanctions that have been imposed under U.S. Economic Sanctions Laws or (c) a Person that is an agent, department or instrumentality of, or is otherwise beneficially owned by, controlled by or acting on behalf of, directly or indirectly, any Person, entity, organization, country or regime described in clause (a) or (b).

*"Bonds"* is defined in Section 1.

*"Business Day"* means for the purposes of any provision of this Agreement, any day other than a Saturday, a Sunday or a day on which commercial banks in New York, New York or Chicago, Illinois are required or authorized to be closed.

*"Capital Lease"* means, at any time, a lease with respect to which the lessee is required concurrently to recognize the acquisition of an asset and the incurrence of a liability in accordance with GAAP.

*"Capital Lease Obligation"* means, with respect to any Person and a Capital Lease, the amount of the obligation of such Person as the lessee under such Capital Lease which would, in accordance with GAAP, appear as a liability on a balance sheet of such Person.

*"Closing"* is defined in Section 3.

*"Code"* means the Internal Revenue Code of 1986, as amended from time to time, and the rules and regulations promulgated thereunder from time to time.

*"Company"* means Aqua Illinois, Inc., a corporation existing under the laws of the State of Illinois.

"*Controlled Entity*" means any of the Subsidiaries of the Company and any of their or the Company's respective Controlled Affiliates. As used in this definition, "Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

*"Debt"* means, with respect to any Person, without duplication,

(a) its liabilities for borrowed money;

(b) its liabilities for the deferred purchase price of property acquired by such Person (excluding accounts payable and other accrued liabilities arising in the ordinary course of business but including, without limitation, all liabilities created or arising under any conditional sale or other title retention agreement with respect to any such property);

(c) its Capital Lease Obligations;

(d) all liabilities for borrowed money secured by any Lien with respect to any property owned by such Person (whether or not it has assumed or otherwise become liable for such liabilities);

(e) all non-contingent liabilities in respect of reimbursement agreements or similar agreements in respect of letters of credit or instruments serving a similar function issued or accepted for its account by banks and other financial institutions;

(f) Swaps of such Person; and

(g) Guaranties of such Person with respect to liabilities of a type described in any of clauses (a) through (f) hereof.

Debt of any Person shall include all obligations of such Person of the character described in clauses (a) through (g) to the extent such Person remains legally liable in respect thereof notwithstanding that any such obligation is deemed to be extinguished under GAAP.

*"Default"* means an event or condition the occurrence or existence of which would, with the lapse of time or the giving of notice or both, become a completed default under the Indenture.

*"Disclosure Documents"* is defined in Section 5.3.

*"Environmental Laws"* means any and all Federal, state, local, and foreign statutes, laws, regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses, agreements or governmental restrictions relating to pollution and the protection of the environment or the release of any materials into the environment, including but not limited to those related to Hazardous Materials.

*"ERISA"* means the Employee Retirement Income Security Act of 1974, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"ERISA Affiliate"* means any trade or business (whether or not incorporated) that is treated as a single employer together with the Company under section 414 of the Code.

*"Financing Agreements"* means this Agreement, the Indenture (including without limitation Supplemental Indenture Y), and the Bonds.

"*GAAP*" means generally accepted accounting principles as in effect from time to time in the United States of America.

*"Governmental Authority"* means:

(a) the government of

(i) the United States of America or any State or other political subdivision thereof, or

(ii) any other jurisdiction in which the Company or any Subsidiary conducts all or any part of its business, or which asserts jurisdiction over any properties of the Company or any Subsidiary, or

(b) any entity exercising executive, legislative, judicial, regulatory or administrative functions of, or pertaining to, any such government.

*"Governmental Official"* means any governmental official or employee, employee of any government-owned or government-controlled entity, political party, any official of a political party, candidate for political office, official of any public international organization or anyone else acting in an official capacity.

*"Guaranty"* means, with respect to any Person, any obligation (except the endorsement in the ordinary course of business of negotiable instruments for deposit or collection) of such Person guaranteeing or in effect guaranteeing any Debt, dividend or other obligation of any other

Person in any manner, whether directly or indirectly, including (without limitation) obligations incurred through an agreement, contingent or otherwise, by such Person:

(a) to purchase such Debt or obligation or any property constituting security therefor primarily for the purpose of assuring the owner of such Debt or obligation of the ability of any other Person to make payment of the Debt or obligation;

(b) to advance or supply funds (i) for the purchase or payment of such Debt or obligation, or (ii) to maintain any working capital or other balance sheet condition or any income statement condition of any other Person or otherwise to advance or make available funds for the purchase or payment of such Debt or obligation;

(c) to lease properties or to purchase properties or services primarily for the purpose of assuring the owner of such Debt or obligation of the ability of any other Person to make payment of the Debt or obligation; or

(d) otherwise to assure the owner of such Debt or obligation against loss in respect thereof.

In any computation of the Debt or other liabilities of the obligor under any Guaranty, the Debt or other obligations that are the subject of such Guaranty shall be assumed to be direct obligations of such obligor, *provided* that the amount of such Debt outstanding for purposes of this Agreement shall not exceed the maximum amount of Debt that is the subject of such Guaranty.

*"Hazardous Material"* means any and all pollutants, toxic or hazardous wastes or other substances that might pose a hazard to health and safety, the removal of which may be required or the generation, manufacture, refining, production, processing, treatment, storage, handling, transportation, transfer, use, disposal, release, discharge, spillage, seepage or filtration of which is or shall be restricted, prohibited or penalized by any applicable law including, but not limited to, asbestos, urea formaldehyde foam insulation, polychlorinated biphenyls, petroleum, petroleum products, lead based paint, radon gas or similar restricted, prohibited or penalized substances.

*"holder"* is defined in the Indenture.

*"Indenture"* is defined in Section 1.

*"Institutional Investor"* means (a) the Purchaser, (b) any holder of a Bond holding (together with one or more of its affiliates) more than 5% of the aggregate principal amount of the Bonds then outstanding, (c) any bank, trust company, savings and loan association or other financial institution, any pension plan, any investment company, any insurance company, any broker or dealer, or any other similar financial institution or entity, regardless of legal form, and (d) any Related Fund of any holder of any Bond.

*"Lien"* means, with respect to any Person, any mortgage, lien, pledge, charge, security interest or other encumbrance, or any interest or title of any vendor, lessor, lender or other secured party to or of such Person under any conditional sale or other title retention agreement or Capital Lease, upon or with respect to any property or asset of such Person (including in the case of stock, stockholder agreements, voting trust agreements and all similar arrangements).

*"Make-Whole Amount"* is defined in Supplemental Indenture Y.

*"Material"* means material in relation to the business, operations, affairs, financial condition, assets or properties of the Company and its Subsidiaries taken as a whole.

*"Material Adverse Effect"* means a material adverse effect on (a) the business, operations, affairs, financial condition, assets or properties of the Company and its Subsidiaries taken as a whole, (b) the ability of the Company to perform its obligations under this Agreement, the Bonds or the Indenture or (c) the validity or enforceability of any Financing Agreement.

*"Multiemployer Plan"* means any Plan that is a "multiemployer plan" (as such term is defined in section 4001(a)(3) of ERISA).

*"NAIC"* means the National Association of Insurance Commissioners or any successor thereto.

*"Non-U.S. Plan"* means any plan, fund or other similar program that (a) is established or maintained outside the United States of America by the Company or any Subsidiary primarily for the benefit of employees of the Company or one or more Subsidiaries residing outside the United States of America, which plan, fund or other similar program provides, or results in, retirement income, a deferral of income in contemplation of retirement or payments to be made upon termination of employment, and (b) is not subject to ERISA or the Code.

*"OFAC"* means the Office of Foreign Assets Control of the United States Department of the Treasury.

"*OFAC Sanctions Program*" means any economic or trade sanction that OFAC is responsible for administering and enforcing. A list of OFAC Sanctions Programs may be found at http://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx.

*"Officer's Certificate"* means a certificate of a Senior Financial Officer or of any other officer of the Company whose responsibilities extend to the subject matter of such certificate.

*"Original Mortgage and Deed of Trust"* is defined in Section 1.

*"PBGC"* means the Pension Benefit Guaranty Corporation referred to and defined in ERISA or any successor thereto.

*"Person"* means an individual, partnership, corporation, limited liability company, association, trust, unincorporated organization, business entity or Governmental Authority.

*"Plan"* means an "employee benefit plan" (as defined in section 3(2) of ERISA) subject to Title I of ERISA that is or, within the preceding five years, has been established or maintained, or to which contributions are or, within the preceding five years, have been made or required to be made, by the Company or any ERISA Affiliate or with respect to which the Company or any ERISA Affiliate may have any liability.

*"property"* or *"properties"* means, unless otherwise specifically limited, real or personal property of any kind, tangible or intangible, choate or inchoate.

*"PTE"* is defined in Section 6.2(a).

*"Purchaser"* is defined in the first paragraph of this Agreement.

*"Related Fund"* means, with respect to any holder of any Bond, any fund or entity that (i) invests in Securities or bank loans, and (ii) is advised or managed by such holder, the same investment advisor as such holder or by an affiliate of such holder or such investment advisor.

*"Required Holders"* means the holders of at least 51% in principal amount of the Bonds at the time outstanding (exclusive of Bonds then owned by the Company or any of its Affiliates).

*"Responsible Officer"* means any Senior Financial Officer and any other officer of the Company with responsibility for the administration of the relevant portion of this Agreement.

*"SEC"* means the Securities and Exchange Commission of the United States, or any successor thereto.

*"Securities"* or *"Security"* shall have the meaning specified in Section 2(a)(1) of the Securities Act.

*"Securities Act"* means the Securities Act of 1933, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"Senior Financial Officer"* means the chief financial officer, principal accounting officer, treasurer or comptroller of the Company.

*"Series AA Bonds"* is defined in Section 1.

*"Series BB Bonds"* is defined in Section 1.

*"Series CC Bonds"* is defined in Section 1.

*"Series DD Bonds"* is defined in Section 1.

*"Series Y Bonds"* is defined in Section 1.

*"Series Z Bonds"* is defined in Section 1.

*"Source"* is defined in Section 6.2.

*"State Sanctions List"* means a list that is adopted by any state Governmental Authority within the United States of America pertaining to Persons that engage in investment or other commercial activities in Iran or any other country that is a target of economic sanctions imposed under U.S. Economic Sanctions Laws.

*"Subsidiary"* means, as to any Person, any other Person in which such first Person or one or more of its Subsidiaries or such first Person and one or more of its Subsidiaries owns sufficient equity or voting interests to enable it or them (as a group) ordinarily, in the absence of contingencies, to elect a majority of the directors (or Persons performing similar functions) of such second Person, and any partnership or joint venture if more than a 50% interest in the profits or capital thereof is owned by such first Person or one or more of its Subsidiaries or such first Person and one or more of its Subsidiaries (unless such partnership or joint venture can and does ordinarily take major business actions without the prior approval of such Person or one or more of its Subsidiaries). Unless the context otherwise clearly requires, any reference to a "Subsidiary" is a reference to a Subsidiary of the Company.

*"Supplemental Indenture Y"* is defined in Section 1.

*"SVO"* means the Securities Valuation Office of the NAIC or any successor to such Office.

*"Swaps"* means, with respect to any Person, payment obligations with respect to interest rate swaps, currency swaps and similar obligations obligating such Person to make payments, whether periodically or upon the happening of a contingency. For the purposes of this Agreement, the amount of the obligation under any Swap shall be the amount determined in respect thereof as of the end of the then most recently ended fiscal quarter of such Person, based on the assumption that such Swap had terminated at the end of such fiscal quarter, and in making such determination, if any agreement relating to such Swap provides for the netting of amounts payable by and to such Person thereunder or if any such agreement provides for the simultaneous payment of amounts by and to such Person, then in each such case, the amount of such obligation shall be the net amount so determined.

*"Trust Estate"* means the properties mortgaged, pledged and conveyed to the Trustee pursuant to the Indenture.

*"Trustee"* is defined in Section 1.

*"USA Patriot Act"* means United States Public Law 107-56, Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT ACT) Act of 2001, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"U.S. Economic Sanctions Laws"* means those laws, executive orders, enabling legislation or regulations administered and enforced by the United States pursuant to which

economic sanctions have been imposed on any Person, entity, organization, country or regime, including the Trading with the Enemy Act, the International Emergency Economic Powers Act, the Iran Sanctions Act, the Sudan Accountability and Divestment Act, each as amended from time to time, and any other OFAC Sanctions Program.

## FINANCIAL STATEMENTS

1. Aqua Illinois, Inc. Consolidated Financial Statements as of and for the years ended December 31, 2016, 2015 and 2014 (audited).

2. Aqua Illinois, Inc. Report for Quarter Ended March 31, 2017.

**SCHEDULE 5.15(a)**
**EXISTING DEBT**
**AS OF**
**MARCH 31, 2017**
**AQUA ILLINOIS INC.**

| | Interest Rate | Outstanding Balance | |
|---|---|---|---|
| Unsecured Affiliate Note | 5.22% | $5,515,450 | 2 |
| Unsecured Affiliate Note | 3.57% | 17,559,550 | 2 |
| Unsecured Affiliate Note | 3.59% | 23,000,000 | 2 |
| Unsecured Note | 8.00% | 1,000,000 | |
| **Total Unsecured** | | **47,075,000** | |
| Tax Exempt | 4.95% | 16,415,000 | 1 |
| **Total Tax Exempt** | | **16,415,000** | |
| FMB | 10.40% | 6,000,000 | |
| FMB | 9.69% | 4,500,000 | |
| FMB | 7.63% | 8,000,000 | |
| FMB | 5.32% | 10,500,000 | |
| **Total FMB** | | **29,000,000** | |
| **Total Long Term Debt** | | **$92,490,000** | |
| CoBank Line of Credit | | - | |
| **Total Short Term Debt** | | **$-** | |
| **Total Aqua Illlinois Inc. Debt** | | **$92,490,000** | |

[1] Redeemed on June 1, 2017.
[2] To be retired with Series 2017 bond proceeds.

**SCHEDULE 5.15(b)**
**DEBT INSTRUMENTS WHICH LIMIT/RESTRICT**
**THE INCURRENCE OF DEBT**

**AQUA ILLINOIS, INC.**

1. Indenture of Mortgage dated as of June 1, 1939 of Aqua Illinois, Inc. as supplemented and amended.

2. $8,000,000 Revolving Credit Agreement dated as of June 30, 2009 among Aqua Illinois, Inc. and CoBank, as amended.

AQUA PENNSYLVANIA, INC.

$155,000,000

$40,000,000 First Mortgage Bonds, 4.04% Series due 2055

$40,000,000 First Mortgage Bonds, 4.06% Series due 2057

$35,000,000 First Mortgage Bonds, 4.06% Series due 2054

$20,000,000 First Mortgage Bonds, 4.07% Series due 2055

$20,000,000 First Mortgage Bonds, 4.09% Series due 2057

# BOND PURCHASE AGREEMENT

Dated as of July 20, 2017

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**AQUA PENNSYLVANIA, INC.**
762 West Lancaster Avenue
Bryn Mawr, Pennsylvania 19010-3489

$155,000,000

$40,000,000 First Mortgage Bonds, 4.04% Series due 2055
$40,000,000 First Mortgage Bonds, 4.06% Series due 2057
$35,000,000 First Mortgage Bonds, 4.06% Series due 2054
$20,000,000 First Mortgage Bonds, 4.07% Series due 2055
$20,000,000 First Mortgage Bonds, 4.09% Series due 2057

As of July 20, 2017

To Each of the Purchasers Listed in
Schedule A Hereto:

Ladies and Gentlemen:

Aqua Pennsylvania, Inc., a corporation organized under the laws of the Commonwealth of Pennsylvania (the *"Company"*), agrees with each of the purchasers whose names appear at the end hereof (each, a *"Purchaser"* and, collectively, the *"Purchasers"*) as follows:

SECTION 1. AUTHORIZATION OF BONDS.

The Company will authorize the issue and sale of (i) First Mortgage Bonds, 4.04% Series due 2055 (herein referred to as the *"4.04% Series due 2055 Bonds"*) in an aggregate principal amount of $40,000,000, to bear interest at the rate of 4.04% per annum, and to mature on July 15, 2055, (ii) First Mortgage Bonds, 4.06% Series due 2057 (herein referred to as the *"4.06% Series due 2057 Bonds"*) in an aggregate principal amount of $40,000,000, to bear interest at the rate of 4.06% per annum, and to mature on July 15, 2057, (iii) First Mortgage Bonds, 4.06% Series due 2054 (herein referred to as the *"4.06% Series due 2054 Bonds"*) in an aggregate principal amount of $35,000,000, to bear interest at the rate of 4.06% per annum, and to mature on October 15, 2054, (iv) First Mortgage Bonds, 4.07% Series due 2055 (herein referred to as the *"4.07% Series due 2055 Bonds"*) in an aggregate principal amount of $20,000,000, to bear interest at the rate of 4.07% per annum, and to mature on October 15, 2055 and (v) First Mortgage Bonds, 4.09% Series due 2057 (herein referred to as the *"4.09% Series due 2057 Bonds"*) in an aggregate principal amount of $20,000,000, to bear interest at the rate of 4.09% per annum, and to mature on October 15, 2057 (the 4.04% Series due 2055 Bonds, the 4.06% Series due 2057 Bonds, the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds are collectively referred to as the *"Bonds"* and such term includes any such bonds issued in substitution therefor). The Bonds will be issued under and secured by that certain Indenture of Mortgage dated as of January 1, 1941, from the Company (as successor by merger to the Philadelphia Suburban Water Company), as grantor, to The Bank of New York Mellon Trust Company, N.A., as successor trustee (the "*Trustee*") (the

*"Original Indenture"*), as previously amended and supplemented by fifty-one supplemental indentures and as further supplemented by the Fifty-second Supplemental Indenture dated as of June 15, 2017 (such Fifty-second Supplemental Indenture being referred to herein as the *"Supplement"*) which will be substantially in the form attached hereto as Exhibit A, with such changes therein, if any, as shall be approved by the Purchasers and the Company. The Original Indenture, as supplemented and amended by the aforementioned fifty-one supplemental indentures and the Supplement, and as further supplemented or amended according to its terms, is hereinafter referred to as the *"Indenture"*. Certain capitalized and other terms used in this Agreement are defined in Schedule B; and references to a *"Schedule"* or an *"Exhibit"* are, unless otherwise specified, to a Schedule or an Exhibit attached to this Agreement. Terms used herein but not defined herein shall have the meanings set forth in the Indenture.

SECTION 2. SALE AND PURCHASE OF BONDS.

Subject to the terms and conditions of this Agreement, the Company will issue and sell to each Purchaser and each Purchaser will purchase from the Company, at each Closing provided for in Section 3, Bonds in the principal amount and in the series specified opposite such Purchaser's name in Schedule A at the purchase price of 100% of the principal amount thereof. The Purchasers' obligations hereunder are several and not joint obligations and no Purchaser shall have any liability to any Person for the performance or non-performance of any obligation by any other Purchaser hereunder.

SECTION 3. CLOSINGS.

The execution and delivery of this Agreement and the sale and purchase of the Bonds to be purchased by each Purchaser shall occur at the offices of Chapman and Cutler LLP, 111 West Monroe Street, Chicago, Illinois 60603, at 10:00 a.m., Chicago time, at two separate closings (each a *"Closing"*), the first of which (for the 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds) shall occur on July 20, 2017 or on such other Business Day thereafter on or prior to July 31, 2017 as may be agreed upon by the Company and the Purchasers (the *"First Closing"*), and the second of which (for the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds) will occur on October 26, 2017, or on such other Business Day thereafter on or prior to October 31, 2017 as may be agreed upon by the Company and the Purchasers (the *"Second Closing"*). At each such Closing the Company will deliver to each Purchaser the Bonds to be purchased by such Purchaser in the form of one or more Bonds to be purchased by such Purchaser, as applicable, in such denominations as such Purchaser may request (with a minimum denomination of $100,000 for each Bond), dated the date of such Closing and registered in such Purchaser's name (or in the name of its nominee), against delivery by such Purchaser to the Company or its order of immediately available funds in the amount of the purchase price therefor by wire transfer of immediately available funds for Account Number: 8559742757, Account Name: Aqua Pennsylvania, Inc., at PNC Bank, N.A., Philadelphia, Pennsylvania, ABA Number 031-000053. If at either Closing the Company shall fail to tender such Bonds to any Purchaser as provided above in this Section 3, or any of the conditions specified in Section 4 shall not have been fulfilled to such Purchaser's satisfaction, such Purchaser shall, at its election, be relieved of all further obligations under this Agreement, without thereby waiving any rights such Purchaser may have by reason of such failure by the

Company to tender such Bonds or any of the conditions specified in Section 4 not having been fulfilled to such Purchaser's satisfaction.

## SECTION 4. CONDITIONS TO CLOSING.

Each Purchaser's obligation to execute and deliver this Agreement and to purchase and pay for the Bonds to be sold to such Purchaser at the applicable Closing is subject to the fulfillment to such Purchaser's satisfaction prior to or at such Closing of the following conditions:

*Section 4.1. Representations and Warranties*. The representations and warranties of the Company in this Agreement shall be correct when made and at the time of such Closing.

*Section 4.2. Performance; No Default*. The Company shall have performed and complied with all agreements and conditions contained in each Financing Agreement required to be performed or complied with by the Company prior to or at such Closing, and after giving effect to the issue and sale of the 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds, or the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds, as applicable, (and the application of the proceeds thereof as contemplated by Section 5.14), no Default or Event of Default shall have occurred and be continuing.

*Section 4.3. Compliance Certificates*. The Company shall have performed and complied with all agreements and conditions contained in the Indenture which are required to be performed or complied with by the Company for the issuance of the Bonds at such Closing. In addition the Company shall have delivered the following certificates:

(a) *Officer's Certificate.* The Company shall have delivered to such Purchaser (i) an Officer's Certificate, dated the date of such Closing, certifying that the conditions specified in Section 4 of this Agreement have been fulfilled, and (ii) copies of all certificates and opinions required to be delivered to the Trustee under the Indenture in connection with the issuance of the 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds, or the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds, as applicable, under the Indenture, in each case, dated the date of such Closing.

(b) *Secretary's Certificate.* The Company shall have delivered to such Purchaser a certificate of its Secretary or Assistant Secretary, dated the date of such Closing, certifying as to the resolutions attached thereto and other corporate proceedings relating to the authorization, execution and delivery of this Agreement, the 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds, or the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds, as applicable, under the Indenture, and the Supplement.

(c) *Certification of Indenture.* Such Purchaser shall have received a composite copy of the Indenture (together with all amendments and supplements thereto), certified by the Company as of the date of such Closing, exclusive of property exhibits, recording information and the like.

*Section 4.4. Opinions of Counsel*. Such Purchaser shall have received opinions in form and substance satisfactory to such Purchaser, dated the date of such Closing (a) from Christopher P. Luning, counsel for the Company, covering the matters set forth in Exhibit 4.4(a) and covering such other matters incident to the transactions contemplated hereby as such Purchaser or its counsel may reasonably request (and the Company hereby instructs its counsel to deliver such opinion to the Purchasers) and (b) from Dilworth Paxson, LLP, special counsel to the Company, covering the matters set forth in Exhibit 4.4(b) and covering such other matters incident to the transactions contemplated hereby as such Purchaser or such Purchaser's counsel may reasonably request (and the Company hereby instructs its counsel to deliver such opinion to the Purchasers), and (c) from Chapman and Cutler LLP, the Purchasers' special counsel in connection with such transactions, substantially in the form set forth in Exhibit 4.4(c) and covering such other matters incident to such transactions as such Purchaser may reasonably request. The Company hereby directs its counsel to deliver the opinions required by this Section 4.4 and understands and agrees that each Purchaser will and hereby is authorized to rely on such opinions.

*Section 4.5. Purchase Permitted by Applicable Law, Etc*. On the date of such Closing such Purchaser's purchase of Bonds shall (a) be permitted by the laws and regulations of each jurisdiction to which such Purchaser is subject, without recourse to provisions (such as section 1405(a)(8) of the New York Insurance Law) permitting limited investments by insurance companies without restriction as to the character of the particular investment, (b) not violate any applicable law or regulation (including, without limitation, Regulation T, U or X of the Board of Governors of the Federal Reserve System) and (c) not subject such Purchaser to any tax, penalty or liability under or pursuant to any applicable law or regulation, which law or regulation was not in effect on the date of either Closing. If requested by such Purchaser, such Purchaser shall have received an Officer's Certificate certifying as to such matters of fact as such Purchaser may reasonably specify to enable such Purchaser to determine whether such purchase is so permitted.

*Section 4.6. Sale of Bonds*. Contemporaneously with such Closing, the Company shall sell to each Purchaser and each Purchaser shall purchase the Bonds to be purchased by it at such Closing as specified in Schedule A. In the case of the Second Closing, the transactions contemplated herein with respect to the First Closing shall have been consummated in accordance with the terms hereof.

*Section 4.7. Payment of Special Counsel Fees*. Without limiting the provisions of Section 12.2, the Company shall have paid on or before such Closing the reasonable fees, reasonable charges and reasonable disbursements of the Purchasers' special counsel referred to in Section 4.4(c) to the extent reflected in a statement of such counsel rendered to the Company at least one Business Day prior to the Closing.

*Section 4.8. Private Placement Number*. A Private Placement Number issued by Standard & Poor's CUSIP Service Bureau (in cooperation with the SVO) shall have been obtained for the series of Bonds issued at such Closing.

*Section 4.9. Changes in Corporate Structure*. The Company shall not have changed its jurisdiction of incorporation or organization, as applicable, or been a party to any merger or consolidation or succeeded to all or any substantial part of the liabilities of any other entity, at any time following the date of the most recent financial statements referred to in Schedule 5.5.

*Section 4.10. Funding Instructions*. At least three Business Days prior to the date of such Closing, such Purchaser shall have received written instructions signed by a Responsible Officer on letterhead of the Company confirming the information specified in Section 3 including (a) the name and address of the transferee bank, (b) such transferee bank's ABA number and (c) the account name and number into which the purchase price for the Bonds is to be deposited.

*Section 4.11. Proceedings and Documents*. All corporate and other proceedings in connection with the transactions contemplated by this Agreement and all documents and instruments incident to such transactions shall be reasonably satisfactory to such Purchaser and its special counsel, and such Purchaser and its special counsel shall have received all such counterpart originals or certified or other copies of such documents as such Purchaser or such special counsel may reasonably request.

*Section 4.12. Execution and Delivery and Filing and Recording of the Supplement*. Prior to or at the First Closing, the Supplement shall have been duly executed and delivered by the Company, and the Company shall have filed, or delivered for recordation, the Supplement in all locations in Pennsylvania (and financing statements in respect thereof shall have been filed, if necessary) in such manner and in such places as is required by law (and no other instruments are required to be filed) to establish, preserve, perfect and protect the direct security interest and mortgage Lien of the Trust Estate created by the Indenture on all mortgaged and pledged property of the Company referred to in the Indenture as subject to the direct mortgage Lien thereof and the Company shall have delivered satisfactory evidence of such filings, recording or delivery for recording.

*Section 4.13. Regulatory Approvals.* The issue and sale of the 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds, or the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds, as applicable, shall have been duly authorized by an order of the Pennsylvania Public Utility Commission and such order shall be in full force and effect on the date of the applicable Closing and all appeal periods, if any, applicable to such order shall have expired. The Company shall deliver satisfactory evidence that orders have been obtained approving the issuance of such Bonds from the Pennsylvania Public Utility Commission or that the Pennsylvania Public Utility Commission shall have waived jurisdiction thereof and such approval or waiver shall not be contested or subject to review, or that the Pennsylvania Public Utility Commission does not have jurisdiction.

SECTION 5. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to each Purchaser at each Closing that:

*Section 5.1. Organization; Power and Authority*. The Company is a corporation duly organized, validly existing and subsisting under the laws of the Commonwealth of Pennsylvania, and is duly qualified as a foreign corporation and is in good standing in each jurisdiction in which such qualification is required by law, other than those jurisdictions as to which the failure to be so qualified or in good standing would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has the corporate power and authority to own or hold under lease the properties it purports to own or hold under lease, to transact the business it transacts and proposes to transact, to execute and deliver this Agreement, the Bonds and the Supplement (and had the corporate power and authority to execute and deliver the Indenture at the time of execution and delivery thereof) and to perform the provisions of the Financing Agreements.

*Section 5.2. Authorization, Etc*. (a) At the First Closing, each Financing Agreement has been duly authorized by all necessary corporate action on the part of the Company, and each Financing Agreement (other than the Supplement and the Bonds) constitutes, and when the Supplement is executed and delivered by the Company and the Trustee and when the 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds are executed, issued and delivered by the Company, authenticated by the Trustee and paid for by the Purchasers, the Supplement and each 4.04% Series due 2055 Bonds, and the 4.06% Series due 2057 Bonds will constitute, a legal, valid and binding obligation of the Company enforceable against the Company in accordance with its respective terms, except as such enforceability may be limited by (i) applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

(b) At the Second Closing, each Financing Agreement (other than the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds) remains in full force and effect, and when the 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds, as applicable, are executed, issued and delivered by the Company, authenticated by the Trustee and paid for by the Purchasers, each 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds will constitute, a legal, valid and binding obligation of the Company enforceable against the Company in accordance with its respective terms, except as such enforceability may be limited by (i) applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

*Section 5.3. Disclosure*. This Agreement and the documents, certificates or other writings delivered to the Purchasers by or on behalf of the Company in connection with the transactions contemplated hereby, including the Term Sheet (including the documents incorporated therein by reference) dated March 21, 2017, and the financial statements listed in

Schedule 5.5 (collectively, the *"Disclosure Documents"*), taken as a whole, do not contain any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein not misleading in light of the circumstances under which they were made. Since December 31, 2016, there has been no change in the financial condition, operations, business or properties of the Company or any of its Subsidiaries except changes that individually or in the aggregate would not reasonably be expected to have a Material Adverse Effect. There is no fact known to management of the Company that, in the reasonable judgment of management of the Company, could be expected to have a Material Adverse Effect that has not been set forth herein or in the other documents, certificates and other writings delivered to the Purchaser by the Company specifically for use in connection with the transactions contemplated hereby.

*Section 5.4.* *Organization and Ownership of Shares of Subsidiaries*. (a) Schedule 5.4 contains a complete and correct list of the Company's Subsidiaries, showing, as to each Subsidiary, the correct name thereof, the jurisdiction of its organization, and the percentage of shares of each class of its capital stock or similar equity interests outstanding owned by the Company and each other Subsidiary.

(b) All of the outstanding shares of capital stock or similar equity interests of each Subsidiary shown in Schedule 5.4 as being owned by the Company and its Subsidiaries have been validly issued, are fully paid and nonassessable and are owned by the Company or another Subsidiary free and clear of any Lien.

(c) Each Subsidiary identified in Schedule 5.4 is duly incorporated and is validly subsisting as a corporation under the laws of the Commonwealth of Pennsylvania, and is duly qualified as a foreign corporation or other legal entity and is in good standing in each jurisdiction in which such qualification is required by law, other than those jurisdictions as to which the failure to be so qualified or in good standing could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Each such Subsidiary has the corporate or other power and authority to own or hold under lease the properties it purports to own or hold under lease and to transact the business it transacts and proposes to transact.

*Section 5.5.* *Financial Statements; Material Liabilities*. The Company has delivered to each Purchaser copies of the financial statements of the Company and its Subsidiaries listed on Schedule 5.5. All of said financial statements (including in each case the related schedules and notes) fairly present in all material respects the consolidated financial position of the Company and its Subsidiaries as of the respective dates specified in such financial statements and the consolidated results of their operations and cash flows for the respective periods so specified and have been prepared in accordance with GAAP consistently applied throughout the periods involved except as set forth in the notes thereto (subject, in the case of any interim financial statements, to normal year-end adjustments). The Company does not have any Material liabilities that are not disclosed on such financial statements or otherwise disclosed in the Disclosure Documents.

*Section 5.6.* *Compliance with Laws, Other Instruments, Etc*. The execution, delivery and performance by the Company of each Financing Agreement (including the prior execution and delivery of the Indenture), will not (a) contravene, result in any breach of, or constitute a default under, or result in the creation of any Lien, other than the Lien created under the Indenture, in respect of any property of the Company or any Subsidiary under, any indenture, mortgage, deed of trust, loan, purchase or credit agreement, lease, corporate charter, regulations or by-laws, or any other Material agreement or instrument to which the Company or any Subsidiary is bound or by which the Company or any Subsidiary or any of their respective properties may be bound or affected, (b) conflict with or result in a breach of any of the terms, conditions or provisions of any order, judgment, decree, or ruling of any court, arbitrator or Governmental Authority applicable to the Company or any Subsidiary or (c) violate any provision of any statute or other rule or regulation of any Governmental Authority applicable to the Company or any Subsidiary, except for any such default, breach, contravention or violation which would not reasonably be expected to have a Material Adverse Effect.

*Section 5.7.* *Governmental Authorizations, Etc.* No consent, approval or authorization of, or registration, filing or declaration with, any Governmental Authority is required in connection with the execution, delivery or performance by the Company of this Agreement, the Bonds and the Supplement, other than approval of the Pennsylvania Public Utility Commission, which has been obtained and is in full force and effect and final and is non-appealable.

*Section 5.8.* *Litigation; Observance of Statutes and Orders*. (a) There are no actions, suits, investigations or proceedings pending or, to the knowledge of the Company, threatened against or affecting the Company or any Subsidiary or any property of the Company or any Subsidiary in any court or before any arbitrator of any kind or before or by any Governmental Authority that, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

(b) Neither the Company nor any Subsidiary is (i) in default under any term of any agreement or instrument to which it is a party or by which it is bound, (ii) in violation of any order, judgment, decree or ruling of any court, any arbitrator of any kind or any Governmental Authority naming or referring to the Company or any Subsidiary or (iii) in violation of any applicable law, or, to the knowledge of the Company, any ordinance, rule or regulation of any Governmental Authority (including, without limitation, Environmental Laws the USA Patriot Act or any of the other laws and regulations that are referred to in Section 5.16), which default or violation, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

*Section 5.9.* *Taxes*. The Company and its Subsidiaries have filed all income tax returns that are required to have been filed in any jurisdiction, and have paid all taxes shown to be due and payable on such returns and all other taxes and assessments payable by them, to the extent such taxes and assessments have become due and payable and before they have become delinquent, except for any taxes and assessments (i) the amount of which is not individually or in the aggregate Material or (ii) the amount, applicability or validity of which is currently being contested in good faith by appropriate proceedings and with respect to which the Company or a Subsidiary, as the case may be, has established adequate reserves in accordance with GAAP. The charges, accruals, and reserves on the books of the Company and its Subsidiaries in respect of federal, state or other taxes for all fiscal periods are adequate. The Federal income tax liabilities of the Company and its Subsidiaries have been finally determined (whether by reason of completed audits or the statute of limitations having run) for all fiscal years up to and including the fiscal year ended December 31, 2011 and all amounts owing in respect of such audit have been paid.

*Section 5.10.* *Title to Property; Leases*. The Company and its Subsidiaries have good and sufficient title to their respective Material properties, including all such properties reflected in the most recent audited balance sheet referred to in Section 5.5 or purported to have been acquired by the Company or any Subsidiary after said date (except as sold or otherwise disposed of in the ordinary course of business), in each case free and clear of Liens prohibited by this Agreement or the Indenture, except for those defects in title and Liens that, individually or in the aggregate, would not have a Material Adverse Effect. All Material leases are valid and subsisting and are in full force and effect in all material respects.

*Section 5.11.* *Licenses, Permits, Etc*. The Company and its Subsidiaries own or possess all licenses, permits, franchises, certificates of convenience and necessity, authorizations, patents, copyrights, proprietary software, service marks, trademarks and trade names, or rights thereto, that are Material, without known conflict with the rights of others, except for those conflicts that, individually or in the aggregate, would not have a Material Adverse Effect.

*Section 5.12.* *Compliance with Employee Benefit Plans*. (a) The Company and each ERISA Affiliate have operated and administered each Plan in compliance with all applicable laws except for such instances of noncompliance as have not resulted in and could not reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any ERISA Affiliate has incurred any liability pursuant to Title I or IV of ERISA or the penalty or excise tax provisions of the Code relating to employee benefit plans (as defined in section 3 of ERISA), and no event, transaction or condition has occurred or exists that would reasonably be expected to result in the incurrence of any such liability by the Company or any ERISA Affiliate, or in the imposition of any Lien on any of the rights, properties or assets of the Company or any ERISA Affiliate, in either case pursuant to Title I or IV of ERISA or to such penalty or excise tax provisions or to section 401(a)(29) or 412 of the Code or section 4068 of ERISA, other than such liabilities or Liens as would not be individually or in the aggregate Material.

(b) The present value of the aggregate benefit liabilities under each of the Plans subject to section 412 of the Code (other than Multiemployer Plans), determined as of January 1, 2016 based on such Plan's actuarial assumptions as of that date for funding purposes as documented in such Plan's actuarial valuation reports dated September 2016 did not exceed the aggregate current value of the assets of such Plan allocable to such benefit liabilities by more than $5,000,000 in the case of any single Plan and by more than $5,000,000 in the aggregate for all Plans. The term "*benefit liabilities*" has the meaning specified in section 4001 of ERISA and the terms "current value" and "*present value*" have the meaning specified in section 3 of ERISA.

(c) The Company and its ERISA Affiliates have not incurred withdrawal liabilities (and are not subject to contingent withdrawal liabilities) under section 4201 or 4204 of ERISA in respect of Multiemployer Plans that individually or in the aggregate are Material.

(d) The expected postretirement benefit obligation (determined as of the last day of the Company's most recently ended fiscal year in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 715-60, without regard to liabilities attributable to continuation coverage mandated by section 4980B of the Code) of the Company and its Subsidiaries is not Material.

(e) The execution and delivery of this Agreement and the issuance and sale of the Bonds hereunder will not involve any transaction that is subject to the prohibitions of section 406 of ERISA or in connection with which a tax could be imposed pursuant to section 4975(c)(1)(A)-(D) of the Code. The representation by the Company to each Purchaser in the first sentence of this Section 5.12(e) is made in reliance upon and subject to the accuracy of such Purchaser's representation in Section 6.2 as to the sources of the funds used to pay the purchase price of the Bonds to be purchased by such Purchaser.

(f) The Company and its Subsidiaries do not have any Non-U.S. Plans.

*Section 5.13. Private Offering by the Company.* Neither the Company nor anyone acting on the Company's behalf has offered the Bonds or any similar securities for sale to, or solicited any offer to buy any of the same from, or otherwise approached or negotiated in respect thereof with, any Person other than the Purchasers and not more than ten (10) other Institutional Investors, each of which has been offered the Bonds in connection with a private sale for investment. Neither the Company nor anyone acting on its behalf has taken, or will take, any action that would subject the issuance or sale of the Bonds to the registration requirements of Section 5 of the Securities Act.

*Section 5.14. Use of Proceeds; Margin Regulations*. The Company will apply the proceeds of the sale of the Bonds to repay existing indebtedness and for general corporate purposes and in compliance with all laws referenced in Section 5.16. No part of the proceeds from the sale of the Bonds hereunder will be used, directly or indirectly, for the purpose of buying or carrying any margin stock within the meaning of Regulation U of the Board of Governors of the Federal Reserve System (12 CFR 221), or for the purpose of buying or carrying or trading in any securities under such circumstances as to involve the Company in a violation of Regulation X of said Board (12 CFR 224) or to involve any broker or dealer in a violation of Regulation T of said Board (12 CFR 220). Margin stock does not constitute more than 2% of the value of the consolidated assets of the Company and its Subsidiaries and the Company does not have any present intention that margin stock will constitute more than 2% of the value of such assets. As used in this Section, the terms "margin stock" and "purpose of buying or carrying" shall have the meanings assigned to them in said Regulation U.

*Section 5.15. Existing Debt.* Except as described therein, Schedule 5.15(a) sets forth a complete and correct list of all outstanding Debt of the Company and its Subsidiaries as of March 31, 2017, since which date except as described therein there has been no Material change in the amounts, interest rates, sinking funds, installment payments or maturities of the Debt of the Company or its Subsidiaries. Neither the Company nor any Subsidiary is in default and no waiver of default is currently in effect, in the payment of any principal or interest on any Debt of the Company or any Subsidiary and no event or condition exists with respect to any Debt of the

Company or any Subsidiary, the outstanding principal amount of which exceeds $5,000,000 that would permit (or that with notice or the lapse of time, or both, would permit) one or more Persons to cause such Debt to become due and payable before its stated maturity or before its regularly scheduled dates of payment.

(b) Without limiting the representation in Section 5.6, the Company is not a party to, or otherwise subject to any provision contained in, any instrument evidencing Debt of the Company or any Subsidiary, any agreement relating thereto or any other agreement (including, but not limited to, its charter or other organizational document) which limits the amount of, or otherwise imposes restrictions on the incurring of, Debt evidenced by the Bonds, except as specifically indicated in Schedule 5.15(b).

*Section 5.16. Foreign Assets Control Regulations, Etc*. (a) Neither the Company nor any Controlled Entity (i) is a Blocked Person, (ii) has been notified that its name appears or may in the future appear on a State Sanctions List or (iii) is a target of sanctions that have been imposed by the United Nations or the European Union.

(b) Neither the Company nor any Controlled Entity (i) has violated, been found in violation of, or been charged or convicted under, any applicable U.S. Economic Sanctions Laws, Anti-Money Laundering Laws or Anti-Corruption Laws or (ii) to the Company's knowledge, is under investigation by any Governmental Authority for possible violation of any U.S. Economic Sanctions Laws, Anti-Money Laundering Laws or Anti-Corruption Laws.

(c) No part of the proceeds from the sale of the Bonds hereunder:

(i) constitutes or will constitute funds obtained on behalf of any Blocked Person or will otherwise be used by the Company or any Controlled Entity, directly or indirectly, (A) in connection with any investment in, or any transactions or dealings with, any Blocked Person, (B) for any purpose that would cause any Purchaser to be in violation of any U.S. Economic Sanctions Laws or (C) otherwise in violation of any U.S. Economic Sanctions Laws;

(ii) will be used, directly or indirectly, in violation of, or cause any Purchaser to be in violation of, any applicable Anti-Money Laundering Laws; or

(iii) will be used, directly or indirectly, for the purpose of making any improper payments, including bribes, to any Governmental Official or commercial counterparty in order to obtain, retain or direct business or obtain any improper advantage, in each case which would be in violation of, or cause any Purchaser to be in violation of, any applicable Anti-Corruption Laws.

(d) The Company has established procedures and controls which it reasonably believes are adequate (and otherwise comply with applicable law) to ensure that the Company and each Controlled Entity is and will continue to be in compliance with all applicable U.S. Economic Sanctions Laws, Anti-Money Laundering Laws and Anti-Corruption Laws.

*Section 5.17. Status under Certain Statutes*. Neither the Company nor any Subsidiary is subject to regulation under the Investment Company Act of 1940, as amended, the Public Utility Holding Company Act of 2005, as amended, the ICC Termination Act of 1995, as amended, or subject to rate regulation under the Federal Power Act, as amended.

*Section 5.18. Environmental Matters*. Neither the Company nor any Subsidiary has knowledge of any claim or has received any notice of any claim, and no proceeding has been instituted of which it has received notice, raising any claim against the Company or any of its Subsidiaries or any of their respective real properties now or formerly owned, leased or operated by any of them, or other assets, alleging damage to the environment or any violation of any Environmental Laws, except, in each case, such as could not reasonably be expected to result in a Material Adverse Effect. Except as otherwise disclosed to the Purchasers in writing:

(a) neither the Company nor any Subsidiary has knowledge of any facts which would give rise to any claim, public or private, for violation of Environmental Laws or damage to the environment emanating from, occurring on or in any way related to real properties or to other assets now or formerly owned, leased or operated by any of them or their use, except, in each case, such as could not reasonably be expected to result in a Material Adverse Effect;

(b) neither the Company nor any of its Subsidiaries has stored any Hazardous Materials on real properties now or formerly owned, leased or operated by any of them or has disposed of any Hazardous Materials in each case in a manner contrary to any Environmental Laws and in any manner that could reasonably be expected to result in a Material Adverse Effect; and

(c) all buildings on all real properties now owned, leased or operated by the Company or any of its Subsidiaries are in compliance with applicable Environmental Laws, except where failure to comply could not reasonably be expected to result in a Material Adverse Effect.

*Section 5.19. Lien of Indenture*. The Indenture (and for avoidance of doubt including the Supplement) constitutes a direct and valid Lien upon the Trust Estate, subject only to the exceptions referred to in the Indenture and Permitted Liens, and will create a similar Lien upon all properties and assets acquired by the Company after the date hereof which are required to be subjected to the Lien of the Indenture, when acquired by the Company, subject only to the exceptions referred to in the Indenture and Permitted Liens, and subject, further, as to real property interests, to the recordation of a supplement to the Indenture describing such after-acquired property; the descriptions of all such properties and assets contained in the granting clauses of the Indenture are correct and adequate for the purposes of the Indenture; the Indenture has been duly recorded as a mortgage and deed of trust of real estate, and any required filings with respect to personal property and fixtures subject to the Lien of the Indenture have been duly made in each place in which such recording or filing is required to protect, preserve and perfect the Lien of the Indenture; and all taxes and recording and filing fees required to be paid with respect to the execution, recording or filing of the Indenture, the filing of financing statements related thereto and similar documents and the issuance of the Bonds have been paid.

*Section 5.20.* *Filings*. No action, including any filings, registration or notice, is necessary or advisable in Pennsylvania or any other jurisdictions to ensure the legality, validity and enforceability of the Financing Agreements, except such action as has been previously taken, which action remains in full force and effect. No action, including any filing, registration or notice, is necessary or advisable in Pennsylvania or any other jurisdiction to establish or protect for the benefit of the Trustee and the holders of Bonds, the security interest and Liens purported to be created under the Indenture and the priority and perfection thereof and the other Financing Agreements, except such action as has been previously taken, which action remains in full force and effect.

## SECTION 6. REPRESENTATIONS OF THE PURCHASERS.

*Section 6.1.* *Purchase for Investment*. Each Purchaser severally represents that it is purchasing the Bonds for its own account or for one or more separate accounts maintained by such Purchaser or for the account of one or more pension or trust funds and not with a view to the distribution thereof, provided that the disposition of such Purchaser's or their property shall at all times be within such Purchaser's or their control. Each Purchaser understands that the Bonds have not been registered under the Securities Act and may be resold only if registered pursuant to the provisions of the Securities Act or if an exemption from registration is available, except under circumstances where neither such registration nor such an exemption is required by law, and that the Company is not required to register the Bonds.

*Section 6.2.* *Source of Funds*. Each Purchaser severally represents that at least one of the following statements is an accurate representation as to each source of funds (a *"Source"*) to be used by such Purchaser to pay the purchase price of the Bonds to be purchased by such Purchaser hereunder:

(a) the Source is an "insurance company general account" (as the term is defined in the United States Department of Labor's Prohibited Transaction Exemption (*"PTE"*) 95-60) in respect of which the reserves and liabilities (as defined by the annual statement for life insurance companies approved by the NAIC (the *"NAIC Annual Statement"*)) for the general account contract(s) held by or on behalf of any employee benefit plan together with the amount of the reserves and liabilities for the general account contract(s) held by or on behalf of any other employee benefit plans maintained by the same employer (or affiliate thereof as defined in PTE 95-60) or by the same employee organization in the general account do not exceed 10% of the total reserves and liabilities of the general account (exclusive of separate account liabilities) plus surplus as set forth in the NAIC Annual Statement filed with such Purchaser's state of domicile; or

(b) the Source is a separate account that is maintained solely in connection with such Purchaser's fixed contractual obligations under which the amounts payable, or credited, to any employee benefit plan (or its related trust) that has any interest in such separate account (or to any participant or beneficiary of such plan (including any annuitant)) are not affected in any manner by the investment performance of the separate account; or

(c) the Source is either (i) an insurance company pooled separate account, within the meaning of PTE 90-1 or (ii) a bank collective investment fund, within the meaning of the PTE 91-38 and, except as disclosed by such Purchaser to the Company in writing pursuant to this clause (c), no employee benefit plan or group of plans maintained by the same employer or employee organization beneficially owns more than 10% of all assets allocated to such pooled separate account or collective investment fund; or

(d) the Source constitutes assets of an "investment fund" (within the meaning of Part VI of PTE 84-14 (the *"QPAM Exemption"*)) managed by a "qualified professional asset manager" or "QPAM" (within the meaning of Part VI of the QPAM Exemption), no employee benefit plan's assets that are managed by the QPAM in such investment fund, when combined with the assets of all other employee benefit plans established or maintained by the same employer or by an affiliate (within the meaning of Part VI(c)(1) of the QPAM Exemption) of such employer or by the same employee organization and managed by such QPAM, represent more than 20% of the total client assets managed by such QPAM, the conditions of Part I(c) and (g) of the QPAM Exemption are satisfied, neither the QPAM nor a person controlling or controlled by the QPAM maintains an ownership interest in the Company that would cause the QPAM and the Company to be "related" within the meaning of Part VI(h) of the QPAM Exemption and (i) the identity of such QPAM and (ii) the names of any employee benefit plans whose assets in the investment fund, when combined with the assets of all other employee benefit plans established or maintained by the same employer or by an affiliate (within the meaning of Part VI(c)(1) of the QPAM Exemption) of such employer or by the same employee organization, represent 10% or more of the assets of such investment fund, have been disclosed to the Company in writing pursuant to this clause (d); or

(e) the Source constitutes assets of a "plan(s)" (within the meaning of Part IV(h) of PTE 96-23 (the *"INHAM Exemption"*)) managed by an "in-house asset manager" or "INHAM" (within the meaning of Part IV(a) of the INHAM Exemption), the conditions of Part I(a), (g) and (h) of the INHAM Exemption are satisfied, neither the INHAM nor a person controlling or controlled by the INHAM (applying the definition of "control" in Part IV(d)(3) of the INHAM Exemption) owns a 10% or more interest in the Company and (i) the identity of such INHAM and (ii) the name(s) of the employee benefit plan(s) whose assets constitute the Source have been disclosed to the Company in writing pursuant to this clause (e); or

(f) the Source is a governmental plan; or

(g) the Source is one or more employee benefit plans, or a separate account or trust fund comprised of one or more employee benefit plans, each of which has been identified to the Company in writing pursuant to this clause (g); or

(h) the Source does not include assets of any employee benefit plan, other than a plan exempt from the coverage of ERISA.

As used in this Section 6.2, the terms *"employee benefit plan," "governmental plan,"* and *"separate account"* shall have the respective meanings assigned to such terms in section 3 of ERISA.

## SECTION 7. INFORMATION AS TO COMPANY.

*Section 7.1. Financial and Business Information*. The Company shall deliver to each Purchaser and each holder of Bonds that is an Institutional Investor:

(a) *Quarterly Statements* — within 60 days after the end of each quarterly fiscal period in each fiscal year of the Company (other than the last quarterly fiscal period of each such fiscal year), duplicate copies of:

(i) a consolidated balance sheet of the Company and its Subsidiaries as at the end of such quarter, and

(ii) consolidated statements of income, changes in shareholders' equity and cash flows of the Company and its Subsidiaries, for such quarter and (in the case of the second and third quarters) for the portion of the fiscal year ending with such quarter,

setting forth in each case in comparative form the figures for the corresponding periods in the previous fiscal year, all in reasonable detail, prepared in accordance with GAAP applicable to quarterly financial statements generally, and certified by a Senior Financial Officer as fairly presenting, in all material respects, the financial position of the companies being reported on and their results of operations and cash flows, subject to changes resulting from year-end adjustments, *provided* that the delivery within the time period specified above of the Company's said financial statements, prepared in accordance with the requirements therefor and filed with the Municipal Securities Rulemaking Board on the Electronic Municipal Market Access ("*EMMA*") database shall be deemed to satisfy the requirements of this Section 7.1(a);

(b) *Annual Statements* — within 120 days after the end of each fiscal year of the Company, duplicate copies of:

(i) a consolidated balance sheet of the Company and its Subsidiaries, as at the end of such year, and

(ii) consolidated statements of income, changes in shareholders' equity and cash flows of the Company and its Subsidiaries for such year,

setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail, prepared in accordance with GAAP, and accompanied by an opinion thereon (without a "going concern" or similar qualification or exception and without any qualification or exception as to the scope of the audit on which such opinion is based) of independent public accountants of recognized national standing, which opinion shall state that such financial statements present fairly, in all material respects, the financial position of the companies being reported upon and their results of operations and cash flows and have been prepared in conformity with GAAP, and that the examination of such accountants in connection with such financial statements has been made in accordance with generally accepted auditing standards, and that such audit provides a reasonable basis for such opinion in the circumstances, *provided* that the delivery within the time period specified above of the Company's said financial statements, prepared in accordance with the requirements therefor and containing the above-described audit opinion and filed with the Municipal Securities Rulemaking Board on the EMMA database shall be deemed to satisfy the requirements of this Section 7.1(b);

(c) *SEC and Other Reports* — promptly upon their becoming available, one copy of (i) each financial statement, report, notice, or proxy statement sent by the Company or any Subsidiary to its public securities holders generally, and (ii) each regular or periodic report, each registration statement that shall have become effective (without exhibits except as expressly requested by such Purchaser or holder), and each final prospectus and all amendments thereto filed by the Company or any Subsidiary with the SEC, *provided* that the delivery within the time period specified above of the Company's said financial statements, prepared in accordance with the requirements therefor and filed with the Municipal Securities Rulemaking Board on the EMMA database shall be deemed to satisfy the requirements of this Section 7.1(c);

(d) *Notice of Default or Event of Default* — promptly, and in any event within five days after a Responsible Officer becomes aware of the existence of any Default or Event of Default, a written notice specifying the nature and period of existence thereof and what action the Company is taking or proposes to take with respect thereto;

(e) *Employee Benefits Matters* — promptly, and in any event within five days after a Responsible Officer becomes aware of any of the following, a written notice setting forth the nature thereof and the action, if any, that the Company or an ERISA Affiliate proposes to take with respect thereto:

(i) with respect to any Plan (other than any Multiemployer Plan) that is subject to Title IV of ERISA, any reportable event, as defined in section 4043(c) of ERISA and the regulations thereunder, for which notice thereof has not been waived pursuant to such regulations as in effect on the date hereof and on the date of the Second Closing; or

(ii) the taking by the PBGC of steps to institute, or the threatening by the PBGC of the institution of, proceedings under section 4042 of ERISA for the termination of, or the appointment of a trustee to administer, any such Plan, or the receipt by the Company or any ERISA Affiliate of a notice from a Multiemployer

Plan that such action has been taken by the PBGC with respect to such Multiemployer Plan; or

(iii) any event, transaction or condition that could result in the incurrence of any liability by the Company or any ERISA Affiliate pursuant to Title I or IV of ERISA or the penalty or excise tax provisions of the Code relating to employee benefit plans, or in the imposition of any Lien on any of the rights, properties or assets of the Company or any ERISA Affiliate pursuant to Title I or IV of ERISA or such penalty or excise tax provisions, if such liability or Lien, taken together with any other such liabilities or Liens then existing, would reasonably be expected to have a Material Adverse Effect;

(f) *Notices from Governmental Authority* — promptly, and in any event within 30 days of receipt thereof, copies of any notice to the Company or any Subsidiary from any federal or state Governmental Authority relating to any order, ruling, statute or other law or regulation that could reasonably be expected to have a Material Adverse Effect;

(g) *Requested Information* — with reasonable promptness, following the receipt by the Company of a written request by such holder of Bonds, the names and contact information of holders of the outstanding bonds issued under the Indenture (i.e. the bonds in which the Company or a trustee is required to keep in a register and that are not publicly traded) of which the Company has knowledge and the principal amount of the outstanding bonds issued under the Indenture owed to each holder (unless disclosure of such names, contact information or holdings is prohibited by law), and such data and information relating to the business, operations, affairs, financial condition, assets or properties of the Company or any of its Subsidiaries or relating to the ability of the Company to perform its obligations under any Financing Agreement as from time to time may be reasonably requested by such Purchaser or holder of Bonds; and

(h) *Deliveries to Trustee* — promptly, and in any event within five days after delivery to the Trustee, a copy of any deliveries made by the Company to the Trustee, including without limitation the annual report delivered to the Trustee pursuant to Article VIII, Section 12 of the Indenture.

*Section 7.2* *Officer's Certificate*. Each set of financial statements delivered to a Purchaser or holder of Bonds pursuant to Section 7.1(a) or Section 7.1(b) shall be accompanied by a certificate of a Senior Financial Officer (which, in the case of financial statements filed with the Municipal Securities Rulemaking Board on the EMMA database, shall be by separate concurrent delivery of such certificate to each holder of Bonds) setting forth a statement that such Senior Financial Officer has reviewed the relevant terms hereof and of the Indenture and has made, or caused to be made, under his or her supervision, a review of the transactions and conditions of the Company and its Subsidiaries from the beginning of the quarterly or annual period covered by the statements then being furnished to the date of the certificate and that such review shall not have disclosed the existence during such period of any condition or event that constitutes a Default or an Event of Default or, if any such condition or event existed or exists (including, without limitation, any such event or condition resulting from the failure of the

Company or any Subsidiary to comply with any Environmental Law), specifying the nature and period of existence thereof and what action the Company shall have taken or proposes to take with respect thereto.

*Section 7.3.* *Visitation*. The Company shall permit the representatives of each Purchaser and each holder of Bonds that is an Institutional Investor:

(a) *No Default* — if no Default or Event of Default then exists, at the expense of such Purchaser or holder and upon reasonable prior notice to the Company, to visit the principal executive office of the Company, to discuss the affairs, finances and accounts of the Company and its Subsidiaries with the Company's officers, and, with the consent of the Company (which consent will not be unreasonably withheld), to visit the other offices and properties of the Company and each Subsidiary, all at such reasonable times during normal business hours and as often as may be reasonably requested in writing; and

(b) *Default* — if a Default or Event of Default then exists, at the expense of the Company to visit and inspect any of the offices or properties of the Company or any Subsidiary, to examine all their respective books of account, records, reports and other papers, to make copies and extracts therefrom, and to discuss their respective affairs, finances and accounts with their respective officers and independent public accountants (and by this provision the Company authorizes said accountants to discuss the affairs, finances and accounts of the Company and its Subsidiaries), all at such reasonable times and as often as may be requested.

## SECTION 8. PURCHASE OF BONDS

The Company will not and will not permit any Affiliate to purchase, redeem, prepay or otherwise acquire, directly or indirectly, any of the outstanding Bonds except (a) upon the payment or prepayment of the Bonds in accordance with the terms of this Agreement and the Bonds or (b) pursuant to a written offer to purchase any outstanding Bonds made by the Company or an Affiliate pro rata to the holders of the Bonds upon the same terms and conditions. Any such offer shall provide each holder with sufficient information to enable it to make an informed decision with respect to such offer, and shall remain open for at least 15 Business Days. If the holders of more than 10% of the principal amount of the Bonds then outstanding accept such offer, the Company shall promptly notify the remaining holders of such fact and the expiration date for the acceptance by holders of Bonds of such offer shall be extended by the number of days necessary to give each such remaining holder at least 10 Business Days from its receipt of such notice to accept such offer. The Company will promptly cancel all Bonds acquired by it or any Affiliate pursuant to any payment, prepayment or purchase of Bonds pursuant to any provision of this Agreement and no Bonds may be issued in substitution or exchange for any such Bonds.

## SECTION 9. AFFIRMATIVE COVENANTS.

The Company covenants that from the date of this Agreement until the Second Closing and thereafter, so long as any of the Bonds are outstanding:

*Section 9.1. Compliance with Law*. Without limiting Section 10.4, the Company will, and will cause each of its Subsidiaries to, comply with all laws, ordinances or governmental rules or regulations to which each of them is subject, including, without limitation, ERISA, Environmental Laws, the USA Patriot Act and the other laws and regulations that are referred to in Section 5.16, and will obtain and maintain in effect all licenses, certificates, permits, franchises and other governmental authorizations necessary to the ownership of their respective properties or to the conduct of their respective businesses, in each case to the extent necessary to ensure that non-compliance with such laws, ordinances or governmental rules or regulations or failures to obtain or maintain in effect such licenses, certificates, permits, franchises and other governmental authorizations could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

*Section 9.2. Insurance*. The Company will cause each of its Subsidiaries to maintain, with financially sound and reputable insurers, insurance with respect to their respective properties and businesses against such casualties and contingencies, of such types, on such terms and in such amounts (including deductibles, co-insurance and self-insurance, if adequate reserves are maintained with respect thereto) as is customary in the case of entities of established reputations engaged in the same or a similar business and similarly situated.

*Section 9.3. Maintenance of Properties*. The Company will cause each of its Subsidiaries to maintain and keep, or cause to be maintained and kept, their respective properties in good repair, working order and condition (other than ordinary wear and tear), so that the business carried on in connection therewith may be properly conducted at all times, *provided* that this Section 9.3 shall not prevent any Subsidiary from discontinuing the operation and the maintenance of any of its properties if such discontinuance is desirable in the conduct of its business and the Company and such Subsidiary have concluded that such discontinuance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

*Section 9.4. Payment of Taxes*. The Company will cause each of its Subsidiaries to file all income tax or similar tax returns required to be filed in any jurisdiction and to pay and discharge all taxes shown to be due and payable on such returns and all other taxes, assessments, governmental charges, or levies payable by any of them, to the extent the same have become due and payable and before they have become delinquent, provided that any Subsidiary does not need to pay any such tax, assessment, charge or levy if (a) the amount, applicability or validity thereof is contested by the Company or such Subsidiary on a timely basis in good faith and in appropriate proceedings, and the Subsidiary has established adequate reserves therefor in accordance with GAAP on the books of such Subsidiary or (b) the nonpayment of all such taxes, assessments, charges and levies in the aggregate would not reasonably be expected to have a Material Adverse Effect.

*Section 9.5. Corporate Existence, Etc*. The Company will at all times preserve and keep in full force and effect the corporate existence of each of its Subsidiaries (unless merged into the Company or a wholly-owned Subsidiary) and all rights and franchises of its Subsidiaries unless, in the good faith judgment of the Company or such Subsidiary, the termination of or failure to preserve and keep in full force and effect such corporate existence, right or franchise would not, individually or in the aggregate, have a Material Adverse Effect.

*Section 9.6. Books and Records*. The Company will, and will cause each of its Subsidiaries to, maintain proper books of record and account in conformity with GAAP and all applicable requirements of any Governmental Authority having legal or regulatory jurisdiction over the Company or such Subsidiary.

SECTION 10. NEGATIVE COVENANTS.

The Company covenants that from the date of this Agreement until the Second Closing and thereafter, so long as any of the Bonds are outstanding:

*Section 10.1. Transactions with Affiliates*. The Company will not and will not permit any Subsidiary to enter into directly or indirectly any Material transaction or Material group of related transactions (including without limitation the purchase, lease, sale or exchange of properties of any kind or the rendering of any service) with any Affiliate (other than the Company or another Subsidiary), except pursuant to the reasonable requirements of the Company's or such Subsidiary's business.

*Section 10.2. Merger, Consolidation, Etc*. The Company will not consolidate with or merge with any other Person or convey, transfer or lease all or substantially all of its assets in a single transaction or series of transactions to any Person unless:

(a) the successor formed by such consolidation or the survivor of such merger or the Person that acquires by conveyance, transfer or lease all or substantially all of the assets of the Company as an entirety, as the case may be, shall be a solvent corporation or limited liability company organized and existing under the laws of the United States or any State thereof (including the District of Columbia), and, if the Company is not such corporation or limited liability company, such corporation or limited liability company shall have executed and delivered to each holder of any Bonds its assumption of the due and punctual performance and observance of each covenant and condition of the Financing Agreements (pursuant to such agreements and instruments as shall be reasonably satisfactory to the Required Holders), and the Company shall have caused to be delivered to each holder of Bonds an opinion of nationally recognized independent counsel, to the effect that all agreements or instruments effecting such assumption are enforceable in accordance with their terms and comply with the terms hereof; and

(b) immediately before and immediately after giving effect to such transaction, no Default or Event of Default shall have occurred and be continuing.

No such conveyance, transfer or lease of substantially all of the assets of the Company shall have the effect of releasing the Company or any successor corporation or limited liability company that shall theretofore have become such in the manner prescribed in this Section 10.2 from its liability under the Financing Agreements.

*Section 10.3. Line of Business*. The Company will not engage in any business if, as a result, the general nature of the business in which the Company and its Subsidiaries, taken as a whole, would then be engaged would be substantially changed from the general nature of the business in which the Company and its Subsidiaries, taken as whole, is engaged on the date of this Agreement.

*Section 10.4.* *Economic Sanctions, Etc.*. The Company will not, and will not permit any Controlled Entity to (a) become (including by virtue of being owned or controlled by a Blocked Person), own or control a Blocked Person or (b) directly or indirectly have any investment in or engage in any dealing or transaction (including any investment, dealing or transaction involving the proceeds of the Bonds) with any Person if such investment, dealing or transaction (i) would cause any holder or any affiliate of such holder to be in violation of, or subject to sanctions under, any law or regulation applicable to such holder, or (ii) is prohibited by or subject to sanctions under any U.S. Economic Sanctions Laws.

SECTION 11. PAYMENTS ON BONDS.

*Section 11.1.* *Payment by Wire Transfer*. So long as any Purchaser or its nominee shall be the holder of any Bond, and notwithstanding anything contained in the Indenture or in such Bond to the contrary, the Company will pay, or cause to be paid by a paying agent, a trustee or other similar party, all sums becoming due on such Bond for principal, Make-Whole Amount or premium, if any, and interest by the method and at the address specified for such purpose below such Purchaser's name in Schedule A, or by such other method or at such other address as such Purchaser shall have from time to time specified to the Company in writing for such purpose, without the presentation or surrender of such Bond or the making of any notation thereon, except that upon written request of the Company or any paying agent made concurrently with or reasonably promptly after payment or prepayment in full of any Bond, such Purchaser shall surrender such Bond for cancellation, reasonably promptly after any such request, to the Company at its principal executive office or at the place of payment most recently designated by the Company pursuant to Article II of the Indenture. Prior to any sale or other disposition of any Bond held by a Purchaser or its nominee, such Purchaser will, at its election, either endorse thereon the amount of principal paid thereon and the last date to which interest has been paid thereon or surrender such Bond to the Company in exchange for a new Bond or Bonds pursuant to Article II of the Indenture. The Company will afford the benefits of this Section 11.1 to any Institutional Investor that is the direct or indirect transferee of any Bond purchased by a Purchaser under this Agreement and that has made the same agreement relating to such Bond as the Purchasers have made in this Section 11.1.

SECTION 12. REGISTRATION; EXCHANGE; EXPENSES, ETC.

*Section 12.1.* *Registration of Bonds*. The Company shall cause the Trustee to keep a register for the registration and registration of transfers of Bonds in accordance with Article XIII, Section 9 of the Indenture.

*Section 12.2.* *Transaction Expenses*. Whether or not the transactions contemplated hereby are consummated, the Company will pay all reasonable costs and expenses (including reasonable attorneys' fees of a special counsel and, if reasonably required by the Required Holders, local or other counsel) incurred by the Purchasers and each other holder of a Bond in connection with such transactions and in connection with any amendments, waivers or consents under or in respect of any Financing Agreement (whether or not such amendment, waiver or consent becomes effective), including, without limitation: (a) the costs and expenses incurred in enforcing or defending (or determining whether or how to enforce or defend) any rights under any Financing Agreement or in responding to any subpoena or other legal process or informal investigative demand issued in connection with any Financing Agreement, or by reason of being a Purchaser or holder of any Bond, (b) the costs and expenses, including financial advisors' fees, incurred in connection with the insolvency or bankruptcy of the Company or any Subsidiary or in connection with any work-out or restructuring of the transactions contemplated by any Financing Agreement and (c) the costs and expenses incurred in connection with the initial filing of any Financing Agreement and all related documents and financial information with the SVO, provided that such costs and expenses under this clause (c) shall not exceed $6,000 for the Bonds. The Company will pay, and will save each Purchaser and each other holder of a Bond harmless from, all claims in respect of any fees, costs or expenses if any, of brokers and finders (other than those, if any, retained by a Purchaser or other holder in connection with its purchase of the Bonds).

*Section 12.3.* *Survival*. The obligations of the Company under this Section 12 will survive the payment or transfer of any Bond, the enforcement, amendment or waiver of any provision of any Financing Agreement, and the termination of any Financing Agreement.

SECTION 13. SURVIVAL OF REPRESENTATIONS AND WARRANTIES; ENTIRE AGREEMENT.

All representations and warranties contained herein shall survive the execution and delivery of this Agreement, the purchase or transfer by any Purchaser of any Bond or portion thereof or interest therein and the payment of any Bond, and may be relied upon by any subsequent holder of a Bond, regardless of any investigation made at any time by or on behalf of such Purchaser or any other holder of a Bond. All statements contained in any certificate or other instrument delivered by or on behalf of the Company pursuant to this Agreement shall be deemed representations and warranties of the Company under this Agreement. Subject to the preceding sentence, the Financing Agreements embody the entire agreement and understanding between each Purchaser and the Company and supersede all prior agreements and understandings relating to the subject matter hereof.

SECTION 14. AMENDMENT AND WAIVER.

*Section 14.1.* *Requirements*. This Agreement and the Bonds may be amended, and the observance of any term hereof or of the Bonds may be waived (either retroactively or prospectively), with (and only with) the written consent of the Company and the Required Holders, except that (i) no amendment or waiver of any of the provisions of Section 1, 2, 3, 4, 5, 6 or 19 hereof, or any defined term, will be effective as to any holder of Bonds unless consented to by such holder of Bonds in writing, and (ii) no such amendment or waiver may, without the written consent of all of the Purchasers and all of the holders of Bonds at the time outstanding affected thereby, (A) subject to the provisions of the Indenture relating to acceleration, change the amount or time of any prepayment or payment of principal of, or reduce the rate or change the time of payment or method of computation of interest (if such change results in a decrease in the interest rate) or of the Make-Whole Amount on, the Bonds, (B) change the percentage of the principal amount of the Bonds the Purchasers or holders of which are required to consent to any such amendment or waiver, or (C) amend any of Sections 8, 14 or 18.

*Section 14.2. Solicitation of Holders of Bonds*.

(a) *Solicitation.* The Company will provide each Purchaser and holder of the Bonds (irrespective of the amount of Bonds then owned by it) with sufficient information, sufficiently far in advance of the date a decision is required, to enable such Purchaser or holder to make an informed and considered decision with respect to any proposed amendment, waiver or consent in respect of any of the provisions hereof or of the Bonds. The Company will deliver executed or true and correct copies of each amendment, waiver or consent effected pursuant to the provisions of this Section 14 to each Purchaser and each holder of outstanding Bonds promptly following the date on which it is executed and delivered by, or receives the consent or approval of, the requisite Purchasers or holders of Bonds.

(b) *Payment.* The Company will not directly or indirectly pay or cause to be paid any remuneration, whether by way of supplemental or additional interest, fee or otherwise (other than legal fees or other related expenses), or grant any security or provide other credit support, to any Purchaser or holder of Bonds as consideration for or as an inducement to the entering into by any Purchaser or holder of Bonds of any waiver or amendment of any of the terms and provisions hereof or of the Bonds unless such remuneration is concurrently paid, or security is concurrently granted or other credit support concurrently provided, on the same terms, ratably to each Purchaser and each holder of Bonds then outstanding even if such Purchaser or holder did not consent to such waiver or amendment.

(c) *Consent in Contemplation of Transfer*. Any consent made pursuant to this Section 14 by a holder of Bonds that has transferred or has agreed to transfer its Bonds to (i) the Company, (ii) any Subsidiary or any other Affiliate or (iii) any other Person in connection with, or in anticipation of, such other Person acquiring, making a tender offer for or merging with the Company and/or any of its Affiliates, and has provided or has agreed to provide such written consent as a condition to such transfer shall be void and of no force or effect except solely as to such holder, and any amendments effected or waivers granted or to be effected or granted that would not have been or would not be so effected or granted but for such consent (and the consents of all other holders of Bonds that were acquired under the same or similar conditions) shall be void and of no force or effect except solely as to such holder.

*Section 14.3. Binding Effect, Etc*. Any amendment or waiver consented to as provided in this Section 14 applies equally to all Purchasers and holders of Bonds and is binding upon them and upon each future Purchaser and holder of any Bond and upon the Company without regard to whether such Bond has been marked to indicate such amendment or waiver. No such amendment or waiver will extend to or affect any obligation, covenant, agreement, Default or Event of Default not expressly amended or waived or impair any right consequent thereon. No course of dealing between the Company and Purchaser and any holder of any Bond nor any delay in exercising any rights hereunder or under any Bond shall operate as a waiver of any rights of any Purchaser or any holder of such Bond.

*Section 14.4.* *Bonds Held by Company, Etc*. Solely for the purpose of determining whether the holders of the requisite percentage of the aggregate principal amount of Bonds then outstanding approved or consented to any amendment, waiver or consent to be given under this Agreement or the Bonds, or have directed the taking of any action provided herein or in the Bonds to be taken upon the direction of the holders of a specified percentage of the aggregate principal amount of Bonds then outstanding, Bonds directly or indirectly owned by the Company or any of its Affiliates shall be deemed not to be outstanding.

SECTION 15. NOTICES.

All notices and communications provided for hereunder shall be in writing and sent (a) by telecopy if the sender on the same day sends a confirming copy of such notice by a recognized overnight delivery service (charges prepaid), or (b) by registered or certified mail with return receipt requested (postage prepaid), or (c) by a recognized overnight delivery service (with charges prepaid). Any such notice must be sent:

(i) if to any Purchaser or its nominee, to such Purchaser or nominee at the address specified for such communications in Schedule A, or at such other address as such Purchaser or nominee shall have specified to the Company in writing,

(ii) if to any other holder of any Bond, to such holder at such address as such other holder shall have specified to the Company in writing, or

(iii) if to the Company, to the Company at its address set forth at the beginning hereof to the attention of 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010-3489 , or at such other address as the Company shall have specified to the holder of each Bond in writing.

Notices under this Section 15 will be deemed given only when actually received.

SECTION 16. INDEMNIFICATION.

The Company hereby agrees to indemnify and hold the Purchasers harmless from, against and in respect of any and all loss, liability and expense (including reasonable attorneys' fees) arising from any misrepresentation or nonfulfillment of any undertaking on the part of the Company under this Agreement. The indemnification obligations of the Company under this Section 16 shall survive the execution and delivery of this Agreement, the delivery of the Bonds to the Purchasers and the consummation of the transactions contemplated herein.

SECTION 17. REPRODUCTION OF DOCUMENTS.

This Agreement and all documents relating thereto, including, without limitation, (a) consents, waivers and modifications that may hereafter be executed, (b) documents received by any Purchaser at either Closing (except the Bonds themselves), and (c) financial statements, certificates and other information previously or hereafter furnished to any Purchaser, may be reproduced by such Purchaser by any photographic, photostatic, electronic, digital, or other similar process and such Purchaser may destroy any original document so reproduced. The Company agrees and stipulates that, to the extent permitted by applicable law, any such reproduction shall be admissible in evidence as the original itself in any judicial or administrative proceeding (whether or not the original is in existence and whether or not such reproduction was made by such Purchaser in the regular course of business) and any enlargement, facsimile or further reproduction of such reproduction shall likewise be admissible in evidence. This Section 17 shall not prohibit the Company or any other holder of Bonds from contesting any such reproduction to the same extent that it could contest the original, or from introducing evidence to demonstrate the inaccuracy of any such reproduction.

## SECTION 18. CONFIDENTIAL INFORMATION.

For the purposes of this Section 18, *"Confidential Information"* means information delivered to any Purchaser by or on behalf of the Company or any Subsidiary in connection with the transactions contemplated by or otherwise pursuant to this Agreement that is proprietary in nature and that was clearly marked or labeled or otherwise adequately identified when received by such Purchaser as being confidential information of the Company or such Subsidiary, provided that such term does not include information that (a) was publicly known or otherwise known to such Purchaser prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by such Purchaser or any person acting on such Purchaser's behalf, (c) otherwise becomes known to such Purchaser other than through disclosure by the Company or any Subsidiary or (d) constitutes financial statements delivered to such Purchaser under Section 7.1 of this Agreement or under the Indenture that are otherwise publicly available. Each Purchaser will maintain the confidentiality of such Confidential Information in accordance with procedures adopted by such Purchaser in good faith to protect confidential information of third parties delivered to such Purchaser, provided that such Purchaser may deliver or disclose Confidential Information to (i) its directors, trustees, officers, employees, agents, attorneys and affiliates (to the extent such disclosure reasonably relates to the administration of the investment represented by Bonds), (ii) its financial advisors and other professional advisors who agree to hold confidential the Confidential Information substantially in accordance with the terms of this Section 18, (iii) the Trustee or any other holder of any Bond, (iv) any Institutional Investor to which it sells or offers to sell such Bond or any part thereof or any participation therein (if such Person has agreed in writing prior to its receipt of such Confidential Information to be bound by the provisions of this Section 18), (v) any Person from which it offers to purchase any security of the Company (if such Person has agreed in writing prior to its receipt of such Confidential Information to be bound by the provisions of this Section 18), (vi) any federal or state or provincial regulatory authority having jurisdiction over such Purchaser, (vii) the NAIC or the SVO or, in each case, any similar organization, or any nationally recognized rating agency that requires access to information about such Purchaser's investment portfolio, or (viii) any other Person to which such delivery or disclosure may be necessary or appropriate (w) to effect compliance with any law, rule, regulation or order applicable to such Purchaser, (x) in response to any subpoena or other legal process, (y) in connection with any litigation to which such Purchaser is a party or (z) if an Event of Default has occurred and is continuing, to the extent such Purchaser may reasonably determine such delivery and disclosure to be necessary or appropriate in the enforcement or for the protection of the rights and remedies under any

Financing Agreement. Each holder of a Bond, by its acceptance of a Bond, will be deemed to have agreed to be bound by and to be entitled to the benefits of this Section 18 as though it were a party to this Agreement. On reasonable request by the Company in connection with the delivery to any holder of a Bond of information required to be delivered to such holder under this Agreement or requested by such holder (other than a holder that is a party to this Agreement or its nominee), such holder will enter into an agreement with the Company embodying the provisions of this Section 18.

In the event that as a condition to receiving access to information relating to the Company or its Subsidiaries in connection with the transactions contemplated by or otherwise pursuant to this Agreement, any Purchaser or holder of a Bond is required to agree to a confidentiality undertaking (whether through EMMA, another secure website, a secure virtual workspace or otherwise) which is different from this Section 18, this Section 18 shall not be amended thereby and, as between such Purchaser or such holder and the Company, this Section 18 shall supersede any such other confidentiality undertaking.

SECTION 19. MISCELLANEOUS.

*Section 19.1. Successors and Assigns*. All covenants and other agreements contained in this Agreement by or on behalf of any of the parties hereto bind and inure to the benefit of their respective successors and assigns (including, without limitation, any subsequent holder of a Bond) whether so expressed or not, except that, subject to Section 10.2, the Company may not assign or otherwise transfer any of its rights or obligations hereunder or under the Bonds without the prior written consent of each holder. Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto and their respective successors and assigns permitted hereby) any legal or equitable right, remedy or claim under or by reason of this Agreement.

*Section 19.2. Accounting Terms*. All accounting terms used herein which are not expressly defined in this Agreement have the meanings respectively given to them in accordance with GAAP. Except as otherwise specifically provided herein, (a) all computations made pursuant to this Agreement shall be made in accordance with GAAP, and (b) all financial statements shall be prepared in accordance with GAAP. For purposes of determining compliance with the financial covenants contained in the Financing Agreements, if any, any election by the Company to measure Debt using fair value (as permitted by Financial Accounting Standards Board Accounting Standards Codification Topic No. 825-10-25 – *Fair Value Option,* International Accounting Standard 39 – *Financial Instruments: Recognition and Measurement* or any similar accounting standard) shall be disregarded and such determination shall be made as if such election had not been made and such Debt shall be valued at not less than 100% of the principal amount thereof.

*Section 19.3. Severability*. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall (to the full extent permitted by law) not invalidate or render unenforceable such provision in any other jurisdiction.

*Section 19.4. Construction, Etc*. Each covenant contained herein shall be construed (absent express provision to the contrary) as being independent of each other covenant contained herein, so that compliance with any one covenant shall not (absent such an express contrary provision) be deemed to excuse compliance with any other covenant. Where any provision herein refers to action to be taken by any Person, or which such Person is prohibited from taking, such provision shall be applicable whether such action is taken directly or indirectly by such Person.

For the avoidance of doubt, all Schedules and Exhibits attached to this Agreement shall be deemed to be a part hereof.

*Section 19.5. Counterparts*. This Agreement may be executed in any number of counterparts, each of which shall be an original but all of which together shall constitute one instrument. Each counterpart may consist of a number of copies hereof, each signed by less than all, but together signed by all, of the parties hereto.

*Section 19.6. Governing Law*. This Agreement shall be construed and enforced in accordance with, and the rights of the parties shall be governed by, the law of the Commonwealth of Pennsylvania excluding choice-of-law principles of the law of such State that would permit the application of the laws of a jurisdiction other than such State.

*Section 19.7. Jurisdiction and Process; Waiver of Jury Trial*. (a) The Company irrevocably submits to the non-exclusive jurisdiction of any Pennsylvania State or federal court sitting in Philadelphia, Pennsylvania, over any suit, action or proceeding arising out of or relating to this Agreement or the Bonds. To the fullest extent permitted by applicable law, the Company irrevocably waives and agrees not to assert, by way of motion, as a defense or otherwise, any claim that it is not subject to the jurisdiction of any such court, any objection that it may now or hereafter have to the laying of the venue of any such suit, action or proceeding brought in any such court and any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum.

(b) The Company consents to process being served by or on behalf of any holder of Bonds in any suit, action or proceeding of the nature referred to in Section 19.7(a) by mailing a copy thereof by registered or certified mail (or any substantially similar form of mail), postage prepaid, return receipt requested, to it at its address specified in Section 15 or at such other address of which such holder shall then have been notified pursuant to said Section. The Company agrees that such service upon receipt (i) shall be deemed in every respect effective service of process upon it in any such suit, action or proceeding and (ii) shall, to the fullest extent permitted by applicable law, be taken and held to be valid personal service upon and personal delivery to it. Notices hereunder shall be conclusively presumed received as evidenced by a delivery receipt furnished by the United States Postal Service or any reputable commercial delivery service.

(c) Nothing in this Section 19.7 shall affect the right of any holder of a Bond to serve process in any manner permitted by law, or limit any right that the holders of any of the Bonds may have to bring proceedings against the Company in the courts of any appropriate jurisdiction or to enforce in any lawful manner a judgment obtained in one jurisdiction in any other jurisdiction.

(d) The parties hereto hereby waive trial by jury in any action brought on or with respect to this Agreement, the Bonds or any other document executed in connection herewith or therewith.

*Section 19.8. Payments Due on Non-Business Days*. Anything in this Agreement or the Bonds to the contrary notwithstanding, any payment of principal of or Make-Whole Amount or interest on any Bond that is due on a date other than a Business Day shall be made on the next succeeding Business Day without including the additional days elapsed in the computation of the interest payable on such next succeeding Business Day; provided that if the maturity date of any Bond is a date other than a Business Day, the payment otherwise due on such maturity date shall be made on the next succeeding Business Day and shall include the additional days elapsed in the computation of interest payable on such next succeeding Business Day.

* * * * *

If you are in agreement with the foregoing, please sign the form of agreement on a counterpart of this Bond Purchase Agreement and return it to the Company, whereupon this Agreement shall become a binding agreement between you and the Company.

Very truly yours,

AQUA PENNSYLVANIA, INC.

| | |
|---|---|
| By | /s/ David P. Smeltzer |
| Name: | David P. Smeltzer |
| Its: | Executive Vice President and CFO |

Accepted as of the date first written above.

NEW YORK LIFE INSURANCE COMPANY

By: Jessica L. Maizel
Name: Jessica L Maizel
Title: Corporate Vice President

NEW YORK LIFE INSURANCE AND ANNUITY CORPORATION

By: NYL Investors LLC, its Investment Manager

By: Jessica L. Maizel
Name: Jessica L Maizel
Title: Senior Director

NEW YORK LIFE INSURANCE AND ANNUITY CORPORATION INSTITUTIONALLY OWNED LIFE INSURANCE SEPARATE ACCOUNT (BOLI 3)

By: NYL Investors LLC, its Investment Manager

By: Jessica L. Maizel
Name: Jessica L Maizel
Title: Senior Director

NEW YORK LIFE INSURANCE AND ANNUITY CORPORATION INSTITUTIONALLY OWNED LIFE INSURANCE SEPARATE ACCOUNT (BOLI 3-2)

By: NYL Investors LLC, its Investment Manager

By: Jessica L. Maizel
Name: Jessica L Maizel
Title: Senior Director

## DEFINED TERMS

As used herein, the following terms have the respective meanings set forth below or set forth in the Section hereof following such term:

*"4.04% Series due 2055 Bonds"* is defined in Section 1.

*"4.06% Series due 2057 Bonds"* is defined in Section 1.

*"4.06% Series due 2054 Bonds"* is defined in Section 1.

*"4.07% Series due 2055 Bonds"* is defined in Section 1.

*"4.09% Series due 2057 Bonds"* is defined in Section 1.

*"Affiliate"* means, at any time, and with respect to any Person, any other Person that at such time directly or indirectly through one or more intermediaries Controls, or is Controlled by, or is under common Control with, such first Person. As used in this definition, "Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise. Unless the context otherwise clearly requires, any reference to an "Affiliate" is a reference to an Affiliate of the Company.

*"Agreement"* means this Bond Purchase Agreement, including all Schedules and Exhibits attached to this Agreement.

*"Anti-Corruption Laws"* means any law or regulation in a U.S. or any non-U.S. jurisdiction regarding bribery or any other corrupt activity, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act 2010.

*"Anti-Money Laundering Laws"* means any law or regulation in a U.S. or any non-U.S. jurisdiction regarding money laundering, drug trafficking, terrorist-related activities or other money laundering predicate crimes, including the Currency and Foreign Transactions Reporting Act of 1970 (otherwise known as the Bank Secrecy Act) and the USA Patriot Act.

*"Blocked Person"* means (a) a Person whose name appears on the list of Specially Designated Nationals and Blocked Persons published by OFAC, (b) a Person, entity, organization, country or regime that is blocked or a target of sanctions that have been imposed under U.S. Economic Sanctions Laws or (c) a Person that is an agent, department or instrumentality of, or is otherwise beneficially owned by, controlled by or acting on behalf of, directly or indirectly, any Person, entity, organization, country or regime described in clause (a) or (b).

*"Bonds"* is defined in Section 1.

*"Business Day"* means for the purposes of any provision of this Agreement, any day other than a Saturday, a Sunday or a day on which commercial banks in New York, New York or Philadelphia, Pennsylvania are required or authorized to be closed.

*"Capital Lease"* means, at any time, a lease with respect to which the lessee is required concurrently to recognize the acquisition of an asset and the incurrence of a liability in accordance with GAAP.

*"Capital Lease Obligation"* means, with respect to any Person and a Capital Lease, the amount of the obligation of such Person as the lessee under such Capital Lease which would, in accordance with GAAP, appear as a liability on a balance sheet of such Person.

*"Closing"* is defined in Section 3.

*"Code"* means the Internal Revenue Code of 1986, as amended from time to time, and the rules and regulations promulgated thereunder from time to time.

*"Company"* means Aqua Pennsylvania, Inc., a corporation existing under the laws of the Commonwealth of Pennsylvania.

"*Controlled Entity*" means any of the Subsidiaries of the Company and any of their or the Company's respective Controlled Affiliates. As used in this definition, "Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

*"Debt"* means, with respect to any Person, without duplication,

(a) its liabilities for borrowed money;

(b) its liabilities for the deferred purchase price of property acquired by such Person (excluding accounts payable and other accrued liabilities arising in the ordinary course of business but including, without limitation, all liabilities created or arising under any conditional sale or other title retention agreement with respect to any such property);

(c) its Capital Lease Obligations;

(d) all liabilities for borrowed money secured by any Lien with respect to any property owned by such Person (whether or not it has assumed or otherwise become liable for such liabilities);

(e) all non-contingent liabilities in respect of reimbursement agreements or similar agreements in respect of letters of credit or instruments serving a similar function issued or accepted for its account by banks and other financial institutions;

(f) Swaps of such Person; and

(g) Guaranties of such Person with respect to liabilities of a type described in any of clauses (a) through (f) hereof.

Debt of any Person shall include all obligations of such Person of the character described in clauses (a) through (g) to the extent such Person remains legally liable in respect thereof notwithstanding that any such obligation is deemed to be extinguished under GAAP.

*"Default"* means an event or condition the occurrence or existence of which would, with the lapse of time or the giving of notice or both, become an Event of Default.

*"Disclosure Documents"* is defined in Section 5.3.

"*EMMA*" is defined in Section 7.1(a).

*"Environmental Laws"* means any and all Federal, state, local, and foreign statutes, laws, regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses, agreements or governmental restrictions relating to pollution and the protection of the environment or the release of any materials into the environment, including but not limited to those related to Hazardous Materials.

*"ERISA"* means the Employee Retirement Income Security Act of 1974, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"ERISA Affiliate"* means any trade or business (whether or not incorporated) that is treated as a single employer together with the Company under section 414 of the Code.

*"Event of Default"* is an "event of default" as defined in the Indenture.

*"Financing Agreements"* means this Agreement, the Indenture (including without limitation the Supplement), and the Bonds.

*"First Closing"* is defined in Section 3.

"*GAAP*" means generally accepted accounting principles as in effect from time to time in the United States of America.

*"Governmental Authority"* means:

(a) the government of

(i) the United States of America or any State or other political subdivision thereof, or

(ii) any other jurisdiction in which the Company or any Subsidiary conducts all or any part of its business, or which asserts jurisdiction over any properties of the Company or any Subsidiary, or

(b) any entity exercising executive, legislative, judicial, regulatory or administrative functions of, or pertaining to, any such government.

*"Governmental Official"* means any governmental official or employee, employee of any government-owned or government-controlled entity, political party, any official of a political party, candidate for political office, official of any public international organization or anyone else acting in an official capacity.

*"Guaranty"* means, with respect to any Person, any obligation (except the endorsement in the ordinary course of business of negotiable instruments for deposit or collection) of such Person guaranteeing or in effect guaranteeing any Debt, dividend or other obligation of any other Person in any manner, whether directly or indirectly, including (without limitation) obligations incurred through an agreement, contingent or otherwise, by such Person:

(a) to purchase such Debt or obligation or any property constituting security therefor primarily for the purpose of assuring the owner of such Debt or obligation of the ability of any other Person to make payment of the Debt or obligation;

(b) to advance or supply funds (i) for the purchase or payment of such Debt or obligation, or (ii) to maintain any working capital or other balance sheet condition or any income statement condition of any other Person or otherwise to advance or make available funds for the purchase or payment of such Debt or obligation;

(c) to lease properties or to purchase properties or services primarily for the purpose of assuring the owner of such Debt or obligation of the ability of any other Person to make payment of the Debt or obligation; or

(d) otherwise to assure the owner of such Debt or obligation against loss in respect thereof.

In any computation of the Debt or other liabilities of the obligor under any Guaranty, the Debt or other obligations that are the subject of such Guaranty shall be assumed to be direct obligations of such obligor, *provided* that the amount of such Debt outstanding for purposes of this Agreement shall not exceed the maximum amount of Debt that is the subject of such Guaranty.

*"Hazardous Material"* means any and all pollutants, toxic or hazardous wastes or other substances that might pose a hazard to health and safety, the removal of which may be required or the generation, manufacture, refining, production, processing, treatment, storage, handling, transportation, transfer, use, disposal, release, discharge, spillage, seepage or filtration of which is or shall be restricted, prohibited or penalized by any applicable law including, but not limited to, asbestos, urea formaldehyde foam insulation, polychlorinated biphenyls, petroleum,

petroleum products, lead based paint, radon gas or similar restricted, prohibited or penalized substances.

*"holder"* is defined in the Indenture.

*"Indenture"* is defined in Section 1.

*"Institutional Investor"* means (a) any Purchaser of a Bond, (b) any holder of a Bond holding (together with one or more of its affiliates) more than 5% of the aggregate principal amount of the Bonds then outstanding, (c) any bank, trust company, savings and loan association or other financial institution, any pension plan, any investment company, any insurance company, any broker or dealer, or any other similar financial institution or entity, regardless of legal form, and (d) any Related Fund of any holder of any Bond.

*"Lien"* means, with respect to any Person, any mortgage, lien, pledge, charge, security interest or other encumbrance, or any interest or title of any vendor, lessor, lender or other secured party to or of such Person under any conditional sale or other title retention agreement or Capital Lease, upon or with respect to any property or asset of such Person (including in the case of stock, stockholder agreements, voting trust agreements and all similar arrangements).

*"Make-Whole Amount"* is defined in the Supplement.

*"Material"* means material in relation to the business, operations, affairs, financial condition, assets or properties of the Company and its Subsidiaries taken as a whole.

*"Material Adverse Effect"* means a material adverse effect on (a) the business, operations, affairs, financial condition, assets or properties of the Company and its Subsidiaries taken as a whole, (b) the ability of the Company to perform its obligations under this Agreement, the Bonds or the Indenture or (c) the validity or enforceability of any Financing Agreement.

*"Multiemployer Plan"* means any Plan that is a "multiemployer plan" (as such term is defined in section 4001(a)(3) of ERISA).

*"NAIC"* means the National Association of Insurance Commissioners or any successor thereto.

*"Non-U.S. Plan"* means any plan, fund or other similar program that (a) is established or maintained outside the United States of America by the Company or any Subsidiary primarily for the benefit of employees of the Company or one or more Subsidiaries residing outside the United States of America, which plan, fund or other similar program provides, or results in, retirement income, a deferral of income in contemplation of retirement or payments to be made upon termination of employment, and (b) is not subject to ERISA or the Code.

*"OFAC"* means the Office of Foreign Assets Control of the United States Department of the Treasury.

"*OFAC Sanctions Program*" means any economic or trade sanction that OFAC is responsible for administering and enforcing. A list of OFAC Sanctions Programs may be found at http://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx.

*"Officer's Certificate"* means a certificate of a Senior Financial Officer or of any other officer of the Company whose responsibilities extend to the subject matter of such certificate.

*"Original Indenture"* is defined in Section 1.

*"PBGC"* means the Pension Benefit Guaranty Corporation referred to and defined in ERISA or any successor thereto.

*"Permitted Liens"* shall have the meaning assigned to such term in the Indenture.

*"Person"* means an individual, partnership, corporation, limited liability company, association, trust, unincorporated organization, business entity or Governmental Authority.

*"Plan"* means an "employee benefit plan" (as defined in section 3(2) of ERISA) subject to Title I of ERISA that is or, within the preceding five years, has been established or maintained, or to which contributions are or, within the preceding five years, have been made or required to be made, by the Company or any ERISA Affiliate or with respect to which the Company or any ERISA Affiliate may have any liability.

*"property"* or *"properties"* means, unless otherwise specifically limited, real or personal property of any kind, tangible or intangible, choate or inchoate.

*"PTE"* is defined in Section 6.2(a).

*"Purchaser"* is defined in the first paragraph of this Agreement.

*"Related Fund"* means, with respect to any holder of any Bond, any fund or entity that (i) invests in Securities or bank loans, and (ii) is advised or managed by such holder, the same investment advisor as such holder or by an affiliate of such holder or such investment advisor.

*"Required Holders"* means (i) at any time, prior to the Second Closing, (x) the Purchasers of 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds, and (y) the holders of at least 51% in principal amount of the Bonds at the time outstanding (exclusive of Bonds then owned by the Company or any of its Affiliates); and (ii) at any time, on or after the Second Closing, the holders of at least 51% in principal amount of the Bonds at the time outstanding (exclusive of Bonds then owned by the Company or any of its Affiliates) *provided*, that if the Second Closing does not occur on October 26, 2017, then the Required Holders shall only include the Purchasers of 4.06% Series due 2054 Bonds, the 4.07% Series due 2055 Bonds, and the 4.09% Series due 2057 Bonds from the date of the First Closing until October 31, 2017 or such later date as such Purchasers and the Company have agreed to in writing.

*"Responsible Officer"* means any Senior Financial Officer and any other officer of the Company with responsibility for the administration of the relevant portion of this Agreement.

*"SEC"* means the Securities and Exchange Commission of the United States, or any successor thereto.

*"Second Closing"* is defined in Section 3.

*"Securities"* or *"Security"* shall have the meaning specified in Section 2(a)(1) of the Securities Act.

*"Securities Act"* means the Securities Act of 1933, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"Senior Financial Officer"* means the chief financial officer, principal accounting officer, treasurer or comptroller of the Company.

*"Source"* is defined in Section 6.2.

*"State Sanctions List"* means a list that is adopted by any state Governmental Authority within the United States of America pertaining to Persons that engage in investment or other commercial activities in Iran or any other country that is a target of economic sanctions imposed under U.S. Economic Sanctions Laws.

*"Subsidiary"* means, as to any Person, any other Person in which such first Person or one or more of its Subsidiaries or such first Person and one or more of its Subsidiaries owns sufficient equity or voting interests to enable it or them (as a group) ordinarily, in the absence of contingencies, to elect a majority of the directors (or Persons performing similar functions) of such second Person, and any partnership or joint venture if more than a 50% interest in the profits or capital thereof is owned by such first Person or one or more of its Subsidiaries or such first Person and one or more of its Subsidiaries (unless such partnership or joint venture can and does ordinarily take major business actions without the prior approval of such Person or one or more of its Subsidiaries). Unless the context otherwise clearly requires, any reference to a "Subsidiary" is a reference to a Subsidiary of the Company.

*"Supplement"* is defined in Section 1.

*"SVO"* means the Securities Valuation Office of the NAIC or any successor to such Office.

*"Swaps"* means, with respect to any Person, payment obligations with respect to interest rate swaps, currency swaps and similar obligations obligating such Person to make payments, whether periodically or upon the happening of a contingency. For the purposes of this Agreement, the amount of the obligation under any Swap shall be the amount determined in respect thereof as of the end of the then most recently ended fiscal quarter of such Person, based on the assumption that such Swap had terminated at the end of such fiscal quarter, and in making

such determination, if any agreement relating to such Swap provides for the netting of amounts payable by and to such Person thereunder or if any such agreement provides for the simultaneous payment of amounts by and to such Person, then in each such case, the amount of such obligation shall be the net amount so determined.

*"Trust Estate"* is defined in the Indenture.

*"Trustee"* is defined in Section 1.

*"UCC"* means, the Uniform Commercial Code as enacted and in effect from time to time in the state whose laws are treated as applying to the Trust Estate.

*"USA Patriot Act"* means United States Public Law 107-56, Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT ACT) Act of 2001, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

*"U.S. Economic Sanctions Laws"* means those laws, executive orders, enabling legislation or regulations administered and enforced by the United States pursuant to which economic sanctions have been imposed on any Person, entity, organization, country or regime, including the Trading with the Enemy Act, the International Emergency Economic Powers Act, the Iran Sanctions Act, the Sudan Accountability and Divestment Act, each as amended from time to time, and any other OFAC Sanctions Program.

**AQUA PENNSYLVANIA, INC.**
**SUBSIDIARIES OF THE COMPANY,**
**OWNERSHIP OF SUBSIDIARY STOCK**

| Company Name | State of Incorporation | % of Ownership (Direct & Indirect) |
|---|---|---|
| Aqua Pennsylvania, Inc. | Pennsylvania | 100% |
| 1. Aqua Pennsylvania Wastewater, Inc. | Pennsylvania | 100% |
| 2. Honesdale Consolidated Water Company | Pennsylvania | 100% |
| 3. Superior Water Company | Pennsylvania | 100% |

## FINANCIAL STATEMENTS

1. Aqua Pennsylvania, Inc. Consolidated Financial Statements as of and for the years ended December 31, 2016, 2015 and 2014 (audited)

2. Aqua Pennsylvania, Inc. Report for Quarter Ended March 31, 2017

**SCHEDULE 5.15(a)**
**EXISTING DEBT**

**Aqua Pennsylvania and Subsidaries**
**Schedule 5.15(a) - Existing Debt**
**as of 3/31/2017**

| | | Outstanding Balance |
|---|---|---|
| Unsecured Note | 5.50% | $ 2,132,180 |
| Unsecured Note | 5.64% | 5,466,000 |
| Unsecured Note | 5.64% | 5,461,000 |
| Unsecured Note | 5.95% | 10,000,000 |
| Unsecured Note | 5.95% | 10,000,000 |
| Unsecured Note | 5.95% | 10,000,000 |
| Unsecured Note | 5.95% | 10,000,000 |
| Bank Loan | 1.92% | 50,000,000 |
| Bank Loan | 1.98% | 50,000,000 |
| **Total Unsecured Notes** | | **153,059,180** |
| Tax Exempt-Bond Premium | | 1,509,110 |
| Tax Exempt | 5.25% | 24,830,000 |
| Tax Exempt | 5.25% | 24,830,000 |
| Tax Exempt-Bond Premium | | 248,668 |
| Tax Exempt | 6.25% | 9,000,000 |
| Tax Exempt | 6.75% | 13,000,000 |
| Tax Exempt-Bond Discount | | (10,200) |
| Tax Exempt | 5.00% | 58,000,000 |
| Tax Exempt-Bond Discount | | (1,507,413) |
| Tax Exempt | 5.00% | 62,165,000 |
| Tax Exempt-Bond Premium | | 464,561 |
| Tax Exempt | 4.75% | 12,520,000 |
| Tax Exempt-Bond Discount | | (227,370) |
| Tax Exempt | 5.00% | 25,910,000 |
| Tax Exempt | 5.00% | 19,270,000 |
| Tax Exempt-Bond Discount | | (98,211) |
| Tax Exempt | 4.50% | 15,000,000 |
| Tax Exempt-Bond Discount | | (492,000) |
| Tax Exempt | 5.00% | 81,205,000 |
| Tax Exempt-Bond Premium | | 2,086,754 |
| **Total Tax Exempt Bonds** | | **347,703,899** |
| PennVest | 2.711% | 479,320 |
| PennVest | 2.547% | 926,212 |
| PennVest | 2.547% | 310,310 |
| PennVest | 2.690% | 860,525 |
| PennVest | 2.547% | 1,685,949 |
| PennVest | 2.547% | 553,590 |
| PennVest | 1.510% | 2,244,838 |
| PennVest | 1.000% | 997,073 |
| PennVest | 4.047% | 213,617 |
| PennVest | 3.631% | 41,779 |
| PennVest | 4.047% | 97,929 |
| PennVest | 3.552% | 1,015,206 |

| | | |
|---|---|---|
| PennVest | 1.349% | 104,685 |
| PennVest | 3.631% | 115,029 |
| PennVest | 4.050% | 337,395 |

| | | Outstanding Balance |
|---|---|---|
| PennVest | 3.030% | 365,958 |
| PennVest | 3.460% | 4,243,680 |
| PennVest | 3.468% | 347,639 |
| PennVest | 2.774% | 1,481,285 |
| PennVest | 4.047% | 178,157 |
| PennVest | 3.790% | 805,288 |
| PennVest | 3.810% | 428,407 |
| PennVest | 3.430% | 509,909 |
| PennVest | 2.774% | 729,933 |
| PennVest | 3.470% | 2,797,557 |
| PennVest | 3.468% | 162,231 |
| PennVest | 3.195% | 1,321,711 |
| PennVest | 2.556% | 687,789 |
| PennVest | 2.554% | 837,654 |
| PennVest | 2.547% | 416,513 |
| PennVest | 3.046% | 971,948 |
| PennVest | 2.547% | 1,096,761 |
| PennVest | 2.547% | 790,973 |
| PennVest | 2.547% | 923,171 |
| PennVest | 3.143% | 1,520,603 |
| PennVest | 1.274% | 735,369 |
| PennVest | 1.000% | 6,919,475 |
| PennVest | 3.330% | 259,627 |
| PennVest | 2.730% | 2,191,284 |
| PennVest | 2.668% | 1,069,884 |
| PennVest | 2.547% | 875,557 |
| PennVest | 1.000% | 336,198 |
| PennVest | 2.774% | 161,093 |
| PennVest | 2.774% | 138,240 |
| PennVest | 3.052% | 570,278 |
| PennVest | 3.468% | 3,507,965 |
| PennVest | 2.774% | 908,122 |
| PennVest | 1.156% | 266,074 |
| PennVest | 2.774% | 1,125,705 |
| PennVest | 3.365% | 1,333,193 |
| PennVest | 2.547% | 1,364,724 |
| **Total PennVest** | | **52,363,414** |
| FMB | 5.17% | 7,000,000 |
| FMB | 5.751% | 15,000,000 |
| FMB | 5.751% | 5,000,000 |
| FMB | 5.98% | 3,000,000 |
| FMB | 6.06% | 15,000,000 |
| FMB | 6.06% | 5,000,000 |
| FMB | 7.72% | 15,000,000 |
| FMB | 9.17% | 2,000,000 |
| FMB | 9.29% | 12,000,000 |
| FMB | 9.97% | 5,000,000 |
| FMB | 3.79% | 40,000,000 |
| FMB | 3.80% | 20,000,000 |
| FMB | 3.85% | 20,000,000 |
| FMB | 3.94% | 25,000,000 |

| | | Outstanding Balance |
|---|---|---|
| FMB | 4.61% | 25,000,000 |
| FMB | 4.62% | 25,000,000 |
| FMB | 3.64% | 25,000,000 |
| FMB | 4.01% | 15,000,000 |
| FMB | 4.06% | 13,000,000 |
| FMB | 4.11% | 12,000,000 |
| FMB | 3.77% | 65,000,000 |
| FMB | 3.82% | 20,000,000 |
| FMB | 3.85% | 25,000,000 |
| FMB | 4.16% | 60,000,000 |
| FMB | 4.18% | 20,000,000 |
| FMB | 4.20% | 20,000,000 |
| FMB | 3.85% | 25,000,000 |
| FMB | 3.95% | 60,000,000 |
| FMB | 3.65% | 10,000,000 |
| FMB | 3.69% | 40,000,000 |
| **Total First Mortgage Bonds** | | **649,000,000** |
| PennVest - Aqua PA WW | 1.00% | 406,362 |
| PennVest - Aqua PA WW | 1.16% | 1,003,914 |
| PennVest - Aqua PA WW | 1.00% | 615,964 |
| PennVest - Aqua PA WW | 1.00% | 181,111 |
| PennVest - Aqua PA WW | 1.35% | 77,328 |
| PennVest - Aqua PA WW | 2.77% | 198,712 |
| **Total PennVest LWWW** | | **2,483,389** |
| **Total Long Term Debt** | | **$ 1,204,609,882** |
| **PNC Revolver** | | **26,742,244** |
| **PNC Uncommitted line** | | **0** |
| **Total Debt Aqua Pennsylvania** | | **$ 1,231,352,126** |

**SCHEDULE 5.15(b)**

**AQUA PENNSYLVANIA, INC. AND SUBSIDIARIES**
**DEBT ISSUANCE LIMITATIONS**

Indenture of Mortgage dated as of January 1, 1941 of Aqua Pennsylvania, Inc. as Supplemented and Amended

$100 million Amended and Restated Credit Agreement among Aqua Pennsylvania, Inc. and PNC Bank, National Association as Agent dated as of November 17, 2016

Aqua Pennsylvania, Inc. $40,000,000 5.95% Senior Notes dated March 31, 2006

Aqua Pennsylvania, Inc. $10,927,000 5.64% Senior Notes dated September 29, 2006

Aqua Pennsylvania, Inc. $2,132,180 5.50% Senior Notes dated May 15, 2007

$50 million Term Loan Agreement among Aqua Pennsylvania, Inc. and PNC Bank, National Association as Agent and Dated as of September 29, 2014

$50 million Term Loan Agreement among Aqua Pennsylvania, Inc. and PNC Bank, National Association as Agent and Dated as of May 6, 2015

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER, PURSUANT TO RULE 13A-14(A) UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, Christopher H. Franklin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting, and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Christopher H. Franklin
Christopher H. Franklin
President and Chief Executive Officer
November 2, 2017

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER, PURSUANT TO RULE 13A-14(A) UNDER THE SECURITIES AND EXCHANGE ACT OF 1934

I, David P. Smeltzer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Aqua America, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting, and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and Chief Financial Officer
November 2, 2017

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report on Form 10-Q for the period ended September 30, 2017 of Aqua America, Inc. (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Christopher H. Franklin, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or Section 78o); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Christopher H. Franklin
Christopher H. Franklin
President and Chief Executive Officer
November 2, 2017

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Quarterly Report on Form 10-Q for the period ended September 30, 2017 of Aqua America, Inc. (the "Company") as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David P. Smeltzer, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. Section 78m or Section 78o); and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David P. Smeltzer
David P. Smeltzer
Executive Vice President and Chief Financial Officer
November 2, 2017

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR16. Supply copies of the company's balance sheets for each month for the last 2 years.

A. Please refer to the Company's response to OD1.

**<u>AQUA PENNSYLVANIA, INC.</u>**
**<u>2018 RATE CASE</u>**
**<u>FILING REQUIREMENTS</u>**

**G. Rate of Return**

RR17. Provide the bond rating history for the company and, if applicable, its parent from the major credit rating agencies for the last five years.

A. Please refer to the attached Standard & Poor's Reports which discuss the bond rating history for the Company.

The Parent Company (Aqua America, Inc.) is not rated.

STANDARD & POOR'S

# Standard & Poor's Research

Summary:

# Aqua Pennsylvania Inc.

**Primary Credit Analyst:**
Matthew L O'Neill, New York (1) 212-438-4295; matthew.oneill@standardandpoors.com

**Secondary Contact:**
Barbara A Eiseman, New York 212-438-7666; barbara.eiseman@standardandpoors.com

## Table Of Contents

Summary:

# Aqua Pennsylvania Inc.

| Corporate Credit Rating | A+/Stable/-- |
|---|---|

**Profile Assessments**

| | | | |
|---|---|---|---|
| BUSINESS RISK | EXCELLENT | Vulnerable | Excellent |
| FINANCIAL RISK | INTERMEDIATE | Highly leveraged | Minimal |

## Rationale

### Business Risk: Excellent

- Monopolistic, rate-regulated business that provides an essential service
- Management is focused on a company that almost entirely consists of rate-regulated utility operations
- Favorable regulatory environment
- Cost recovery mechanisms that enhance cash flow predictability
- Low operating risk

### Financial Risk: Intermediate

- Large capital spending requirements over the next several years
- Generally conservative financial policies
- Adequate liquidity

### Outlook: Stable

The stable outlook reflects Standard & Poor's Ratings Services' expectation of adequate and timely rate relief, management of Aqua Pennsylvania Inc.'s growth strategy, and maintenance of an appropriate financial risk profile.

#### Downside scenario

We could lower the rating if the regulatory environment in Pennsylvania made an unfavorable shift or the company increased debt to finance acquisitions or capital spending, resulting in consolidated funds from operations (FFO) to debt consistently less than 17% and leverage more than 60%.

#### Upside scenario

Although less likely, we could raise the rating if regulators provided significant rate increases and above-average returns on equity that result in parent company Aqua America Inc. generating cash flow that is materially stronger than we expect, with FFO to debt of at least 25% and leverage less than 55%.

## Standard & Poor's Base-Case Scenario

**Assumptions**

- We assume EBITDA growth of about 2.5% to 3.5% per year during the forecast period
- Capital spending of about $300 million annually, on average
- Dividends of about $90 million to $100 million in 2013, rising slightly throughout the forecast period

**Key Metrics**

| | 2012A | 2013E | 2014E |
|---|---|---|---|
| FFO/Total debt | 21.9% | 18-22% | 18-23% |
| Total debt/Total capital | 56.4% | 52-56% | 52-56% |
| Total debt/EBITDA | 4.0x | 3.4-4x | 3.5-4x |

## Business Risk: Excellent

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated credit quality of its parent company, Aqua America Inc. (unrated). Aqua Pennsylvania accounts for more than one-half of consolidated Aqua America's revenues and cash flow.

Aqua Pennsylvania's business risk profile is "excellent", in our assessment, reflecting a low-risk monopoly water distribution business; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, stable residential and commercial customer base that provides a stable revenue base; and solid operations in which purchased water accounts for only about 10% of water sales. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths.

The Pennsylvania Public Utility Commission provides Aqua Pennsylvania with favorable cost-recovery mechanisms, including the addition of capital spending to rates outside the traditional rate proceedings, inclusion of certain expected spending in determining customer rates, and a consolidated rate structure. During 2012, the company received roughly $40 million of revenue from rate increases.

Reflected in the business risk profile is our assessment of the company's management and governance as "strong". This reflects management's consistent strategy that has a demonstrated track of successful execution, comprehensive enterprise wide risk management standards, and management's considerable expertise within all of its operating businesses.

## Financial Risk: Intermediate

Timely rate relief and balanced financing of its growth strategy support Aqua Pennsylvania's intermediate financial profile, which we view as appropriate for the rating, but consolidated financial measures are modestly weaker than other 'A+' rated water companies. As of Dec. 31, 2012, Aqua America had total debt, including tax-effected pension and other postemployment benefits and operating leases, of about $1.8 billion, with total debt to capital of about 56%.

Aqua America's adjusted funds from operations (FFO) are about $390 million and FFO to debt is about 22%. Over the intermediate term, we expect financial performance to approximate current levels for Aqua America supported by additional rate increases and existing recovery mechanisms.

Aqua America entered into a joint venture with Penn Virginia Resource Partners L.P. (PVR; B+/Negative/--) to build a 12-inch-wide pipeline to provide fresh water to PVR's gas-gathering systems in Lycoming County, Pa. We believe that this project efficiently fulfills a requirement to provide water in the Marcellus Shale region and could provide Aqua with an opportunity to increase its unregulated cash flows, which are currently less than 1% of total EBITDA. We believe that this project carries more risk than the utility's regulated strategy and any sizable growth of this business would adversely affect the business risk profile and possibly lead to lower ratings.

## Liquidity: Adequate

Aqua Pennsylvania's liquidity reflects that of parent Aqua America. We consider Aqua's consolidated liquidity to be "adequate", with forecast sources divided by uses of more than 1.2x for the next 12 months.

| Principal Liquidity Sources | Principal Liquidity Uses |
|---|---|
| • Credit line availability of more than $100 million in the next 12 months<br>• FFO of about $300 million during the next 12 months | • Capital spending of $200 million during the next 12 months<br>• Dividends of about $99 million during the next 12 months |

## Recovery Analysis

- We assign recovery ratings to first-mortgage bonds (FMBs) issued by U.S. utilities, which can result in issue ratings being notched above a corporate credit rating (CCR) on utility depending on the rating category and the extent of the collateral coverage. The FMBs issued by U.S. utilities are a form of "secured utility bond" (SUB) that qualify for a recovery rating as defined in our criteria (see "Collateral Coverage and Issue Notching Rules for '1+' and '1' Recovery Ratings on Senior Bonds Secured by Utility Real Property", Feb. 14, 2013).
- The recovery methodology is supported by the ample historical record of 100% recovery for secured bondholders in utility bankruptcies in the U.S. and our view that the factors that enhanced those recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization given the essential service provided and the high replacement cost) will persist in the future.
- Under our SUB criteria, we calculate a ratio of our estimate of the value of the collateral pledged to bondholders relative to the amount of FMBs outstanding. FMB ratings can exceed a CCR on a utility by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories depending on the calculated ratio.
- Aqua Pennsylvania's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the CCR.

## Related Criteria And Research

- 2008 Corporate Criteria: Analytical Methodology, April 15, 2008
- Business Risk/Financial Risk Matrix Expanded, Sept. 18, 2012
- 2008 Corporate Ratings Criteria: Ratios And Adjustments, April 15, 2008
- Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Methodology And AssumptionsLiquidity Descriptors For Global Corporate Issuers, Sept. 28, 2011
- Collateral Coverage and Issue Notching Rules for '1+' and '1' Recovery Ratings on Senior Bonds Secured by Utility Real Property, Feb. 14, 2013
- 2008 Corporate Criteria: Rating Each Issue, April 15, 2008
- 2008 Corporate Criteria: Commercial Paper, April 15, 2008
- Corporate Criteria: Assessing U.S. Utility Regulatory Environments, Nov. 7, 2007
- Corporate Criteria: Standard & Poor's Methodology For Imputing Debt For U.S. Utilities' Power Purchase Agreements, May 7, 2007
- Parent/Subsidiary Links; General Principles; Subsidiaries/Joint Ventures/Nonrecourse Projects; Finance Subsidiaries; Rating Link to Parent, Oct. 28, 2004

**Business And Financial Risk Matrix**

| | Financial Risk | | | | | |
|---|---|---|---|---|---|---|
| **Business Risk** | Minimal | Modest | Intermediate | Significant | Aggressive | Highly Leveraged |
| Excellent | AAA/AA+ | AA | A | A- | BBB | -- |
| Strong | AA | A | A- | BBB | BB | BB- |
| Satisfactory | A- | BBB+ | BBB | BB+ | BB- | B+ |
| Fair | -- | BBB- | BB+ | BB | BB- | B |
| Weak | -- | -- | BB | BB- | B+ | B- |
| Vulnerable | -- | -- | -- | B+ | B | B- or below |

**Note:** These rating outcomes are shown for guidance purposes only. The ratings indicated in each cell of the matrix are the midpoints of the likely rating possibilities. There can be small positives and negatives that would lead to an outcome of one notch higher or lower than the typical matrix outcome. Moreover, there will be exceptions that go beyond a one-notch divergence. For example, the matrix does not address the lowest rungs of the credit spectrum (i.e., the 'CCC' category and lower). Other rating outcomes that are more than one notch off the matrix may occur for companies that have liquidity that we judge as "less than adequate" or "weak" under our criteria, or companies with "satisfactory" or better business risk profiles that have extreme debt burdens due to leveraged buyouts or other reasons. For government-related entities (GREs), the indicated rating would apply to the standalone credit profile, before giving any credit for potential government support.

STANDARD & POOR'S RATINGS SERVICES
McGRAW HILL FINANCIAL

# RatingsDirect®

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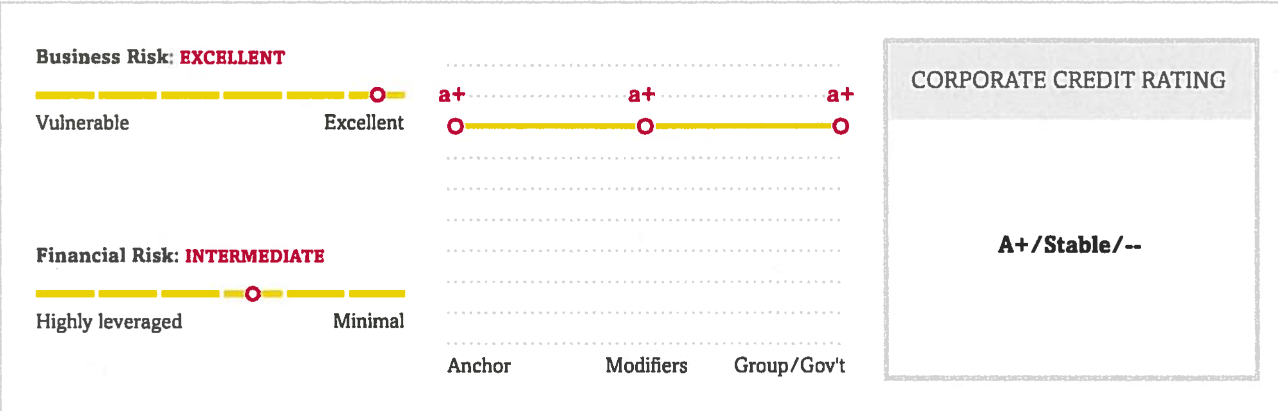
## Summary:

# Aqua Pennsylvania Inc.




## Rationale

| Business Risk: Excellent | Financial Risk: Intermediate |
|---|---|
| • Monopolistic, rate-regulated business that provides an essential service<br>• Management's focus is on a company that almost entirely consists of rate-regulated utility operations<br>• Favorable regulatory environment<br>• Cost recovery mechanisms that enhance cash flow predictability<br>• Low operating risk water distribution business | • Use of the low volatility table<br>• Large capital spending requirements over the next several years<br>• Generally conservative financial policies<br>• Adequate liquidity |

**Outlook: Stable**

The stable outlook on Aqua Pennsylvania Inc. reflects Standard & Poor's Ratings Services' baseline forecast that consolidated adjusted funds from operations (FFO) to debt will be about 18% to 20% over the next 12 to 18 months and the company's continued effective management of its regulatory risk.

### Downside scenario

We could lower the rating if the regulatory environment in Pennsylvania made an unfavorable shift or the company increased debt to finance acquisitions or capital spending, resulting in consolidated FFO to debt consistently less than 13% and debt to EBITDA of more than 4x on a sustained basis.

### Upside scenario

Although less likely, we could raise the rating if FFO to debt consistently strengthened to greater than 23% on a sustained basis, which we would expect from an improvement in the economy.

## Standard & Poor's Base-Case Scenario

**Assumptions**

- We assume EBITDA growth of about 2% to 3.5% per year during the forecast period
- Capital spending of about $300 million annually, on average
- Dividends of about $90 million to $100 million over the next 12 months

**Key Metrics**

| | 2013A | 2014E | 2015E |
|---|---|---|---|
| FFO/total debt (%) | 21.7 | 18-22 | 18-22 |
| Total debt/EBITDA (x) | 3.8 | 3.5-4.0 | 3.5-4.0 |

A--Actual. E--Estimated. FFO--Funds from operations.

## Business Risk: Excellent

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated credit quality of its parent company, Aqua America Inc. (unrated). Aqua Pennsylvania accounts for more than one-half of consolidated Aqua America's revenues and cash flow.

We view Aqua Pennsylvania's business risk profile as "excellent", reflecting a "very low" country risk because all of the company's operations are based in the U.S., and the regulated utility sector has a "very low" industry risk profile. Our assessment reflects the low-risk monopoly water distribution business; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, stable residential and commercial customer base that provides a stable revenue base; and solid operations in which purchased water accounts for only about 10% of water sales. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths.

Reflected in the business risk profile is our assessment of the company's management and governance as "strong". This reflects management's consistent strategy that has a demonstrated track of successful execution, comprehensive enterprise wide risk management standards, and management's considerable expertise within all of its operating businesses.

## Financial Risk: Intermediate

We view Aqua's financial risk profile as "intermediate" using our low volatility table. We apply the low volatility table based on Aqua's low-operating risk water distribution business and given its effective management of regulatory risk compared with peers. Timely rate relief and balanced financing of its growth strategy support Aqua Pennsylvania's intermediate financial profile. Our baseline forecast results in adjusted FFO to debt of 18% to 20% and debt to EBITDA below 4x

## Liquidity: Adequate

Aqua Pennsylvania's liquidity reflects that of parent Aqua America. We consider Aqua's consolidated liquidity to be "adequate", under our corporate liquidity methodology. Projected liquidity sources exceed uses by more than 1.1x for the next 12 months. The company's ability to absorb high-impact, low-probability events with limited need for refinancing, its flexibility to lower capital spending or sell assets, sound bank relationships, solid standing in credit markets, and generally prudent risk management also support our assessment of its liquidity as "adequate".

| Principal Liquidity Sources | Principal Liquidity Uses |
|---|---|
| • Credit line availability of more than $100 million in the next 12 months<br>• FFO of about $300 million during the next 12 months | • Capital spending of $300 million during the next 12 months<br>• Dividends of about $90-100 million during the next 12 months |

## Other Modifiers

Modifiers have no impact on the SACP or rating outcome. We consider management & governance (M&G) to be "strong".

## Group Influence

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated group credit quality of its parent company, Aqua America Inc. (unrated). Aqua Pennsylvania accounts for more than one-half of consolidated Aqua America's revenues and cash flow.

## Ratings Score Snapshot

**Corporate Credit Rating**

A+/Stable/--

**Business risk: Excellent**

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

**Financial risk: Intermediate**

- **Cash flow/Leverage:** Intermediate

**Anchor: a+**

**Modifiers**

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Financial policy:** Neutral (no impact)
- **Management and governance:** Strong (no impact)
- **Comparable rating analysis:** Neutral (no impact)

**Stand-alone credit profile : a+**

- **Group credit profile:** a+
- **Entity status within group:** Core (no impact)

## Recovery Analysis

- We assign recovery ratings to first-mortgage bonds (FMBs) issued by U.S. utilities, which can result in issue ratings being notched above a corporate credit rating on utility depending on the rating category and the extent of the collateral coverage. The FMBs issued by U.S. utilities are a form of "secured utility bond" (SUB) that qualify for a recovery rating as defined in our criteria (see "Collateral Coverage and Issue Notching Rules for '1+' and '1' Recovery Ratings on Senior Bonds Secured by Utility Real Property", Feb. 14, 2013).
- The recovery methodology is supported by the ample historical record of 100% recovery for secured bondholders in utility bankruptcies in the U.S. and our view that the factors that enhanced those recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization given the essential service provided and the high replacement cost) will persist in the future.
- Under our SUB criteria, we calculate a ratio of our estimate of the value of the collateral pledged to bondholders relative to the amount of FMBs outstanding. FMB ratings can exceed a corporate credit rating on a utility by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories depending on the calculated ratio.

- Aqua Pennsylvania's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the corporate credit rating.

## Related Criteria And Research

### Related Criteria

- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Jan. 2, 2014
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Criteria - Corporates - General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

**Business And Financial Risk Matrix**

| | Financial Risk Profile | | | | | |
|---|---|---|---|---|---|---|
| **Business Risk Profile** | Minimal | Modest | **Intermediate** | Significant | Aggressive | Highly leveraged |
| **Excellent** | aaa/aa+ | aa | **a+/a** | a- | bbb | bbb-/bb+ |
| Strong | aa/aa- | a+/a | a-/bbb+ | bbb | bb+ | bb |
| Satisfactory | a/a- | bbb+ | bbb/bbb- | bbb-/bb+ | bb | b+ |
| Fair | bbb/bbb- | bbb- | bb+ | bb | bb- | b |
| Weak | bb+ | bb+ | bb | bb- | b+ | b/b- |
| Vulnerable | bb- | bb- | bb-/b+ | b+ | b | b- |

STANDARD & POOR'S RATINGS SERVICES
McGRAW HILL FINANCIAL

# RatingsDirect®

Summary:

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**Secondary Contact:**
Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@standardandpoors.com

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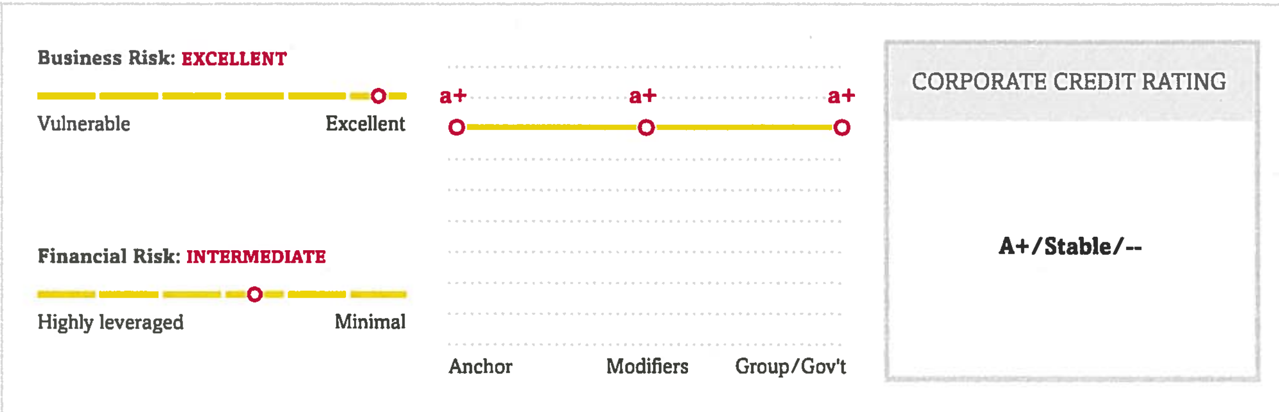


## Rationale

### Business Risk: Excellent

- Monopolistic, rate-regulated business that provides an essential service.
- Management's focus is primarily on rate-regulated utility operations.
- Favorable regulatory environment.
- Cost recovery mechanisms that enhance cash flow predictability.
- Low operating risk water distribution business.

### Financial Risk: Intermediate

- Use of the low volatility table.
- Stable cash flow from regulated utility operations.
- Large capital spending requirements over the next several years.
- Generally conservative financial policies.

### Outlook: Stable

The stable outlook on Aqua Pennsylvania Inc. reflects Standard & Poor's Ratings Services' baseline forecast that consolidated adjusted funds from operations (FFO) to debt will be about 18% to 20% over the next 12 to 18 months and the company's continued effective management of its regulatory risk.

#### Downside scenario

We could lower the rating if the regulatory environment in Pennsylvania made an unfavorable shift or the company increased debt to finance acquisitions or capital spending, resulting in consolidated FFO to debt consistently less than 13% and debt to EBITDA of more than 4x on a sustained basis.

#### Upside scenario

Although less likely, we could raise the rating if FFO to debt consistently strengthened to greater than 23% on a sustained basis, which we would expect from an improvement in the economy.

## Standard & Poor's Base-Case Scenario

### Assumptions

- We assume EBITDA growth of about 2% to 3.5% per year during the forecast period.
- Capital spending of about $325 million to $350 million annually.
- Dividends of about $120 million over the next 12 months.

### Key Metrics

| | 2014A | 2015E | 2016E |
|---|---|---|---|
| FFO/total debt (%) | 21.6 | 18-22 | 18-22 |
| Total debt/EBITDA (x) | 3.8 | 3.5x-4.0 | 3.5x–4.0 |

A—Actual. E—Estimate.

## Business Risk: Excellent

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated credit quality of its parent company, Aqua America Inc. (unrated). Aqua Pennsylvania accounts for more than one-half of consolidated Aqua America's revenues and cash flow.

We view Aqua Pennsylvania's business risk profile as "excellent," reflecting a "very low" country risk because all of the company's operations are based in the U.S., and the regulated utility sector has a "very low" industry risk profile. Our assessment reflects the low-risk water distribution business; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, stable residential and commercial customer base that provides a stable revenue base; and solid operations in which purchased water accounts for only about 10% of water sales. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths.

## Financial Risk: Intermediate

We view Aqua's financial risk profile as "intermediate" using our low volatility table. We apply the low volatility table based on Aqua's low-operating risk water distribution business and given its effective management of regulatory risk compared with peers. Timely rate relief and balanced financing of its growth strategy support Aqua's intermediate financial profile. Our baseline forecast results in adjusted FFO to debt of 18% to 20% and debt to EBITDA below 4x.

## Liquidity: Adequate

Aqua Pennsylvania's liquidity reflects that of parent Aqua America. We consider Aqua's consolidated liquidity to be "adequate," under our corporate liquidity methodology. Projected liquidity sources exceed uses by more than 1.1x for the next 12 months. The company's ability to absorb high-impact, low-probability events with limited need for refinancing, its flexibility to lower capital spending or sell assets, sound bank relationships, solid standing in credit markets, and generally prudent risk management also support our assessment of its liquidity as "adequate".

| Principal Liquidity Sources | Principal Liquidity Uses |
| --- | --- |
| • Credit line availability of more than \$250 million in the next 12 months.<br>• FFO of about \$360 million during the next 12 months. | • Maintenance capital spending of \$260 million to \$270 million during the next 12 months.<br>• Dividends of about \$120 million during the next 12 months. |

## Other Credit Considerations

Our assessment of modifiers results in no further changes to the anchor score. We consider management and governance (M&G) to be "strong". Our assessment reflects management's consistent strategy that has a demonstrated track of successful execution, comprehensive enterprise wide risk management standards, and management's considerable expertise within all of its operating businesses.

## Group Influence

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated group credit quality of its parent company, Aqua America Inc. (unrated). Under the group rating methodology criteria, we assess Aqua America as the parent of the group with a group credit profile of 'a+'. We assess the status of Aqua America's operating subsidiary Aqua Pennsylvania as core because we view it as integral to the group's identity, it is highly unlikely to be sold, and has strong management commitment given the company's emphasis on maintaining the size and score of the regulated utility operations. The business and financial scope of the rated entity and the group to which it belongs are the same and consolidated group accounts have been analyzed.

## Ratings Score Snapshot

### Corporate Credit Rating

A+/Stable/--

**Business risk: Excellent**

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

**Financial risk: Intermediate**

- **Cash flow/Leverage:** Intermediate

**Anchor: a+**

**Modifiers**

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Strong (no impact)
- **Comparable rating analysis:** Neutral (no impact)

**Stand-alone credit profile : a+**

- **Group credit profile:** a+

## Recovery Analysis

- We assign recovery ratings to first-mortgage bonds (FMBs) issued by U.S. utilities, which can result in issue ratings being notched above a corporate credit rating on a utility depending on the rating category and the extent of the collateral coverage. The FMBs issued by U.S. utilities are a form of "secured utility bond" (SUB) that qualify for a recovery rating as defined in our criteria (see "Collateral Coverage and Issue Notching Rules for '1+' and '1' Recovery Ratings on Senior Bonds Secured by Utility Real Property," Feb. 14, 2013).
- The recovery methodology is supported by the ample historical record of 100% recovery for secured bondholders in utility bankruptcies in the U.S. and our view that the factors that enhanced those recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization given the essential service provided and the high replacement cost) will persist.
- Under our SUB criteria, we calculate a ratio of our estimate of the value of the collateral pledged to bondholders relative to the amount of FMBs outstanding. FMB ratings can exceed a corporate credit rating on a utility by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories depending on the calculated ratio.
- Aqua Pennsylvania's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or

subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the corporate credit rating.

## Related Criteria And Research

### Related Criteria

- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Criteria - Corporates - General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

**Business And Financial Risk Matrix**

| | Financial Risk Profile | | | | | |
|---|---|---|---|---|---|---|
| **Business Risk Profile** | Minimal | Modest | **Intermediate** | Significant | Aggressive | Highly leveraged |
| **Excellent** | aaa/aa+ | aa | **a+/a** | a- | bbb | bbb-/bb+ |
| Strong | aa/aa- | a+/a | a-/bbb+ | bbb | bb+ | bb |
| Satisfactory | a/a- | bbb+ | bbb/bbb- | bbb-/bb+ | bb | b+ |
| Fair | bbb/bbb- | bbb- | bb+ | bb | bb- | b |
| Weak | bb+ | bb+ | bb | bb- | b+ | b/b- |
| Vulnerable | bb- | bb- | bb-/b+ | b+ | b | b- |

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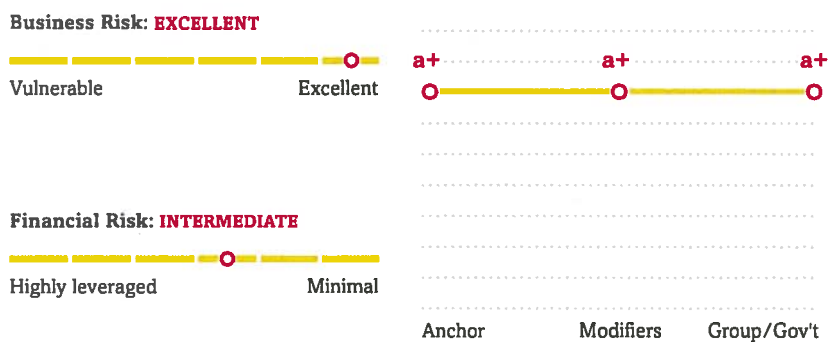


CORPORATE CREDIT RATING

**A+/Stable/--**

## Rationale

| Business Risk: Excellent | Financial Risk: Intermediate |
|---|---|
| • Monopolistic, rate-regulated business that provides an essential service.<br>• Management's focus is primarily on rate-regulated utility operations.<br>• Favorable regulatory environment.<br>• Cost recovery mechanisms that enhance cash flow predictability.<br>• Low-operating-risk water distribution business. | • Use of the low volatility table.<br>• Stable cash flow from regulated utility operations.<br>• Large capital spending requirements over the next several years.<br>• Generally conservative financial policies. |

### Outlook: Stable

The stable outlook on Aqua Pennsylvania Inc. reflects Standard & Poor's Ratings Services' baseline forecast that consolidated adjusted funds from operations (FFO) to debt will be about 18% to 20% over the next 12 to 18 months and the company's continued effective management of its regulatory risk.

#### Downside scenario

We could lower the rating if the regulatory environment in Pennsylvania made an unfavorable shift or the company increased debt to finance acquisitions or capital spending, resulting in consolidated FFO to debt consistently less than 14% sustained basis.

#### Upside scenario

Although less likely, we could raise the rating if FFO to debt consistently strengthened to greater than 22% on a sustained basis, which we would expect from an improvement in the economy.

## Standard & Poor's Base-Case Scenario

### Assumptions

- We assume EBITDA growth of about 2% to 3.5% per year during the forecast period.
- Capital spending of about $325 million to $350 million annually.
- Dividends of about $120 million over the next 12 months.

### Key Metrics

| | 2014A | 2015E | 2016E |
|---|---|---|---|
| FFO/total debt (%) | 21.6 | 18-20 | 18-20 |
| Total debt/EBITDA (x) | 3.8 | 3.5x-4.0 | 3.5x–4.0 |

## Business Risk: Excellent

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated credit quality of its parent company, Aqua America Inc. (unrated). Aqua Pennsylvania accounts for more than one-half of consolidated Aqua America's revenues and cash flow.

We view Aqua Pennsylvania's business risk profile as "excellent," reflecting a "very low" country risk because all of the company's operations are based in the U.S., and the regulated utility sector has a "very low" industry risk profile. Our assessment reflects the low-risk water distribution business; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, stable residential and commercial customer base that provides a stable revenue base; and solid operations in which purchased water accounts for only about 10% of water sales. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths.

## Financial Risk: Intermediate

We view Aqua's financial risk profile as "intermediate" using our low volatility table. We apply the low volatility table based on Aqua's low-operating-risk water distribution business and given its effective management of regulatory risk compared with peers. Timely rate relief and balanced financing of its growth strategy support Aqua's intermediate financial profile. Our baseline forecast results in adjusted FFO to debt of 18% to 20%.

Based on our "excellent" business risk and "intermediate" financial risk profile assessments, there are two potential anchor outcomes ('a+' or 'a'). Our choice of an 'a+' anchor reflects our view that the business risk of Aqua is on the high end of the "excellent" category, in part because of the supportive cost recovery and strong regulatory framework, and effective management of regulatory risk

## Liquidity: Adequate

Aqua Pennsylvania's liquidity reflects that of parent Aqua America. We consider Aqua's consolidated liquidity to be "adequate," under our corporate liquidity methodology. Projected liquidity sources exceed uses by more than 1.1x for the next 12 months. The company's ability to absorb high-impact, low-probability events with limited need for refinancing, its flexibility to lower capital spending or sell assets, sound bank relationships, solid standing in credit markets, and generally prudent risk management also support our assessment of its liquidity as "adequate".

| Principal Liquidity Sources | Principal Liquidity Uses |
|---|---|
| • Credit line availability of more than $150 million in the next 12 months; and<br>• FFO of about $380 million during the next 12 months. | • Maintenance capital spending of $260 million to $270 million during the next 12 months; and<br>• Dividends of about $90 million to $120 million during the next 12 months. |

## Other Credit Considerations

Our assessment of modifiers results in no further changes to the anchor score. We consider management & governance (M&G) to be "strong". Our assessment reflects management's consistent strategy that has a demonstrated track of successful execution, comprehensive enterprise-wide risk management standards, and management's considerable expertise within all of its operating businesses.

## Group Influence

Standard & Poor's ratings on water utility Aqua Pennsylvania Inc. reflect the consolidated group credit quality of its parent company, Aqua America Inc. (unrated).Under the group rating methodology criteria, we assess Aqua America as the parent of the group with a group credit profile of 'a+'. We assess the status of Aqua America's operating subsidiary Aqua Pennsylvania as core because we view them as integral to the group's identity, they are highly unlikely to be sold, and have strong management commitment given the company's emphasis on maintaining the size and score of the regulated utility operations. The business and financial scope of the rated entity and the group to which it belongs are the same and consolidated group accounts have been analyzed.

## Ratings Score Snapshot

### Corporate Credit Rating

A+/Stable/--

**Business risk: Excellent**

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

**Financial risk: Intermediate**

- **Cash flow/Leverage:** Intermediate

**Anchor: a+**

**Modifiers**

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Strong (no impact)
- **Comparable rating analysis:** Neutral (no impact)

**Stand-alone credit profile : a+**

- **Group credit profile:** a+

## Recovery Analysis

- We assign recovery ratings to first-mortgage bonds (FMBs) issued by U.S. utilities, which can result in issue ratings being notched above a corporate credit rating on utility depending on the rating category and the extent of the collateral coverage. The FMBs issued by U.S. utilities are a form of "secured utility bond" (SUB) that qualify for a recovery rating as defined in our criteria (see "Collateral Coverage and Issue Notching Rules for '1+' and '1' Recovery Ratings on Senior Bonds Secured by Utility Real Property", Feb. 14, 2013).
- The recovery methodology is supported by the ample historical record of 100% recovery for secured bondholders in utility bankruptcies in the U.S. and our view that the factors that enhanced those recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization given the essential service provided and the high replacement cost) will persist.
- Under our SUB criteria, we calculate a ratio of our estimate of the value of the collateral pledged to bondholders

relative to the amount of FMBs outstanding. FMB ratings can exceed a corporate credit rating on a utility by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories depending on the calculated ratio.

- Aqua Pennsylvania's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the corporate credit rating.

## Related Criteria And Research

### Related Criteria

- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Criteria - Corporates - General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

**Business And Financial Risk Matrix**

| | Financial Risk Profile | | | | | |
|---|---|---|---|---|---|---|
| **Business Risk Profile** | Minimal | Modest | **Intermediate** | Significant | Aggressive | Highly leveraged |
| **Excellent** | aaa/aa+ | aa | **a+/a** | a- | bbb | bbb-/bb+ |
| Strong | aa/aa- | a+/a | a-/bbb+ | bbb | bb+ | bb |
| Satisfactory | a/a- | bbb+ | bbb/bbb- | bbb-/bb+ | bb | b+ |
| Fair | bbb/bbb- | bbb- | bb+ | bb | bb- | b |
| Weak | bb+ | bb+ | bb | bb- | b+ | b/b- |
| Vulnerable | bb- | bb- | bb-/b+ | b+ | b | b- |

S&P Global
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# Research

# Aqua Pennsylvania Inc. 'A+' Ratings Affirmed; Outlook Stable

**Primary Credit Analyst:**
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Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@spglobal.com

- We base our ratings on Aqua Pennsylvania Inc. on the very low business risk and steady financial performance of its parent, Aqua America Inc. (unrated).
- We affirmed the 'A+' issuer credit rating on Aqua Pennsylvania Inc. The outlook is stable.
- We revised our management and governance assessment on Aqua Pennsylvania to satisfactory.
- The stable rating outlook over the next two years on Aqua Pennsylvania Inc. reflects our expectation of sustained solid consolidated financial measures of parent Aqua America Inc., steady operating performance, and the company's effective management of regulatory risk. Our baseline forecast for Aqua America includes funds from operations (FFO) to debt of about 17%-20%.

NEW YORK (S&P Global Ratings) Sept. 21, 2016--S&P Global Ratings today affirmed all its ratings on regulated water utility Aqua Pennsylvania Inc., including the 'A+' long-term issuer credit rating. The outlook is stable. Aqua Pennsylvania Inc. is a wholly owned subsidiary of Aqua America Inc. (unrated).

"The ratings on Aqua Pennsylvania [Aqua Penn] reflect the consolidated credit quality of its parent company, Aqua America Inc.," said S&P Global Ratings credit analyst Safina Ali. Aqua Penn accounts for more than one-half of consolidated Aqua America's revenues and EBITDA. Nonutility operations contribute less than 5% of consolidated revenue and EBITDA.

We assess Aqua Penn's business risk profile as excellent, reflecting its very



 1717975 | 300642892

low risk U.S.-based regulated water and wastewater distribution operations; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, diversified residential and commercial customer base that provides stable revenues; and solid operations with a focus on cost control. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths. After considering the supportive cost recovery and strong regulatory framework and effective management of regulatory risk, we assess the business risk profile as being toward the high end of the category.

Our assessment of Aqua Penn's financial risk profile as intermediate is based on the low-volatility financial ratio benchmarks. Use of low-volatility financial benchmarks is based on the company's low-operating-risk water distribution business and its effective management of regulatory risk compared with peers. Timely rate relief and balanced financing of its growth strategy support Aqua's intermediate financial profile. Our baseline forecast results in adjusted FFO to debt of 17%-20%.

We revised our management and governance assessment on Aqua Penn to satisfactory from strong. This revision aligns our management and governance assessment on the company with those of peers and reflects our view of management's generally consistent strategy and ability to typically execute on it.

The stable rating outlook over the next two years on Aqua Penn reflects our expectation of sustained solid consolidated financial measures of parent Aqua America Inc., steady operating performance, and the company's effective management of regulatory risk. Our baseline forecast for Aqua America includes FFO to debt of about 17%-20%.

We could lower the ratings on Aqua Pennsylvania if the credit quality of the group declines including weakening business risk profile as a result of material expansion into the riskier non-utility operations or adverse regulatory outcomes. In addition, a worsening financial risk profile from weaker operating cash flow or greater debt leverage within the group could also lead to lower ratings. Specifically, we could lower the ratings if FFO to debt falls to less than 14% for Aqua America on a sustained basis.

Although less likely, we could raise the rating if FFO to debt for Aqua America consistently strengthened to greater than 22%, which could result from an improvement in the economy or deleveraging.

RELATED CRITERIA AND RESEARCH

Related Criteria

- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014

- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology For Linking Short-Term And Long-Term Ratings For Corporate, Insurance, And Sovereign Issuers, May 7, 2013
- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Corporates - General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com and at www.spcapitaliq.com. All ratings affected by this rating action can be found on the S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

S&P Global
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# Research

## Summary:
# Aqua Pennsylvania Inc.

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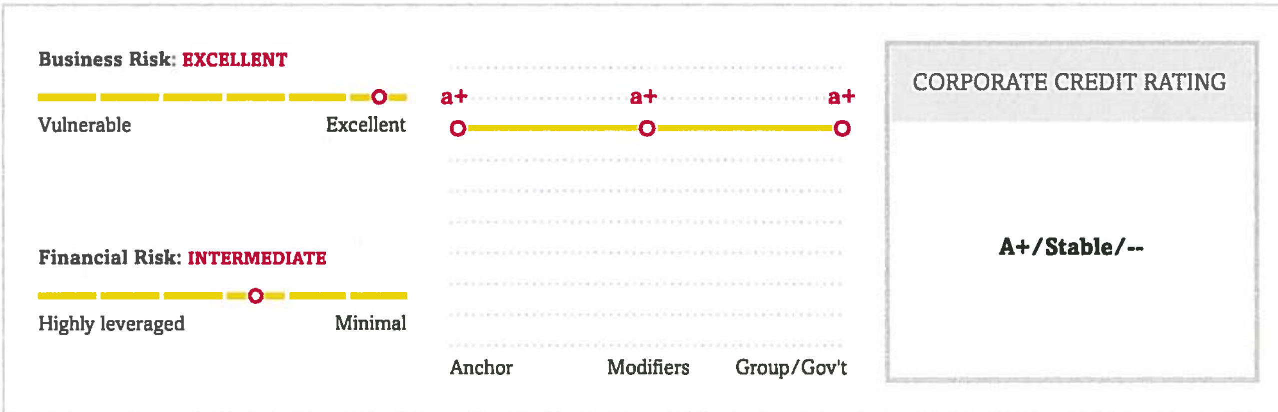
Summary:

# Aqua Pennsylvania Inc.




## Rationale

| Business Risk: Excellent | Financial Risk: Intermediate |
|---|---|
| • Monopolistic, rate-regulated, and low-risk water distribution business;<br>• Management's focus is primarily on rate-regulated utility operations;<br>• Favorable regulatory environment; and<br>• Cost recovery mechanisms that enhance cash flow predictability. | • Use of our most relaxed financial ratio benchmarks;<br>• Stable cash flow from regulated utility operations;<br>• Large capital spending requirements over the next several years; and<br>• Generally conservative financial policies. |

### Outlook: Stable

S&P Global Ratings' stable outlook over the next two years on Bryn Mawr, Pa.-based Aqua Pennsylvania Inc. (Aqua Penn) reflects the expectation of sustained solid consolidated financial measures of parent Aqua America Inc. steady operating performance, and the company's effective management of regulatory risk. Our baseline forecast for Aqua America includes funds from operations (FFO) to debt of about 16%-18%.

#### Downside scenario

We could lower the ratings on Aqua Penn if the credit quality of the group declines. This decline could be a result of a weakening business risk profile from a material expansion into riskier non-utility operations or because of adverse regulatory outcomes. In addition, a worsening financial risk profile from weaker operating cash flow or greater debt leverage within the group could also lead to lower ratings. Specifically, we could lower the ratings if FFO to debt falls to less than 14% for Aqua America on a sustained basis.

#### Upside scenario

Although less likely, we could raise the rating if FFO to debt for Aqua America consistently strengthened to greater than 22%, which could result from an increase in cash flows as a result of higher than anticipated sales volumes and an increase in customer connections or deleveraging.

## Our Base-Case Scenario

### Assumptions

- The company continues to receive a timely recovery of investments and operating expenses through rate surcharges and rate cases.
- Increase in customer base as a result of small tuck-in acquisitions results in single-digit annual gross margin growth.
- Capital spending of about $500 million in 2017, trending to historic levels in 2018 and 2019.
- Dividend payout ratio at Aqua America in the range of 60%-70% for all forecasted years.
- All the debt maturities are assumed to be refinanced.

### Key Metrics

| | 2016A | 2017E | 2018E |
|---|---|---|---|
| FFO to total debt (%) | 18.5 | 16.0-18.0 | 15.0-18.0 |
| Total debt to EBITDA (x) | 4.4 | 4.3-4.7 | 4.5-4.8 |

A-Actual. E-Estimate. FFO- Funds from operations.

## Business Risk: Excellent

The ratings on Aqua Penn reflects the consolidated credit quality of its parent company, Aqua America Inc. Aqua Penn accounts for more than one-half of consolidated Aqua America's revenues and EBITDA. Non-utility operations contribute less than 5% of consolidated revenue and EBITDA.

We assess Aqua Penn's business risk profile as excellent, reflecting its very low-risk, U.S.-based, regulated water and wastewater distribution operations; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, diversified residential and commercial customer base that provides stable revenues; and solid operations with a focus on cost control. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths. After considering the supportive cost recovery, strong regulatory framework and effective management of regulatory risk, we assess the business risk profile as being toward the high end of the category.

## Financial Risk: Intermediate

Our assessment of Aqua Penn's financial risk profile as intermediate is based on our most relaxed financial ratio benchmarks reflecting the company's low-operating-risk water distribution business and its effective management of regulatory risk compared with peers. Timely rate relief and balanced financing of its growth strategy support Aqua's intermediate financial profile. Our baseline forecast results in adjusted FFO to debt of 16%-18%.

## Liquidity: Adequate

We assess Aqua Pennsylvania's liquidity as adequate because we believe its liquidity sources are likely to cover uses by more than 1.1x over the next 12 months and meet cash outflows even with a 10% decline in EBITDA. The assessment also reflects the company's generally prudent risk management, sound relationships with banks, and a generally satisfactory standing in credit markets.

| Principal Liquidity Sources | Principal Liquidity Uses |
|---|---|
| • Cash FFO of roughly $230 million; and<br>• Assumed ongoing parental support on liquidity needs. | • Debt maturities, of about $60 million, including outstanding short term debt; and –<br>• Maintenance capital spending of about $290 million and dividends in-line to maintain the utility's capital structure. |

## Group Influence

Under our group rating methodology, we assess Aqua Penn to be a core subsidiary of Aqua America, reflecting our view that Aqua Penn is highly unlikely to be sold, has a strong long-term commitment from senior management, is successful at what it does, and contributes meaningfully to the group. There are no meaningful insulation measures in place that protect Aqua Penn from its parent and therefore, our issuer credit rating (ICR) on Aqua Penn is in-line with Aqua America's group credit profile of 'a+'.

## Ratings Score Snapshot

### Corporate Credit Rating

A+/Stable/--

**Business risk: Excellent**

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Excellent

**Financial risk: Intermediate**

- **Cash flow/Leverage:** Intermediate

**Anchor: a+**

**Modifiers**

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

**Stand-alone credit profile : a+**

- **Group credit profile:** a+
- **Entity status within group:** Core

## Recovery Analysis

We assign recovery ratings to first mortgage bonds (FMBs) issued by U.S. utilities, which can result in issue ratings being notched above an issuer credit rating (ICR) on a utility depending on the rating category and the extent of the collateral coverage. Aqua Penn's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the ICR.

## Related Criteria

- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013

- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Corporates - General: 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

**Business And Financial Risk Matrix**

| | Financial Risk Profile | | | | | |
|---|---|---|---|---|---|---|
| **Business Risk Profile** | Minimal | Modest | **Intermediate** | Significant | Aggressive | Highly leveraged |
| **Excellent** | aaa/aa+ | aa | **a+/a** | a- | bbb | bbb-/bb+ |
| Strong | aa/aa- | a+/a | a-/bbb+ | bbb | bb+ | bb |
| Satisfactory | a/a- | bbb+ | bbb/bbb- | bbb-/bb+ | bb | b+ |
| Fair | bbb/bbb- | bbb- | bb+ | bb | bb- | b |
| Weak | bb+ | bb+ | bb | bb- | b+ | b/b- |
| Vulnerable | bb- | bb- | bb-/b+ | b+ | b | b- |

S&P Global
Ratings

# Research

Research Update:

# Aqua Pennsylvania Inc. 'A+' Issuer Level Rating Affirmed; Outlook Revised To Negative On Weaker Financial Measures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Research Update:

# Aqua Pennsylvania Inc. 'A+' Issuer Level Rating Affirmed; Outlook Revised To Negative On Weaker Financial Measures

## Overview

- We expect the consolidated financial measures for Aqua Pennsylvania Inc. (Aqua Penn) and Aqua America Inc. (WTR) to weaken prospectively reflecting a combination of robust capital spending, on-going small acquisitions that are primarily debt-funded, and our expectation of higher current tax expenses for the company.
- We are revising our rating outlook on Aqua Penn to negative from stable. At the same time, we are affirming our ratings including the 'A+' issuer credit rating and 'AA-' secured debt rating.
- The negative outlook reflects our expectation for weaker consolidated financial measures and a potential strain on cash flow. Without counter-measures such as additional equity, improved operating cash flows, or a deleveraging plan, the company's financial risk profile could weaken further, possibly resulting in lower ratings.

## Rating Action

On July 09, 2018, S&P Global Ratings affirmed its 'A+' issuer credit rating on Aqua Pennsylvania Inc. and the 'AA-' rating on the company's secured debt. We also revised our rating outlook to negative from stable.

## Rationale

The outlook revision reflects our expectation that parent Aqua America's consolidated funds from operations (FFO) to total debt will fall to 14%-15% for 2018 through 2022, from its historical average of about 18%. The weaker financial measures place the company at the lower end of the range for its current financial risk profile category, resulting in minimal cushion for the 'A+' rating. Our expectations for weak financial measures reflect the company's robust capital spending, on-going small acquisitions that are mostly debt-funded, and our expectation of higher current tax expenses. Without counter-measures such as additional equity, improved operating cash flows, or a deleveraging plan, the company's financial risk profile could weaken further, possibly resulting in lower ratings.

Our ratings on Aqua Penn reflects the consolidated group credit profile of its parent company, Aqua America Inc. Aqua Penn accounts for more than one-half of consolidated Aqua America's revenues and EBITDA. Non-utility operations contribute less than 5% of consolidated revenue and EBITDA.

We assess Aqua Penn's business risk profile as excellent, reflecting its very low-risk, U.S.-based, regulated water and wastewater distribution operations; a supportive regulatory environment with favorable cost-recovery mechanisms that enhance cash flow predictability; a large, diversified residential and commercial customer base that provides stable revenues; and solid operations with a focus on cost control. The company's elevated capital spending requirements for infrastructure replacement, increasing costs of compliance with water quality standards, and a highly acquisitive growth strategy somewhat temper the company's strengths. After considering the supportive cost recovery, strong regulatory framework, and effective management of regulatory risk, we assess the business risk profile as being toward the high end of the excellent category.

We assess Aqua Penn's financial risk profile as intermediate using our most relaxed financial ratio benchmarks, reflecting the company's low-risk water distribution business and its effective management of regulatory risk compared with peers. Aqua Penn's financial profile has historically been supported in part by the use of repair tax deductions. However, we no longer expect the use the repair tax deduction to persist, resulting in a higher current tax expenses for the company going forward. In addition, Aqua Penn's capital spending program remains robust, and the company's strategy continues to reflect on-going small acquisitions, most of which are debt-financed. For these reasons, we expect Aqua Penn's consolidated financial measures will fall to 14%-15%, indicative of the lower end of the range for the company's current financial risk profile category. Our base case assumes capital spending of about $500 million, $110 million of acquisition costs, and future rate cases.

## Liquidity

Aqua Penn has adequate liquidity and can more than cover its needs for the next 12 months, even if EBITDA declines by 10%. We expect the company's liquidity sources over the next 12 months will exceed uses by more than 1.1x. Aqua Penn's liquidity benefits from the company's ability to absorb a high-impact, low-probability event with limited need for refinancing, its well-established relationships with banks, a satisfactory standing in the credit markets, and manageable debt maturities over the next few years.

Principal liquidity sources:

- FFO of about $230 million; and
- Assumed ongoing parental support for liquidity needs.

Principal liquidity uses:

- Debt maturities of about $25 million;
- Maintenance capital spending of about $335 million; and

- Dividends in line with the utility's capital structure.

## Group Rating Methodology

Under our group rating methodology, we assess Aqua Penn to be a core subsidiary of Aqua America, reflecting our view that Aqua Penn is highly unlikely to be sold, has a strong long-term commitment from senior management, is successful at what it does, and contributes meaningfully to the group. There are no meaningful insulation measures in place that protect Aqua Penn from its parent. Therefore, our issuer credit rating (ICR) on Aqua Penn is in line with Aqua America's group credit profile of 'a+'.

## Outlook

The negative outlook for Aqua Penn reflects our expectation for weaker consolidated financial measures due to the company's on-going acquisition growth strategy, robust capital spending, and our expectation for higher current tax expense, which could possibly result in a ratings downgrade.

### Downside scenario

Without counter-measures such as additional equity, improved operating cash flows, or a deleveraging plan, we could lower our rating on Aqua Penn over the next 12 months if the company's consolidated FFO to debt remains consistently below 15%.

### Upside scenario

We could revise the outlook to stable if the consolidated FFO to debt remains above 15% on a consistent basis.

## Ratings Score Snapshot

Corporate Credit Rating: A+/Negative/--

Business risk: Excellent
- Country risk: Very low
- Industry risk: Very low
- Competitive position: Excellent

Financial risk: Intermediate
- Cash flow/Leverage: Intermediate

Anchor: a+

Modifiers
- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: a+
- Group credit profile: a+
- Entity status within group: Core

## Issue Ratings--Recovery Analysis

We assign recovery ratings to first mortgage bonds (FMBs) issued by U.S. utilities, which can result in issue ratings being notched above an issuer credit rating (ICR) on a utility depending on the rating category and the extent of the collateral coverage. Aqua Penn's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the ICR.

## Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings , April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013

- Criteria - Corporates - Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

## Ratings List

Ratings Affirmed; Outlook Action

| | To | From |
|---|---|---|
| Aqua Pennsylvania Inc. | | |
| Corporate Credit Rating | A+/Negative/-- | A+/Stable/-- |

Ratings Affirmed

| | |
|---|---|
| Aqua Pennsylvania Inc. | |
| Senior Secured | AA- |
| Recovery Rating | 1+ |

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR18. Provide copies of all bond rating reports relating to the company and, if applicable, its parent for the past 2 years.

A. Please refer to the Company's response to RR17.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR19. Supply copies of all presentations by the company's and, if applicable, its parent's management and securities analysts during the past 2 years, including presentations of financial projections.

A. Attached is a copy of the parent company's, Aqua America, Inc., material presented to analysts in May 2018. These presentations are substantially the same as those presented over the past two years, but has been continually updated with current information.

The presentations have also included copies of the parent company's Annual Report and SEC Filings.

# Earnings Call

AQUA

NYSE: WTR

First Quarter 2018

May 9, 2018

# Forward Looking Statement

This presentation contains in addition to historical information, forward looking statements based on assumptions made by management regarding future circumstances over which the company may have little or no control, that involve risks, uncertainties and other factors that may cause actual results to be materially different from any future results expressed or implied by such forward-looking statements. These factors include, among others, the following: general economic and business conditions; weather conditions affecting customers' water usage or the company's cost of operations; costs arising from changes in regulations; regulatory treatment of rate increase requests; availability and cost of capital; the success of growth initiatives, including pending acquisitions; the ability to generate earnings from capital investment; and other factors discussed in our Form 10-K for the fiscal year ended December 31, 2017, which is on file with the SEC. We undertake no obligation to publicly update or revise any forward-looking statement.

Non-GAAP Reconciliation

For reconciliation of non-GAAP financial measures, see the Investor Relations section of the company's Web site at www.aquaamerica.com

# Today's Presenters

**Christopher Franklin**
Chairman &
Chief Executive Officer

**Dave Smeltzer**
Executive Vice President,
Chief Financial Officer

**Dan Schuller**
Executive Vice President,
Strategy and Corp.
Development & Deputy CFO

**Brian Dingerdissen**
Vice President, Chief of Staff
& Investor Relations

# Introduction

## Christopher Franklin

Chairman, Chief Executive Officer and President

AQUA℠

NYSE: **WTR**

# Today's Agenda

- Corporate Update
- Quarter Highlights
- Summary of Financial Results
- Rates & Acquisition Update
- 2018 Guidance

# Dave Smeltzer Retirement

- 32-year career with Aqua
- CFO for 19 years
- Played a key role in over 300 acquisitions
- Helped to pioneer regulatory mechanisms such as DSIC
- Named 2009 CFO of the Year by Philadelphia Business Journal

# Executive Team Update

## Dan Schuller

- Appointed CFO, serving as deputy CFO until Dave Smeltzer retirement in October
- Previously was EVP, Strategy and Corporate Development since 2015
- Spent 8 years with J.P. Morgan Asset Management – Infrastructure Investments Group

## Matthew Rhodes

- Named EVP, Strategy and Corporate Development
- Spent 11 years at Goldman Sachs Investment Banking Division, with lead coverage of more than 25 utility companies

## Christina Kelly

- Appointed Chief Human Resources Officer starting May 21
- Previously vice president of HR at AmerisourceBergen with 14 years of human resources experience

# 2018 First Quarter Highlights

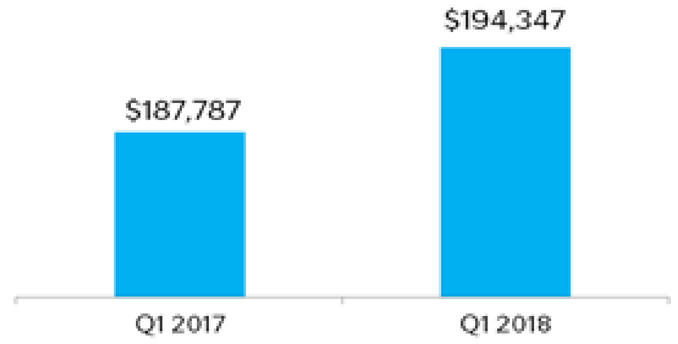
## Acquisitions

- Three water and wastewater system acquisitions closed in Q1 including one in PA and two in Ohio

## Customer Growth

- Added 2,259 new customers
- 2-3% customer growth expected for the year

## Revenue Growth




## EPS Growth

# Summary of Financial Results


**Dave Smeltzer**

Executive Vice President and CFO

**Dan Schuller**

Executive Vice President, Strategy and Corporate Development and Deputy CFO


AQUA[SM]

NYSE: **WTR**

# 2018 First Quarter Financial Results

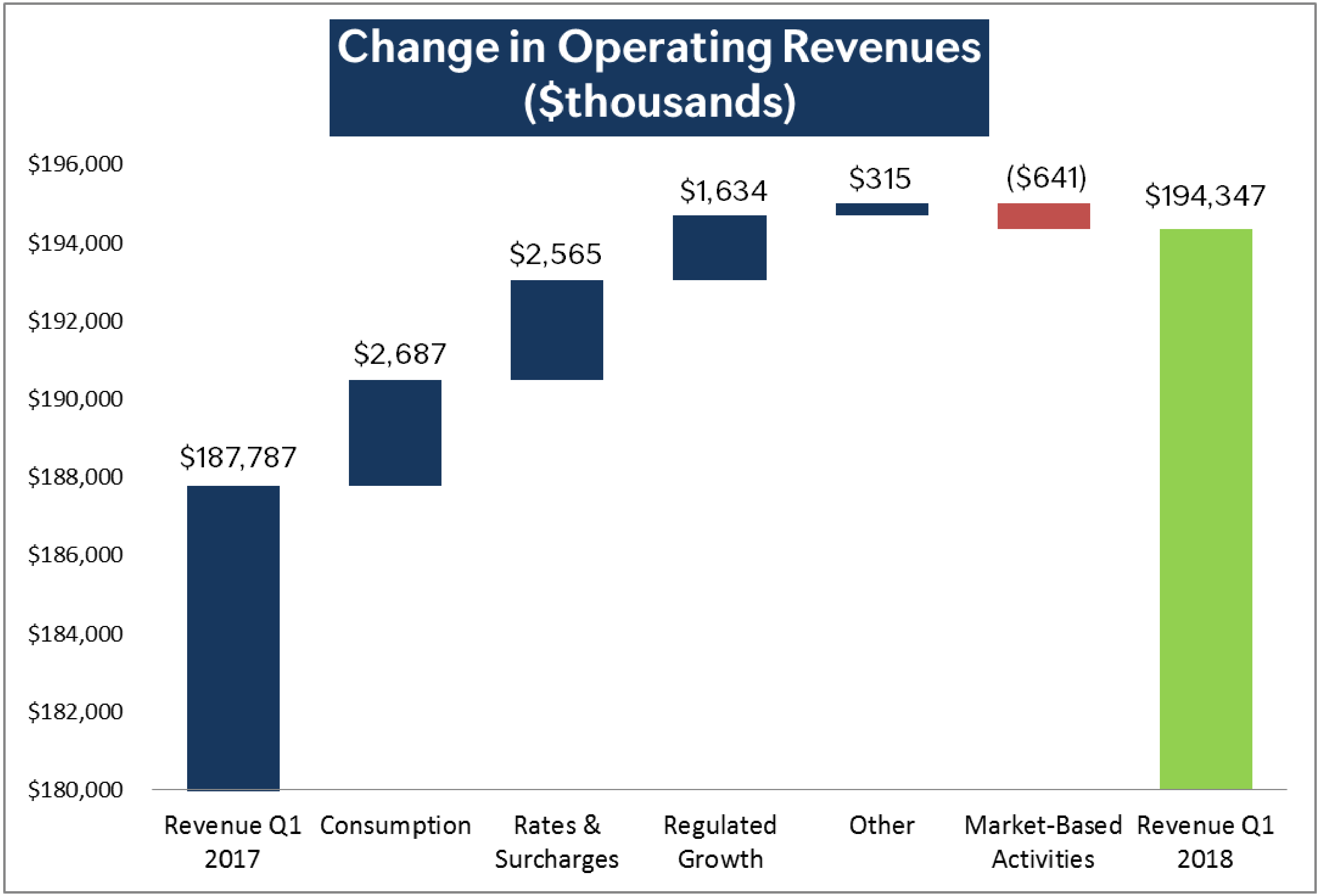
| In millions except per share | Q1 2018 | | Q1 2017 | Variance |
|---|---|---|---|---|
| **Revenue** | $194.3 | ▲ | $187.8 | 3.5% |
| **Operations and Maintenance Expense** | $73.9 | ▲ | $67.9 | 8.9% |
| **Net Income** | $50.8 | ▲ | $49.1 | 3.6% |
| **Net Income per Share** | $0.29 | ▲ | $0.28 | 3.6% |

Favorable Change

Unfavorable Change

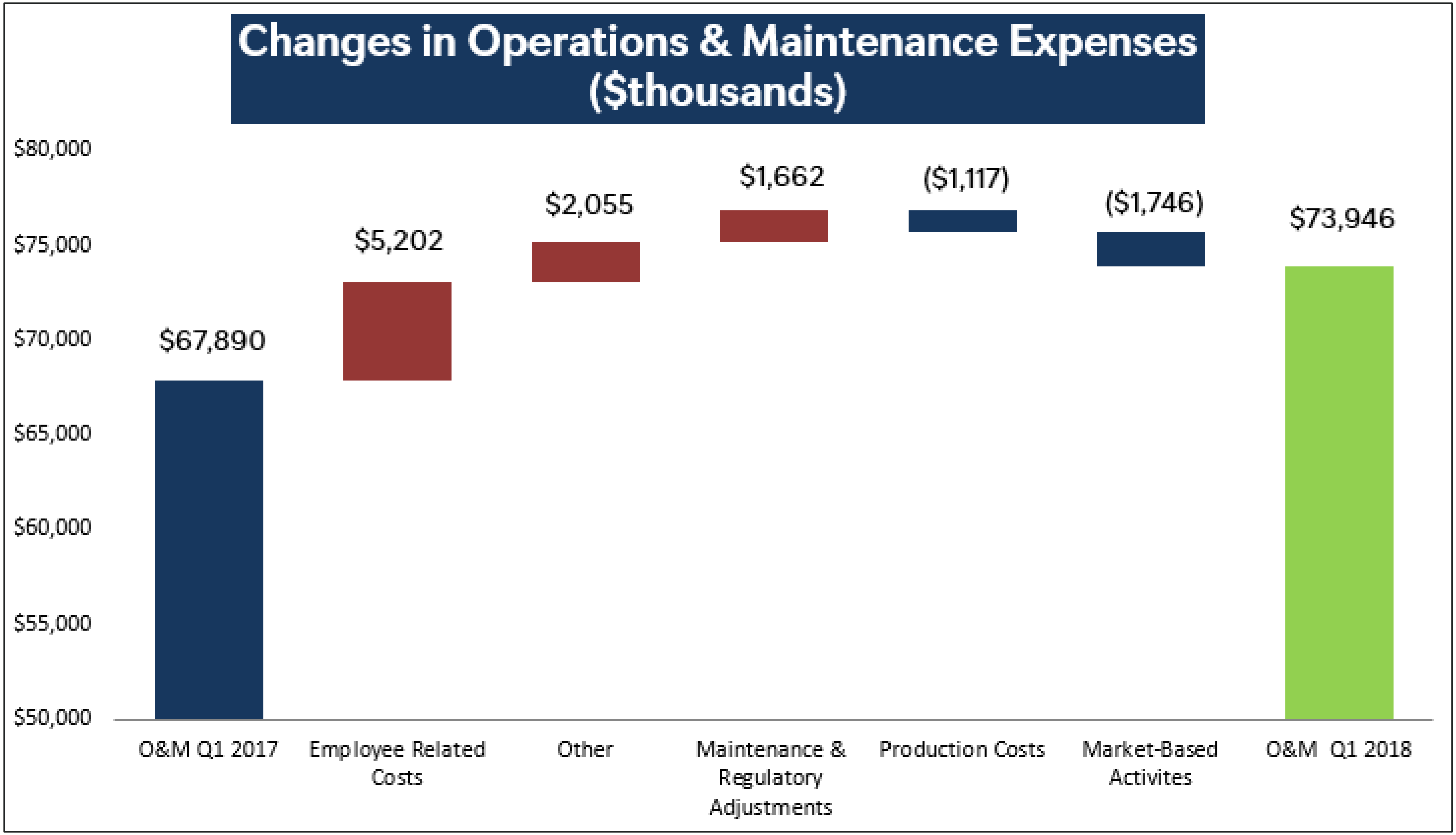
# Operating Revenues

## Q1 2018 vs. Q1 2017



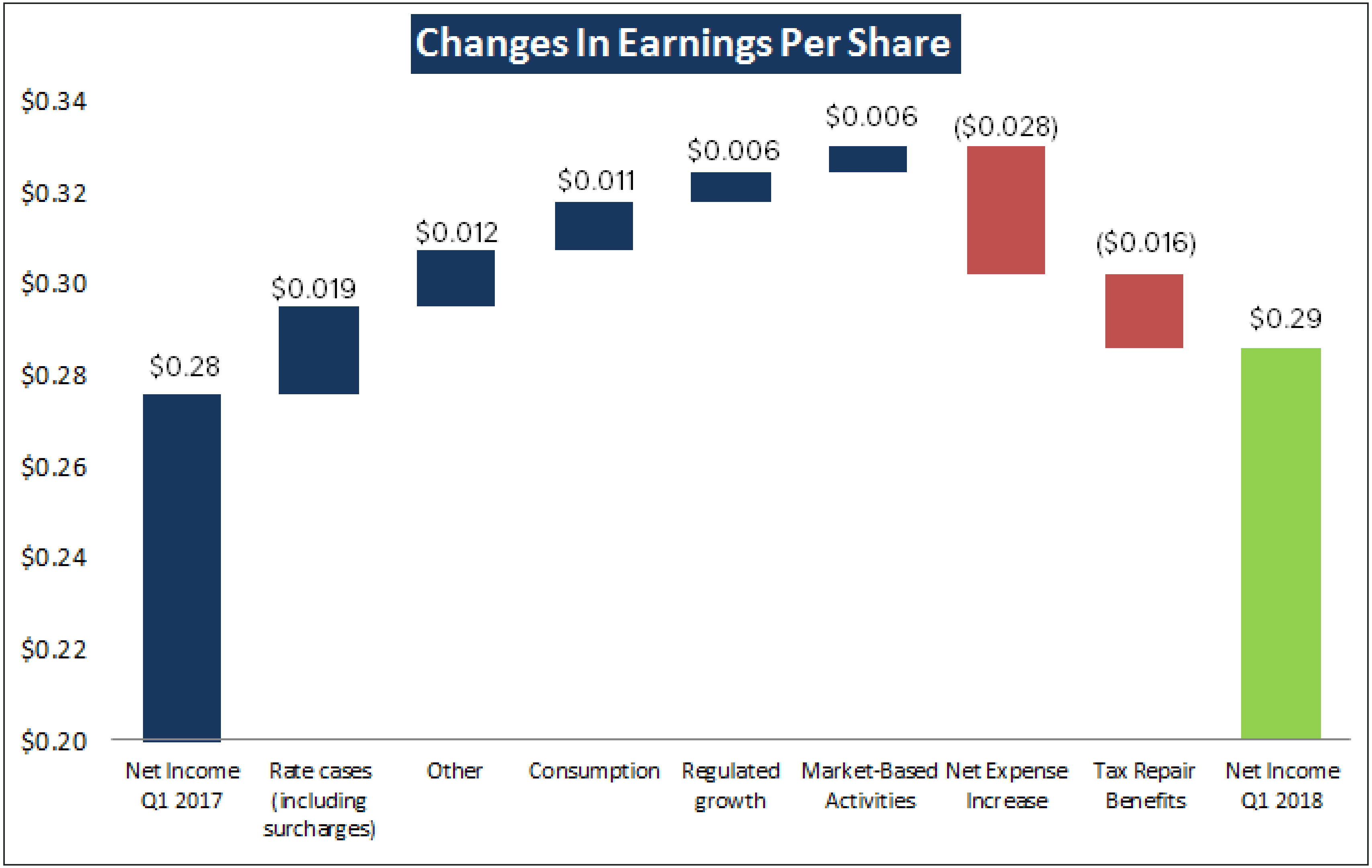
# Operations & Maintenance Expenses

Q1 2018 vs. Q1 2017



# Earnings per Common Share

## Q1 2018 vs. Q1 2017



# Rate Activity

## 2018 Completed Rate Cases and Surcharges

- Base rate cases or surcharges completed in IL, IN NJ, NC, OH, PA, and TX
- $23.6 million in additional annualized revenue

## 2018 Pending Rate Cases and Surcharges

- Base rate cases or surcharges in IN, NC, OH, and VA with requested annualized revenue increase of $8.6 million

Additional rate activity information provided in Appendix

# 2018 Municipal Acquisition Activity

***We have six municipal acquisitions that are signed and slated to close in 2018.***

| Acquisition[1] | Type | Approx. Number of Customers | Approx. Purchase Price ($000s) |
|---|---|---|---|
| System A | WW | 5,400 | $75,100 |
| System B | WW | 2,100 | $29,500 |
| System D | W | 600 | $3,600 |
| System E | W / WW | 2,987 | $12,300 |
| System F | WW | 3,838 | $25,200 |
| System G | WW | 1,400 | $5,000 |
| **Total** | | **16,325** | **$150,700** |

1) System C (Tobyhanna, PA) closed in2017.

# 2018 Guidance

## Christopher Franklin

Chairman, Chief Executive Officer and President

AQUA℠

NYSE: **WTR**

# 2018 Guidance

| | |
|---|---|
| Earnings | • Full-year earnings per share between \$1.37 – \$1.42 |
| Capex | • Infrastructure investment of approximately \$500 million in 2018<br>• Infrastructure investment of approximately \$1.4 billion planned through 2020 in existing operations<br>• Rate base growth of approximately 7% |
| Rate Activity | • Aqua Pennsylvania, files a rate case in 2018 with resolution expected in 2019 |
| Customer Growth | • Total customer growth of between 2 to 3% |

# Q&A Session

AQUA

NYSE: WTR

# Thank You for Attending Aqua America's First Quarter 2018 Earnings Call

Second Quarter 2018 Earnings
Conference Call and Webcast
Thursday, August 9, 2018

For more information contact:
Brian Dingerdissen
Vice President, Chief of Staff and Investor Relations
610.645.1191

# Appendix

AQUA

NYSE: **WTR**

# 2018 Acquisitions

As of May 8, 2018

| State | Acquisitions Closed | Total Customers | Total Collective Purchase Price ($thousands) |
|---|---|---|---|
| PA | 1 | 81 | $4.5 |
| OH | 2 | 367 | $185.6 |
| | | | |
| **Total** | **3** | **448** | **$190.1** |

0.2% Total Customer Growth

31% of Acquired Customers from Wastewater Systems

# Rates and Infrastructure Surcharges Completed

as-of May 7, 2018

| Rates or Surcharges Received in 2018 | | | |
|---|---|---|---|
| State | Docket Number | Type | Awarded Annualized Revenue Increase ($thousands) |
| Illinois* | 17-0259 | Rate Case (w) | $6,549 |
| | 17-0259 | Rate Case (ww) | $758 |
| Indiana | 50137, 50144, 50143, 50141 | Tax Compliance Filing | ($39) |
| New Jersey | WR16010090 | Surcharge (w) | $1,913 |
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| Texas | 48197 | Tax Credit Surcharge | ($3,726) |
| | | **Total** | **$23,555** |

Rates and Surcharges differentiated by water (w) and wastewater (ww) systems

*IL Rate Case was petitioned for rehearing on 4/6/18 and denied on 4/19/18, however the other parties have 30 days to file an appeal – rate increase awarded could be subject to refund if an appeal is awarded

# Rates and Surcharges Pending

as-of May 7, 2018

| Rates Pending in 2018 | | | |
|---|---|---|---|
| State | Docket Number | Type | Requested Annualized Revenue Increase ($thousands) |
| Indiana | TBD | Tax Compliance Filing | ($750) |
| North Carolina | W-218, Sub 497 | Rate Case (w) | $3,664 |
| | W-218, Sub 497 | Rate Case (ww) | $1,304 |
| | W-218, Sub 363A | Surcharge (w) | ($27) |
| | W-218, Sub 363A | Surcharge (ww) | $50 |
| Ohio | 18-0337-WW-SIC | Surcharge (w) | $2,440 |
| Virginia* | PUR-2017-00082 | Rate Case (w) | $1,489* |
| | PUR-2017-00082 | Rate Case (ww) | $399* |
| | | **Total** | **$8,570** |

Rates and Surcharges differentiated by water (w) and wastewater (ww) systems

*VA Interim Rates were reduced for water, and eliminated for wastewater in response to Tax Reform.

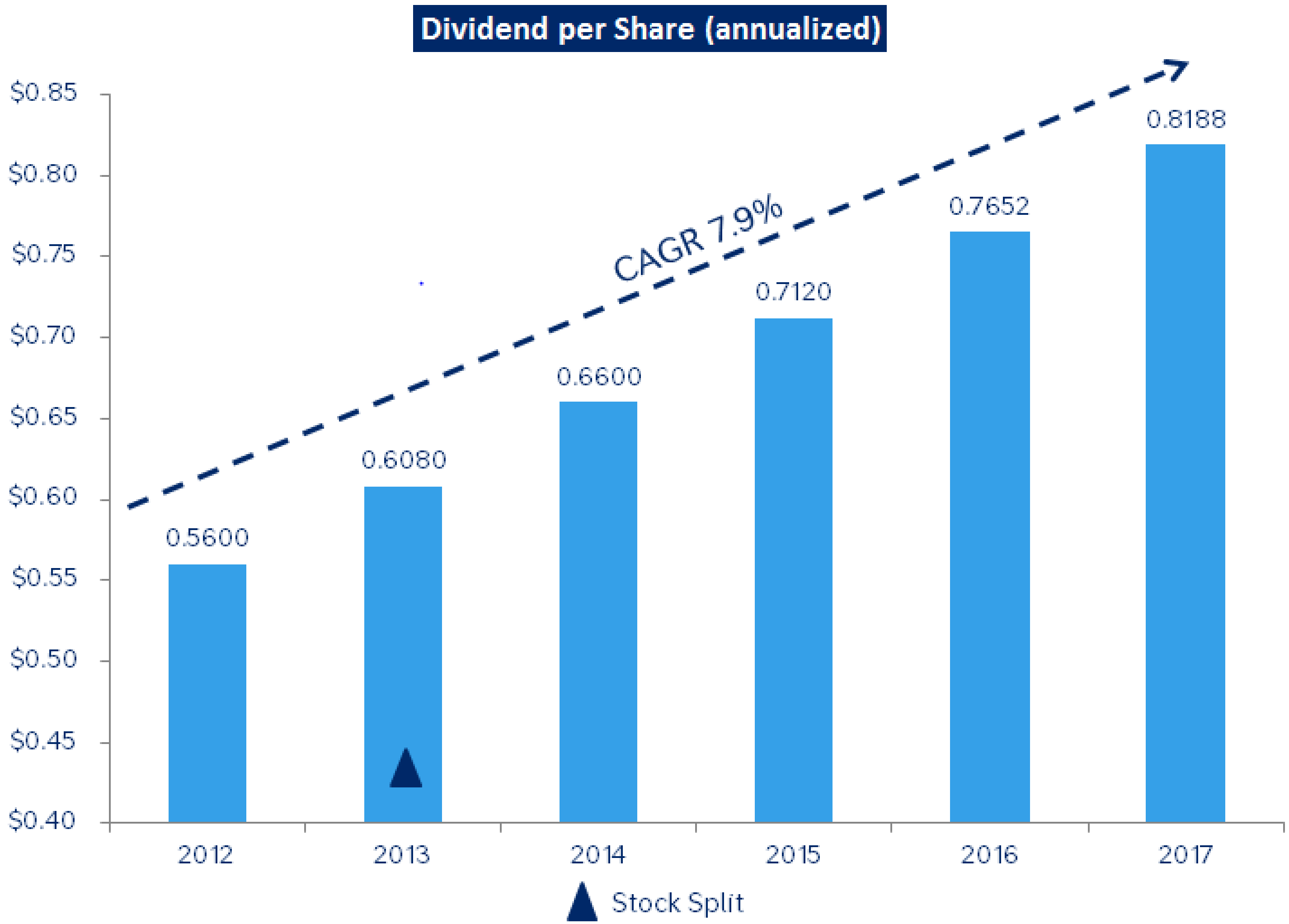
# State by State Comparison

as of December 31, 2017

| State | Rate Base ($millions) | Water Connections | Wastewater Connections |
|---|---|---|---|
| PA | $2,831 | 437,985 | 21,306 |
| OH | 287 | 145,000 | 6,719 |
| IL | 276 | 63,699 | 9,821 |
| TX | 241 | 63,046 | 16,869 |
| NJ | 172 | 53,115 | 6,125 |
| NC | 165 | 79,906 | 18,293 |
| IN | 74 | 1,169 | 26,371 |
| VA | 77 | 25,676 | 7,749 |
| **Total** | **$4,123** | **869,596** | **113,253** |

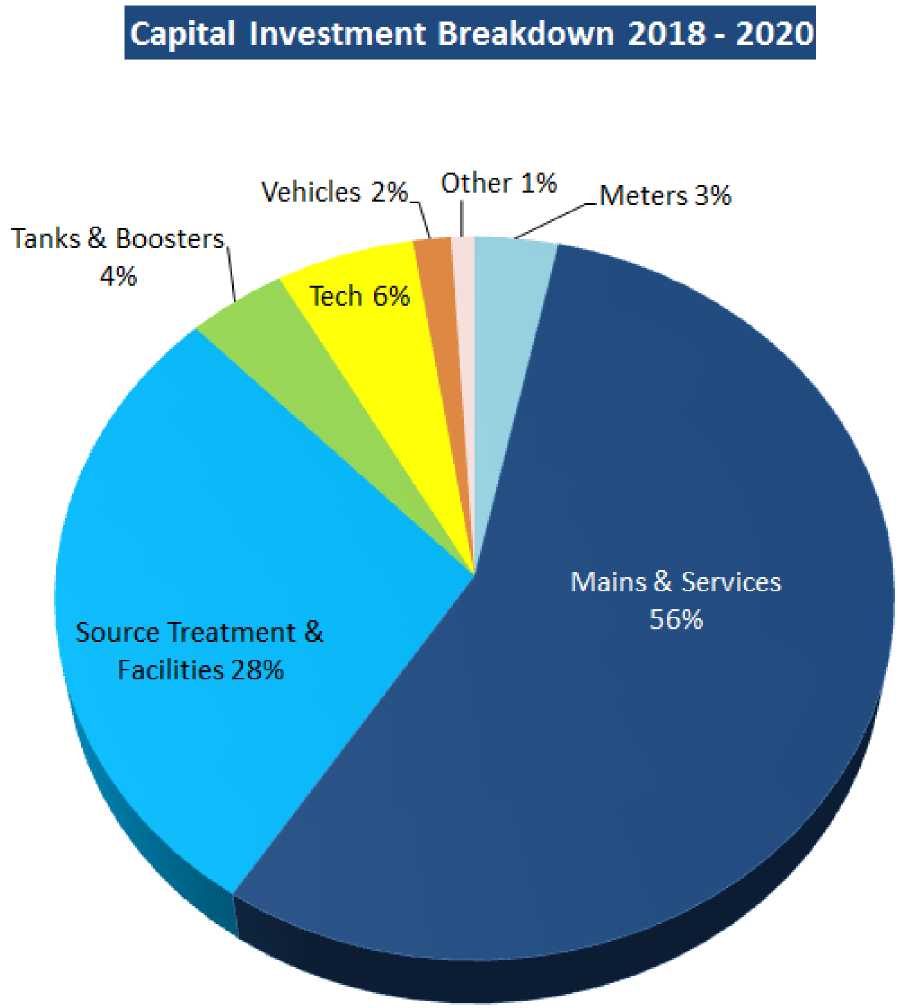
# Dividend History

## 7.0% Increase to Annualized Dividend Rate of $0.8188 Effective 9/1/2017



# Infrastructure Investment

## Regulated Operations




**3 YEAR TOTAL= $1.4 billion**

# Aqua America

## Investor Presentation

AQUA

NYSE: **WTR**

**May 9, 2018**

## Forward Looking Statement

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Non-GAAP Reconciliation

For reconciliation of non-GAAP financial measures, see the Investor Relations section of the company's Web site at www.aquaamerica.com

## Company Overview


- Large multi-state water & wastewater company
- Proven growth model
- History of industry leading profitability
- Above average dividend growth



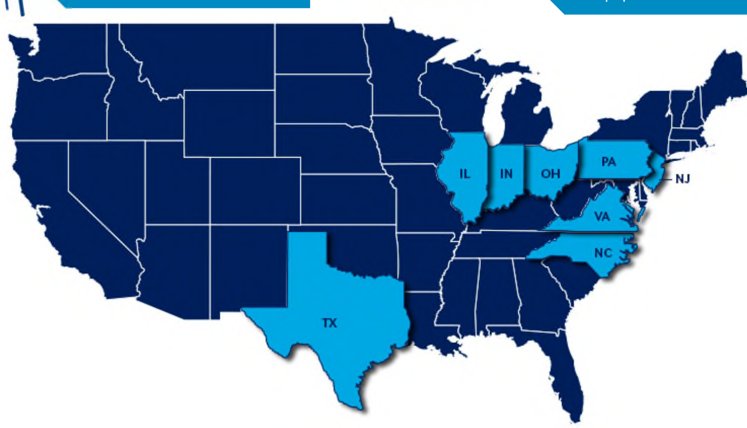
## U.S. Regulated Water and Wastewater Industry Overview

**Water**

- 53,000 systems in the U.S.
- 85% of U.S. population served by municipalities
- Aqua serves 1% of U.S. population

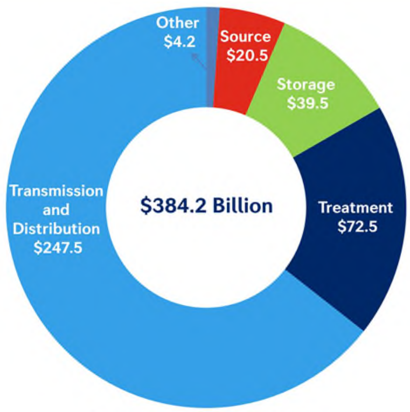
**Wastewater**

- 16,000 systems in the U.S.
- 97% of U.S. population served by municipalities
- Aqua serves 0.1% of U.S. population



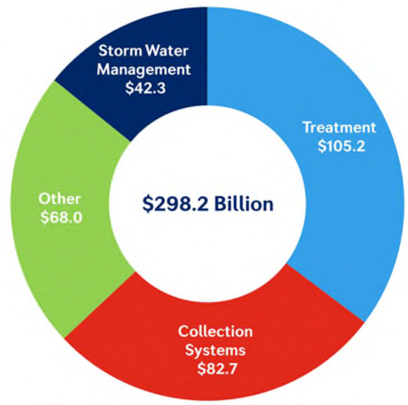
## EPA's Estimate of the National Need for Infrastructure Investment

### Water




Source: 2013 EPA Needs Survey

### Wastewater



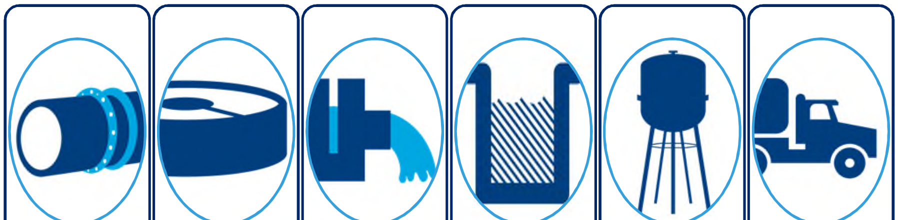

Source: 2013 ASCE Infrastructure Report Card

American Society of Civil Engineers Grade for Drinking Water and Wastewater Infrastructure = D



## Infrastructure Footprint

as of December 31, 2017



| + 12,825 Miles of Water Main | 21 Surface Water Filtration Plants | 187 Wastewater Treatment Plants | ~ 3,300 Wells | +866 Water Storage Tanks | ~1,100 Vehicles |
|---|---|---|---|---|---|

**$4.1 Billion in Total Rate Base**

# Mission: Protecting and Providing Earth's Most Essential Resource

## Sustainability

### Customers
- Compliance
- Near 100% Reliability
- Responsible Rate Increases
- Trusted Partner
- Top of Class Customer Service

### Communities
- Regulatory Innovation
- Civic Involvement
- Steward of Environment
- Rebuild Infrastructure
- Promote Economic Growth

### Employees
- Concern for Work Life Balance
- Ensure a Safe Working Environment
- Demonstrate Fair Pay / Benefits
- Growth and Development Opportunities
- Utilize Technology to Improve Efficiency
- Labor/ Mgmt. Partnership

### Shareholders
- Above Industry Average Long-term Growth
- Stable (Utility) Risk Profile
- Above Average Dividend Growth
- Buyback Opportunities



# 2018 First Quarter Highlights

## Acquisitions
- Three water and wastewater system acquisitions closed in Q1 including one in PA and two in Ohio

## Customer Growth
- Added 2,259 new customers
- 2-3% customer growth expected for the year

## Revenue Growth


## EPS Growth

## 2018 First Quarter Financial Results

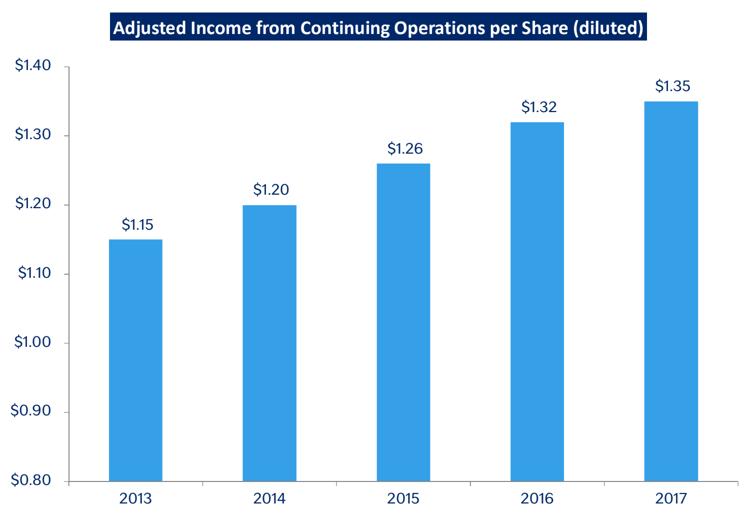
| In millions except per share | Q1 2018 | | Q1 2017 | Variance |
|---|---|---|---|---|
| **Revenue** | $194.3 | ▲ | $187.8 | 3.5% |
| **Operations and Maintenance Expense** | $73.9 | ▲ | $67.9 | 8.9% |
| **Net Income** | $50.8 | ▲ | $49.1 | 3.6% |
| **Net Income per Share** | $0.29 | ▲ | $0.28 | 3.6% |

■ Favorable Change

■ Unfavorable Change



## Growth in Income from Continuing Operations per Share

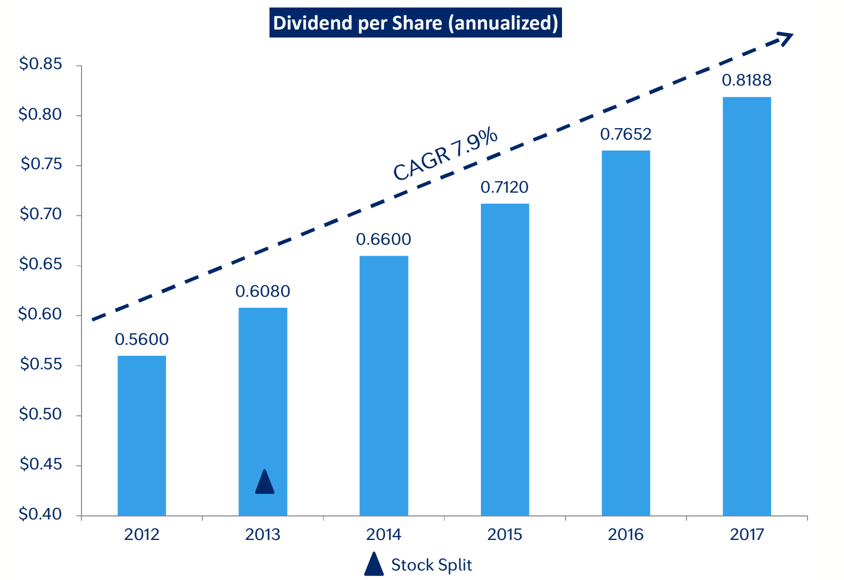



Source: Aqua Annual Reports

*2015: Income from Continuing Operations adjusted for Joint Venture Impairment Charge (a Non-GAAP Financial Measure)
2015 Income from Continuing Operations per Share was $1.14

# Dividend History

7.0% Increase to Annualized Dividend Rate Effective 9/1/2017

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# Tax Reform Implications

## 2017

- Write-off of $3.1M
  - Typically related to deferred comp, goodwill and deferred gains
- $303 million Deferred Income Tax reclassified to Regulatory Liability
- Ultimately be refunded to customers

## 2018

- Tax savings typically being deferred for future return to customers
- Exceptions
  - Negative impact in PA due to NOL status
  - Positive impact in Market Based and negotiated / divisions

NYSE: WTR AQUA 12

# Accounting for Tax Reform

Accrue 21% for Federal Income Tax @ 1/1/2018

Remaining 14%, will be recorded as:

| Reduction in Revenue (DR) | Recognition of Regulatory Liability (CR) |
|---|---|

Regulatory Liability

To be refunded to customers based on specific state requirements



# Change in Corporate Tax Rate

(Illustrative Example)

| | 35% Tax Rate | 21% Tax Rate |
|---|---|---|
| Revenue | $1.00 | $.88 |
| Expenses | $(0.35) | $(0.35) |
| Pre-Tax Income | $0.65 | $0.53 |
| *Federal Tax Rate* | *35%* | *21%* |
| Federal Income Tax | $(0.23) | $(0.11) |
| **Net Income** | **$0.42** | **$0.42** |

## Taxability of Capital Contributions (CAC / CIAC)

- Estimated $27 Million in CAC/CIAC Additions
- Taxes estimated to be $6 million
- Balance Sheet only
- Some states will recognize deferred tax asset in rate base



## Key Benefits

- Reduces rates / bills without impacting profitability
- Helps comparability to municipal bills
- Reduces the future increases required related to Capital additions
- 7:1 projects become 8:1 projects
- Permits more system improvements in a typical 5% infrastructure surcharge

## PA Rate Case Summary

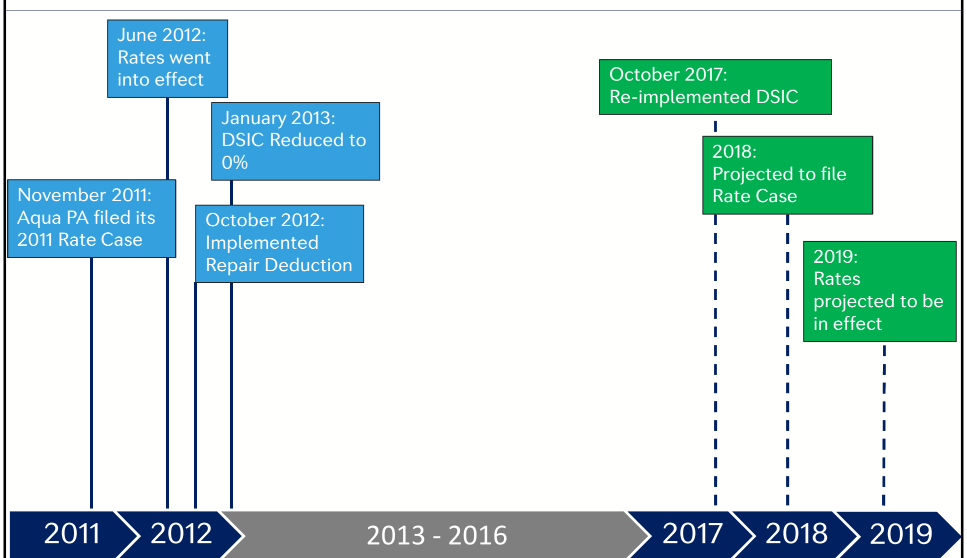
Timeframe:
- File: Summer 2018
- Complete: Spring 2019

Case Summary/Issues:
- First case filed in 7 years
- Over $2 billion of capital
- Consolidated Water & WW
- Over 20 Acquisitions
- First filing using Fully Projected Future Test Year
- Tax Act and Tax Repair

| Year | PA CAPX ($000's) |
|---|---|
| 2012 | $129,923 |
| 2013 | $212,721 |
| 2014 | $214,155 |
| 2015 | $248,354 |
| 2016 | $251,373 |
| 2017 | $308,006 |
| '18 and '19 (est.) | $650,000 |
| **Total** | **$2,014,532** |



## PA Rate Case Summary



# Rate Activity

## 2018 Completed Rate Cases and Surcharges

- Base rate cases or surcharges completed in IL, IN NJ, NC, OH, PA, and TX
- $23.6 million in additional annualized revenue

## 2018 Pending Rate Cases and Surcharges

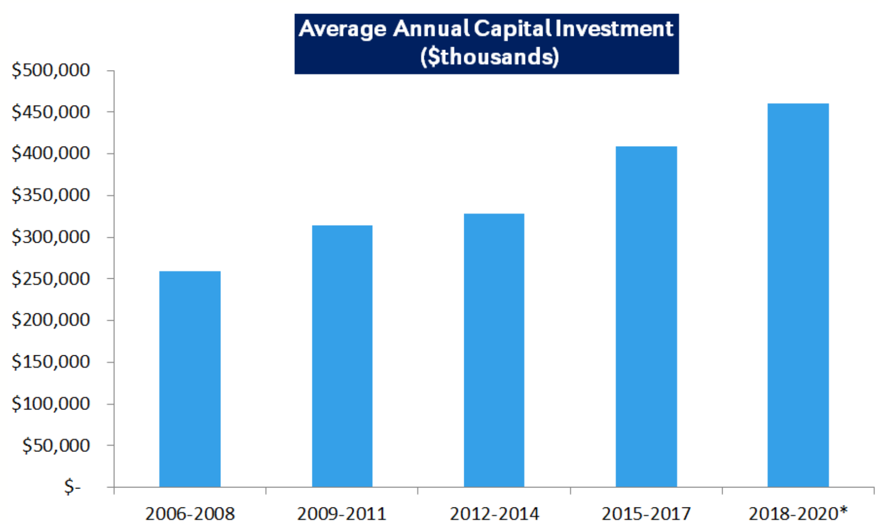
- Base rate cases or surcharges in IN, NC, OH, and VA with requested annualized revenue increase of $8.6 million

Additional rate activity information provided in Appendix



# Building for the Future

Regulated Operations




*2018 to 2020: forecasted annual capital investments

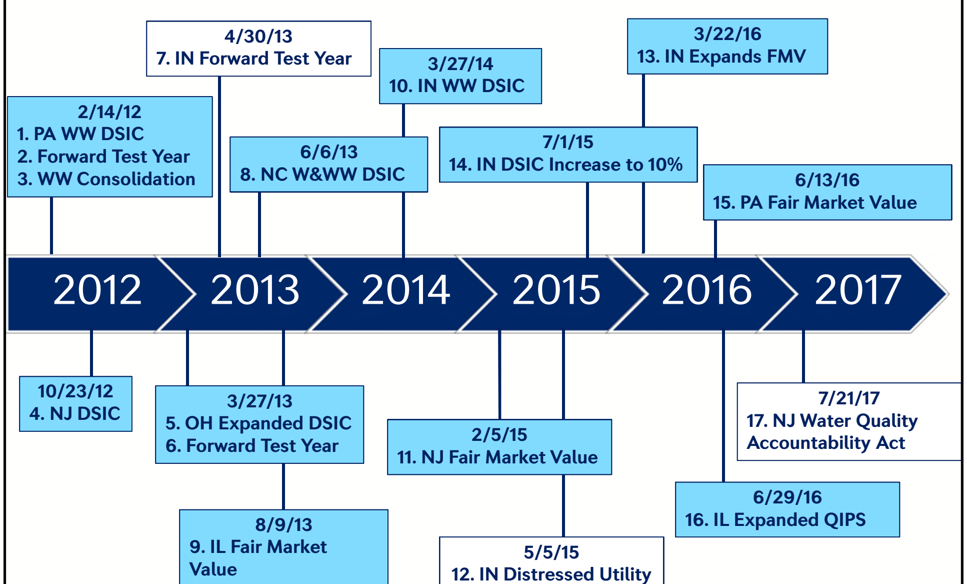
## Aqua States with Infrastructure Surcharges

| State | Allowed Surcharge |
|---|---|
| IL | 2.5% Avg. Annual Increase |
| IN | 10% |
| NC | 5% |
| NJ** | 5% |
| OH | 12.75% water<br>9% wastewater |
| PA | 7.5% water<br>5% wastewater |

* 16 additional states have water infrastructure surcharges
** Water only



## Water & Wastewater Regulatory Trends



# Aqua America Growth Strategy

**Core Competencies**

- Infrastructure Investment (pipes, plants, etc.)
- Regulatory Affairs
- Operational Excellence

**Leads To**

**Three-Pronged Growth Strategy**

**Municipal Initiative**
- Driver of growing our foundational water/wastewater business
- Our primary focus today

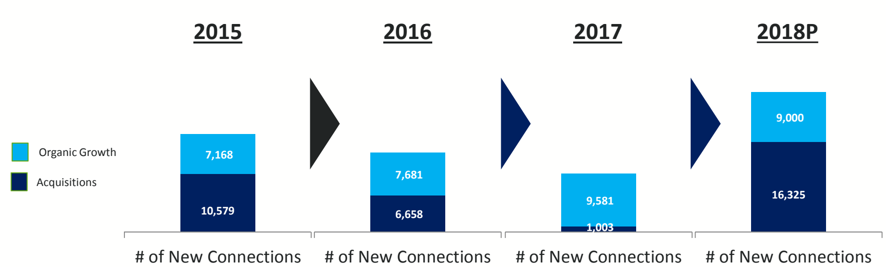
**Strategic M&A**
- Opportunistic pursuit of large, regulated utility/infrastructure targets

**MBAs**
- Complementary to our regulated business
- Capitalizes on broader infrastructure renewal



# Historical Growth Performance

***If we include our 2018 projections, from 2015 to 2018, we will average a total of ~17,000 new customers per year , with an average of ~8,600 from acquisitions.***




| | 2015 | 2016 | 2017 | 2018P |
|---|---|---|---|---|
| **Total New:** | 17,747 | 14,399 | 10,584 | 25,325 |
| **EOY Total Aqua:** | 957,866 | 972,265 | 982,849 | 1,008,174 |
| **YoY Growth %:** | 1.9% | 1.5% | 1.1% | 2.6% |

**Two transactions that were expected to close in 2017 shifted to 2018.**

## 2018 Municipal Acquisition Activity

*We have six municipal acquisitions that are signed and slated to close in 2018.*

| Acquisition[1] | Type | Approx. Number of Customers | Approx. Purchase Price ($000s) |
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| *Expected to Close in 2018* | | | |
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1) System C (Tobyhanna, PA) closed in 2017



## 2018 Guidance

**Earnings**
- Full-year earnings per share between $1.37 – $1.42

**Capex**
- Infrastructure investment of approximately $500 million in 2018
- Infrastructure investment of approximately $1.4 billion planned through 2020 in existing operations
- Rate base growth of approximately 7%

**Rate Activity**
- Aqua Pennsylvania, files a rate case in 2018 with resolution expected in 2019

**Customer Growth**
- Total customer growth of between 2 to 3%

## What Aqua Represents to the Investor

- One of the largest publicly traded water and wastewater companies, ideally positioned to address the nation's significant infrastructure needs
- A balanced growth & income investment with decades of strong dividend growth and performance
- Strategic approach to growth
- Strong Balance Sheet



For more information contact:
Brian Dingerdissen
Vice President, Chief of Staff and Investor Relations
610.645.1191
BJDingerdissen@AquaAmerica.com

# Appendix

AQUA

NYSE: WTR

# Rates and Infrastructure Surcharges Completed

as-of May 7, 2018

| Rates or Surcharges Received in 2018 | | | |
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| | W-218, Sub 363A | Surcharge (w) | ($27) |
| | W-218, Sub 363A | Surcharge (ww) | $50 |
| Ohio | 18-0337-WW-SIC | Surcharge (w) | $2,440 |
| Virginia* | PUR-2017-00082 | Rate Case (w) | $1,489* |
| | PUR-2017-00082 | Rate Case (ww) | $399* |
| | | **Total** | **$8,570** |

Rates and Surcharges differentiated by water (w) and wastewater (ww) systems

*VA Interim Rates were reduced for water, and eliminated for wastewater in response to Tax Reform.

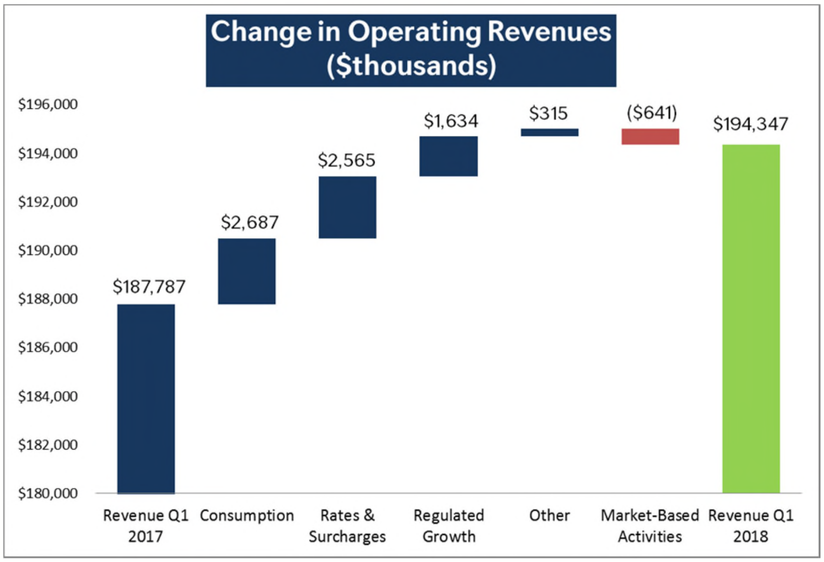


# State by State Comparison

as of December 31, 2017

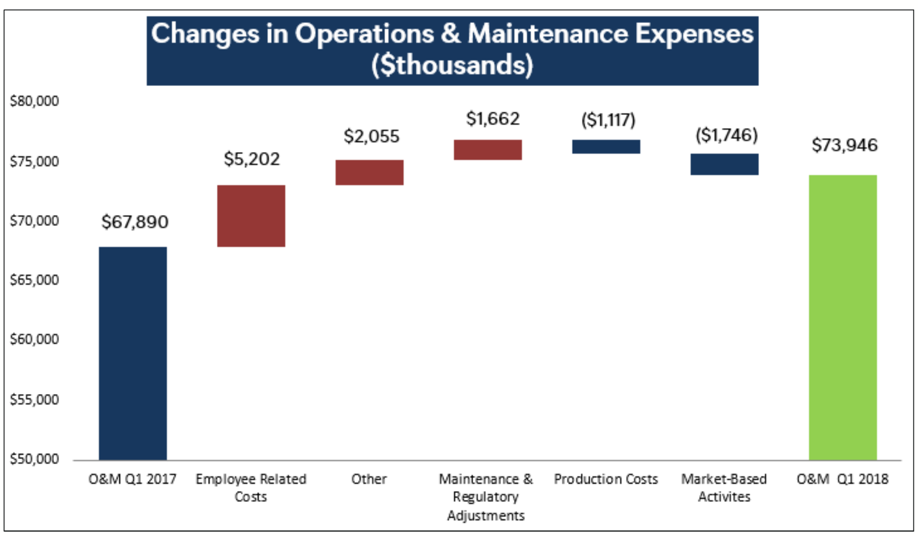
| State | Rate Base ($millions) | Water Connections | Wastewater Connections |
|---|---|---|---|
| PA | $2,831 | 437,985 | 21,306 |
| OH | 287 | 145,000 | 6,719 |
| IL | 276 | 63,699 | 9,821 |
| TX | 241 | 63,046 | 16,869 |
| NJ | 172 | 53,115 | 6,125 |
| NC | 165 | 79,906 | 18,293 |
| IN | 74 | 1,169 | 26,371 |
| VA | 77 | 25,676 | 7,749 |
| **Total** | **$4,125** | **869,596** | **113,253** |

# Operating Revenues
Q1 2018 vs. Q1 2017




NYSE: WTR AQUA. 33

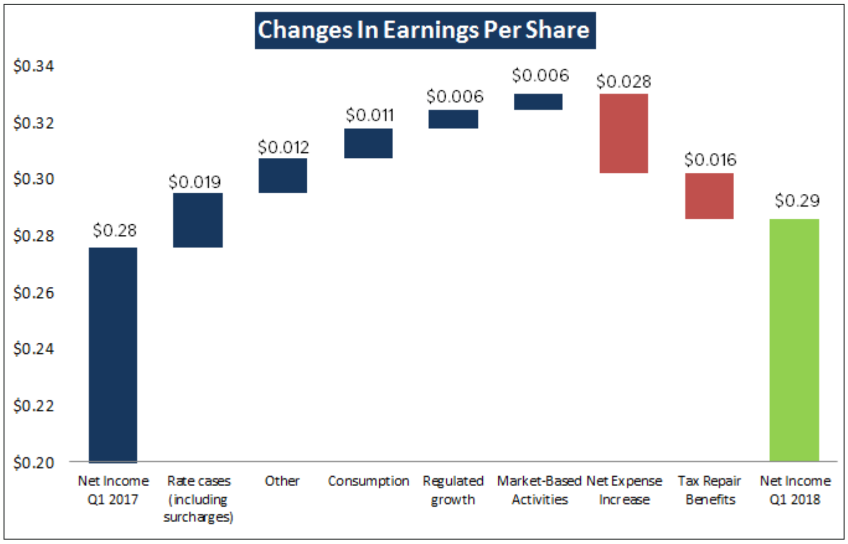
# Operations & Maintenance Expenses
Q1 2018 vs. Q1 2017




NYSE: WTR AQUA. 34

# Earnings per Common Share

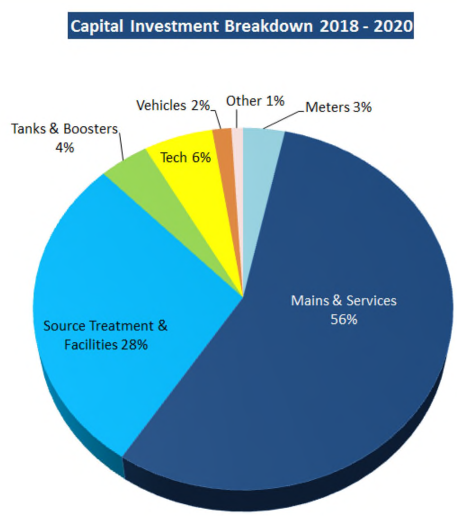
Q1 2018 vs. Q1 2017




NYSE: WTR AQUA. 35

# Infrastructure Investment

Regulated Operations




**3 YEAR TOTAL= $1.4 billion**

NYSE: WTR AQUA. 36

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR20. Provide a listing of all securities issuances for the company and, if applicable, its parent projected for the next 2 years. The response shall identify for each projected issuance the date, dollar amount, type of security, and effective cost rate.

A. The Company plans to file a securities certificate application with the PA PUC requesting authority to issue first mortgage bonds in an amount not to exceed $125,000,000 at current market rates. The issuance will occur no later than December 31, 2018. Please refer to the direct testimony of Paul R. Moul and the accompanying Exhibit 4 for the target structure at March 31, 2020.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

## G. Rate of Return

RR21. Identify any plan by the company to refinance high cost long-term debt or preferred stock.

A. The Company continually looks for ways to lower its cost of debt. Please refer to the Company's response to RR9 for refinancing activity since the prior rate case.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR22. Provide copies of all securities analysts' reports relating to the company and its parent, or both, issued within the past 2 years.

A. Please refer to the electronic copies provided on the enclosed flash drive.

Corrected Transcript

17-Jan-2017

# Aqua America, Inc. (WTR)

FY 2017 Guidance Call

# CORPORATE PARTICIPANTS

Brian Dingerdissen
*Vice President, Chief of Staff & Investor Relations, Aqua America, Inc.*

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

# OTHER PARTICIPANTS

Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*

Tyler Charles Frank
*Analyst, Robert W. Baird & Co., Inc. (Private Wealth Management)*

Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*

# MANAGEMENT DISCUSSION SECTION

**Operator**: Good day and welcome to Aqua America's 2017 Earnings Guidance Conference Call. Today's conference is being recorded. At this time, I would like to turn the conference over to Brian Dingerdissen, Vice President, Chief of Staff & Investor Relations. Please go ahead, sir.

## Brian Dingerdissen
*Vice President, Chief of Staff & Investor Relations, Aqua America, Inc.*

Thank you, Silvia. Good morning, everyone and thank you for joining Aqua America's 2017 earnings guidance conference call. If you did not receive a copy of the press release, you can find it by visiting the Investor Relations section of our website at aquaamerica.com. The slides that we will be referencing can be found on our website. There will also be a webcast of this event available on our site.

As a reminder, some of the matters discussed during this call may include forward-looking statements that involve risk, uncertainties and other factors that may cause the actual results to be materially different from any future results expressed or implied by such forward-looking statements. Please refer to our most recent 10-Q, 10-K and other SEC filings for a description of such risk and uncertainties.

During the course of this call, reference may be made to certain non-GAAP financial measures. A reconciliation of these non-GAAP to GAAP financial measures is posted in the Investor Relations section of the company's website.

Presenting today is Chris Franklin, Aqua America's Chief Executive Officer and Dave Smeltzer, the company's Chief Financial Officer. After the presentation, we will open the call up for questions.

At this time, I'd like to pass it over to Chris Franklin.

## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

Hey, thanks Brian, and good morning, everyone and Happy New Year. Thanks for joining us today. On today's call, I'll start by asking Dave Smeltzer to recap the guidance that we provided for 2016 and he'll go over some of the potential tax reform implications as they may affect the company. After that I'm going to provide an update on a few things that we thought might be of interest to you, then we'll conclude with an overview of our 2017 guidance which we released last night – I'm sorry earlier today with the press release. And lastly, we'll open it up and take any of your questions.

So that's it, Dave, I'll hand it over to you.

## David P. Smeltzer

*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

Thanks Chris, and good morning, everyone. Flipping to the next slide, I'll start with review of our 2016 guidance. We're affirming our earnings, customer growth, CapEx and expense guidance for 2016. We still expect the full year earnings per share to be in the $1.30 to $1.35 range we provided at the beginning of the year and probably close to the middle of that range, if not, below that middle as we discussed in our third quarter earnings call.

We already announced our customer growth of 1.6% based on 19 deals, including two municipal transactions. We expect that the final tally of our CapEx will reflect about $380 million in infrastructure investments in 2016, resulting in more than $1.1 billion of anticipated investments through 2018. Those investments we would anticipate the rate base growth in the 6% to 7% range. And lastly, same-system O&M expense increase, we're expecting in the 1% to 2% range for the full year.

So turning to the next slide, I'd like to talk about the potential tax reform changes, and how those might affect our business. But first, I'd like to note that, as a regulated utility, income tax expenses are largely a pass-through matter for us. So in the long run, there is no real impact to our profitability only to our customer rates. There could be some rate base implications or some short-term implications, and we'll talk about this. And although it's in a very early stage to comment on this, prior to the first 100 days of the new administration or even the inauguration for that matter, you can appreciate that we thought it was important to give you a few thoughts on how potential tax reform could impact our company.

So, let me outline the primary possibilities. First, we hear a lot about the potential for a tax rate reduction. And a tax rate reduction would be good typically, it would increase company's income, but in our regulated arena, the customers would get the benefit of that tax rate reduction immediately and they would either get it through a reset of rates, coincident with the timing of the tax rate reduction or more typically with us continuing to record taxes at the higher rate and defer that difference into a regulatory liability we paid back to our customers at a later date.

Second, that reduction in tax rate would create what we call excess deferred taxes. Taxes that were previously put up in the books at the 35% statutory rate. And upon reversal, we'll reverse at a lower rate, therefore leaving some liabilities stranded on the balance sheet. And so upon passage of a new tax reform act, we would typically re-class those excess deferred taxes to a regulatory liability, again to be paid back to our customers in the context of future rate proceedings.

Third, we're in a little bit of a unique situation, in that we still continue to record our repair tax deductions, which do flow through to net income. And so in that instance, a reduction of the tax rate could actually reduce the benefit of the repair tax and possibly cause an acceleration of our PA rate filing.

And then lastly talk about increasing tax deductions. And there will be possibility of deducting our capital expenditures and those sorts of things that could in the long-term slow our rate base growth which we've talked about as 6% to 7% in this period, just because of the increased deferred taxes associated with those kinds of deduction.

So with that as a quick overview, I'll hand the call back to Chris, who will provide an update on a few things we believe you'll find interesting. Chris?

## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

Hey, thanks, Dave. I thought, maybe we spend a couple of minutes updating you on the divestiture of our market based activities. And then we'll look at the customer growth that we had at the end of 2016.

Our effort to divest of our subscale market-based activities continues. We hope that we have concluded that process in 2016, but we still have two small businesses remaining. One is our cross-connection business and the other one is our training and field services business. We plan to close this cross-connection business even as early as this week, but in the coming days. And the other small business we are head out to some interested parties who are reviewing it now.

The one primary market-based activity that we plan to keep is the insurance product. You will recall, our partnership with HomeServe. That's the insurance that protects our service lines between our mains in the customers homes. And you will recall that we receive a royalty on each of the contracts. So we'll keep that and a limited number of O&M contracts that are relatively close to our current operations, and that together contribute in a small way to earnings.

Now, despite our divestiture of these small businesses, we do continue to evaluate market-based opportunities, which are closely related to our core. And if we find something that's the right scale, the right risk and the right profitability profile, we would consider expanding our market-based portfolio. And that being said, we don't see this segment of the company becoming a large component of Aqua America. We've discussed that with many of you over time. But we continue to spend our primary focus and resources on growing the regulated water and wastewater business, that's where we see the greatest opportunity at this point.

Now, last week we put a press release out that wrapped-up our 2016 customer growth efforts. The slide here summarizes what we've completed. We've invested more than $22 million in acquiring water and wastewater systems throughout the year. And also in 2016, we acquired 13 water, 6 wastewater systems and that includes two municipal deals that would be our East Cameron and our Emlenton, both of those deals in Pennsylvania. So, coupled with organic growth, the company increased the customer base by 1.6%, which is right within the range that we put out as our expectation.

I think it's important to note that the majority of these deals still don't reflect that targeted size range that we've discussed. That's the 2,500 to 25,000 customer range. The majority of the deals we closed in 2016 were initiated before we initiated or put our refocus strategy on larger opportunities in place. The work that we began when I took over in 2015 and Dan Schuller joined us continues today and we'll continue to focus on larger opportunities. We believe that this refocus strategy is working and we'll talk about it in just a minute when we talk about our 2017 growth activities. So I'll say, we remain very optimistic about the prospect of growth in the water and wastewater sectors.

And I want to point out that, we've just not seen this level of activity really ever before, municipals looking to sell. Importantly, this heightened activity is primarily in states where fair market value legislation has passed, and we'll discuss this in more detail in a minute in relation to our 2017 guidance. But given this optimism and the activity level in the regulated water, wastewater space, again, we're deploying the vast majority of our resources right there.

So, let's talk a little bit about 2017. I'm on the guidance slide, slide 13. This slide summarizes our expectations for earnings per share, operating expenses, CapEx, rate activity and customer growth for 2017. We're expecting full-year earnings per share to be in the range of $1.34 to $1.39. And I'll continue to remind you, as Dave has many times, if we continue over-earning in several of our states which does impact our ability to file for rates.

Now on a same-store basis, we expect O&M to grow only about 1% to 2% for the full year. And as always, we remain laser-focused on minimizing our O&M expenses and certainly 2017 will be no exception. We expect to invest another $450 million in infrastructure in 2017. And by the way, that will be a record spend for us in terms of CapEx in a year, and we'll spend more than $1.2 billion of CapEx through 2019. And this is really intended to improve and strengthen the infrastructure in our existing systems that we already own. As you know these investments allow us to provide the high level of service throughout our company's footprint.

But in addition, we expect incremental capital expenditures to make improvements on newly acquired systems and to purchase newly acquired systems. So that would be above and beyond the $1.2 billion in CapEx that we project in our budget. We expect to grow rate base in the range of 6% to 7%. Again a reminder there that, we said many times that earnings temporarily will lag rate base growth given our over-earning in many of our states.

Now, regarding our Pennsylvania rate activities. This is a constant discussion, and we've discussed it previously in all of our calls to keep you updated. We expect to file an infrastructure charge otherwise known as a DSIC in 2017 this year, followed by a full rate filing next year 2018, and then we'll have resolution. We expect resolution of that full rate case in 2019. Now Dave mentioned a few minutes ago, change to the tax policy obviously potentially impact the timing of any of those activities.

And lastly, year-over-year we're expecting our total customer growth rate in the range of 1.5% to 2%, and I'll explain on that in just a moment. I just can't say enough times that the fair market value legislation continue to generate just a huge interest and, Dave and I sit here as 20 plus year veterans at the company, I think we can say, we've never seen this level of activity before. This legislation is really working to drive municipal water and wastewater to consider privatization. And under Dan's leadership, we vetted an unprecedented level of opportunities in 2016.

But in fact, last year we – about 46 potential deals came before the Investment Committee. And out of the 46 deals, 35 of them progressed to a decision. We lost four to competition, and we won 31 of them. 19 of the 31 closed, 10 are in process and 2 were lost in referendums. So the remainder, a couple died and several are still in the pipeline. Our Investment Committee maintains a really strict discipline based on a framework that we believe provides value to our customers and to our shareholders.

And to put this 2017 activity in perspective, this slide, we already have four municipal systems under agreement, which are represented here as Systems A through D on the chart. Combined they represented over $110 million of purchase price and nearly 9,000 customers. I think it's important to point out that we think about the two in terms of equivalent dwelling units, so it'll be – the 9,000 customers would be equal to 12,000 EDUs. We say that because when you buy some of these systems, they have large apartment complexes or particularly large users.

So customers don't always tell the full story. All of these deals are expected to close in 2017. So we're off to a great start.

In addition to the four municipal deals, we also have a couple of investor-owned utilities under agreement. These are smaller ones. And again, leftover from our backlog before we were focused on the 2,500 to 25,000. Additionally, we're working on our top 70 municipal targets, which represent approximately 390,000 customers. Of course, we're not going to close all these transactions or [indiscernible] (16:23) the transactions, but we think if we win even our fair share of these, it will generate an attractive level of growth.

Now, the next chart on 15 really helps to visualize this in a bar graph. This represents our top 70 municipal systems that we're targeting. You will notice that 92% of the targeted customers here come from water and wastewater systems that serve more than 2,500 customers. So, our strategy is in place and focused. In 2016, we started to make a somewhat different approach to deals. In some instances and in some states, we're making unsolicited offers to municipalities to try to encourage a sale process to begin.

We focused on municipals where we control it via partner, and in many cases be the white knight to help them with an economic situation or a compliance problem that they're experiencing. So we try to come in with – obviously, we want to come in to be long-term partners. Some of these seem to be working and I'll tell you, as they progress, we'll certainly keep you updated on that part of our strategy.

So, in closing, let me just reiterate our optimism about the opportunities we see in the municipal at water and wastewater space, again largely driven by this fair market value legislation. And I would suggest you that we will see more states adopting similar approaches or similar legislation as the industry works together in the coming months and years.

And with that, I'll conclude my remarks and open the phone call up for questions. Thanks.

# QUESTION AND ANSWER SECTION

**Operator**: Thank you. [Operator Instructions] We'll go first to Ryan Connors with Boenning & Scattergood.

Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*
Q

Good morning. Thanks for hosting the call this morning.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Hey, Ryan, how are you?

Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*
Q

I'm doing well. Thanks, Chris. So, I guess, I do want to talk more about this fair value legislation and obviously a big catalyst for you and – but it's a brand new concept and I wonder if you could talk about the evolution of the system and the process it remains to be seen, how exactly this gets implemented, I'm not even sure that any true fair value deals have closed yet at least in Pennsylvania.

So can you just talk to us about any moving parts that are left out there in terms of how this is implemented whether it would be in terms of how the following – the subsequent rate cases will be treated, unified tariffs, any of the above? And just any potential surprises, plus or minus in terms of how the implementation and the complexities of this play out?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Yeah. All good questions. And I think when your – your questions are primarily focused in Pennsylvania, Ryan because...

Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*
Q

Yep.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

...in Illinois, as you know we've had some go through the commission and it seems to be working well out there. As a matter of fact, we're talking about a reauthorization of that legislation in Illinois. Let's focus on Pennsylvania for a moment. You're exactly right that this just went through the commission – I'm sorry, through the legislature last March. And so, as it flown through the process, obviously the deal started to get closed in mid-to-late 2016 and have not yet gone through the regulatory process.

We would expect those to begin through the process probably by the end of the first quarter here in this year. And as it's typically the case with new legislation or regulation, we need to figure things out, work together with regulators to make sure that they go smoothly. I don't think given the continuous conversation in Harrisburg about this legislation. And remember we have Act 11 and Act 12 both relatively new, the other one relates to subsidization of wastewater customers by the water customers in the state.

And so, how those work together, those two acts work together and how they are actually implemented and worked through rate cases, yet to be seen. I don't want to presuppose the view of regulators, but we continue to have conversation with staff and commissioners about how to implement and how this will work, and I think this team is optimistic about the overall use and prospects of moving it through the legislature. And one of the absolutes, Ryan, that I'll suggest here is that you have an appraisal done. And so that appraisal is done by an outside engineering firm and that's the basis for a lot of what we consider rate base. So, assuming, that that works well, the building base is strong. Dave, I don't know if you have any additional thoughts.

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David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*
A

No, that's it. And I agree with Chris that we definitely see it as a catalyst and more municipalities coming to the table to talk to us.

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Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*
Q

And then as a follow-on to that. You talked on the last earnings call, Chris, about the fact that that there is some elements – at least in a competitive state like Pennsylvania, there is some element of competition and upward bias on pricing, because when attractive ones come up for sale. Can you talk about how you're mitigating that in terms of your discipline and whether there's certain hurdle rates you have in place or what have you, what is your discipline in terms of valuation on this?

---

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Yeah. We sat down and very clearly laid out guidelines and that's the discussion we had with our board, Ryan, about how we see these deals and what our hurdles are to achieve both short-term and long-term, and obviously each one of those deals is slightly different, they have a different growth profile, some of them are growing, some of them are basically stacked in terms of their growth. And so, the valuation like you do any deal varies and it's specific to any individual deal. But we've got written and firm guidelines that we adhere to. And in the case where we believe it's truly a strategic deal, and we want to stretch those guidelines, then that's a real interesting discussion at our – not only our internal Investment Committee, but also at our Board Subcommittee on investment as well. So we believe that we'll be very disciplined.

Now, with regard to competition. Yeah, there's no question, there's going to be competition. And remember, there is a couple of buckets here to consider when you do these. If you pay more than that appraised value or that rate base, that goes to shareholders. I'm certain that [ph] American (24:02) must as well be aware of that as a guideline as well, and clearly, we like to buy these systems at near to rate base as we can. Having said that, it is market value and we have to evaluate each one on its own merits.

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Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*
Q

Got it. And then if I just sneak one more in on this topic. So I think it is important. One of the things I think is interesting about these municipal deals that come out tend to be either in areas that are having pension issues or obviously infrastructure issues and fiscal issues, and sometimes have a tendency to be in pockets of the state that are depressed, either economically or demographically or what not. And one of the hallmarks of Aqua historically I think has kind of been that your core base around your headquarters and elsewhere is not that, it's a pretty affluent steady economic region. And so I wonder if you could talk about the risk of a negative evolution of the portfolio away from that real solid sound economic status in your traditional stronghold into more of a type of region that might have a different profile and how that impacts customer growth and risk, as it relates to unions and different things like that?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Yeah. So we gave that a lot of thought. Obviously, we are interested in being a solution. We're interested in growing. But it's also got to be of the right match with the right customer base. And as illustration, and I won't use the name of the system, but we had a system come before us in 2016, fairly large in a key state and we evaluated it and would have been meaningful to us as a company in terms of rate base growth. As we did the evaluation and determined that the average household income in that location was in the range of $30,000 a year and that we would have had to, in order to fix and recover our investment, we would have rates that surpassed $100 a month. And we did a lot of soul searching on that as a team and ended up walking away from that deal, never bit, never put a proposal in, because we just didn't think it was affordable for those customers.

And we're going to continue to make those decisions, because we think it's the right thing to do. And while we have a level of discipline on what we need to earn, we also have a level of discipline and commitment to the customers we already serve. I mean let's face it Ryan, you know, you talk to a lot of regulators, we've spent many, many years earning a reputation in the state capital with our regulators and we're not about to jeopardize those reputations based on doing bad deals. So that's just one illustration.

Ryan Michael Connors
*Analyst, Boenning & Scattergood, Inc. (Broker)*
Q

Yeah. Great. Well, thanks again for hosting the call, very helpful.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

You bet.

**Operator**: [Operator Instructions] We'll go next to Tyler Frank with Robert Baird (sic) [Robert W. Baird] (27:23).

Tyler Charles Frank
*Analyst, Robert W. Baird & Co., Inc. (Private Wealth Management)*
Q

Hi, guys. Thanks for taking the question. Just wanted to focus a little bit on the amount of CapEx you're going to be doing next year since that will be a record. What do you need to do to make sure that you're able to hit your CapEx target, I guess from both a projects planning standpoint, and then how should we think about needs for hiring new employees, and getting people trained et cetera on that front, just that we can get comfortable with the amount of risk that there might be to that level of CapEx getting executed?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Yeah, yeah. It's a good question Tyler. We are very confident that we can achieve it. We think very carefully about the project mix and how to achieve that CapEx spend before we put the budget together or having to put the budget together. It's largely spread over the eight states, and we have increasing spend in states like North

Carolina and in Texas, where we have, what I'll call, compliance, it's really not compliant, because the secondary water quality issues in places like North Carolina where we meet all of the primary standards, but we have some discolored water or taste issues that customers wants smoothed out. So we ramped up spending in a couple of states. Pennsylvania, largest, again our largest customer base as well.

The way we deploy capital, particularly in main replacement work is largely through ramping up of contractors, and then ramping down. We don't typically alter our internal customer count – or I'm sorry, employee count to achieve our capital numbers. Therefore, we don't just ramp up and lay off, we keep a steady workforce internally. But the team that we have doing our planning, and the execution really of this capital spend is a team who have been long in place. Bill Ross who is our Chief Engineer, Rick Fox, who is our Chief Operating Officer have been doing this work for a very long time, and both are very confident in our ability to spend and invest that CapEx in the most prudent way, because I'll point out Tyler, we don't take chances on prudency either. We've got conversations going on regularly with regulators to make sure that the spend and the items we're spending on are the best and most prudent use of our capital dollars. So I'll just leave you with the fact that we're very confident in the spend.

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Tyler Charles Frank
*Analyst, Robert W. Baird & Co., Inc. (Private Wealth Management)*

Q

Okay. Great. Thank you. And then just a follow-up on the acquisition side of things. Can you give us a sense for, you said you went after 30 – 31 deals last year. How many systems did you initially review and then end up with that 31 number, I mean is that 31 out of a 100 or can you give us some sort of range for sort of how you guys go about that selection process where [indiscernible] (30:38) pursue? And then, can you provide some commentary on things you've seen in terms of the amount of competition that's in bidding for your prospects? Have you seen that ramp up and what's the average number of competing bids, when you guys go after a new acquisition?

---

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

A

Yes. Yes. So a little insight on how we think about this. One, I described to you on one slide about our pipeline of – we'll call it 390,000 customers in our top 70 targets. So we distilled within our eight states, the possibilities down to 70 and obviously we've got others behind that 70. But those are 70 highest targets and so they are the ones that meet these size ranges in large part.

And then, as we think about distilling in further we look at what's got a compliance issue, what's got an economic issue, who might have pension concerns and we look at why the municipals might be interested in exiting the business. And then we start to look at the overlay of the political situation, interest and all those sorts of things. And so, multi-layers, but at the end of the day, to answer your very specific question, we had 46 deals come before the IC, the Investment Committee last year. But there were a lot more, some of them we didn't even bring to the IC. We literally – they just didn't hit the target for us.

And then as you think about starting with those 46, and 35 of them progressed through [ph] the natural (32:13) decision at the IC. But as you might imagine, even with smaller deals, every one of these, I'll say has heir right. There's issues with them. They're not leaving the business because they're, in most cases humming along optimally. So we've got to do our due diligence and our valuation is not only on the financial side, but on the operational side. So to vet this many deals is an enormous lift for the team. And while we're excited and pleased with the volume, what we like to see is an increasing number, then coming to closing.

Now, with regard to your question about competition, one of the reasons we're focused on what I'll call is middle market, 2,500 customers to 25,000 customers is because there's less competition from, I'll call financial buyers, right. There are a little bit under that their target for size. So, largely we find in the states where American is as well, we find American as the chief competition and we compete together on most deals. But we don't see a lot of other competition. In some cases, we see other municipals trying to grow and the assumption there, I guess they want to bring more economies of scale to bear. But typically there is not a lot of competition from other municipals. So, I would say steady competition and strong competition, but not a lot of other players competing. Hopefully that answers your question.

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Tyler Charles Frank
*Analyst, Robert W. Baird & Co., Inc. (Private Wealth Management)*
Q

Excellent. Thank you.

---

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

You bet.

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**Operator**: We'll go next to Angie Storozynski with Macquarie.

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Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*
Q

Thank you. So, first on 2017 guidance, so I understand that you are over-earning particularly in Pennsylvania, hence there is a lag between the rate base growth and the earnings growth. So the rate case will be filed in 2018, so should we assume that 2018 is also showing this significant lag in earnings versus rate base growth?

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Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

I think it's fair to say that the same lag that we're going to experience in 2017 would carry through 2018.

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Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*
Q

Okay. And so it's – I mean just so I understand, so you're basically trying to invest in your rate base in order to right size the realized ROE, and only then you'll be filing rate cases, is that just a fair summary?

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Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

I think that's well said.

---

Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*
Q

Okay.

---

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

We'll invest and as we ramp-up that investment, obviously we'll bring our return on equity down and ultimately beyond that the level where we can file a DSIC and a case.

---

Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*
Q

Okay. Then maybe I missed it, but could you give us an update about your views on potential expansion beyond the other water sector, given where your premium now is versus electrics or water utilities on – or like gas utilities on a PE basis?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Yeah. And see I think what I've said on another call is that, well gas is interesting to us, given the similarities between the vast amounts of pipe being installed in gas it will be ceased. It's not a primary focus of ours. The vast majority of our resources and our primary focuses are around the growth of the water and wastewater business and it will continue to be. And so, we just are not out there with our line in the pond, looking for simply gas LDCs. You hit it right. I mean there are market dynamics that would suggest that that deal would have to be the right deal for us to make it worthwhile.

Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*
Q

And just one last question going back to 2018. So if there is a corporate tax code change, which would remove the repair tax deduction from the code and you're still awaiting a filing of a Pennsylvania rate case. I mean, should we have actually a very weak 2018 given that the corporate tax rate would actually go up for you guys?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Well, that's a good question, Angie, and it's one we've talked about extensively when we started talking about potential tax reforms. And I've talked to all of my experts on this matter, and there is general concurrence that the repair tax will not go away. In fact, the expectation is that any new tax laws will allow more capital to be written off rather than less. And so, that won't change our repair status, because still only specific capital will qualify for the repair flow-through method, but we don't see a risk in taking away that deduction. The risk that we do see is, that deduction could take place at a lower tax rate in the future and that's what I said during the call could cause us to consider accelerating the rate case to a sooner date.

Angie Storozynski
*Analyst, Macquarie Capital (USA), Inc.*
Q

Okay. Understood. Thank you.

**Operator**: And we have no further questions in the queue at this time. I would like to turn the conference back over to Mr. Chris Franklin for any additional or closing remarks.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

Thank you very much for joining us everyone. As always, if you've got follow up call or questions, don't hesitate to make those calls. In the meantime, thanks for joining us and Happy New Year.

**Operator**: And that concludes today's conference. We thank you for your participation.

17-Jan-2017

# Aqua America, Inc. (WTR)

FY 2017 Guidance Call

# CORPORATE PARTICIPANTS

Brian Dingerdissen
*Vice President, Chief of Staff & Investor Relations, Aqua America, Inc.*

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

# MANAGEMENT DISCUSSION SECTION

**Operator**: Good day and welcome to Aqua America's 2017 Earnings Guidance Conference Call. Today's conference is being recorded.

At this time, I would like to turn the conference over to Brian Dingerdissen, Vice President, Chief of Staff & Investor Relations. Please go ahead, sir.

## Brian Dingerdissen
*Vice President, Chief of Staff & Investor Relations, Aqua America, Inc.*

Thank you, [ph] Sylvia. Good morning, everyone and thank you for joining Aqua America's 2017 earnings conference call – earnings guidance conference call. If you did not receive a copy of the press release, you can find it by visiting the Investor Relations section of our website at aquaamerica.com. The slides that we'll be referencing can be found on our website. There will also be a webcast of this event available on our site.

As a reminder, some of the matters discussed during this call may include forward-looking statements that involve risk, uncertainties and other factors that may cause the actual results to be materially different from any future results expressed or implied by such forward-looking statements. Please refer to our most recent 10-Q, 10-K and other SEC filings for a description of such risk and uncertainties.

During the course of this call, reference may be made to certain non-GAAP financial measures. A reconciliation of these non-GAAP to GAAP financial measures is posted in the Investor Relations section of the company's website.

Presenting today is Chris Franklin, Aqua America's Chief Executive Officer and Dave Smeltzer, the Company's Chief Financial Officer. After the presentation, we will open the call up for questions.

At this time, I'd like to pass it over to Chris Franklin.

## Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

Hey, thanks Brian, and good morning, everyone and Happy New Year. Thanks for joining us today. On today's call, I'll start by asking Dave Smeltzer to recap the guidance we provided for 2016 and he'll go over some of the potential tax reform implications as they may affect the company. After that, I'm going to provide an update on a few things that we thought might be of interest to you, then we'll conclude with an overview of our 2017 guidance which we released last night, I'm sorry earlier today with a press release.

And lastly, we'll open it up and take any of your questions.

With that said, Dave, I'll hand it over to you.

## David P. Smeltzer

*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

Thanks Chris, and good morning, everyone. Shifting to the next slide, I'll start with the review of our 2016 guidance. We're affirming our earnings, customer growth, CapEx and expense guidance for 2016. We still expect the full year earnings per share to be in the $1.30 to $1.35 range. We provided at the beginning in the year and probably close to middle of that range, if not below that middle as we discussed in our third quarter earnings call.

We already announced our customer growth of 1.6% based on 19 deals including two municipal transactions. We expect that the final tally of our CapEx will reflect about $380 million in infrastructure investments in 2016, resulting in more than $1.1 billion of anticipated investments through 2018. Those investments, we would anticipate a rate base growth of in the 6% to 7% range. And lastly, same-system O&M expense increased, and we're expecting in the 1% to 2% range for the full year.

So turning to the next slide, I'd like to talk about the potential tax reform changes and how those might affect our business. But first, I'd like to note that as a regulated utility, income tax expenses are largely a pass through matter for us. So in the long run, there is no real impact to our profitability only to our customer rates. There could be some rate base implications or some short-term implications and we'll talk about this.

And although, it's at a very early stage to comment on this, prior to the first 100 days of the new administration or even the inauguration for that matter. You can appreciate that, we thought it was important to give you a few thoughts on how potential tax reform could impact our company.

So let me outline the primary possibilities. First, we hear a lot about the potential for a tax rate reduction. And tax rate reduction would be good, typically it would increase a company's income, but in our regulated arena, the customers would get the benefit of that tax rate reduction immediately. And they would either get it through a reset of rates, coincident with the timing of the tax rate reduction or more typically with us continuing to record taxes at the higher rate and defer that difference into a regulatory liability to be paid back to our customers at a later date.

Second, that reduction in tax rate would create what we call excess deferred taxes. Taxes that were previously put up in the books at the 35% statutory rate. And upon reversal, we'll reverse at a lower rate, therefore leaving some liabilities stranded on the balance sheet. And so upon passage of a new tax reform act we would typically re-class those excess deferred taxes to a regulatory liability, again to be paid back to our customers in the context of future rate proceedings.

Third, we're in a little bit of a unique situation, in that we still continue to record our repair tax deductions, which do flow though to net income. And so in that instance, a reduction of the tax rate could actually reduce the benefit of the repair tax and possibly cause an acceleration of our PA rate filing.

And then lastly, we talk about increasing tax deductions. And – there will be possibility of deducting capital expenditures and those sorts of things that could in the long-term slower rate base growth which we've been talked about is 6% to 7% in this period, just because of the increased differed taxes associated with those kinds of deduction.

So with that as a quick overview, I'll hand the call back to Chris, who will provide an update on a few things we believe you'll find interesting. Chris?

## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

Hey, thanks, Dave. I thought, maybe we spend a couple of minutes updating you on the divestiture of our market-based activities. And then we'll look at the customer growth we had at the end of 2016. Our effort to divest of our subscale market-based activities continues. We'd hope that we have concluded that process in 2016 but we still have two some small businesses remaining. One is our cross-connection business and the other one is our training and field services business.

We plan to close this cross-connection business even as earlier this week, but in the coming days. And the other small business we are [ph] head (00:07:19) out to some interested parties who are reviewing it now. The one primary market-based activity, we plan to keep is the insurance product you will recall, our partnership with HomeServe, has the insurance that protects our service lines between our mains in the customers homes. And you will recall that we receive a royalty on each of the contracts.

So we'll keep that and a limited number of O&M contracts that are relatively close to our current operations. And that together contribute in a small way to earnings. Now, despite our divestiture of these small businesses, we do continue to evaluate market based opportunities, which are closely related to our core. And if we find something that's the right scale, the right risk and the right profitability profile, we would consider expanding our market-based portfolio.

And that being said, we don't see this segment of the company becoming a large component of Aqua America, we've discussed that with many of you over time. But we continue to spend our primary focus and resources on growing the regulated water and wastewater business, that's where we see the greatest opportunity at this point.

Now, last week we put a press release out that wrapped-up our 2016 customer growth efforts. The slide here summarizes what we've completed. We've invested more than $22 million in acquiring water and wastewater systems throughout the year. And also in 2016 we acquired 13 water, 6 wastewater systems and that includes two municipal deals that would be our East Cameron and our Emlenton, both of those deals in Pennsylvania.

So, coupled with organic growth, the company increased the customer base by 1.6%, which is right within the range that we put out as our expectation. I think it's important to note that the majority of these deals still don't reflect that targeted size range that we've discussed. That's the 2,500 to 25,000 customer range.

The majority of the deals we closed in 2016 are – were initiated before we initiated or to put our [ph] refocus strategy on larger opportunities in place. The work that we began when I took over in 2015 and Dan Schuller joined us, continues today and we'll continue to focus on larger opportunities. We believe that this refocus strategy is working and we'll talk about it in just a minute when we talked about our 2017 growth activities.

So I'll say, we remain very optimistic about the prospect of growth in the water and wastewater sectors. And I want to point out that, we've just not seen this level of activity really ever before, so municipals looking to sell. Importantly, this heightened activity is primarily in states where fair market value legislation has passed and we'll discuss this in more detail in a minute in relation to our 2017 guidance.

But given this optimism and the activity level in the regulated water and wastewater space, again, we're deploying the vast majority of our resources like there. So, let's talk a little bit about 2017.

I'm on the guidance slide, slide 13. This slide summarizes the expectations, our expectations for earnings per share, operating expenses, CapEx, rate activity and customer growth for 2017. We're expecting full year earnings per share to be in the range of a $1.34 to a $1.39 and I'll continue to remind you as Dave has many times if we continue over earning in several of our states which does impact our ability to file for rates.

Now on a same-store basis, we expect O&M to grow only about 1% to 2% for the full year and as always, we remain laser focused on minimizing our O&M expenses and certainly 2017 will be no exception. We expect to invest another $450 million in infrastructure in 2017 and by the way that will be a record spend for us in terms of CapEx in a year, and we'll spend more than $1.2 billion of CapEx through 2019. And this is really intended to improve and strengthen the infrastructure in our existing systems that we already own. As you know these investments allow us to provide the high level of service throughout our company's footprint.

In addition, we expect incremental capital expenditures to be made – make improvements on newly acquired systems and to purchase newly acquired systems. So that would be above and beyond the $1.2 billion in CapEx that we project in our – in our budget. We expect to grow rate base in the range of 6% to 7%. Again a reminder there that, we said many times that earnings temporarily will lag rate base growth given our over earning in many of our states.

Now, regarding our Pennsylvania rate activities; this is a constant discussion, and we've discussed it previously in all of our calls to keep you updated. We expect to file an infrastructure charge otherwise known as DSIC, a disc, in 2017 this year, followed by a full rate filing next year 2018, and then we'll have a resolution, we expect resolution of that full rate case in 2019. Now, as Dave mentioned a few minutes ago, change to the tax policy obviously potentially would impact the timing of any of those activities.

And lastly, year-over-year we're expecting our total customer growth rate in the range of 1.5% to 2%, and I'll explain on that in just a moment. I just can't say enough times that the fair market value legislation continues to generate – just a huge interest in, Dave and I sit here is 20 plus year veterans in the company, I think we can say, we've never seen this level of activity before.

This legislation is really working to drive municipal water and wastewater to consider privatization. And under Dan's leadership, we've added an unprecedented level of opportunities in 2016. Although in fact, last year we about 46 potential deals came before the investment committee. And out of the 46 deals, 35 of them progress to a decision. We lost four to competition, and we won 31 of them. 19 of the 31 closed, 10 are in process and 2 were lost in referendums. So the remainder, a couple died and several are still in the pipeline. Our investment committee maintains really a strict discipline based on a framework that we believe provides value to our customers and to our shareholders.

And put this 2017 activity in perspective the slide, we already have four municipal systems under agreement, which I represent here is a Systems A through D on the chart, combined they represented over a $110 million of purchase price and nearly 9,000 customers, I think it's important to point out that we think about the two in terms of equivalent dwelling units, that will be the 9,000 customers would be equal to 12,000 EDUs. We say that because when you buy some of these systems, they have large apartment complexes or taking the large user. So customers don't always tell the full story. All of these deals were expected to close in 2017. So we're off to a great start.

In addition to the four municipal deals, we also have a couple of investor owned utilities under agreement. These are smaller ones and again leftover from our backlog before we were focused on the 2,500 to 25,000.

Additionally, we're working on our top 70 municipal targets which represent approximately 390,000 customers. Of course, we're not going to close all these transactions or where they will – they'll want to necessarily turn into transactions, but we think if we win even our fair share of these, it will generate an attractive level of growth.

Now, the next chart on 15 really helps to visualize this in a bar graph. This represents our top 70 municipal systems that we're targeting. You will notice that 92% of the targeted customers here come from water and wastewater systems that serve more than 2,500 customers. So, our strategy is in place and focused. In 2016, we started to make a somewhat different approach to deals. In some instances and in some states, we're making unsolicited offers in municipalities to try to encourage a sale process to begin.

We focused on municipals where we control it via partner, and in many cases be the white knight to help them with an economic situation or a compliance problem that they're experiencing. We try to come in with – obviously, we want to come in to be long-term partners. Some of these seem to be working and I'll tell you, as they progress, we'll certainly keep you updated on that part of our strategy.

So, in closing, let me just reiterate our optimism about the opportunities we see in the municipal water and wastewater space, again largely driven by this fair market value legislation. And I would suggest to you that we will see more state adopting similar approaches or similar legislation as the industry works together, in the coming months and years.

So with that, I'll conclude my remarks and open the phone call up for questions. Thanks.

**Operator**: Thank you. [Operator Instructions] We'll go first to Ryan Connors with Boenning & Scattergood.

Ryan Michael Connors

Q

Good morning. Thanks for hosting the call this morning.

A

Hey, Ryan, how are you?

Ryan Michael Connors

Q

I'm doing well. Thanks, Chris. So, I guess, I do want to talk about – more about this fair value legislation and obviously a big catalyst for you and those are brand new concept and I wonder if you could talk about the evolution of the system and the process it remains to be seen, how exactly this gets implemented, I'm not even sure that any true fair value deals have closed yet at least in Pennsylvania.

So can you just talk to us about any moving parts that are left out there in terms of how this is implemented whether it would be know in terms of how that the following, the subsequent rate cases will be treated, unified tariffs, any of the above. And just any potential surprises, plus or minus in terms of how the implementation and the complexities of this play out?

A

Yeah. All good questions. And I think, when your questions are primarily focused in Pennsylvania, Ryan because...

Ryan Michael Connors

Q

Yes.

A

...in Illinois, we've had some go through the commission and seems to be working well out there. As a matter of fact we're talking about a reauthorization of that legislation in Illinois.

Let's focus on Pennsylvania for a moment, you're exactly right that this just went through the commission – I'm sorry, through the legislature last March. And so, as it flown through process, obviously the deals started to get closed in mid-to-late 2016 and have not been gone through the regulatory process.

We would expect those to begin through the process, probably by the end of the first quarter here in – this year. And – as it's typically the case with the new legislation or regulation, we need to figure things out work together with regulators to make sure that they go smoothly. I don't think given the continuous conversation in Harrisburg about this legislation.

And remember we have Act 11 and Act 12 both relatively new at the – the other one relates to subsidization of wastewater customers by the water customers in the state. And so, how those work together, those two acts work together and how they – how they are actually implemented in work through rate cases, yet to be seen. I don't want to presuppose the view of regulators, but we continue to have conversation with staff and commissioners about how to implement and how this will work and I think this team is optimistic about the overall use and prospects of moving it through the [ph] legislature.

And one of the absolutes, Ryan, that I'll suggest here is that -- here you have an appraisal done. And so that appraisals done by an outside engineering firm and that's the basis for a lot of what we consider rate base. So, assuming, that works well instead of building base is strong.

Dave, I don't know if you have any additional thoughts.

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

No, that's it. We – and I agree with Chris, that we definitely see it as a catalyst and more municipal – municipalities coming to the table to talk to us.

Ryan Michael Connors

Q

And then as a follow-on to that, you talked on the last earnings call, Chris, about you know the fact that, that there is some elements at least in a competitive state like Pennsylvania. There is some element of – competition and upward bias on pricing, because when the attractive ones come up for sale. Can you talk about how you – you're mitigating that in terms of your discipline and whether there are certain hurdle rates you have in place or what have you, what is your discipline in terms of valuation on this?

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**Christopher H. Franklin**
*President & Chief Executive Officer, Aqua America, Inc.*

A

Yeah. We sat down – and very clearly laid out guidelines and that's the discussion we had with our board, Ryan, about how we see these deals and what our hurdles are to achieve both short-term and long-term, and obviously each one of those deals are slightly different, they have a different growth profile, some of them are growing, some of them are basically stacked in terms of their growth. And so, the valuation like you do any deal, varies and it's specific to the any individual deal.

But we've got written and firm guidelines that we adhere to. And in the case where we believe it's – it's truly a strategic deal, and we want to – we want to stretch those guidelines, then that's a real interesting discussion at our internal investment committee, but also at our Board subcommittee on investment as well. So we believe that we'll be very disciplined.

Now, with regard to competition. Yeah, there's no question, there's going to be competition. And remember, there is a couple of buckets here to consider when you do these. If you pay more than that rate value or that rate base, that goes to shareholders. So we are certain that American must as well be aware of that as a guideline as well, and clearly, we'd like to buy these systems at near to rate base as we can. Having said that, it is market value and we'll – after evaluating each one on its own merits.

---

Q

Got it. And then if I just sneak one more in on this topic. So I think it is important. One of the things I think is interesting about these municipal deals that come out tend to be either in areas that are having pension issues or obviously infrastructure issues and fiscal issues, and sometimes have a tendency to be in pockets of the state that are depressed, either economically or demographically or what not. And one of the hallmarks of Aqua historically I think has kind of been that your core base around your headquarters and elsewhere is not that, it's a pretty affluent steady economic region. And so I wonder if you could talk about the risk of a negative evolution of the portfolio away from that real solid sound economic status in your traditional stronghold into more of a – a type of region that might have a different profile and how that impacts customer growth and risk, as it relates unions and different things like that?

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**Christopher H. Franklin**
*President & Chief Executive Officer, Aqua America, Inc.*

A

Yeah. So we gave that a lot of thought. Obviously, we are interested in being a solution. We're interested in growing. But it's also got to be of the right match with the right customer base, and as illustration, and I won't use the name of the system, but we are – we had a system come before us in 2016, fairly large in a key state and we evaluated it and it would have been meaningful to us as a company in terms of rate-base growth.

As we did the evaluation and determine that the average household income in that location was in the range of $30,000 a year. And that we would have had to in order to fix and recover our investment, we would have rates that surpassed $100 a month and we had – did a lot of soul searching on that as a team. And ends up walking away from that deal, never been – never put a proposal in, because we just didn't think, it was affordable for those customers.

And we're going to continue to make those decisions, because we think it's the right thing to do, and while we have a level of discipline on what we need to earn, we also have a level of discipline and commitment to the customers we already serve in that space that Ryan, you know – you talked to a lot of regulators, we've spent many, many years earning a reputation in the state capital with our regulators. And we're not about to jeopardize those reputations based on doing bad deals. So that's just one illustration.

Q

Yeah. Great. Well, thanks again for hosting the call, very helpful.

A

You bet.

**Operator**: [Operator Instructions] We'll go next Tyler Frank with Robert W. Baird.

Tyler Charles Frank

Q

Hi, guys. Thanks for taking the question. I just wanted to focus a little bit on the amount of CapEx you're going to be doing next year since that will be a record. What do you need to do to make sure that you're able to hit your CapEx target, I guess from both a projects planning standpoint, and then how should we think about needs for hiring new employees, and getting people trained et cetera on that front? Just so that we can get comfortable with the amount of risk that there might be to that level of CapEx getting executed?

A

Yeah, yeah. It's a good question Tyler. We are very confident that we can achieve it. We think very carefully about the project mix and how to achieve that, that CapEx spend before we put the budget together or having to put the budget together. As long as they spread over the eight states, but and we have increasing spend in states like North Carolina and in Texas, where we have – what I'll call compliance really not compliant because the secondary water quality issues in places like North Carolina where we meet all of the primary standards.

But we have some discolored water or taste issues that customers want smoothed out. So we – we've ramped up spending in a couple of states. Pennsylvania, largest, again our large customer base as well. The way we deploy capital particularly in main replacement work is largely through ramping up of contractors, and then ramping down. We don't typically alter our internal customer count, I'm sorry, employee count to achieve our capital numbers. Therefore, we don't ramp up and lay off. We keep a steady workforce internally.

But the team that we have doing our planning, and the execution really of this capital spend is a team who have been long in place. Bill Ross who is our Chief Engineer, Rick Fox, who is our Chief Operating Officer have been doing this work for a very long time, and both are very confident our ability to spend in, and invest that CapEx in the most prudent way, it will play out – how we don't – we don't make chances on prudents either. We got conversations going on regularly with regulators to make sure that the spend and the items we're spending on are the best and most prudent use of our capital dollars. So I'll just leave you with the fact that we're very confident in the spend.

Q

Okay. Great. Thank you. And then just a follow-up on the acquisition side of things. Can you give us a sense for, you said you went after 30, 31 deals last year, how many systems did you initially review and then end up without 31 number, I mean is that 31 out of 100 or can you give us some sort of – some sort of range for sort of how you guys go about that selection process or the actual process you want to pursue?

And then, can you provide some commentary on things you've seen in terms of the amount of competition that's embedding, bidding for your prospects. Have you seen that ramp up and what's the average number of competing bids, when you guys go after a new acquisition?

A

Yes. Yes. So a little insight on how we think about this. One, I described to you on one slide about our pipeline of – we'll call it 390,000 customers in our tough 70 targets. So we just still in our – within our eight stage, the possibilities down to 70 and obviously we've got others behind that 70. But those are 70 highest targets and so they are the ones that meet these size ranges in large part. And then, as we think about still in the further we look at who's got a compliance issue, who's got an economic issue, who might have pension concerns. We look at why municipals might be interested in exiting the business. And there we start to look at the overlay of the political situation, interest and all those sorts of things. And so, multi layers, but again as a day, to answer your very specific question, we had 46 deals come before the IC, the Investment Committee last year. But there were lot more, some of them we didn't even bring to the IC. We literally did just in and hit the target for us.

And so – and as you think about starting with those 46, the 35 of them progressed through a national decision at the IC. But as you might imagine, even with smaller deals, every one of these, I'll say has [indiscernible] (00:32:20), right. They are – there's issues with them. They're not leaving the business because they're, in most cases humming along optimally. So we've got to do our due diligence in our valuations not only on the financial side but on the operational side. So, to vet this many deals is an enormous lift for the team. And while we're excited and pleased with the volume, what we like to see is that an increasing number than coming to closing.

Now, with regard to your question about competition, one of the reasons we're focused on what I call is middle-market, 2,500 customers to 25,000 customers is because there's less competition from, I call financial buyers, right. There are a little bit under that their target for size. So, largely we find in the states where American is as well, we find American as the chief competition and we compete together on most deals. But we don't see a lot of other competition. In some cases we see other municipals trying to grow and the assumption there is that, I guess they want to bring more economies of scale to bear.

But typically there is not a lot of competition from other municipals. So, I would say steady competition and strong competition, but not a lot of other players competing. I believe that answers your question?

Q

Excellent. Thank you.

A

You bet.

**Operator**: Well, the next is Angie Storozynski with Macquarie.

Angie Storozynski

Q

Thank you. So, first on 2017 guidance, so I understand that you are over earning particularly in Pennsylvania, hence there is a lag between the rate base growth and the earnings growth. But so the rate case will be filed in 2018. So, should we assume that 2018 is also showing this significant lag in earnings versus rate base growth?

A

I think it's fair to say that the same lag that we're going to experience in 2017 would carry to through 2018.

Angie Storozynski

Q

Okay. And so it's – I mean just so I understand, so you're basically trying to invest in – in your rate base in order to right size the realized ROE, and only then you'll be filing rate cases, is that just a fair summary?

A

I think that's well said.

Angie Storozynski

Q

Okay.

A

We'll invest and as we ramp-up that investment, obviously we'll bring our return on equity down and ultimately beyond that the level where we could file a DSIC and a case.

Angie Storozynski

Q

Okay. Then maybe I missed it, but could you give us an update about your views on potential expansion beyond the other water sector, given where are your premium now is versus electric water utilities or like gas utilities on a PE basis?

A

Yeah. And – see I think what I've said on another call is that, well gas is interesting to us, given the similarities between the vast amount of pipe being installed in gas it will be ceased. It's not a primary focus of ours. The vast majority of our resources in our primary focuses are around the growth of the water and wastewater business and it will continue to be.

And so, we just are not out there with our line in the pond, looking for simply gas LDCs and you heard it right. There are market dynamics that would suggest that, to that deal we have to do the right deal for us to make it worthwhile.

Q

And just one last question going back to 2018. So is there, is a corporate tax change – corporate tax co-change, which would remove the repair tax deduction from the code. And you're still awaiting a filing of a Pennsylvania rate case. I mean, should we have actually a very weak 2018 given that the corporate tax rate would actually go up for you guys?

A

Well, that's a good question, Angie and it is one we've talked about extensively when we started talking about potential tax reforms and I've talked to all of my experts on this matter and there is general concurrence that the repair tax will not go away. In fact, the expectation is that any new tax loss will allow more capital to be written off rather than less and so that won't change our repair status, because still only specific capital will qualify for the repair flow through method, but we don't see a risk in taking away that deduction. The risk that we do see is, that deduction could take place at a lower tax rate in the future and that's what I said during the call could cause us to consider accelerating the rate case to a sooner date.

Q

Okay, understood. Thank you.

**Operator**: And we have no further questions in the queue at this time. I'd like to turn the conference back over to Mr. Chris Franklin for any additional or closing remarks.

## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

Thank you very much for joining us everyone. As always if you got follow up call or questions, don't hesitate to make those calls. In the meantime, thanks for joining us and Happy New Year.

**Operator**: And that concludes today's conference. We thank you for your participation.

03-Aug-2017

# Aqua America, Inc. (WTR)

Q2 2017 Earnings Call

# CORPORATE PARTICIPANTS

Brian Dingerdissen
*Vice President, Chief of Staff & Investor Relations, Aqua America, Inc.*

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

Dan J. Schuller
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

# OTHER PARTICIPANTS

Spencer E. Joyce
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Timothy Winter
*Analyst, Gabelli & Company*

# MANAGEMENT DISCUSSION SECTION

**Operator**: Good day and welcome to the Aqua America Q2 2017 Earnings Conference Call. Today's conference is being recorded.

At this time, I would like to turn the conference over to Brian Dingerdissen. Please go ahead, sir.

## Brian Dingerdissen

*Vice President, Chief of Staff & Investor Relations, Aqua America, Inc.*

Thank you, Michelle. Good morning, everyone, and thank you for joining us for Aqua America's second quarter 2017 earnings conference call. If you did not receive a copy of the press release, you can find it by visiting the Investor Relations section of our website at aquaamerica.com. The slides that we will be referencing can be found on our website. There will also be a webcast of this event available on our site.

As a reminder, some of the matters discussed during this call may include forward-looking statements that involve risk, uncertainties, and other factors that may cause the actual results to be materially different from any future results expressed or implied by such forward-looking statements. Please refer to our most recent 10-Q, 10-K, and other SEC filings for a description of such risk and uncertainties.

During the course of this call, reference may be made to certain non-GAAP financial measures. A reconciliation of these non-GAAP to GAAP financial measures is posted in the Investor Relations section of the website.

Presenting today is Chris Franklin, Aqua America's Chief Executive Officer; Dave Smeltzer, the company's Chief Financial Officer; and Dan Schuller, our Executive Vice President of Strategy and Corporate Development. After the presentation, we will open the call up for questions.

At this time, I'd like to pass it over to Chris Franklin.

## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

Hey. Thanks, Brian, and good morning, everyone. Thanks for joining us. Quick summary of what we'll discuss today, talk about a little recent news on the company, highlights for the second quarter. Dave Smeltzer, our CFO, will review the company's financial results and our rate activity. And then Dan Schuller, who's our Executive Vice President of Strategy and Corporate Development, will take us through an update on our acquisition and growth programs. Then we'll conclude the formal portion of the presentation by recapping our guidance for 2017. And then, we'll take any questions you might have.

Let's dive in. By now, you've seen our release, and we started the year with a good solid first half. We feel very good about our work on the growth front, and I'm going to let Dan discuss that in a little more depth just shortly. Our annual infrastructure improvement program is off to a strong start. And we've invested about $210 million so far this year in water/wastewater infrastructure. And we remain on track to spend a record spending of capital at about $450 million for the year.

I'm happy to report that we're on track to replace about 150 miles of main this year. This includes pipes replaced across our eight-state footprint. We're also installing some new water main as opposed to replacement. We're installing new projects, as well as some plant expansions. And I'll just mention two that I think are interesting. The two projects were both in Illinois.

First is our University Park pipeline project. University Park is just south of Chicago. We're building a 16-mile pipeline to bring our award-wining Kankakee River water up to the University Park area. Previously, University Park was served by wells which needed significant treatment to improve their water quality. This new pipeline is a much more cost-effective solution compared to treating each of the wells in the University Park that bring them up to what we would call best standard. The new pipeline will also provide increased capacity in that University Park area.

The second project is related and it's the expansion of our Kankakee water treatment facility, which also supports some pretty significant economic development in that area, in particular, a biotech plant there, which is doing manufacturing work. And our Kankakee plant expansion will provide additional reliability and redundancy for the current plant and will also bring some new and additional water supply to these industrial users, who are already requiring about 1.5 million gallons a day. And we expect them to ask for more in the future.

One other project that I'll mention, a little closer to headquarters here in Pennsylvania, we completed a pipeline in Bucks County, just north of where we sit. We were purchasing about 3.5 million gallons a day of water from the Bucks County Water Authority (sic) [Bucks County Water & Sewer Authority]. But upon completion of our new pipeline, which now connects the customers to an existing and recently expanded Aqua water supply, we're able to eliminate that contract with Bucks County. The result is an annual operating expense savings of about $7.3 million. This is significant for us.

So, this is another one of our examples that we've talked about before, these [ph] seven-to-one (05:21) projects where we can spend up to about $7 in capital to eliminate $1 operating expense, which really in order to benefit to the customers and the shareholders. We're always working to identify projects like this, and we could see more in the future.

Let's switch gears a little bit to board governance. We added a ninth board member to our Board of Directors, we met earlier this week. We welcomed Dan Hilferty, who's the CEO of Independence Blue Cross in Philadelphia.

And we're excited to have Dan on the board as he's really expanded his business. He is also very familiar with the regulated world albeit healthcare. And he's been a big player on the national scene with healthcare reform. So, Dan is a great addition to our board.

Now, let's turn to the highlights of the quarter. Year-to-date, we've added 5,326 customer connections. This accounts for about 0.5% in customer growth. We acquired a system called Tobyhanna in Pennsylvania just in July, and two small systems in Indiana, both investor-owned. So far this year, these small systems were in that backlog. We've often mentioned of these small private deals that we've amassed over the years.

Now, regulator revenues were up in the quarter to $202 million compared to $198.1 million last year, and total operating revenues were $203.4 million in the quarter compared to $203.9 million in 2016. Now rates, surcharges, and regulated customer growth increased our revenues by about $4.3 million for the quarter. And this was offset by what we've talked about many times as decrease in market-based activities. And we really concluded that program at this point. Consequently, earnings per share were $0.34 compared to $0.33 reported in the second quarter of 2016.

And lastly, it's important to mention that the board met this week and raised the quarterly dividend by 7%. The new quarterly cash dividend is just over $0.20. The directional amount is in the release, $0.20 per share, and on an annualized basis, nearly $0.82. This marks the 27th increase in 26 years. And the company has paid consecutive quarterly dividends for more than 72 years now, and we're really proud of that. We have a long history of enhancing value for our shareholders, and we're pleased to continue building on that history by increasing our quarterly dividend. It's a strong growth, and the dividend is reflective of our confidence in the business and our commitment to delivering long-term value for our shareholders.

The board continues to target 60% to 70% payout ratio compared to where we are right now, we're in the high 50s, call that, 58%, 59%.

And with that, let me turn it over to Dave Smeltzer to take us through the financials in a little bit more detail. Dave?

## David P. Smeltzer

*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

Yeah. Thanks, Chris, and good morning, everyone. Today, I'll review the financial results for the quarter, discuss some of the key factors impacting our performance, and provide a look at our 2017 rate activity.

So, we reported revenues of just over $203 million for the quarter. Our regulated segment reported revenues were $202 million, up 2% compared to the $198 million in 2016. I'll show a waterfall chart on this in a minute, but when we look at Q2 2017 versus Q2 2016, the increase in revenues from rates, surcharges, and regulated growth was largely offset by reduced revenue from market-based activities as we've been talking about the last few quarters.

O&M expenses were down 4.2% to $70.9 million for the second quarter of 2017 compared to $74 million in the same period of 2016, largely as a result of expenses that were associated with our former MBAs. For our regulated segment, O&M expense increased by 4% to $72.6 million compared to $69.7 million last year. And we reported net income of $61 million or $0.34 per share compared to $59.6 million or $0.33 per share in Q2 last year.

For the year-to-date, annual revenues decreased slightly to $391.2 million from $396.5 million in the same period last year. Regulated revenues, however, were up 1.1% to $388 million, as regulated revenues exclude the impact from our market-based activities. O&M expenses were down 5.1% to $140 million for the year compared to $147 million in the same period last year, largely due to lower production expenses and continuation of the story of our reduced market-based costs.

Regulated O&M expenses were up 2.2% due to a number of prior-year items, including a gain of $1.1 million recognized for the buyout of an operating contract, a reduction in claim reserves of $1.6 million, and a system sale gain of $1.2 million, all of which occurred in Q2 2016. Partially offsetting these increases was a decrease in pension expense.

And also, for the year-to-date, net income was $110 million compared to $111.4 million last year. Earnings per share was $0.62 compared to the $0.63 reported in 2016. And the year-to-date waterfall chart on EPS is in the appendix, and that will give you more color on this year-to-date matters.

Looking at different components of the 0.2% revenue decrease, rates and surcharges, consumption increases, and customer growth in our regulated operations increased revenues by approximately $4.3 million, but then the market-based revenue decline of $4.4 million and other minor items offset the increases.

O&M expenses were almost $71 million for the second quarter compared to $74 million in 2016. Expenses related to regulated acquisitions, a prior-year reversal reserve due to the settlement of a contractual obligation and other expenses in the quarter increased O&M $3.3 million. Reduced market-based activities expenses, lower production costs, and lower employee-related costs, primarily insurance, offset the aforementioned increase by $6.4 million for a net decrease in O&M expenses of approximately $3.1 million year-over-year for Q2.

And like me, you may have noticed an anomaly, in our O&M expenses. The fact that we would have had negative O&M expenses that are non-regulated operation kind of stands out, and it was very straightforward matter. Our costs are way down, and we did have a contract in that non-regulated sector that we're able to reverse the reserve on this year upon exiting that contract that we had inherited with the previous acquisition.

So, looking at earnings per share, starting with the $0.33 we reported last year. Regulated growth, rates, and surcharges, consumption, and tax repair benefits increased our earnings per share by a $0.015 in the quarter. And reductions in market-based activities and other expense increases in aggregate decreased our earnings this quarter by over $0.005. Net for the quarter, we reported earnings of $0.34 per share.

Moving to rate activity. So far, in 2017, we completed rate cases or surcharges in six states with $11.1 million in additional annual revenue. We also have rate cases pending in Illinois and Virginia, where we're requesting an additional $14 million.

And lastly, I will provide you with an update on our plans to file a rate release in Pennsylvania. As you'll recall, we've not raised customer rates in Pennsylvania since the conclusion of our 2011 rate case. And sticking with our prior guidance, we do anticipate we'll begin implementing a PA DISC later this year and plan to gradually phase in the increase, which we would expect to reach 7.5% over multiple quarters. We expect to file a full Pennsylvania rate case in 2018. And additional rate information can be found in the appendix of this presentation.

Chris?

## Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

Thanks, Dave. When I became CEO, I talked with many of you about our desire for greater transparency and greater exposure to our management team. And we really attempted to do that over the last couple of years.

And today, to continue in that trend, I'm going to introduce you to Dan Schuller, our Executive Vice President of Strategy and Corporate Development. By way of introduction to Dan, today is Dan's second anniversary with the company, exactly today. And Dan's going to talk a little bit about our growth strategy and the review of the acquisition landscape.

Dan?

## Dan J. Schuller

*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

Thanks, Chris, and good morning, everyone. First, I'd like to refresh your memory as to how we think about our growth strategy. You'll recall that our views in growth strategy are anchored in our core competencies, which include capital investment, regulatory affairs, and operational excellence. Think about it, prudently rehabilitating and expanding our infrastructure, earning a fair return [indiscernible] (16:05) those investments, and running our business in an optimal manner. We believe these core competencies can be leveraged in three primary areas or avenues of acquisition growth: municipal acquisitions, strategic M&A, and market-based activities.

Today, I'll provide an update on our municipal acquisition activity and touch on the completion of our exit of a legacy MBA, or market-based businesses. First, let's look at the acquisitions we've closed so far this year. This slide summarizes what we have completed t-date. We acquired a couple of investor-owned utilities in Indiana in the first quarter. And we recently added Tobyhanna, a municipal wastewater system in Northeast Pennsylvania.

Next, I wanted to provide an update on our municipal activity, thus far, in 2017. This slide depicts the municipal systems we have under agreement this year. We closed Tobyhanna in June, adding 740 customers that I mentioned a minute ago. This was System C on the chart that we've shown on the last earnings call. You'll note that we added System E as it is now under contract. It's a fairly sizable deal adding nearly 3,000 customers.

System E includes both water and wastewater connections. And it's in our target range of 2,500 to 25,000 connections. The deals either close or anticipated to close in 2017 represent nearly $114 million of purchase price and nearly 9,000 customers or 12,000 equivalent dwelling unit. In total, the systems represented on this slide consist of about 12,000 connections at a purchase price of approximately $126 million. In future calls, we'll keep you updated, as these systems reach financial close.

Lastly, while there are not as many deals on the slide as some would expect, we remain excited about the numerous opportunities that we are seeing in the municipal market. As Chris has indicated previously, we're seeing more interest than ever before on this front, especially in those states with fair market value treatment. Given our pipeline and anticipated regulatory approval schedule, we're still targeting the 1.5% to 2% full year growth that we discussed as part of our guidance call in January.

Now, let's turn to our top prospects slide. You've seen a slide like this from us before. This is meant to provide you with a sense of our opportunity set. It simply segments the top 70 deals on which we're working by system size. As you'll recall, we're most focused on those deals with 2,500 to 25,000 connections. As the header indicates, 94% of the nearly 500,000 connections represented here are from systems within that target range. While we clearly don't expect to close all of these potential transactions, when one falls off, it's quickly replaced by another opportunity from our much longer list, which had many more acquisition candidates.

Now, let's turn to our market-based activities. In June, we completed our last planned divestiture of a market-based activity. Our efforts to divest many of our subscale market-based businesses are now complete. Therefore, this is the last time we expect to talk about this on an earnings call.

The one primary market-based activity that we plan to keep is the home serve product, a product that protects the service line between our mains and our customers' homes. You may recall that we received a royalty on these contracts. We'll also keep a limited number of O&M contracts that are close to our owned utility operations.

We occasionally evaluate market-based opportunities which are closely related to our core business and expertise. And if we find something it is of the right scale, with an appropriate risk and profitability profile, we may decide to expand our market-based portfolio. That being said, we don't envision this segment of the company becoming more than 10% of Aqua America, as we continue to place our primary focus on growing the regulated water and wastewater business.

And now, I'll turn it back to Chris.

## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

Okay. Thanks Dan. Appreciate the update. And Dan will stay for questions when we wrap up as well.

Now, let me just quickly reaffirm our 2017 guidance, and then we'll move to questions. We expect our full-year earnings per share to be in the range we predicted of $1.34 to $1.39. And as always, we remain laser-focused on minimizing O&M expenses and expect year-over-year increase in the 1% to 2% range. We expect to invest more than $450 million in infrastructure in 2017, again, a record amount for us. And this will be about $1.2 billion of CapEx over the next three years. That's through 2019. This will improve and strengthen our infrastructure for our customers and the systems we currently own. And it's important to recognize, it's these improvements that allow us to provide this high level service to our customers.

But in addition to that, we expect to spend additional capital to make improvements to the newly acquired systems. Again, this isn't captured in that $1.2 billion CapEx budget. This would be an additional CapEx on top of the $1.2 billion.

We expect to grow rate base in the range of 6% to 7%. And as Dave previously discussed, we expect to file a DISC here in Pennsylvania this year. And we expect to file the Pennsylvania full rate case in 2018 and would see a resolution sometime in 2019. Finally, as Dan said, year-over-year we expect total customer growth to be in the 1.5% to 2% range.

So, before we end the call, I'd like to open it up for any questions you might have.

# QUESTION AND ANSWER SECTION

**Operator**: Thank you. [Operator Instructions] Your first question comes from Ben Kallo of Robert W. Baird. Please go ahead. Mr. Kallo, please go ahead. Your line might be...

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Ben, is your phone on mute?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*
A

Okay. Maybe we should move on and come back to Ben.

**Operator**: Thank you. The next question comes from Spencer Joyce, Hilliard Lyons. Please go ahead.

Spencer E. Joyce
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*
Q

Hey. Good morning, guys. Solid quarter. Thanks for all the color.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Good to hear from you, Spencer.

Spencer E. Joyce
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*
Q

My question is for Dan, and welcome to the calls. Great to have you on here.

Dan J. Schuller
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*
A

Thanks, Spencer.

Spencer E. Joyce
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*
Q

Two years into your tenure here, I was just wondering if you could talk about the development of the M&A pipeline versus perhaps what your initial expectations were. And then just kind of give you the floor a little bit to discuss anything as far as the go-forward outlook, with respect to kind of your initial assumptions.

Dan J. Schuller
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*
A

Sure. And I appreciate that Spencer. And two years ago, we sat here with the same team and the board, really, the day before the board meeting. And today, we sit here after having, really, I'd say, formalized and accelerated our municipal acquisition program. So, as we talked [ph] with analysts today (24:03), a year and a half ago now, putting that process in place with an investment committee and putting a database in place, where we're tracking our opportunity set and shepherding the opportunities through that process, working with our state teams and so forth, what we've done is built a strong pipeline.

And we showed you that slide today with the top 70 opportunities. And we continue to advance these and move them forward. And we would expect that the fair value legislation will continue to be beneficial to us in bringing us pipeline of opportunities. We're certainly seeing that as we said earlier in all of our fair value states, a real acceleration in the opportunity set. Now, as you know, they don't develop overnight. It takes a while to develop these, to get them into the pipeline, to convert them to a signed agreement at some point, and then we get them to regulatory approval.

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**Spencer E. Joyce**
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*

Q

Yeah. Fair point there on the timeline, and appreciate the color. Talking about the fair value legislation. Is it safe to assume that most of the top 70 prospects would be in those fair value states?

---

**Dan J. Schuller**
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

A

I'd have to look at the numbers exactly, but that is a fair assessment that a good percentage of those would be in the fair value states. Whether that's...

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**Spencer E. Joyce**
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*

Q

Or I guess another way to ask would be, have you seen a migration over the past couple of years towards that list, I guess, shifting towards to the fair value.

---

**Dan J. Schuller**
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

A

Yeah. Let's put it this way. That list, if we're to look at it before, when we're in the kind of pre-municipal initiative days, the top 75 would have been shifted to the left. There would've been many more small opportunities to acquire small investor-owned utilities. What we really pushed for is to increase the scale of our targets and to move those targets to being municipal. So, that's why we showed that slide to you, and we showed that slide to the board saying, that this push toward the 2,500 to 25,000 connections has taken hold. Many of those being fair value type of system acquisition opportunities.

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**Christopher H. Franklin**
*President & Chief Executive Officer, Aqua America, Inc.*

A

Spencer, I think one of the things that Dan brought to the team here, too, is we are more a sales team now. In other words, we're out there, more actively speaking with and generating sales. In the past, we will wait many times for regulatory agencies, call that environmental DEP, EPA, and PUC to call us with troubled systems. We'd react, and we purchase them. Now, we're out there actively, more aggressively, talking with various systems and of size, as Dan mentioned.

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**Spencer E. Joyce**
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*

Q

Yeah. To that point, are you comfortable with kind of the current size and scope of the business development or the sales team, or are there perhaps any additions or changes there, probably the next few quarters?

Dan J. Schuller
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*
A

That's something, Spencer, we constantly evaluate. But I think at this point, we're pretty comfortable with the team that we have in place and their ability to generate and develop opportunities for us.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Yeah. I don't think we want to get in the secret sauce here.

Dan J. Schuller
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*
A

True.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

But on the other hand, I think it's fair to say, Spencer, that since Dan's arrived, we have ramped up both the number of people and the activity around the sales.

Spencer E. Joyce
*Analyst, J.J.B. Hilliard, W.L. Lyons LLC*
Q

Okay. Appreciate the color there, and that's all I had. Thanks, guys.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Thank you.

**Operator**: Thank you. [Operator Instructions] The next question comes from Jonathan Reeder, Wells Fargo. Please go ahead.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*
Q

Hey. Good morning, gentlemen.

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*
A

Hey, Jonathan.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*
Q

How are you doing?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*
A

Good. Thanks. Thanks for being with us.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Q

Yeah. No. Thanks for taking the call. So, with regards to the PA rate relief plans. Dave, do you have to hit the 7.5% DISC cap before you can make the general request, or can you continue implementing DISC increases as the rate case run its course?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

Well, the answer is no and yes, right. We could file before reaching 7.5% technically, right. But generally, the way we would prefer to do it would be to reach the 7.5% first, and then file the base rate increase, which would be beyond that 7.5%. So, that's our expectation right now.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Q

Right. But once you file the rate increase, you can't keep, I guess, implementing DISC increases is what you're saying, right?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

Well, certainly if we reach 7.5% before we file, as is our intention , that's exactly correct. But just from a generic standpoint, if we hadn't reached it, we certainly could continue to increase during the pendency of the rate case.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Q

Okay. Okay. So, those give you that flexibility if you wanted to. I'm just trying to think of the trajectory of the DISC increases if you're not starting until in 2017, and then maybe in position to file the rate case still on 2018, so.

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

Yes. Yes.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Q

In terms of the timing of the rate case filing, do you think it will be consistent with when Aqua typically filed in the past, i.e., November?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

Yeah. We haven't nailed down a time yet. I'd like to think it'll be before that. But again, we haven't made that final decision just yet. But when you think about it this way, we've already decided that rather than go to 7.5% on the DISC immediately, as we're qualified for, having put over $1 billion of pipe in Pennsylvania since the last rate filing, we've decided that instead of hitting that 7.5% all at once, to roll it in over several quarters to be more gradual and more customer-friendly.

So, when you think about that, in order to do that and implementing our first DISC – obviously, we haven't implemented our first DISC in Q3 which we are in today, right.

So, the first DISC will likely be Q4, and then you'd see further increases in Q1 and Q2. So, it would likely be some time thereafter the implementation of that third DISC that we would file the rate case.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Q

Okay. That helps. And then, Chris, maybe if you could kind of give your updated thoughts on M&A, both within the water space as we saw Eversource agree to acquire Aquarion, as well as potential opportunities outside of water and wastewater as you see it today?

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

A

Yeah. Well, I think it was a little bit of a surprise to all of us when Eversource ended up with Aquarion. I did call Jim Judge at Eversource and congratulated and welcomed to our space. And I think when he explained that they had substantial cash from the sale of coal generation in New Hampshire and were going to redeploy it on "clean water," I thought that was great. And, hopefully, they'll be a player in our space. But I don't know that electrics necessarily are moving back into water. As you know, they were in, they got out. So, you have to talk to your electric friends.

On a broader sense, the multiples are just so high, Jonathan, in the water space, and for that matter, the regulated utility space, that it's tough to look at – you really have to search for accretion. And as you know, we have been and continue to be a very disciplined buyer. And so, when we looked at these opportunities, we're looking for increased shareholder value in the form of not only accretion, but enhanced long-term growth rate. So, all I can say is as we look for opportunities in our space, we will continue to look for those opportunities and only move when we think it's going to meet our shareholder value requirements.

Jonathan Reeder
*Analyst, Wells Fargo Securities LLC*

Q

Okay. Thanks for that. And then one question for Dan. What types of non-regulated businesses would you find attractive and consider moving into?

Dan J. Schuller
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

A

Yeah. Jonathan, we done some initial work on that, but I would say it's too early to really have the discussion. It has been really a lower priority for us than the municipal transactions. And our focus has been growing our business through the municipal transactions and making sure that, that acquisition activity is building our customer base for the future.

Christopher H. Franklin
*President & Chief Executive Officer, Aqua America, Inc.*

A

Yeah. And Jon, we've talked about this theme of complementary and supplementary. We get into market-based business, needs to be close to the core. We, in the utility business, understand what we're good at, and particularly, here at Aqua America, understand where our strengths are. And if it's complementary, i.e., a business that would give us access to opportunity to grow the regulated business, and obviously supplementary, in the sense that it would enhance earnings, then that would be attractive. But I think, as Dan said, we've been very active on the municipal front, we've been very interested in opportunities in a larger scheme of the M&A world, and so, market-based businesses, would've taken a third tier.

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**Dan J. Schuller**
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

A

Yeah. I think it's fair...

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**Jonathan Reeder**
*Analyst, Wells Fargo Securities LLC*

Q

That's a good – Sorry.

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**Dan J. Schuller**
*Executive VP-Strategy & Corporate Development, Aqua America, Inc.*

A

Jonathan, we spend a lot more time divesting the subscale market-based businesses we've had and looking at additional ones, as Chris said, that would complementary and supplementary.

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**Jonathan Reeder**
*Analyst, Wells Fargo Securities LLC*

Q

Okay. I was going to say good answer. That's what we like to hear that the focus is on growing through the muni deals and not the non-regs. So, appreciate the update, and thanks for the time.

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**Christopher H. Franklin**
*President & Chief Executive Officer, Aqua America, Inc.*

A

You bet.

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**Operator**: Thank you. The next question comes from Tim Winter, Gabelli & Company. Please go ahead.

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**Timothy Winter**
*Analyst, Gabelli & Company*

Q

Good morning, guys, and thanks for taking my question.

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**David P. Smeltzer**
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

Hey, Tim.

---

**Timothy Winter**
*Analyst, Gabelli & Company*

Q

I wanted to know, given the sort of significance of returning to the Pennsylvania rate environment, if you could talk a little bit about where your Pennsylvania rates are relative to peers, or where they've been in the past, and how much of a percent increase you think you need in 2018 once you revisit that? And maybe what that's done to your earnings over the past several years, staying out of Pennsylvania?

---

**David P. Smeltzer**
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*

A

Yeah. Tim, it's Dave. Yeah. I'll try to hit a couple of those things. You might have to remind me. But, yeah, in Pennsylvania, it's interesting. Our rates were comparable to our peers for many years. We might have gotten a little bit ahead in the kind of the 1990s, early 2000s, as we ramped up our infrastructure rehabilitation program. But the last seven years have fixed that, right, because our last rate case was filed in 2011. And since then, our peers have continued to spend capital, implement surcharges, and raise rates, and we have not. And so, today, as we sit here, our rates are certainly comparable with our peers in the utility space. So, that's how I would judge our rates.

In terms of our process, we've mentioned before that we'd like to file the case subsequent to reaching the maximum on our surcharge. We felt that jumping to 7.5%, although certainly technically possible having put that $1 billion-plus of plan in the last number of years wouldn't be the right thing to do for our customers, so we've decided to spread that out over multiple quarters. And once we do reach 7.5%, then the timing would be appropriate to file that next rate case. So, I expect it'd be sometime in the middle of the year. We haven't nailed down which quarter or which month yet, but I would expect it will kind of be some time near the middle of 2018.

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**Christopher H. Franklin**
*President & Chief Executive Officer, Aqua America, Inc.*
A

If I could just jump in and supplement, Tim, because, I think your question is a really good question. It's interesting to think about despite the fact that we hadn't had top line growth really since Dave said, 2011, our Pennsylvania unit still is operating at about $0.29 on $1 O&M to revenue, which is pretty impressive from the operating team here at the company. I think that's important to keep in mind. We've really, really been expense-conscious.

The second thing is we're keenly aware that our – the fact that we've been out of rates for nearly seven years now helps us in our municipal acquisition program. Because there's often, as you're all aware now, this rate differential between what municipals charge and what we charge. And so, to the extent that we can be efficient through our customers to keep that overall rate down, it makes our deal-making on municipal front that much easier.

We're also very aware though that we'd like to continue the single tariff pricing. And so, to the extent that, that gap is smaller from where we buy on municipals, and their rates, and to where they get to, to get to a single tariff price, that's an advantage for us.

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**David P. Smeltzer**
*Chief Financial Officer & Executive Vice President, Aqua America, Inc.*
A

Anything else on that we can help you with, Tim?

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**Timothy Winter**
*Analyst, Gabelli & Company*
Q

I'm sorry. Thank you, guys. No, I appreciate that.

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**Christopher H. Franklin**
*President & Chief Executive Officer, Aqua America, Inc.*
A

Got it. Very good.

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**Operator**: Thank you. [Operator Instructions] It appears there are no further questions at this time. Mr. Chris Franklin, I'd like to turn the conference back to you for any additional or closing remarks.

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## Christopher H. Franklin

*President & Chief Executive Officer, Aqua America, Inc.*

I have no additional remarks. I just want to thank everyone for joining. And obviously, Brian and the team, Dave, are all available for follow-ups if you have them. Thanks so much.

**Operator**: Ladies and gentlemen, this does conclude the conference call for today. You may now disconnect your line, and have a great day.

THOMSON REUTERS STREETEVENTS

# EDITED TRANSCRIPT

WTR - Q4 2016 Aqua America Inc Earnings Call

EVENT DATE/TIME: FEBRUARY 23, 2017 / 4:00PM GMT

## CORPORATE PARTICIPANTS

**Brian Dingerdissen** *Aqua America Inc - IR Director*

**Chris Franklin** *Aqua America Inc - CEO*

**Dave Smeltzer** *Aqua America Inc - CFO*

## CONFERENCE CALL PARTICIPANTS

**David Cater** *Robert W. Baird & Co. - Analyst*

**Ryan Connors** *Boenning & Scattergood Inc. - Analyst*

## PRESENTATION

**Operator**

Good day, ladies and gentlemen, and welcome to the Aqua America Q4 and full-year 2016 earnings call.

Today's conference is being recorded.

At this time I would like to turn the conference over to Mr. Brian Dingerdissen. Please go ahead.

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**Brian Dingerdissen** - *Aqua America Inc - IR Director*

Thank you Keith. Good morning everyone and thank you for joining us for Aqua America's 2016 full-year and fourth-quarter earnings conference call. If you did not receive a copy of the press release you can find it by visiting the investor relations section of our website at aquaamerica.com. The slides we will be referencing can be found on our website as well. There also will be a webcast of this event available on our site.

As a reminder some of the matters discussed during this call may include forward-looking statements that involve risks, uncertainties, and other factors that may cause the actual results to be materially different from any future results expressed or implied by such forward-looking statements. Please refer to our most recent 10-Q, 10-K and other SEC filings for a description of such risks and uncertainties.

During the course of this call reference may be made to certain non-GAAP financial measures. A reconciliation of these non-GAAP to GAAP financial measures is posted in the investor relations section of the Company's website.

Presenting today is Chris Franklin, Aqua America's Chief Executive Officer, and Dave Smeltzer, the Company's Chief Financial Officer. After the presentation will open the call up for questions.

At this time I'd like to pass it over to Chris Franklin.

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**Chris Franklin** - *Aqua America Inc - CEO*

Thanks Brian and good morning everyone. For today's brief agenda, we'll start with some recent news on the Company, and then I'll comment on some of our highlights from 2016 and Dave Smeltzer, our CFO is going to cover the financial results for the year and some of our rate activity. Then we will conclude the formal portion of the presentation by reviewing our guidance for this year 2017 and after that we'll take any questions you might have.

Let's jump right in. As we close the books on 2016, which is our 130th year anniversary, I'd like to provide just a little bit of color on the year. I think it was an exciting and a fulfilling year for all of us at the Company and we laid in some important groundwork for our strong future. Probably most importantly, we built our strong Management Team and I believe we're fielding a world-class team at this point. I'm thrilled with how the team as gelled and the talent that they possess.

Secondly, we continue to maintain our high standard of operational excellence, including the handling of some of the industry type challenges like the fallout from Flint, Michigan, which is the national discussion as we've said before and we continuously get questions from our customers and our different constituencies about the lead issue.

We invested nearly $400 million in our infrastructure this year at the Company. This is a record year for us. We provide a higher degree of service continuously for our customers and we continue to bring fair market value legislation in even more states where we do business, Pennsylvania obviously being the big accomplishment in 2016. We talked about that detail on our last call so I am not going get into the details other than to say that our New Garden acquisition is the first one through in Pennsylvania and that's in the midst of getting its examination at the PUC in Pennsylvania now.

We've largely completed the exit of our small non-core, nonstrategic, market based or unregulated businesses as we call them. That's almost done and the last remaining really is profitable but is on the way out now.

On the softer side, we continued the refinement of our corporate culture and worked to ensure that all of our 1,600 dedicated utility professionals are safe in the workplace when they come in every day and that they uphold our high ethical standards and continue to operate the Company as efficiently as possible.

Also last year, we updated our short term and our long-term incentive plans to better reflect our strategy and incent behaviors that will continue to make us the world-class company that we are. Finally, we implemented some new Board governance practices. I've mentioned them before but we put term limits on our Board members, we've put rotation requirements on the committee chairs, and we switched from the traditional meeting fees to retainer fees. So I think we've put good work governance into place in 2016.

Now let's turn to some of the highlights from the 2016 on the next slide here. We increased our customer count by 1.6%. This includes customer growth from acquisitions and organic growth and it falls with within our guidance range that we provided last year. Our annual revenues increased to $819.9 million compared to $814.2 million last year or in 2015, I should say.

Our 2016 earnings per share increased 4.8% over the 2015 adjusted income per share. Again, we'll talk non-GAAP here just for a minute of $1.26 per share. As you'll recall that we wrote down our Marcellus pipeline to the $0.12 write-down in 2015. I would also like to note that 2016 marks the 72nd consecutive year that the Company has paid a quarterly dividend.

Now many of you have seen this next slide, you'll recognize it from our 2017 earnings call just a month ago. And this slide summarizes what we completed as of year-end 2016. We invested more than $22 million in acquiring water and wastewater systems last year. We acquired 13 water and six wastewater systems, including two municipal deals and most of you recall those are the East Cameron and Emlenton, both in Pennsylvania.

As I mentioned a minute ago, we increased in total of 1.6% for the year and I think it's important to note that the majority of the deals still don't reflect the targeted size range that we've discussed; this is that 2,500 to 25,000 customer range. The majority of the deals closed in 2016 and were initiated before we refocused our strategy on larger opportunities. And that work that we began in 2015 and continues today, really focuses on those larger opportunities and I am very confident that this refocused strategy is already working.

I think you'll see it in the next slide here as we talk about our 2017 growth initiatives. As we turn the page, and I mentioned this last month, we already have four municipal systems under contract, under agreement this year and their representative as systems A through D on this chart; again, just because they haven't been announced yet. Combined, they represent $113 million of purchase price, nearly 9,000 customers or 12,000 of what we call equivalent dwelling units.

These deals are expected to close at some point during the year of 2017. In addition, to the four municipal's, we also have a couple of investor-owned utilities under agreement but not yet closed. These couple of deals are also smaller deals from our backlog of small private deals. And we'll of course keep you updated as these systems close and move through the new process.

And with that, I'll hand the call over to Dave, who's going to review the full-year financial results.

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**Dave Smeltzer** - *Aqua America Inc - CFO*

Thanks, Chris. Good morning everyone. Today, I'd like to review the financial results for the full-year and discuss some of the driving factors that impacted the Company's performance. While we're doing that I'll also provide a look at our rate activity from 2016 and for the current year so far.

Turning to the next slide, we've reported annual revenues of $819.9 million, which is up from the $814.2 million last year. In our regulated segment, reported revenues of $800.1 million were up 2.6% compared to the $779.6 million in 2015. Operating and maintenance expenses were down 1.4% to $304.9 million for the year compared to $309.3 million in 2015.

For our regulated segment operations and maintenance increased just less than 1% to $285.3 million compared to $282.9 million last year. We reported net income of $234.2 million or $1.32 per share, compared to $201.8 million or $1.14 per share in 2015. Chris mentioned the adjustment for the Marcellus write-off on an adjusted basis. Earnings per share of $1.32 increased by 4.8% over the 2015 adjusted income per share.

Turning to the next page, let's take a look at the full-year revenue comparison, starting with our revenue for 2015 of $814.2 million. Regulated growth rate surcharges, assumption, and other factors increased revenue by approximately $20.5 million. From there, lower revenues from the Company's sale of certain of it's market-based activities offset the increase by $14.8 million.

The next page we'll look at O&M expenses, starting with our O&M for 2015 of $309.3 million. Increased employee related costs and regulated acquisitions, increased O&M by approximately $10.4 million. From there, lower production costs, expenses related to our sale of our market based activities, and other factors decreased expenses by $14.8 million, getting us to an overall decrease of $4.4 million or 1.4% in O&M expense for the year.

The next page, looking at earnings per share, starting with our EPS for 2015 of $1.14 and adding in the adjustment of $0.12 for the impairment of the JV pipeline, as we mentioned earlier, brings us to the 2015 adjusted income of $1.26. From there tax repair benefits, rates and surcharges, and regulated growth, accounted for an increase of about $0.08.

We also saw some minor earnings from our remaining market-based activities and consumption. And from there, higher expenses and other factors decreased EPS by approximately $0.02 net, resulting in the $1.32 we recorded for the year.

Moving on, let's take a look at our rate activity schedule. Recapping 2016 from a rate perspective, Aqua America's regulated subsidiaries received rate awards and infrastructure surcharges in six of our eight states, with an estimated increase in annualized revenues of approximately $5.6 million; including $1.1 million of revenues recognized under interim rates during 2015.

Thus far in 2017, we completed rate cases or surcharges in three states with $3.7 million in additional revenue. We also have a rate case pending in Ohio, requesting an additional $5.6 million of revenue. Additional rate information can be found in the appendix to this presentation.

And with that I'll turn the call back to Chris, who will discuss our expectations for the future.

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**Chris Franklin** - *Aqua America Inc - CEO*

Great, Dave thanks. So let's take a look at what lies ahead. We continue to be very excited about our opportunities, particularly our growth opportunities and particularly in water and wastewater. Among our top priorities for this year 2017, we plan to continue to grow our rate base from both acquisitions and needed infrastructure improvement. In fact, we'll again spend CapEx at record levels next year.

We'll focus on our operating efficiencies and this is one of our hallmarks and we won't lose sight of operating efficiency. We'll also focus on our safety programs as we want our workplace to be the safest in the industry and we'll continue our tremendous focus on safety programs.

We'll also continue to focus on succession planning; as we know there's a wave of utility retirements coming through in most of the utility industry and we plan to be very prepared for that wave as we build greater diversity in our Company and greater depth of bench. I think we're doing that very, very well already.

Of course we'll continue to work on fair market value legislation, as this helps to fuel the growth in our municipal world and in states where it makes sense, we'll spend a lot of time in 2017 trying to get that legislation through the legislatures. So I'll close by reviewing our 2017 guidance that we provided in January.

On the next slide you'll see our full-year earnings per share guidance to be in the range of $1.34 to $1.39. On a same system basis, we expect O&M to increase only 1% to 2% for the full year and as always, we'll remain very focused on that aspect of the business.

We expect to invest more than $450 million in infrastructure in 2017. Again, this is another record for us. And more than $1.2 billion of CapEx will be spent over the next three years between now and 2019, which will continue to improve and strengthen our existing infrastructure for the customers that are already due within our footprint. Now these investments allow us to provide a high quality of service to our customers throughout that footprint.

When we spend capital, we talk about our capital budget of $1.2 billion over that time but we're also going to improve systems that are new to us; so new acquisitions and the improvements in those systems. That will be over and beyond our $1.2 billion CapEx budget. We don't budget for acquisitions or the improvements that are associated with those acquisitions.

We also expect to grow rate base as a result, approximately 6% to 7%. And regarding one of our most commonly asked questions, our PA rate case, we expect to stay with our original plan, we've been discussing for some time now; and that's to file a distribution system improvement charge in 2017 later this year and we'll follow then with a full rate case in 2018 with an expected resolution in 2019. Finally, year over year we expect our total customer growth to be in the range of 1.5% to 2%.

Now before we end the call, Dave and I would be happy to take any questions that you might have.

## QUESTIONS AND ANSWERS

**Operator**

(Operator instructions)

David Cater, Baird.

**David Cater** - *Robert W. Baird & Co. - Analyst*

Hello, thank you for taking the question. I was hoping you can provide some color on your 1.6% customer growth. What percentage of that was organic and is that level of organic growth sustainable, do you think?

**Chris Franklin** - *Aqua America Inc - CEO*

Let's take a look at that piece of organic here to get it right for you. Our organic customer growth was about 6,500. And so the balance or 8,700 were from the 19 acquisitions we did during the year.

**David Cater** - *Robert W. Baird & Co. - Analyst*

Got it.

**Chris Franklin** - *Aqua America Inc - CEO*

I'm sorry. It's the other way around. So our acquisitions were 6,500 and organic growth was 8,700.

**David Cater** - *Robert W. Baird & Co. - Analyst*

And is that level of organic growth something that we can think about going forward, do you think is sustainable?

**Chris Franklin** - *Aqua America Inc - CEO*

Yes, I don't see why that wouldn't be a sustainable level of organic growth.

**David Cater** - *Robert W. Baird & Co. - Analyst*

Excellent. Thank you. And lastly I was hoping if you could provide some color on what levers you have to decrease the O&M ratio and what are your long-term goals there, your efficiency targets?

**Chris Franklin** - *Aqua America Inc - CEO*

Yes, so the challenge with what we called the efficiency ratio is, as you buy municipal systems and as we're in that world now of municipal systems, you have this delayed rate impact. So we will buy it, and typically it's a multiyear phase, where we wait for a rate case. And so as we do that, expenses slightly climb and then of course as we recover in rates, we would get that all back.

So over time, we have a nice, strong O&M to revenue ratio. As you look at it and this is the non-GAAP measurement that we used in the industry. We're at about 33.4% today and so it's very strong.

I think it's still the strongest in the industry, despite our municipal activity. But I would expect as we ramp up municipal activity, that expenses could front run revenues at least for a short period of time until we get rates. So it could impact that ratio slightly.

**David Cater** - *Robert W. Baird & Co. - Analyst*

Got it. Thank you.

**Operator**

Ryan Connors, Boenning & Scattergood.

**Ryan Connors** - *Boenning & Scattergood Inc. - Analyst*

Good morning, thanks for taking my question. I wanted to actually, Chris, thanks for the reiteration of the timeline there on the Pennsylvania rate activity. But now that we're more into the tactical timeframe of this, I wonder if you could give us any modeling guidance on when you would actually expect the DSIC to begin actually impacting the P&L.

Would that be something you'd expect to see a little bit of that in the back half of this year or should we hold off on expecting any of that until 2018?

**Chris Franklin** - *Aqua America Inc - CEO*

Yes, I think it's fair to say back half of the year certainly. And I think that's a very fair and I would say more towards Q4 than Q3.

**Ryan Connors** - *Boenning & Scattergood Inc. - Analyst*

Okay. Good, that's good that's helpful. And then I was just curious, Ohio, you just got new rates there; another one in the pipeline, just curious what's the reasoning behind or the dynamics behind such rapid succession there in Ohio?

**Chris Franklin** - *Aqua America Inc - CEO*

Well we have a couple of different things going on in Ohio, right, we have the regulated, fully regulated, which is the PUCO rates and we go in on a fairly regular cadence for that. And they have a, they don't call it a DSIC out there but a SIC and we then have the locally the regulated system. In Baseline, Ohio, for example, we go to the county and the county regulates.

So we go in for rates there but it's not the same that's going into commission, it's that those cases are reviewed locally and the rates are approved locally. So it's a much more, I'm going to use the word efficient, but in the sense that you're not prosecuting a full rate case the rate case expenses are a lot more efficient than they would be otherwise.

**Ryan Connors** - *Boenning & Scattergood Inc. - Analyst*

Interesting.

**Chris Franklin** - *Aqua America Inc - CEO*

I would say you have multiple rate divisions there, Ryan if you think about it. One large at PUCO and then two smaller, which are locally negotiated.

**Dave Smeltzer** - *Aqua America Inc - CFO*

And you know, Ryan, Ohio is our second-biggest state and its obviously some very old towns that we serve where there's significant opportunity for infrastructure rehabilitation.

**Ryan Connors** - *Boenning & Scattergood Inc. - Analyst*

Yes. That's good. I wasn't aware of that. That's good color. And my last one was just on the -- I realize you're mostly out of the market based businesses now but you do still have the service line protection and I noticed that there's new marketing documents that home serve is using an they're much more robust. Really it looks great actually. Might actually get me on board for the first time.

But is that something that you're aware of that they've really beefed up their marketing of that? And have they given you any forecast or expectation on their expectations of how that more aggressive marketing will impact uptake on the service line protection? I mean it's really a multipage brochure now with all these neat graphics and stuff. Is there any expectation that, that will accelerate that?

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**Chris Franklin** - *Aqua America Inc - CEO*

Remember the offerings today are a lot more robust than when we first started, when it was really a service line protection, water service line protection. Now the services are into wastewater, electric, everything else. So the offerings are much more robust.

What they call take-up rates or saturation in my mind, are already significant. So I don't have any projections as to what they think they can attain through their new efforts. But I would say that just looking at what they saturated in the states where they do business with us already, it's very, very strong.

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**Ryan Connors** - *Boenning & Scattergood Inc. - Analyst*

Okay. And then I apologize but one more, while we are on the topic, it comes to mind that this is a broad question for anybody in that business but how does the Commission's look at that? If someone subscribes to that, it goes on the water bill, right?

So I would assume they don't look at that then as part of your quote, unquote rates, when they're assessing total household wherewithal to meet the water bill and whatnot. How do the Commissions look at that when someone subscribes?

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**Dave Smeltzer** - *Aqua America Inc - CFO*

Yes, Ryan. It's Dave. Most of the Commissions don't really look at it very much. They recognize it's a nonregulated business and they allow that to go on unattached.

There's an occasional opportunity when the commission does take a look at it and incorporate into a rate case but we've generally only seen that in one state.

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**Chris Franklin** - *Aqua America Inc - CEO*

The fact is that it doesn't take really staff time or overhead from the Company. Since it operates largely independent, it really doesn't impact rates.

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**Ryan Connors** - *Boenning & Scattergood Inc. - Analyst*

Got it. Okay. Well, thanks for your time.

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**Operator**

(Operator instructions)

At this time we have no further questions in the queue. I would like to turn the conference over to Mr. Brian Dingerdissen for any additional or closing remarks.

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**Chris Franklin** - *Aqua America Inc - CEO*

Folks, this is Chris. Thanks for joining us today and if you have follow-up questions, we're always available. Thank you so much.

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**Operator**

Ladies and gentlemen, this does conclude today's presentation. We appreciate your participation.

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HILLIARD LYONS

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November 2, 2016

COMPANY UPDATE / ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 11/1/16 | | $29.99 |
| Price Target | | | $27.00 |
| 52-Week Range | | $28.05 - | $35.83 |
| Shares Outstanding (mm) | | | 177.3 |
| Market Cap. ($mm) | | | $5,318.1 |
| 1-Mo. Average Daily Volume | | | 858,976 |
| Institutional Ownership | | | 51.0% |
| LTD / Total Capital | Q3'16 | | 48.5% |
| ROE--Adj | TTM | | 13.3% |
| Book Value / Share | Q3'16 | | $10.30 |
| Price / Book Value | | | 2.9x |
| Dividend Yield | | | 2.6% |
| LTM EBITDA Margin | | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | -- | $0.41 | A | -- | -- |
| 4Q | *$0.28 | $0.30 | $0.30 | | -- | -- |
| Year | $1.26 | $1.31 | $1.33 | | $1.35 | $1.36 |
| P/E | 23.8x | | 22.5x | | | 22.1x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | -- | $227 | A | -- | -- |
| 4Q | $197 | $199 | $199 | | -- | -- |
| Year | $814 | $818 | $822 | | $849 | $849 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**Q3'16 Results from WTR; Reiterating Underperform.**

**Investment Highlights**

- Aqua America reported Q3'16 EPS of $0.41 versus $0.38 in the year-ago period. EPS in the quarter beat our estimate for $0.39, which equaled consensus. Core revenue/expense items were positive in Q3, although a $2.3MM swing in JV profit/loss helped growth too.
- Revenue grew 2.5% to $226.6MM in Q3, missing our estimate for fractional growth. Regulated revenues grew ~$9MM while non-reg fell ~$4MM, in a favorable trend we expect to persist in Q4.
- WTR has $8.1MM in rate and surcharge applications pending in IN, OH, and VA, with ~$4.4MM in net awards so far this year. We believe material rate activity in PA is still a couple years away, meaning dynamism to top line is likely to key off acquisitions.
- O&M expense grew 1.6% in Q2, which was ahead of our expectations but offset the revenue beat. Same system O&M is still expected to be +1% to +2% for 2016, although consolidated growth should remain subdued on non-reg divestitures.
- The effective tax rate in Q3 slipped to 10.3% from 12.4% in the year-ago period, as WTR continues to maximize its repair tax 'lever'.
- Management reiterated FY 2016 EPS guidance in the range of $1.30-$1.35. Reflecting upside to Q3, our FY 2016 estimate moves up $0.02 to $1.33; our 2017E rises $0.01 to $1.36.
- We are reiterating our Underperform rating and 1-year $27 price target. At our target, WTR would trade ~20x our 2017E EPS which we view as fair value given peer multiples, and more importantly, just sector-average growth prospects over the next few years.
- At this point, our Underperform continues to flow in agreement with our Underweight allocation suggestion to each utility vertical (gas, H20, electric).

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## ADDITIONAL DISCUSSION—Q3 RESULTS & FORWARD OUTLOOK

Q3 was another good quarter operationally, in our view, and a bit better quarter financially than we had seen yet this year. EPS growth of 8.3% marks the company's best growth rate since Q1 of 2014, a period over which most growth has been <5%. Revenue growth was perhaps our biggest surprise, although with Aqua citing increased usage to some extent, we believe there could be at least a hint of a tough comparison for next year.

Moving forward however, we believe the revenue environment remains challenging without rate activity in Pennsylvania being in the mix; however, we still like seeing the market-based businesses being either liquidated or disposed.

## ADDITIONAL DISCUSSION—FINAL THOUGHTS

Our negative thesis in Aqua for some time now has been multiple compression due to slowing earnings growth in conjunction with ROE-compression. Over the past couple of months however, we have been cultivating a complementary thesis that centers on M&A. Somewhat unfortunately, Aqua shares a footprint in two populous and important states (PA and NJ) with its primary rival for M&A transactions. Recently, we have seen a flurry of large deals 'won' by parties other than Aqua.

We believe much of the positive fervor across the back half of 2015 and into 2016 was tied to a refocused and revitalized M&A strategy, in which Aqua is pursuing larger deals. Should consensus wane from WTR's ability to consistently win these bigger deals long-term, we see risk for further re-rating lower.

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

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Water Utilities

November 2, 2016

# Aqua America, Inc. (WTR) - BUY

# WTR: Solid 3Q16 Results, Reaffirmed 2016 Guidance; Maintain BUY, $39 F.V.

| | |
|---|---|
| Price: | $29.99 |
| Fair Value Estimate: | $39.00 |
| 52-Week Range: | $28.05 - $35.83 |
| Market Cap (MM): | $5,317 |
| Shr.O/S-Diluted (mm): | 177.3 |
| Average Daily Volume: | 766,192 |
| Book Value: | $10.10 |
| Dividend: | $0.77 |
| Yield: | 2.6% |

| FYE: Dec | 2016E | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33E | $1.42E | $1.51E |
| Prior EPS: | $1.34 | $1.43 | $1.50 |
| P/E Ratio: | 22.5x | 21.1x | 19.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.29E | $0.32E |
| Q2 | $0.33A | $0.33E | $0.35E |
| Q3 | $0.41A | $0.45E | $0.48E |
| Q4 | $0.29E | $0.34E | $0.35E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $202E | $222E |
| Q2 | $204A | $214E | $235E |
| Q3 | $227A | $249E | $262E |
| Q4 | $207E | $228E | $239E |
| Year: | $830E | $893E | $959E |

1 Year Price History for WTR

## PORTFOLIO MANAGER BRIEF

Aqua America reported net income of $73.2MM and EPS of $0.41 for 3Q16, which was in line with consensus estimates. The company executed on key initiatives, including capex activity and acquisitions, as well as continuing its efforts to minimize the cost structure. Guidance for 2016 was reaffirmed, and while we made a few minor adjustments to our model the changes had no impact on valuation. We maintain our BUY rating and $39 Fair Value based on the shares trading to a P/E level of 26x our 2018 EPS forecast of $1.51.

## ANALYST NOTES

- Solid Quarter Across the Board. Aqua America reported a solid quarter with no surprises and in line results. Net income of $73MM was up 8.5% YoY, while reported EPS of $0.41 was up 7.9% YoY. The YoY growth was driven in part by increased revenues due to higher consumption, higher rates, and regulated growth. Additionally, Aqua America's continued focus on cost-cutting and cost-conscious decisions was also cited as having a positive impact on bottom line performance.
- Acquisitions Continue to Have a Positive Impact. Acquisitions and organic growth have increased Aqua's customer base by 1.3% so far in 2016, with acquisitions accounting for 5,700 of the 12,900 new customer connections. Aqua has made acquisitions this year in Pennsylvania, Indiana, North Carolina, Virginia, New Jersey, and Ohio. Of note was management's indication that opportunities for acquisitions are increasing as municipalities struggle to keep pace with necessary infrastructure improvements, and its current pending acquisition agreements will add another 4,700 customer connections.
- Continued Execution on Robust CAPEX Plan. Aqua America has continued to execute on its CAPEX plans; year to date, the company has invested $270MM in infrastructure improvements, with $80MM left in the budget to hit the $350MM goal for 2016 capital spending. These infrastructure improvements come as part of Aqua's $1.1B investment plan through 2018. As we have noted previously, the plan will add much needed improvements to infrastructure while also contributing to rate base growth.
- Guidance for 2016 Reaffirmed. Aqua reaffirmed guidance for the year, with EPS expected to be between $1.30 and $1.35. Customer growth is expected to be between 1.5% and 2.0%, while CAPEX will top $350MM. Aqua has not yet released 2017 guidance.

 

- Summary/Valuation - Aqua turned in yet another solid quarter with no surprises. Continued execution on initiatives, strong leadership, and growing opportunities for acquisitions all drive a strong story. As 2017 approaches, our focus now shifts to Aqua's next Pennsylvania rate case, which it expects to file in late 2018 with new rates effective in 2019. Given the ongoing capital program since they last visited with the PAPUC on the topic of rates, we note rate base should increase materially, which we'd expect to have a positive impact on WTR's bottom line. We maintain our Buy rating and $39 Fair Value target, based on the shares trading to a P/E of 26x our 2018 EPS estimate of $1.51.

November 2, 2016

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: Valuation Tempting But We Remain On Sidelines For Now**

**Market Perform**

Sector: Water Utilities
Market Weight


- **Summary.** No changes to our EPS outlook or thesis following WTR's Q3 report. We remain attracted to WTR's strategy of (1) timely recovery of infrastructure investments and (2) consolidating the fragmented water and wastewater industry. We believe WTR's revised approach to municipal M&A will start bearing fruit in 2017 aided by enabling legislation in IL, IN, NJ and PA as well as the potential for NC and OH to follow suit. We reiterate our Market Perform rating despite the fact that WTR shares have underperformed year-to-date (+2% vs. +17% for our water utility index and +13% for the S&P Utilities) and trade at 8-10% P/E discounts to water utility peers on our 2017-19E EPS. We believe the discount valuation reflects investor concerns that the water industry premium P/E will be eroded if WTR announces a M&A deal outside of the regulated water space. Should WTR announce a strategic deal, it could create an attractive entry point in our opinion.


- **Relative Valuation Thoughts.** Currently, the water utility sub-sector enjoys premiums of roughly 35% to the electric and 20-25% to the gas utility sub-sectors. We don't disagree that a non-water transaction could trigger further near-term underperformance in WTR shares – particularly if the relative size of the hypothetical target is similar to WTR. However, we do question the sustainability of the waters' current relative premium. We believe current water utility share prices imply a roughly 75 bps lower equity risk premium (ERP) than electrics in our dividend discount models. We agree a lower ERP is warranted for the lower risk water business model (might 75 bps be too steep though?) but point out that if interest rates eventually rise from historic lows, the implied premium P/E multiples represented by a 75 bps lower ERP naturally diminish as the risk-free rate rises. In other words, the 35% relative premium the waters currently command over the electrics should contract as interest rates rise.

- **Implications to Our Thesis.** If WTR's hypothetical deal makes strategic sense (increases WTR's EPS growth rate, offers capex and rate base growth at least commensurate with the water utility industry, possesses a similar business risk profile, etc.) and allows WTR to take advantage of today's premium currency (WTR trades at P/E premiums of 22-24% to electric and 8-15% to gas utilities), a further pullback in shares could create an attractive entry point versus water utility peers as the erosion of the relative water premium may be inevitable if/when rates rise. So while we find WTR's current 8-10% P/E discount to water peers tempting, we elect to remain on the sidelines until (1) the details of a potential deal materializes and (2) there is a potential further pullback in shares.

- **Outlook.** Our 2016-19E EPS remain $1.33, $1.40, $1.47 & $1.55. We do not assume any strategic M&A despite the fact that WTR has financial flexibility and WTR has articulated a clear desire to explore such opportunities. Barring a very sizeable deal, we do not foresee the need for new equity and, in fact, WTR has previously indicated that roughly $750MM of additional debt capacity exists. As such, we believe share buybacks and/or accelerated dividend increases (greater than 8%) may be considered to achieve a consolidated equity ratio closer to 45%.

**Valuation Range: $31.00 to $33.00**

Our VR is based on a P/E multiple (5-10% discount to 17E water median of 23.6X to our 18E of $1.47) and DDM analyses. Primary risks are regulatory and M&A.

**Investment Thesis:**

We are attracted to WTR's strong fundamentals. Our Market Perform rating primarily reflects valuation considerations.

### *Earnings Reported*

| EPS | 2015A | 2016E Curr. | 2016E Prior | 2017E Curr. | 2017E Prior |
|---|---|---|---|---|---|
| **Q1** (Mar.) | $0.27 | $0.29 A | NC | NE | |
| **Q2** (June) | 0.32 | 0.33 A | NC | NE | |
| **Q3** (Sep.) | 0.38 | **0.41 A** | **0.40** | NE | |
| **Q4** (Dec.) | 0.28 | 0.30 | NC | NE | |
| **FY** | $1.26 | $1.33 | NC | $1.40 | NC |
| **CY** | $1.26 | $1.33 | | $1.40 | |
| **FY P/EPS** | 23.6x | 22.4x | | 21.2x | |
| **Rev.(MM)** | $814 | $835 | | $878 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2016 ongoing diluted EPS guidance is $1.30-1.35.*
*2015A excludes a 1-time item impairment charge on the Marcellus water pipeline JV of $0.12 in Q4.*

| | |
|---|---|
| Ticker | WTR |
| Price (11/02/2016) | $29.72 |
| 52-Week Range: | $28-36 |
| Shares Outstanding: (MM) | 177.3 |
| Market Cap.: (MM) | $5,269.4 |
| S&P 500: | 2,104.32 |
| Avg. Daily Vol.: | 851,816 |
| Dividend/Yield: | $0.77/2.6% |
| LT Debt: (MM) | $1,858.0 |
| LT Debt/Total Cap.: | 50.4% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 6.0% |
| CY 2016 Est. P/EPS-to-Growth: | 3.7x |
| Last Reporting Date: | 11/01/2016 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


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**Please see page 3 for rating definitions, important disclosures and required analyst certifications**


**All estimates/forecasts are as of 11/02/16 unless otherwise stated.**

# Aqua America, Inc. (WTR)

## Q3 Conference Call Highlights

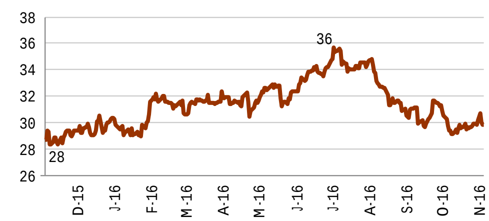
**Reiterate Neutral rating after WTR's Q3 conference call.** Q3 beat estimates as favorable weather led to increased consumption, although WTR expects to be at the mid-to-low point of its EPS guidance range for 2016. Additionally, management indicated higher-than-expected organic growth and a strong acquisition pipeline should ensure customer growth going forward. WTR tentatively plans to file for DSIC in 2017 and a full rate case in 2018, which should help EPS growth. We continue to wait for a clearer path to earnings growth before becoming more constructive.

- **Management expects to be at the mid to low point of EPS guidance range for FY:16.** Q3 was stronger than expected due to increased consumption, larger-than-expected organic growth, and fee recognition in its JV. Despite the strong Q3, Management expects to be at the mid to low point of its FY:16 EPS guidance as the one-time fee benefits in Q3 will not continue in Q4, and we have adjusted our model accordingly. For additional details about Q3 performance see: Q3 First Look Note.
- **Acquisition opportunities remain robust and competing bidders are acting rationally.** WTR completed 13 acquisitions through November 1, adding ~5,707 total customers. WTR also has 6 pending acquisitions for an additional 4,700 customers. The company has achieved 1.3% customer growth YTD (~12,900 customers), and continues to expect y/y customer growth of 1.5%-2.0%. Management is optimistic about future acquisitions and municipals seeking to sell their water businesses are at an all-time high.
- **WTR tentatively plans to file for a rate case in Pennsylvania in 2018 (2019 effective date), and potentially DSIC in 2017.** WTR expects to file to recover some revenue in 2017, with a full rate case in 2018. Under this timeline, new rates from a 2018 rate case filing would likely come into effect in 2019. WTR currently has pending rate cases in IN, VA, and OH with requested annualized revenue increase of $8.1M.
- **Warmer weather in Pennsylvania, Virginia, and Ohio, drove increased consumption during Q3.** Warmer-than-expected weather in several service territories led to increased consumption y/y. Given unfavorable weather conditions in Q2 and expectations for a typical Q4, however, management expects the effect of weather to be neutral overall in FY:16.
- **$32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### ESTIMATE CHANGE

### 1-Year Price Chart




### Stock Data

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (11/2/16): | $29.79 |
| Market Cap (mil): | $5,297 |
| Shares Out (mil): | 177.8 |
| Average Daily Vol (mil): | 0.77 |
| Dividend Yield: | 2.6% |

### Estimates

| FY Dec | 2015A | 2016E | 2017E |
|---|---|---|---|
| Q1 | 0.27 A | 0.29 A | |
| Q2 | 0.32 A | 0.33 A | |
| Q3 | 0.38 A | 0.41 A | |
| Q4 | 0.28 A | 0.26 E | |
| **Fiscal EPS** | **1.26 A** | **1.30 E** | **1.33 E** |
| Previous Est | | 1.35 E | 1.37 E |
| Fiscal P/E | 23.6x | 22.9x | 22.4x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $350-$360 million annual capex investment, (~2.6x depreciation). $1.1B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 16 acquisitions in 2015, providing 1.1% to WTR's overall customer growth of 1.9%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Potential expansion into non-regulated water space could drive growth in the long run.** The company has recently divested from many of its market-based businesses that it considers too risky and hard to grow. WTR is actively evaluating other market-based activity, and believes that it will contribute to growth in the long run, but does not foresee non-regulated business becoming more than 15%-20% of Aqua America. WTR has also indicated that it would consider moving into other regulated utility space, believing the core competencies of the regulated water utility market would be profitable in other utility spaces.

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, in line with peers when fully valued (20x-22x 2018E EPS), reflecting average EPS growth opportunities and generally more constructive regulatory mechanisms.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# BARCLAYS

Equity Research | Instant Insights

2 November 2016


| | | | | |
|---|---|---|---|---|
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## Aqua America

# WTR: Status Quo Remains

**Stock Rating/Industry View:** Equal Weight/Neutral
**Price Target:** USD 34.00
**Price (01-Nov-2016):** USD 29.99
**Potential Upside/Downside:** 13%
**Tickers:** WTR

**WTR reported Q3 results and reaffirmed 2016 guidance**

WTR reported $0.41 for Q3, in line with our estimate and a penny ahead of consensus. 2016 guidance was reaffirmed at $1.30-$1.35 with commentary on the call pointing to the middle to just below the middle of the range similar to previous quarters. There was not much in terms of incremental information, however the following items should be of interest.

- Smaller tuck-in acquisitions are getting more competitive based on both strategics and other municipalities bidding. This is especially the case in PA, IL and NJ based on recent legislation.
- The larger the acquisition, the more competitive they seem to be. There has been a definite chase up in price; it remains to be seen whether under fair value legislation this will result in the winning bidders having to carry some level of goodwill.
- On the strategic front, WTR still sees opportunity to do a deal that leverages its regulatory expertise to the extent that it identifies a deal that would be accretive. We continue to believe that the potential acquisition of a regulated asset or company outside of water is the primary overhang on the shares.
- Pennsylvania will see is DSIC filing in 2017 and a general rate case filed in 2018 for new rates in 2019.

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November 3, 2016

Gabelli & Company

## Aqua America (WTR - $29.79 - NYSE) Lowered '16-'18 Estimates; Reiterate - Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2018P | $1.50 | 19.9x | $40 | Dividend: $0.77 Current Return: 2.6% |
| 2017P | 1.40 | 21.3 | 37 | Shares O/S: 177.8 million |
| 2016E | 1.30 | 23.0 | 35 | 52-Week Range: $35.83 - $28.05 |
| 2015A | 1.26 | -- | -- | |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about 3 million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On November 1, 2016, WTR reported third quarter 2016 earnings of $0.40 per share compared to $0.38 per share last year. Rate increases, customer growth, and lower operating expenses more than offset the negative impact of lower consumption. Year-to-date, WTR subsidiaries were awarded $5.5 million in annual rate increases and currently have requests totaling $8.1 million awaiting PUC decisions. In addition, WTR closed on thirteen acqusitions adding 5,298 water and 409 wastewater customers. Year-to-date, WTR added 12,900 customers, including oganic growth, for a 1.3% total customer growth rate.

- Year-ot-date operating and maintenance (O&M) expenses declined -1.8% and the first-half 2016 operating efficiency ratio (O&M as a percent of operating revenues) declined to 36.5%, from 37.5%, for the same period last year.

**Table 1** **WTR Selected Financial**

| | Third Quarter | | | Nine-Months | | | Full Year | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | Change | 2015 | 2016 | Change | 2014A | 2015A | Change | 2016E | 2017P | 2018P |
| EBITDA | $ 127.9 | $ 132.1 | 3.3% | $ 342.6 | $ 352.6 | 2.9% | $ 442.0 | $ 457.2 | 3.4% | $ 476.6 | $ 508.9 | $ 543.4 |
| Net Income | 67.4 | 73.2 | 8.5 | 173.4 | 184.5 | 6.4 | 213.9 | 223.2 | 4.3 | 231.7 | 249.0 | 267.5 |
| EPS | $ 0.38 | $ 0.41 | 7.9 | $ 0.98 | $ 1.04 | 6.1 | $1.20 | $1.26 | 4.3 | $1.30 | $1.40 | $1.50 |

*Source: Company data, Gabelli & Company estimates*

- WTR affirmed 2016 EPS guidance of $1.30-1.35 per share (but suggested the lower-end was more likely) based on 1.5-2.0% customer growth, same-sytem O&M increase of 1-2%, more than $350 million in annual capital investments and 6-7% annual rate base growth. Given the use of repair tax deductions, Aqua-PA (55-60% of WTR) has delayed the need for a general rate case or DSIC since 2011, which has benefitted customers $10 per month. The company plans to file a ~15% rate increase in late 2017 or 2018.

- We lowered our 2016-2018 earnings estiamtes to $1.30, $1.40 and $1.50 per share, from $1.35, $1.45, and $1.55 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, infrastructure surcharges, and the pipeline rehabilitation business.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. We are encouraged by the possibility that the pace of municipal acqusitions could accelerate. WTR currently has four municipal and two private system acquisition pending, which would add 4,700 customers.

- The 2016-2018 capital investment program totals $1.1 billion, including $350 million in 2016. Roughly 63% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, NC). The PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base allows for a quarterly distribution system improvement charge (DSIC).

- Given strong cash flow, infrastructure surcharges and cash from asset sales, WTR has minimal external funding needs. As of September 30, 2016, the common equity ratio was 49%, and S&P credit rating was A+ for Aqua Pennsylvania.

**Valuation**

WTR is a well-managed, low-risk, high-quality conservative utility with unique growth opportunities. Shares offer a 2.6% current return on the $0.77 per share annual dividend. Shares trade at 22.9x and 21.3x our 2016 and 2017 earnings estimates and 296% of book value ($10.09 per share), which compares to group multiples of 23.9x and 22.2x earnings and 288% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. We consider WTR to be one of the premier water utilities in the nation with a warranted premium, given the company's national presence, strong financial condition, successful track record, and earnings and dividend outlook. Our 2016-2017 PMVs are $35 and 37 per share, respectively, based on 3.5x book value.

**Table 2** **Aqua America Private Market Value Analysis, 2009A-2019P**

| *($ in millions, except per share data)* | 2009A | 2010A | 2011A | 2012A | 2013A | 2014A | 2015A | 2016E | 2017P | 2018P | 2019P |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $633.3 | $683.4 | $712.0 | $757.8 | $768.6 | $779.9 | $827.3 | $852.1 | $883.1 | $915.3 | $948.7 |
| Utility EBITDA | 342.5 | 383.9 | 405.6 | 445.7 | 429.8 | 442.0 | 457.2 | 476.6 | 508.9 | 543.4 | 586.1 |
| Book Value | 1,108.9 | 1,174.3 | 1,251.3 | 1,385.9 | 1,535.0 | 1,620.9 | 1,696.2 | 1,792.7 | 1,896.0 | 2,007.0 | 2,132.8 |
| Multiple | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,274.6 | $6,635.9 | $7,024.5 | $7,464.8 |
| Less: Net Options Payments (1) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 |
| Private Market Value | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,274.6 | $6,635.9 | $7,023.5 | $7,463.8 |
| Shares outstanding | 170.2 | 171.6 | 172.5 | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 |
| PMV per share | $20 | $21 | $22 | $24 | $30 | $32 | $33 | $35 | $37 | $40 | $42 |
| *Discount to PMV* | *-53%* | *-45%* | *-37%* | *-26%* | *2%* | *7%* | *11%* | *15%* | *20%* | *24%* | *29%* |
| EPS | $0.59 | $0.69 | $0.84 | $1.05 | $1.16 | $1.20 | $1.26 | $1.30 | $1.40 | $1.50 | $1.65 |
| P/E | 50.7 | 43.3 | 35.6 | 28.4 | 25.7 | 24.8 | 23.8 | 22.9 | 21.3 | 19.8 | 18.1 |
| Year End Book Value | $6.52 | $6.84 | $7.22 | $7.97 | $8.67 | $9.12 | $9.54 | $10.09 | $10.67 | $11.29 | $12.00 |
| P/B | 458% | 436% | 413% | 374% | 344% | 327% | 313% | 296% | 280% | 264% | 249% |
| ROE | 9.2% | 10.3% | 11.9% | 13.9% | 13.9% | 13.5% | 13.5% | 13.3% | 13.5% | 13.7% | 14.1% |

*Source: Company data and Gabelli & Company estimates.*

**Aqua America - Price Performance**


*Source: Public data. As of November 3, 2013 WTR was rated BUY.*

We, ***Tim Winter, CFA and Eric Guo,*** the Research Analysts who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analysts have not been, are not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

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**Important Disclosures**

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03-Aug-2016

# Aqua America, Inc. (WTR)

Q2 2016 Earnings Call

# CORPORATE PARTICIPANTS

Brian Dingerdissen
*Chief of Staff & Head of Investor Relations*

Christopher H. Franklin
*President & Chief Executive Officer*

David P. Smeltzer
*Chief Financial Officer & Executive Vice President*

# OTHER PARTICIPANTS

Agnieszka Storozynski
*Macquarie Capital (USA), Inc.*

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Jonathan G. Reeder
*Wells Fargo Securities LLC*

# MANAGEMENT DISCUSSION SECTION

**Operator**: Good day and welcome to the Aqua America Q2 2016 Earnings Call. Today's conference is being recorded. At this time, I would like to turn the conference over to Mr. Brian Dingerdissen. Please go ahead sir.

## Brian Dingerdissen
*Chief of Staff & Head of Investor Relations*

Thank you, Dana. Good morning, everyone. Thank you for joining us for Aqua America's 2016 second quarter earnings conference call. If you did not receive a copy of the press release, you can find it by visiting the Investor Relations section of our website at aquaamerica.com or by calling Scott Siegel at 610-520-6361. The slides that we will be referencing can be found on our website. There will also be a webcast of this event available on our site.

As a reminder, some of the matters discussed during this call may include forward-looking statements that involve risk, uncertainties and other factors that may cause the actual results to be materially different from any future results expressed or implied by such forward-looking statements. Please refer to our most recent 10-Q, 10-K and other SEC filings for a description of such risk and uncertainties.

During the course of this call, reference may be made to certain non-GAAP financial measures. A reconciliation of these non-GAAP to GAAP financial measures is posted in the Investor Relations section of the company's website.

Presenting today is Chris Franklin, Aqua America's Chief Executive Officer and Dave Smeltzer, the company's Chief Financial Officer. After the presentation, we will open the call up for questions.

At this time, I'd like to pass it over to Chris Franklin, Aqua America's President and Chief Executive Officer.

## Christopher H. Franklin

*President & Chief Executive Officer*

Okay. Thanks, Brian, and thanks everyone for joining us this morning. On today's call we'll talk about some recent news on the company and I'll comment on some of the highlights from the quarter, including our acquisitions, and Dave Smeltzer, our CFO will take us through the financial results and rate activity. And then we'll conclude the formal portion of the presentation by reviewing our guidance for 2016, and then answer any questions that you might have.

So let's start with some organizational, I think we've spent a lot of the first year putting the organization together and we'll call it tweaks at this point, but I think important enough to mention here. You may have seen some of these in our recent press releases, but Stan Szczygiel was recently promoted to Vice President, Finance, and Treasurer. This is an important one for us. Stan has been with the company for 10 years now, and Stan and I have worked very closely over the last 10 years. He was the Regional Controller of the Southern Division, when I was the Regional President for Southern Division. So, we worked here a long time. Stan then went onto be Director of Planning, Vice President of Finance, and now added Treasury to his responsibilities.

He's got a vast resume of significant responsibilities including executive roles in companies such as Exxon, Foster Management Companies and NovaCare. I have to say we are very fortunate at Aqua America to have the bench we have and so when the position opened, very quickly Stan was promoted to the job as Treasurer and is well qualified and will do a terrific job.

Another new member of our team that I'm very excited about is Chris Crockett. Chris joined in mid-June as our new Chief Environmental Officer. And Chris reports up through Bill Ross, our Chief Engineer up in Rick Fox's organization. You'll recall, Rick addressed the group last time. Rick is our Chief Operating Officer. Chris is going to be responsible for overseeing water quality, environmental compliance and all of our drinking water and wastewater systems in the eight states. He'll also manage Aqua's in-house water and wastewater lab as well the company's water quality services and water resources department. He comes to our company with 20 years of experience, most recently as Deputy Commissioner for Planning and Environmental Services at the Philadelphia Water Department. This was a key pick. Chris will do its great job for us well.

And again demonstrating the strength of our bench, Shannon Becker, our former President of our Aqua Virginia Company, which is a relatively small part of our system in terms of customer count. Shannon has been appointed to President of our Aqua North Carolina Company which is our third largest state by customer count. Shannon succeeds Tom Roberts who was with us for 30 years, retired. Tom did a great job as the President of Aqua North Carolina. Now in his role as President of Aqua North Carolina, Shannon will supervise 160 employees and be responsible for overall operations. Now Shannon was previously the Controller in Aqua North, Carolina before he was President in Virginia, so he is well trained and very familiar with North Carolina, and he will, also will do a terrific job.

And finally again from our bench John Hildabrant has been named President of our New Jersey Company. John has been with the company for 11 years and previously served as our Operations Manager in that same [ph] stay (05:10) of New Jersey. He has got a great combination of skills. John has been involved with our regulatory filings, our rate cases, growth of the company and certainly operations. So I really can't say enough about the strength of this management team and I fully expect that this team will continue to deliver the operating results that we're all so proud of and that our customers have come to expect.

Now we'll take a look at the quarterly results. The Board met yesterday on a regular scheduled Board meeting and increased our dividend by 7.5%. We're very proud to say this is the 26th dividend increase in 25 years and it's our 71st year of paying a consecutive quarterly dividend, we're very proud of that. The second quarter also saw strong performance as we continue to pursue our three-pronged growth strategy. We've talked about this on previous calls, as you might remember municipal acquisitions, prong number on one; strategic M&A is prong number two; and market based activities as prong number three.

As we think about this growth strategy, we'll continue to focus on and leverage our core capabilities and among those and we've mentioned these before as well, is our ability to both financially and operationally make significant capital investments in infrastructure. Two, our ongoing regulatory relations, the work that brings to the company, strong credibility with our regulators. And finally as we think about our core capabilities, we think about our ability to operate utilities at optimal levels and of course, you're very familiar with the efficiency we bring in our O&M.

Now on growth, so far this year we've added 5,400 new customer connections, from acquisitions alone, slightly more than a 0.5%. Clearly revenues were down slightly, decreasing just less than 1% to $203.9 million in the second quarter of 2016, from $205.8 million in the same quarter last year. A large portion of this though comes from the decreased revenue from our market based activities and we've discussed that extensively in our last call. And with that said earnings per share were up, 3.1% to $0.33, compared to $0.32 reported in Q2 of 2015.

Now look at our dividend history, as I said, the company takes great pride in rewarding its shareholders with quarterly dividends. Over the past ten years, we've more than doubled the dividend and achieved the compounded annual growth rate of 7.6%. And we're going to continue on this path to achieve the Board's stated payout ratio target of between 60% and 70%. Currently, that payout ratio is right around 57%.

Now let's look to our growth activity for the year. Looking at the acquisitions completed so far in 2016, we've closed 10 deals, eight of them were water; two of them are wastewater systems. As we've mentioned, we continue clearing our small deals that have been on our list for several years and you'll notice some of these numbers are small, continue to push these out, these are the ripening deals that have been sitting there for many years as we pursued a lot of the smaller tuck-ins. But I'll tell you we remain very confident in our pipeline and the increasing size of the deals that we're reviewing in our Internal Investment Committee. We meet every two weeks to review these deals. And we remain very confident in our ability to grow in the water and wastewater space. We just think there is a lot of opportunity and we're seeing more municipal interest in selling systems than we have in many, many years.

Now to date, this growth represents more than 0.5% in growth this year from acquisitions and we've also seen an uptick of approximately 0.5% in organic growth through the second quarter. So at this point, we expect 2016 year-over-year customer growth to be in the range of our current guidance of 1.5% to 2% and this includes organic growth.

So, with that I'll hand the call over to Dave to take a look at the numbers. Dave?

## David P. Smeltzer

*Chief Financial Officer & Executive Vice President*

Thanks, Chris. Good morning everyone. Today I'll review the second quarter financial results and some of the key driving factors that impacted the company's performance; and I'll also provide a look at our rate activity for the year thus far.

In the second quarter, our revenues decreased nearly 1% to $203.9 million, down from the $205.8 million in the same period of 2015. In a moment I'll show you the waterfall chart, but when we look at Q2 2015 versus Q2 2016, much of the decrease was related to market based activities along with lower consumption through the unfavorable weather conditions, and that was mostly in Pennsylvania with also some unfavorable weather in New Jersey and North Carolina.

Operations and maintenance expenses were down about 7.2% to $74 million for the quarter compared to $79.7 million in Q2 of 2015. Again I'll touch on this in the waterfall chart, but lower production expenses, lower expenses associated with our market based businesses and several one-time events led to the decrease in O&M expense. As mentioned in the release, same-utility system O&M would have been up about 1.3% year-over-year for the second quarter.

Net income was $59.6 million, up 3.9% compared to the $57.4 million in the same timeframe of 2015. And earnings per share of $0.33 as Chris mentioned, was an increase of 3.1% compared to the $0.32 reported in Q2 of 2015. Year-to-date as of June 30, revenues were virtually flat at $396 million. You can view the year-to-date waterfall charts in the appendix, but lower consumption and decreased market based revenues offset the increased revenues from the regulated business to cause that flat revenue.

Operating and maintenance expenses were down 3.5% to $147 million for the quarter compared to $153 million in the same timeframe last year. Again several non-recurring items, lower production and lower market based expenses offset the increase in employee related and regulated acquisition expenses.

Net income was $111.4 million, which is up 5.1% compared to the $106 million at the same timeframe of 2015. Earnings per share was $0.63, an increase of 5% compared to the $0.60 reported in 2015 and the year-to-date waterfall chart on EPS in the appendix will give you more color on this as well.

Let's take a look at quarterly revenue comparisons starting with our revenue for Q2 2015. Regulated growth increased revenues by 1.5%, rates and surcharges along with other factors accounted for an additional increase of about 1%. From there, revenues related to our market based activities decreased about $3 million or 1.5% of total revenue. Then a decrease in consumption associated with the unfavorable weather we saw in this quarter lowered revenues by an additional 2%, resulting an overall decrease of 0.9% to $203.9 million.

Looking at O&M expense and starting with our O&M for the second quarter of 2015 of $79.7 million, expenses tied to regulated acquisitions and slightly higher employee related cost increased O&M by 1.9%. From there lower production costs and expenses related to market based activities decreased expenses by about $3.1 million. Additionally, there were several non-recurring events that contributed to the decreased O&M for the quarter versus 2015. Again looking at same-system utilities, O&M would have increased by about 1.3% well within our guided range of 1% to 2% for 2016.

Looking at the next waterfall of earnings per share and starting with our EPS for Q2 2015, we saw lowered expenses, regulated growth and rates and surcharges account for an increase of more than $0.03 per share. From there market based activities, lower consumption and other factors decreased the EPS by approximately $0.02, resulting in the $0.33 we reported in Q2 2016.

On to rate activity, so far in 2016, we've completed rate cases or surcharges in five states with approximately $5 million in additional revenue dollars, including $1.1 million of revenues recognized under interim rates during 2015. We also have rate cases pending in New Jersey, Indiana and Ohio requesting an additional $10.5 million of revenue. Additional rate information can be found in the appendix of this presentation.

And with that I'll turn the call back to Chris who will recap our 2016 guidance. Chris?

### Christopher H. Franklin
*President & Chief Executive Officer*

Hey, Dave, thanks. So if look at the recap of our guidance, our earnings, customer growth CapEx and expense guidance is really unchanged [ph] from the second (15:41) quarter of the year. We expect full year earnings per share to between $1.30 and $1.35. And as you heard Dave talked about weather, some ups and down, flooding in Texas and some better weather elsewhere. We get more and more comfortable with the center of that range.

Year-over-year, as we've said a couple of times, we expect to land customers growth in the targeted range of 1.5% to 2 %. We expect to invest about $350 million in infrastructure in 2016 and more than $1.1 billion of CapEx through 2018. We expect our ongoing rate base growth of approximately 6% to 7%, and on a same-system O&M basis, we expect O&M, as Dave just said, to increase between 1% to 2% for the full year. So, all in all, a good solid quarter and we expect a good solid year.

And now before we end the call, I'd like to open it up and answer any of the questions that you might have.

# QUESTION AND ANSWER SECTION

**Operator**: Thank you. [Operator Instructions] We'll go first to Agnieszka Storozynski with Macquarie.

### Agnieszka Storozynski
*Macquarie Capital (USA), Inc.*

Q

Thank you very much. So thank you for your remarks today, about especially growth opportunities within the water and wastewater segments. So in light of that, can you talk us through this possibility of maybe [ph] venturing (17:28) into non-water sectors and why would you attempt to actually diversify away from water if you see so much organic growth potential within the water sector? Thank you.

### Christopher H. Franklin
*President & Chief Executive Officer*

A

Yeah, it's a good question. And as we think about growth opportunities, let's just talk for a moment about water, because we've worked with legislators in multiple states now and we've seen the [ph] positive (17:56) legislation that really provides us an opportunity to get access to a municipal market that often was not available given the prices that we could get into rate base. Now with the new legislation and the ability to pay fair market value, we see even greater opportunity, and I know our peer companies are seeing the same thing, and the activity in municipal market is certainly on an uptick. So I want to leave you with our confidence.

Having said that, we also – and we've been talking about this on a lot of our calls, have said that, the skill sets and the core competencies that we have here would work in a lot of areas. We think that the regulated market is where we excel and certainly a regulated market where we could invest capital at high rate, which is what we do very well here, and then certainly, our regulatory relations, we work very hard on to be a very credible company that does top level service and is mindful of customer pricing and everything else. And we believe that [indiscernible] (19:09) water and wastewater in the regulated market.

And finally, as we think about how we run our company with O&M, we just think, Angie, that those among other core competencies have multiple applications. And believe me, if we see an opportunity that matches those, and would enhance our utility strength in the market, we'd look at it. Having said that, we're going to be very-very prudent in how we approach it. We have a long history of being very prudent in how we think about M&A

Agnieszka Storozynski
*Macquarie Capital (USA), Inc.*

Q

Okay. But on the back of it, I mean just looking at your market valuation, wouldn't you say that your key multiple is to a large extent reflective of the scarcity value of a water utility as an investment? I mean there're very – really few sizeable public water utilities you can invest in, there are a number of international funds looking for exposure to water. Wouldn't you agree that if you were to dilute your water focus that that multiple could erode?

Christopher H. Franklin
*President & Chief Executive Officer*

A

Well, we think the multiple is largely due to the management team, I'm kidding, of course.

I think that you make a very, very strong point and I think as you look across the general utility sector, of course, water is not the only utility that's seen an increase in valuation. And so traditionally as you've pointed out, water has traded at a premium to other utilities, whether that's scarcity, we think that that we would agree that's part of it. Whether it's the safety, particularly in this market that's a component and in fact the companies are all well run. So you make a very good point, but I'm not sure that the premium is solely based on scarcity.

Agnieszka Storozynski
*Macquarie Capital (USA), Inc.*

Q

Okay. And I'm sorry I just keep asking the same questions, but again in light of the water driven growth options, are you basically trying to grow faster or become larger quickly, as behind – and that's the strategy behind the potential M&A outside of water, or is it that basically you feel the growth in the water sector is actually less visible than you might think and thus the need to maybe get some support somewhere else as far as the growth is concerned?

Christopher H. Franklin
*President & Chief Executive Officer*

A

That's a great question too. Here is I think how we think about it. The United States right now has a vast need for investment in infrastructure and we've been a leader in that in the areas where we operate. We've been investing as you know significant amounts of capital in infrastructure, in water and wastewater.

And when you think about it, you've heard the numbers that the EPA has put out there, the need for an additional trillion dollars of investment in just this space. And if you broaden that to the broader utility market, the needs, I'm very familiar with transmission from my Board membership up at ITC, the need for investment in transmission, the need for investment in gas pipes. So it's across the general utility industry, huge need for infrastructure.

So to the extent that we could capitalize on our skill sets and be a larger player in making sure that that investment is made in a great area of need in United States, we think our skill sets are broadly applicable and specifically applicable in those infrastructure needs.

Agnieszka Storozynski
*Macquarie Capital (USA), Inc.*

Q

Okay. Thank you.

**Operator**: And we'll take our next question from Ryan Connors with Boenning & Scattergood.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Great. Good morning. Thanks for taking my question. A couple on housekeeping items, and then I had a bigger picture question if I could. First just on housekeeping, Dave, you mentioned a few times, "non-recurring" events as part of our lower O&M expenses, can you just elaborate for us on more specifically what some of those things were?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President*

A

Yeah. We had a couple of charges, kind of one-time charges and one-time bring-backs this year and last year. I'll see if I can get my hands on them all. Yeah, so for the quarter last year, we had a couple of charges, one was the leadership transition charge that we talked about on the call. We reserved some old Aqua Pennsylvania water rates that appeared, that we'd not able to put to use. So they were two big one-time charges last year, totaling about $3.5 million that obviously did not recur again this year.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Okay. So clearly non-operating stuff?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President*

A

Yeah, kind of unique one-off items in last year's numbers that caused the part of that difference.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Got it. Okay. And the other one was just can you give us a progression on the tax rate? I mean obviously we've jumped – we've been now in the single-digits for a while, can you just kind of give us an outlook on how we should think about modeling that going forward?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President*

A

Yeah, I would expect that it will be fairly consistent until the next Pennsylvania rate case and in that Pennsylvania rate case, I would see somewhat of a step-change, not more than a few percentage points, but certainly more than what we've seen recently. So I would say fairly steady until we get to that point.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Okay. That's actually a good segue into my next question which was that any update on Pennsylvania in terms of where we stand relative to go into the DSIC and ultimately to general rate case? I know you made some comments at the Analyst Day that we're helpful in that regard, so any update there?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President*

A

Yeah, I would say no. We're sticking with the guidance that we've provided at the Analyst Day, that we'd like to think of a DSIC sometime in 2017 or 2018 and then a rate increase some time in 2018 or 2019, and that's still where we see it right now.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Okay. So, a rate increase in 2018 or 2019 would imply filing either in late 2017 or early 2018, is that a right way to read that?

David P. Smeltzer
*Chief Financial Officer & Executive Vice President*

A

Yep, that's right.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Okay. Okay. And then yeah, my bigger picture question was, I mean Chris you commented on the Pennsylvania Act 12 legislation and the PUC did have some news on that front with their preliminary implementation order a couple of weeks ago. I wondered if you had a chance to look at that and if you had any – if that give you anymore granularity on the opportunity there, and whether there were aspects of that that you liked or didn't like, or any incremental feedback on that legislation with the latest developments?

Christopher H. Franklin
*President & Chief Executive Officer*

A

Yeah. I guess frankly I have not seen that particular piece come from the Commission. So, I can't comment directly on that. But I guess from what we know and what we're aware of from the legislation and our discussions at the Commission level, we remain confident that this will be a great tool for continued growth and maybe expanded growth.

Ryan Michael Connors
*Boenning & Scattergood, Inc. (Broker)*

Q

Okay. Great. That's all I had. Thanks guys.

Christopher H. Franklin
*President & Chief Executive Officer*

A

[ph] You bet (27:12).

**Operator**: [Operator Instructions] We'll go next to Jonathan Reeder with Wells Fargo.

Jonathan G. Reeder
*Wells Fargo Securities LLC*

Q

Hey, good morning gentlemen. Most of my questions have been answered, but I don't know if there's any more color you could give on the M&A progress, particularly on the targeted muni effort that's being made. Is there some deals in the second half that you expect to announce [ph] deal of that size (27:40)?

Christopher H. Franklin
*President & Chief Executive Officer*

A

The deal pipeline I will tell you is strong, but as you probably are aware, as we think about the discussion with municipals, Jonathan it's a long lead time and there is a vote and in many cases, we're seeing the need for referendum. So, I don't see in the coming few quarters a major, that's why we've given the guidance, you've seen the guidance, but we have some, I'll call it sizeable opportunities in our pipeline, and we have a relatively high level of confidence about some of those.

So, I guess I'll leave you with, we see activity, we see activity, we see greater size and we feel like the pipeline is strong for next year.

Jonathan G. Reeder
*Wells Fargo Securities LLC*

Q

Okay. So look to 2017, to really see kind of the, I guess the efforts coming to fruition.

Christopher H. Franklin
*President & Chief Executive Officer*

A

I think that's fair to say.

Jonathan G. Reeder
*Wells Fargo Securities LLC*

Q

Okay, sounds fair. Thanks guys.

Christopher H. Franklin
*President & Chief Executive Officer*

A

You're welcome.

**Operator**: And it appears we have no further questions in the queue at this time.

Christopher H. Franklin
*President & Chief Executive Officer*

All right, thank you very much. Appreciate your time.

**Operator**: Again that does conclude today's presentation. We thank you for your participation.

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| Daniel Ford, CFA | +1 212 526 0836 | daniel.x.ford@barclays.com | BCI, US | Completed: 03-Aug |
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## Aqua America

# WTR: A Quiet Quarter

**Stock Rating/Industry View:** Equal Weight/Neutral
**Price Target:** USD 38.00
**Price (02-Aug-2016):** USD 34.40
**Potential Upside/Downside:** 10%
**Tickers:** WTR

### WTR Reported Q2 EPS of $0.33 and Reaffirmed 2016 Guidance

WTR reported Q2 EPS of $0.33 in line with the consensus estimate of $0.34 and reaffirmed 2016 guidance $1.30-$1.35 versus the consensus estimate of $1.33. The main drivers for the quarter were lower expens regulated growth and rate case impacts partially offset by consumption, which was weather driven. The company expects to offset poor weather through continued cost controls and municipal acquisitions and a such expects to be in the middle of the $1.30-$1.35 guidance range. The water system acquisitions year date have added 5,396 customers (approximately 0.6% customer growth). The expectation is for an acceleration of acquisitions resulting from the increased number of states having fair value legislation for water system acquisitions.

Yesterday WTR announced a 7.5% increase in their annual dividend, consistent with expectations.

**Analyst(s) Certification(s):**
I, Daniel Ford, CFA, hereby certify (1) that the views expressed in this research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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**Mentioned Stocks (Ticker, Date, Price)**

**Aqua America** (WTR, 02-Aug-2016, USD 34.40), Equal Weight/Neutral, CE/J

**Valuation Methodology:** Our $38 price target is based on applying a 5% premium to the water group average 2018 P/E multiple of 24.1x to our 2018 EPS estimate of $1.50.
**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target**
Risks to WTR include an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, and a slowdown in acquisition activity that would impact sales growth potential.

**Ratings and Price Target History:**
Aqua America
Currency=USD

# Aqua America, Inc.

**(WTR-NYSE)**

August 3, 2016

**Water | Environment**

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $34.40 |
| Target Price: | NA |

## 2Q16 earnings in-line as lower costs offset reduced sales; Maintain Neutral.

**Investment Conclusion:** Aqua America's 2Q16 results affirm both the "good news" and the "bad news" of the story, with the good news being that Aqua is among the best run utilities in the nation from an operational perspective (O&M expense was just 36% of sales in 2Q), and the bad news being that during the ongoing rate stay-out in PA, growth remains hard to come by (revenue fell 1%). Coupled with an epic YTD run-up in P/E multiples across the entire water utility space that leaves the stock trading near the high end of its historical valuation range, this hinders the reward-risk equation in our view, and as a result we maintain our Neutral rating for shares of WTR.

**Key Points:**

- **2Q in-line as lower O&M expenses offset soft top-line.** Aqua posted 2Q16 EPS of $0.33, in-line with consensus, as a sharp drop in Operations & Maintenance expenses offset a 1% decline in revenue that the company attributes in part to reduced volumes (our model assumed a 2% increase in sales). Management says the decline in O&M expenses was driven by a combination of market-based divestitures, lower production expenses, and other non-recurring factors, and says that on a "same system" basis, O&M expenses rose 1.3% year-over-year. Overall, it was a solid, if noisy, quarter for Aqua, though the results also underscore the challenge the company faces trying to grow during its PA rate stay-out, with EPS up just 3.8% year-over-year.

- **Rate case pipeline active, but all eyes remain on PA.** Measured by the number of rate awards, 2016 has been a banner year for Aqua, with new rates hitting the P&L in IL, OH, NC, OH, TX, and VA, and rate cases outstanding in IN, NJ, and OH. Still, new awards year-to-date total just $5 million (~0.5% of sales), and cases pending total $10.5 million (with final awards subject to the customary haircut), underscoring the vital importance of Pennsylvania (~70% of rate base) to Aqua's overall growth picture. The company continues to invest aggressively (capex targeted at $350 million for 2016), and we expect DSIC surcharges to begin in PA in 2017, with a rate filing likely by early 2018. In the meantime, consolidated growth will remain muted.

- **Tweaking 2016 estimate lower on likely 3Q weather headwinds.** July is a key swing month for demand from a weather standpoint, and July 2016 precipitation levels were heavy in Aqua's two largest territories. In Southeastern PA, there were 14 days of measurable rainfall in July for a total of 6.8 inches, versus 10 days for 2.5 inches in July 2015 (which itself was wetter than normal). In Ohio, there were 15 days of rain in July for 6.3 inches, versus 8 days for 0.9 inches in July 2015. As a result, we believe demand could be softer in 3Q16, and lower our top-line assumption (to –0.5% from +2%), and tweak our 2016 EPS estimate downward to $1.30 from $1.35 previously (management affirmed it 2016 EPS guidance range of $1.30-$1.35).

- **Maintain Neutral: Fundamentals remain compelling, but largely priced-in.** Aqua is among the best-run companies in the water space, and enjoys a structural advantage over water utility peers in that the progressive regulatory jurisdiction of Pennsylvania represents >50% of sales and ~70% of rate base. The company's new leadership is taking proactive steps to enhance the long-term growth outlook (including taking a less inhibited view of strategic M&A), and the addition of fair value legislation in PA provides the opportunity for muni acquisitions to finally gain steam. Still, these positives are largely priced in, with WTR trading at forward P/E of 24.7 times, at the high end of their historical range of 19-25 times. We rate the stock Neutral.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2015A | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 |
| 2016E* | $0.29 | $0.33 | $0.38 | $0.30 | $1.30 |
| 2017E | $0.29 | $0.36 | $0.42 | $0.31 | $1.38 |

**Q1 & Q2 represent actual results*

| Prior | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | - | - | $0.41 | $0.30 | $1.35 |
| 2017E | $0.29 | $0.35 | $0.43 | $0.31 | $1.38 |

| Consensus | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | $0.28 | $0.33 | $0.41 | $0.29 | $1.33 |
| 2017E | $0.29 | $0.35 | $0.44 | $0.32 | $1.41 |

**Market Data**

| | |
|---|---|
| Current Price | $34.40 |
| 52-Week Range: | $24.40 - $32.93 |
| Market Cap. (M) | $6,098 |
| Shares Out. (M): | 177.3 |
| Avg. Daily Vol. (Shs.Th.): | 790.6 |
| ADTV (M): | $16.50 |
| **Valuation** | |
| P/E 2016E | 26.4x |
| P/E 2017E | 24.9x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,516.0 |
| Dividend / Share: | $0.71 |
| Dividend Yield: | 2.1% |

*Source: Capital IQ, B&S Estimates*

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August 4, 2016

Gabelli & Company

# Aqua America (WTR - $33.82 - NYSE) Solid Results; Guidance Affirmed - Buy

| Year | EPS | P/E | PMV |
|---|---|---|---|
| 2018P | $1.55 | 21.9x | $40 |
| 2017P | 1.45 | 23.3 | 38 |
| 2016E | 1.35 | 25.0 | 35 |
| 2015A | 1.26 | -- | -- |

Dividend: $0.71 Current Return: 2.1%
Shares O/S: 178.1 million
52-Week Range: $35.83 - $24.45

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about 3 million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On August 2, 2016, WTR reported second quarter 2016 earnings of $0.33 per share compared to $0.32 per share last year. Rate increases, customer growth, and lower operating expenses more than offset the negative impact of lower consumption. Year-to-date, WTR subsidiaries were awarded $5.0 million in annual rate increases and currently have requests totaling $10.5 million awaiting PUC decisions. In addition, WTR closed on ten acqusitions adding 5,204 water and 192 wastewater customers.

- Second quarter operating and maintenance (O&M) expenses declined -7.2% and the first-half 2016 operating efficiency ratio (O&M as a percent of operating revenues) declined to 37.2%, from 38.6%, for the same period last year.

**Table 1** **WTR Selected Financial**

*($ in millions, except per share data)*

| | Second Quarter | | | Six Months | | | Full Year | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | Change | 2015 | 2016 | Change | 2014A | 2015A | Change | 2016E | 2017P | 2018P |
| EBITDA | $ 113.1 | $ 115.9 | 2.5% | $ 215.5 | $ 221.0 | 2.6% | $ 442.0 | $ 457.2 | 3.4% | $ 486.6 | $ 518.9 | $ 551.4 |
| Net Income | 57.4 | 59.6 | 3.9 | 105.9 | 111.4 | 5.1 | 213.9 | 223.2 | 4.3 | 240.7 | 258.0 | 274.7 |
| EPS | $ 0.32 | $ 0.33 | 3.1 | $ 0.60 | $ 0.63 | 5.0 | $1.20 | $1.26 | 4.3 | $1.35 | $1.45 | $1.55 |

- WTR affirmed 2016 EPS guidance of $1.30-1.35 per share based on 1.5-2.0% customer growth, same-sytem O&M increase of 1-2%, and more than $350 million in capital investments. Our 2016-2018 earnings estimates remain $1.35, $1.45, and $1.55 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, infrastructure surcharges, and the pipeline rehabilitation business.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. We are encouraged by the possibility that the pace of municipal acqusitions could accelerate.

- Given the use of repair tax deductions, Aqua-PA has delayed the need for a general rate case or DSIC since 2011, which has benefitted customers $10 per month. The company plans to file a ~15% rate increase in late 2017 or 2018.

- The 2016-2018 capital investment program totals $1.1 billion, including $350 million in 2016. Roughly 63% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, NC). The PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base allows for a quarterly distribution system improvement charge (DSIC).

- WTR is in the process of divesting or liquidating five Market-based businesses, resulting in expected annual revenue reduction of $30.5 million and immaterial impact on net income. Management plans to opportunistically pursue Market-based ventures that would provide supplementary and complementary opportunities for the regulated business.

- Given strong cash flow, infrastructure surcharges and cash from asset sales, WTR has minimal external funding needs. As of June 30, 2016, the common equity ratio was 49%, and S&P maintained its A+ credit rating for Aqua Pennsylvania.

**Valuation**

WTR is a well-managed, low-risk, high-quality conservative utility with unique growth opportunities. Shares offer a 2.1% current return on the $0.71 per share annual dividend. Shares trade at 25.0x and 23.3x our 2016 and 2017 earnings estimates and 336% of book value ($10.06 per share), which compares to group multiples of 26.9x and 25.2x earnings and 310% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. We consider WTR to be one of the premier water utilities in the nation with a warranted premium, given the company's national presence, strong financial condition, successful track record, and earnings and dividend outlook. Our 2016-2017 PMVs are $35 and 38 per share, respectively, based on 3.5x book value.

**Table 2** **Aqua America Private Market Value Analysis, 2009A-2019P**

| *($ in millions, except per share data)* | 2009A | 2010A | 2011A | 2012A | 2013A | 2014A | 2015A | 2016E | 2017P | 2018P | 2019P |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $633.3 | $683.4 | $712.0 | $757.8 | $768.6 | $779.9 | $827.3 | $857.2 | $888.3 | $920.6 | $954.2 |
| Utility EBITDA | 342.5 | 383.9 | 405.6 | 445.7 | 429.8 | 442.0 | 457.2 | 486.6 | 518.9 | 551.4 | 586.1 |
| Book Value | 1,108.9 | 1,174.3 | 1,251.3 | 1,385.9 | 1,535.0 | 1,620.9 | 1,696.2 | 1,801.7 | 1,914.0 | 2,032.2 | 2,158.0 |
| Multiple | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,306.1 | $6,698.9 | $7,112.7 | $7,553.0 |
| Less: Net Options Payments (1) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 |
| Private Market Value | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,306.1 | $6,698.9 | $7,111.7 | $7,552.0 |
| Shares outstanding | 170.2 | 171.6 | 172.5 | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 |
| PMV per share | $20 | $21 | $22 | $24 | $30 | $32 | $33 | $35 | $38 | $40 | $42 |
| *Discount to PMV* | *-73%* | *-65%* | *-55%* | *-42%* | *-11%* | *-6%* | *-1%* | *5%* | *10%* | *15%* | *20%* |
| EPS | $0.59 | $0.69 | $0.84 | $1.05 | $1.16 | $1.20 | $1.26 | $1.35 | $1.45 | $1.55 | $1.65 |
| P/E | 57.5 | 49.1 | 40.3 | 32.1 | 29.2 | 28.1 | 26.9 | 25.0 | 23.3 | 21.9 | 20.5 |
| Year End Book Value | $6.52 | $6.84 | $7.22 | $7.97 | $8.67 | $9.12 | $9.54 | $10.14 | $10.77 | $11.43 | $12.14 |
| P/B | 519% | 494% | 469% | 424% | 390% | 371% | 354% | 334% | 314% | 296% | 279% |
| ROE | 9.2% | 10.3% | 11.9% | 13.9% | 13.9% | 13.5% | 13.5% | 13.8% | 13.9% | 13.9% | 14.0% |

***Source: Company data and Gabelli & Company estimates.***

(1) Payments to buy out options holders at PMV, net of taxes.

**Aqua America - Price Performance**


*Source: Public data. As of August 4 2013 WTR was rated BUY.*

We, ***Tim Winter, CFA and Eric Guo,*** the Research Analysts who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analysts have not been, are not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

***Tim Winter, CFA (314) 238-1314*** ***Eric Guo (914) 921-7742***



**Important Disclosures**

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August 3, 2016

COMPANY UPDATE / TARGET CHANGE
ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 8/2/16 | | $34.40 |
| Price Target | | | $30.00 |
| 52-Week Range | | $24.45 - | $35.83 |
| Shares Outstanding (mm) | | | 177.3 |
| Market Cap. ($mm) | | | $6,098.2 |
| 1-Mo. Average Daily Volume | | | 773,656 |
| Institutional Ownership | | | 51.5% |
| LTD / Total Capital | Q2'16 | | 49.8% |
| ROE--Adj | TTM | | 13.1% |
| Book Value / Share | Q2'16 | | $10.06 |
| Price / Book Value | | | 3.4x |
| Dividend Yield | | | 2.1% |
| LTM EBITDA Margin | | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | $0.39 | $0.39 | | -- | -- |
| 4Q | *$0.28 | $0.29 | $0.30 | | -- | -- |
| Year | $1.26 | $1.31 | $1.31 | | $1.36 | $1.35 |
| P/E | 27.3x | | 26.3x | | | 25.5x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | $228 | $223 | | -- | -- |
| 4Q | $197 | $202 | $199 | | -- | -- |
| Year | $814 | $836 | $818 | | $873 | $849 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**Q2'16 Results from WTR; Reiterating Underperform but Raising Price Target.**

**Investment Highlights**

- Aqua America reported Q2'16 EPS of $0.33 versus $0.32 in the year-ago period. EPS in the quarter met consensus, falling a penny shy of our target. Lower operating expenses drove growth in the quarter.
- Revenue slipped 0.9% to $203.9MM in Q2, missing both our estimate and consensus. We expect nominal growth would have been positive if not for rationalization of market-based businesses, which weighed by ~$3MM in a trend we expect to persist across the balance of 2016.
- WTR has ~$10.5MM in rate and surcharge applications pending in NJ, IN, and OH, with ~$5MM extra in awards so far this year. Material rate activity in PA is still at least a couple years away, meaning dynamism to top line is likely to key off acquisitions.
- O&M expense fell 7.2% in Q2, driving our EPS beat; non recurrence of some executive severance and reduction on the market-based side were most impactful. Same system O&M is still expected to be +1% to +2% for 2016.
- The effective tax rate in Q1 ticked up to 8.5% from 7.9% in the year-ago period, as WTR continues to maximize its repair tax 'lever'.
- Management reiterated FY 2016 EPS guidance in the range of $1.30-$1.35. Our FY 2016 estimate is unchanged at $1.31; our 2017E slips $0.01 to $1.35.
- We are reiterating our Underperform rating, but raise our 1-year price target to $30, reflecting the current Utility sector valuation environment. At our $30, WTR would trade ~22x our 2016E EPS, in line with the stock's 5-yr average multiple. We still expect valuation compression on the grounds of slow growth in a falling earned-ROE environment.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## ADDITIONAL DISCUSSION—Q2 RESULTS

Q2 was a good quarter operationally, in our view, but just a decent quarter financially. EPS growth of 3.8% marks the fifth quarter of the past six in which WTR has grown earnings per share at a rate <5%. Revenue growth remains challenging without rate activity in Pennsylvania being in the mix; however, we are actually pleased to see some of the market-based businesses being either liquidated or disposed. As has been a staple at WTR for years, Operations & Maintenance was strong, in our opinion. Market-based rationalization helped with the yr/yr decline versus an easy comp, but WTR nonetheless bettered our expectations as the company is seemingly able to efficiently search for M&A targets.

## ADDITIONAL DISCUSSION—FINAL THOUGHTS

As our hike in price target should imply, we are cognizant of the current valuation environment for the Utility sector; however, we continue to flag WTR as one of the more at-risk stocks, if/when the sector sees waning tactical and/or top down support. We identify essentially no new information that neutralizes our view that earned-ROE will fall moving forward, which could occur in tandem with what we view as only average EPS growth. We project Aqua to post a third consecutive year of sub-5% EPS growth in 2016 (and a 4$^{th}$ in 2017), which is not even competitive with the higher-end stories we target in the slower growth gas and electric utility arena. With our view toward likely multiple compression at some point, we are compelled to reiterate our Underperform rating.

## SUITABILITY

We assign WTR a suitability rating of ‘2.’ A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative ‘1’ suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive ‘3’ rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company’s ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility’s ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company’s non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

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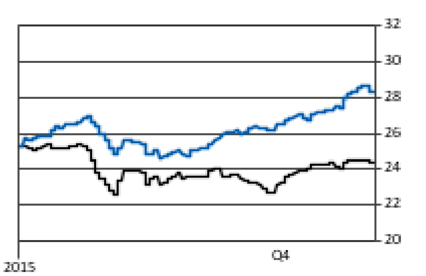
Water Utilities

| | |
|---|---|
| Price: | $34.40 |
| Fair Value Estimate: | $39.00 |
| 52-Week Range: | $24.45 - $35.83 |
| Market Cap (MM): | $6,099 |
| Shr.O/S-Diluted (mm): | 177.3 |
| Average Daily Volume: | 727,700 |
| Book Value: | $9.93 |
| Dividend: | $0.71 |
| Yield: | 2.1% |

| FYE: Dec | 2016E | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.34E | $1.43E | $1.50E |
| Prior EPS: | $1.35 | $1.47 | NC |
| P/E Ratio: | 25.7x | 24.1x | 22.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.28E | $0.29E |
| Q2 | $0.33A | $0.32E | $0.33E |
| Q3 | $0.40E | $0.46E | $0.49E |
| Q4 | $0.31E | $0.37E | $0.38E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $202E | $212E |
| Q2 | $204A | $214E | $225E |
| Q3 | $225E | $266E | $279E |
| Q4 | $207E | $244E | $256E |
| Year: | $829E | $927E | $973E |




1 Year Price History for WTR

August 3, 2016

# Aqua America, Inc. (WTR) - BUY

## 2Q16 Results Inline with Expectations; Maintain BUY Rating, Fair Value to $39

### PORTFOLIO MANAGER BRIEF

Aqua America's 2Q16 results slightly exceeded our expectations, with revenues of $204MM and EPS of $0.33. Recent strategic actions reduced OPEX materially, offsetting lower consumption. Looking forward, we've introduced (and moved to) 2018 estimates for valuation purposes, which increases our Fair Value assumption on WTR shares to $39 from $35. We continue to recommend accumulation at current price levels.

### ANALYST NOTES

- <u>2Q16 results a touch above forecasts.</u> On the top line, revenues of $204MM were actually below our $208MM forecast, before adjusting for divestitures in market-based activities. Making that adjustment, WTR came within $1MM of our estimate. More interesting though was the OPEX improvement, which decreased by 7.2% YoY. The aforementioned sales of market-based activities appears to have had a noticeable impact. Otherwise, most other income statement line items were within normal statistical bounds of what we were expecting. EPS of $0.33 was $0.01 ahead of our $0.32 estimate, which was also consensus.
- <u>Dividend increase announced.</u> The company boosted its dividend 7.5%, to $0.1913 per share, payable to shareholders of record on 8/18. This marks the 26th dividend increase in 25 years.
- <u>Guidance reaffirmed.</u> Aqua America reaffirmed its 2016 EPS guidance of $1.30 to $1.35. The company also expects in excess of $350MM of CAPEX to be deployed during the year, and customer growth of 1.5% to 2.0%. Thus far, WTR has invested $168.8MM and increased its customer count by 1.1%.
- <u>Adjusting pre-existing estimates; introducing 2018 forecasts.</u> We've made minor adjustments to our 2016 and 2017 estimates, and introduced 2018 forecasts. The move to 2018 forecasts for share valuation purposes had a material impact on our Fair Value assumption.
- <u>Summary/Valuation.</u> The move to 2018 forecasts for valuation purposes allows us to increase our Fair Value target for WTR shares from $35 to $39, based on a 26 P/E multiple. What we saw in the 2Q16 results was a widening focus on improving operational margins, in addition to solid execution against the guidance parameters laid out for 2016. We've also noted from recent activity that WTR is not content to just "work around the edges" to improve its performance; if it sees large scale opportunities to grow the business, it steps

right up to the plate and takes its swings. We differ with those that believe multiple contraction would occur should WTR move outside water/wastewater utilities; we believe most analysts would simply incorporate a "sum-of-the-parts" methodology to the various earnings streams generated, much like we do in our electric & gas utility universe. That said, we continue to recommend accumulation at current share price levels.


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 3 - 4 OF THIS REPORT

August 3, 2016

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: Quiet Q2 But What Does The M&A Future Hold?**

**Market Perform**

Sector: Water Utilities
Market Weight

- **Summary.** No change to our EPS outlook following WTR's Q2 report. The base business continues to execute – invest capital, grow rate base and seek recovery – but WTR's new mgmt team has ratcheted up the desire to grow through M&A. Investor focus/angst reflects concerns around what the M&A future holds in store for WTR. The more proactive, methodical approach to municipal deals is likely to start bearing fruit in 2017 (good!) but pursuit of a strategic acquisition outside of the water space has caused valuation concerns (bad!). Reiterate Market Perform rating and $35-36/sh valuation range. Shares trade at modest P/E discounts to water utility peers on our 2016-19E EPS which we consider appropriate given potential P/E multiple degradation from M&A outside the regulated water sector. In addition, water utilities as a whole seem to be fully valued as the group trades at P/E premiums of 35-40% to electric and 12-18% to gas utilities.

- **Results.** Q2'16 EPS were $0.33 vs $0.32 in Q2'15. Adverse weather impacted consumption causing $4.2M of lower revenues. However, the impact was muted by $4.2M of non-recurring favorable expense comparison items, including $3.5M of charges taken in Q2'15. With weather in mind, mgmt indicated comfortability with the middle of the $1.30-1.35 2016 EPS guidance range.

- **Outlook.** We continue to believe that a 5-yr EPS CAGR of 6% is achievable driven by timely rate recognition of investment, cost controls and modest M&A activity. Our 2016-19E EPS of $1.33, $1.40, $1.47 & $1.55 are predicated on $1.2B of regulated investments over the 2016-18 period, including $75M of M&A activity. Thus, we do not assume any transformational M&A despite the fact that WTR has financial flexibility and mgmt has articulated a clear desire to explore such opportunities. Barring a very sizeable deal, we do not foresee the need for new equity and, in fact, mgmt has previously indicated that roughly $750M of additional debt capacity exists. As such, we believe share buybacks and/or accelerated dividend increases (greater than 8%) may be considered to achieve a consolidated equity ratio closer to 45% and a 60-70% dividend payout ratio.

- **Strategy Update.** WTR is focused on (1) efficiently deploying capital across the regulated platform, (2) aggressively pursuing muni system deals and (3) scouring the broader utility landscape for strategic M&A as well as potential market-based opportunities. Mgmt indicated muni acquisition enabling legislation in IL, IN, NJ and PA is creating an uptick in interest and the pipeline is strong, including with deals of size. WTR's Board has set a goal of $50M/year worth of deals. Given the longer lead times for muni deals, look for efforts to bear fruit in 2017. As for strategic deals, mgmt affirmed interest and continues to believe core competencies are transferable across utility platforms. While stepping outside of water could lead to a merging of multiples (which would have to be taken into consideration), mgmt believes there could be long-term value creation if it opens up a path to attractive growth and allows fixed costs to be further spread out.

**Valuation Range: $35.00 to $36.00**

Our $35-36/sh valuation range is based on a P/E multiple (apply a modest discount to the 17E water utility median of 24.5-25.0X to our 18E of $1.47) and DDM analyses. Primary risks are regulatory and M&A related.

**Investment Thesis:**

We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.

**Please see page 3 for rating definitions, important disclosures and required analyst certifications**
**All estimates/forecasts are as of 08/03/16 unless otherwise stated.**



### *Earnings Reported*

| EPS | 2015A | 2016E Curr. | 2016E Prior | 2017E Curr. | 2017E Prior |
|---|---|---|---|---|---|
| **Q1** (Mar.) | $0.27 | $0.29 A | NC | NE | |
| **Q2** (June) | 0.32 | **0.33 A** | **0.32** | NE | |
| **Q3** (Sep.) | 0.38 | **0.40** | **0.41** | NE | |
| **Q4** (Dec.) | 0.28 | 0.30 | NC | NE | |
| **FY** | $1.26 | $1.33 | NC | $1.40 | NC |
| **CY** | $1.26 | $1.33 | | $1.40 | |
| **FY P/EPS** | 27.0x | 25.6x | | 24.3x | |
| **Rev.(MM)** | $814 | $835 | | $878 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2016 ongoing diluted EPS guidance is $1.30-1.35.*
*2015A excludes a 1-time item impairment charge on the Marcellus water pipeline JV of $0.12 in Q4.*

| Ticker | WTR |
|---|---|
| Price (08/03/2016) | $34.06 |
| 52-Week Range: | $24-36 |
| Shares Outstanding: (MM) | 177.3 |
| Market Cap.: (MM) | $6,038.8 |
| S&P 500: | 2,161.15 |
| Avg. Daily Vol.: | 722,633 |
| Dividend/Yield: | $0.77/2.3% |
| LT Debt: (MM) | $1,796.0 |
| LT Debt/Total Cap.: | 50.1% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 6.0% |
| CY 2016 Est. P/EPS-to-Growth: | 4.3x |
| Last Reporting Date: | 08/02/2016 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*

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Together we'll go far

Aqua America, Inc. is a publicly traded water and wastewater utility holding company with operating subsidiaries serving approximately three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

## Analyst's Notes

*Analysis by John Eade and Katelyn Bayone, September 13, 2016*

**ARGUS RATING: BUY**

- Recent selloff offers buying opportunity
- WTR shares have underperformed the S&P 500 over the last quarter, declining 10.2% compared to a 2.6% rise for the index.
- The company posted 2Q results that met consensus expectations for EPS but were slightly low on revenue.
- Along with the earnings release, Aqua America increased its quarterly cash dividend by 7.5%. The current yield is about 2.5%.
- WTR shares are trading at premium multiples that we feel are justified by the company's solid long-term fundamentals.

### INVESTMENT THESIS

BUY-rated Aqua America Inc. (NYSE: WTR) has a solid business model, a history of steady earnings growth, and a growing dividend. We think the company will continue to provide shareholders with solid risk-adjusted returns as it stands to benefit from expected investment of more than $700 billion in the nation's water and wastewater infrastructure recommended by the EPA over the next two decades. The company expects to grow its customer base not only through acquisitions but also organically, as it is well positioned in states such as North Carolina and Texas, where population growth is above the national average. The company also benefits from an experienced management team and balanced rate regulation. Our 12-month target price is $36.

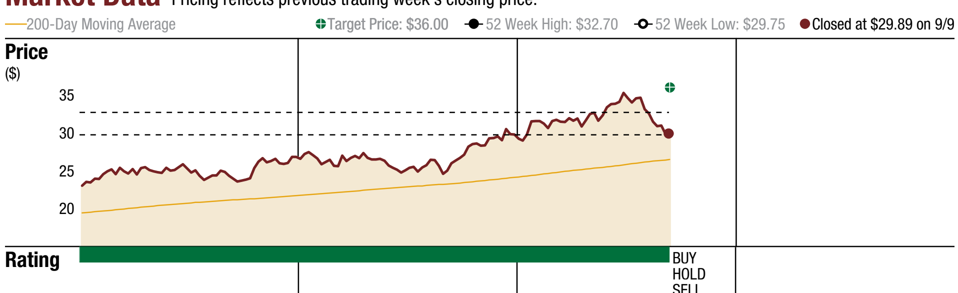
### RECENT DEVELOPMENTS

WTR shares have underperformed the S&P 500 over the last quarter, declining 10.2% compared to a 2.6% rise for the index. Over the past year, the shares have outperformed, gaining 21.4% compared to the S&P 500's rise of 9.6%. WTR shares have a beta of 0.38.

On August 2, Aqua America reported 2Q earnings that were in line with expectations though sales disappointed. Revenue fell 1% year-over-year to $203.9 million as growth from higher rates, surcharges and acquisitions was offset by lower water consumption and the impact of divestitures. Second-quarter net income grew 3.9% to $59.6 million, or

## Market Data

Pricing reflects previous trading week's closing price.




**EPS ($)**

| | 2014 Q1 | 2014 Q2 | 2014 Q3 | 2014 Q4 | 2015 Q1 | 2015 Q2 | 2015 Q3 | 2015 Q4 | 2016 Q1 | 2016 Q2 | 2016 Q3 | 2016 Q4 | 2017 Q1 | 2017 Q2 | 2017 Q3 | 2017 Q4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarterly | 0.24 | 0.31 | 0.38 | 0.28 | 0.27 | 0.32 | 0.38 | 0.28 | 0.29 | 0.33 | 0.41 | 0.31 | 0.31 | 0.35 | 0.44 | 0.33 |
| Annual | 1.20 | | | | 1.26 | | | | 1.34 (Estimate) | | | | 1.42 (Estimate) | | | |

**Revenue ($ in Mil.)**

| | 2014 Q1 | 2014 Q2 | 2014 Q3 | 2014 Q4 | 2015 Q1 | 2015 Q2 | 2015 Q3 | 2015 Q4 | 2016 Q1 | 2016 Q2 | 2016 Q3 | 2016 Q4 | 2017 Q1 | 2017 Q2 | 2017 Q3 | 2017 Q4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarterly | 182.7 | 195.3 | 210.5 | 191.4 | 190.0 | 205.0 | 221.0 | 197.0 | 200.0 | 204.0 | 221.0 | 197.0 | 203.0 | 208.0 | 225.0 | 201.0 |
| Annual | 779.9 | | | | 813.0 | | | | 822.0 (Estimate) | | | | 837.0 (Estimate) | | | |

FY ends Dec 31

## Argus Recommendations

| | | | |
|---|---|---|---|
| Twelve Month Rating | SELL | HOLD | **BUY** |
| Five Year Rating | SELL | HOLD | **BUY** |
| Sector Rating | **Under Weight** | Market Weight | Over Weight |

Argus assigns a 12-month BUY, HOLD, or SELL rating to each stock under coverage.

- BUY-rated stocks are expected to outperform the market (the benchmark S&P 500 Index) on a risk-adjusted basis over the next year.
- HOLD-rated stocks are expected to perform in line with the market.
- SELL-rated stocks are expected to underperform the market on a risk-adjusted basis.

**The distribution of ratings across Argus' entire company universe is: 46% Buy, 48% Hold, 6% Sell.**

## Key Statistics

Key Statistics pricing data reflects previous trading day's closing price. Other applicable data are trailing 12-months unless otherwise specified

### Market Overview

| | |
|---|---|
| Price | $30.19 |
| Target Price | $36.00 |
| 52 Week Price Range | $25.00 to $35.83 |
| Shares Outstanding | 177.27 Million |
| Dividend | $0.77 |

### Sector Overview

| | |
|---|---|
| Sector | Utility |
| Sector Rating | UNDER WEIGHT |
| Total % of S&P 500 Market Cap. | 3.00% |

### Financial Strength

| | |
|---|---|
| Financial Strength Rating | MEDIUM |
| Debt/Capital Ratio | 51.0% |
| Return on Equity | 13.4% |
| Net Margin | 25.4% |
| Payout Ratio | 0.54 |
| Current Ratio | 0.66 |
| Revenue | $814.60 Million |
| After-Tax Income | $207.23 Million |

### Valuation

| | |
|---|---|
| Current FY P/E | 21.26 |
| Prior FY P/E | 22.53 |
| Price/Sales | 6.57 |
| Price/Book | 2.99 |
| Book Value/Share | $10.10 |
| Market Capitalization | $5.35 Billion |

### Forecasted Growth

| | |
|---|---|
| 1 Year EPS Growth Forecast | 6.35% |
| 5 Year EPS Growth Forecast | 9.00% |
| 1 Year Dividend Growth Forecast | 5.80% |

### Risk

| | |
|---|---|
| Beta | 0.61 |
| Institutional Ownership | 48.58% |

Please see important information about this report on page 5

## Analyst's Notes...Continued

$0.33 per share.

For the first six months, net income rose to $111.4 million or $0.63 per share from $105.9 million or $0.60 per share in the prior-year period. First-half revenues were flat at $396.5 million while same-utility operating and maintenance expenses rose 1.4%.

Along with 2Q earnings, management reaffirmed its 2016 earnings guidance. The company expects full-year EPS of $1.30-$1.35 based on total customer growth of 1.5%-2.0%, a 1%-2% increase in same-system operating costs, and $350 million in capital investments. Management expects to spend $1.1 billion on capital projects through 2018.

Earlier this year, management announced plans to reevaluate and exit some of its noncore businesses, which currently represent about 4% of revenue. This is expected to reduce full-year revenue by about $30.5 million, but to have no impact on EPS due to the offset of lower operating expenses.

Aqua America also continues to seek rate increases at its regulated utilities. Thus far in 2016, it has received rate awards and infrastructure surcharges that will generate annual revenue of $5.1 million. The company could generate an additional $10.5 million from pending rate or surcharge proceedings.

### EARNINGS & GROWTH ANALYSIS

Aqua America's second-quarter revenue decline was primarily driven by lower consumption and noncore divestitures, partly offset by a rate increase of $7.2 million.

Management was able to leverage costs, reducing operating expenses by 7.2% to $74 million, mostly through divestitures and other one-time actions. However, excluding these items, same-utility expenses rose 1.3%.

Based on current sales and expense trends, we are trimming our 2016 estimate to $1.34 from $1.35. Our revised estimate implies 6% growth this year and assumes higher rates in the company's regulated operations along with growth in its nonregulated businesses. We are maintaining our 2017 estimate of $1.42 per share.

Our estimates assume that the company will control costs and improve the efficiency of acquired assets, invest in infrastructure projects, and grow its customer base both organically and through acquisitions. In 2Q, the company invested $73 million in infrastructure improvements, following investments of $364.6 million in 2015. It expects to invest more than $350 million in 2016. This spending will include improvements to replace pipes, enhance water quality, and strengthen service reliability.

### FINANCIAL STRENGTH & DIVIDEND

Our financial strength rating for Aqua America is Medium, the midpoint on our five-point scale. The company achieves above-average scores on our three main criteria of debt levels, fixed-cost coverage and profitability.

The company's total debt/total capitalization ratio was 51% at the end of 2Q, flat with the end of 2015. EBITDA covered interest

## Growth & Valuation Analysis

| GROWTH ANALYSIS ($ in Millions, except per share data) | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| Revenue | 719 | 774 | 773 | 788 | 816 |
| COGS | | | | | — |
| Gross Profit | 719 | 774 | 773 | 788 | — |
| SG&A | — | — | — | — | — |
| R&D | — | — | — | — | — |
| Operating Income | 288 | 327 | 305 | 319 | 322 |
| Interest Expense | 78 | 78 | 77 | 76 | -75 |
| Pretax Income | 218 | 255 | 228 | 245 | 218 |
| Income Taxes | 76 | 56 | 21 | 25 | 13 |
| Tax Rate (%) | 26 | 9 | 11 | 7 | — |
| Net Income | 151 | 205 | 218 | 239 | 205 |
| Diluted Shares Outstanding | 174 | 175 | 177 | 178 | 178 |
| EPS | 0.86 | 1.17 | 1.23 | 1.34 | 1.16 |
| Dividend | 0.51 | 0.54 | 0.60 | 0.65 | 0.70 |
| **GROWTH RATES (%)** | | | | | |
| Revenue | 9.2 | 1.5 | 2.4 | 4.4 | — |
| Operating Income | 13.1 | -5.0 | 4.2 | 2.1 | — |
| Net Income | 37.4 | 12.6 | 5.4 | -13.5 | — |
| EPS | 26.8 | 10.6 | 4.3 | -5.0 | — |
| Dividend | 6.3 | 9.0 | 8.6 | 8.2 | — |
| Sustainable Growth Rate | 7.3 | 9.0 | 6.9 | 6.6 | 4.6 |
| **VALUATION ANALYSIS** | | | | | |
| Price: High | $21.54 | $28.12 | $28.22 | $31.09 | — |
| Price: Low | $16.85 | $20.59 | $22.40 | $24.40 | — |
| Price/Sales: High-Low | 5.2 - 4.1 | 6.4 - 4.7 | 6.5 - 5.1 | 7.0 - 5.5 | — - — |
| P/E: High-Low | 24.9 - 19.5 | 24.1 - 17.6 | 22.9 - 18.2 | 23.2 - 18.2 | — - — |
| Price/Cash Flow: High-Low | 10.2 - 8.0 | 13.0 - 9.5 | 13.8 - 11.0 | 14.9 - 11.7 | — - — |

## Financial & Risk Analysis

| FINANCIAL STRENGTH | 2014 | 2015 | 2016 |
|---|---|---|---|
| Cash ($ in Millions) | — | — | — |
| Working Capital ($ in Millions) | — | — | — |
| Current Ratio | 0.68 | 0.66 | — |
| LT Debt/Equity Ratio (%) | 94.3 | 101.0 | — |
| Total Debt/Equity Ratio (%) | 98.9 | 104.1 | — |
| **RATIOS (%)** | | | |
| Gross Profit Margin | 100.0 | 100.0 | — |
| Operating Margin | 40.3 | 39.4 | — |
| Net Margin | 29.9 | 24.8 | — |
| Return On Assets | 4.5 | 3.6 | — |
| Return On Equity | 14.6 | 11.9 | — |
| **RISK ANALYSIS** | | | |
| Cash Cycle (days) | — | — | — |
| Cash Flow/Cap Ex | 1.2 | — | — |
| Oper. Income/Int. Exp. (ratio) | — | — | — |
| Payout Ratio | 45.0 | 51.7 | 53.8 |



Please see important information about this report on page 5

## Analyst's Notes...Continued

expense by a factor of 5.7 in 2Q. As of June 30, 2016, WTR had $4.9 million in cash on hand and $75 million available on its credit lines. In the first six months, cash from operations totaled $177.7 million and covered capital expenditures of $367.4 million by a factor of 1.05.

The company pays a dividend. On August 2, it raised its quarterly payout by 7.5% to $0.1913, or $0.765 annually. The yield is about 2.5%. The company has grown its dividend at a 7.6% average rate over the last 10 years, has paid consecutive quarterly dividends for 71 years, and has raised the dividend 26 times in the past 25 years. We expect the dividend to continue to grow. Our 2016 dividend estimate is $0.73 and our 2017 estimate is $0.80.

### MANAGEMENT & RISKS

On July 1, 2015, WTR appointed Christopher H. Franklin as its new CEO, succeeding Nicholas DeBenedictis. Mr. Franklin is a 24-year veteran of the company, and was most recently the president and chief operating officer of its regulated operations. The company promoted Richard S. Fox to chief operating officer of regulated operations on July 16, filling Mr. Franklin's former role. Mr. Fox has worked at Aqua for 14 years, most recently serving as the company's regional president and overseeing operations in five states. The company also created a new position, executive vice president of strategy and corporate development, and named Daniel J. Schuller, formerly of J.P. Morgan Asset Management, to this post. Mr. Schuller will focus on growing the company's regulated and market-based businesses. David P. Smeltzer is the CFO and is a 28-year company veteran.

The U.S. water industry is extremely fragmented, with more than 53,000 individual water systems. Many of these systems cannot afford to meet the EPA's increasingly stringent standards, and have put themselves up for sale. In fact, several companies have sought to be acquired by Aqua America. The range of acquisition targets has also grown as cash-strapped municipalities look to monetize their utility assets. We believe that WTR will have the opportunity to acquire additional municipal water systems in the coming years at attractive prices.

Key risks for stocks in our water utility coverage universe include the effect of adverse weather on revenues, regulatory issues (especially related to construction cost recovery), and potential environmental and safety-related liabilities. In addition, the capital-intensive nature of the utility industry creates ongoing liquidity risk that must be actively managed by each company.

### COMPANY DESCRIPTION

Aqua America, Inc. is a publicly traded water and wastewater utility holding company with operating subsidiaries serving approximately three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

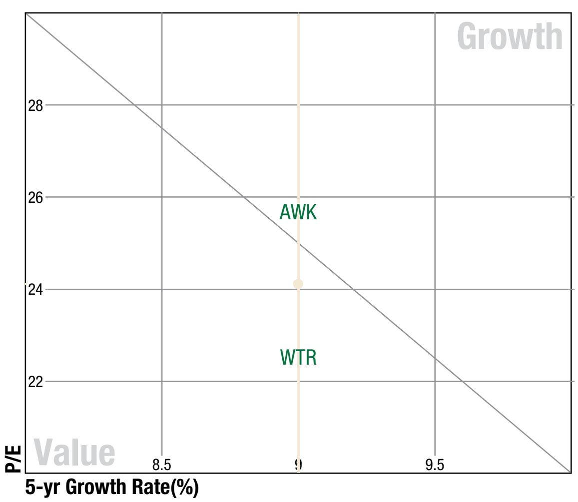
### VALUATION

WTR shares appear attractively valued at current prices near

## Peer & Industry Analysis

**The graphics in this section are designed to allow investors to compare WTR versus its industry peers, the broader sector, and the market as a whole, as defined by the Argus Universe of Coverage.**

- **The scatterplot shows how WTR stacks up versus its peers on two key characteristics: long-term growth and value. In general, companies in the lower left-hand corner are more value-oriented, while those in the upper right-hand corner are more growth-oriented.**
- **The table builds on the scatterplot by displaying more financial information.**
- **The bar charts on the right take the analysis two steps further, by broadening the comparison groups into the sector level and the market as a whole. This tool is designed to help investors understand how WTR might fit into or modify a diversified portfolio.**




| Ticker | Company | Market Cap ($ in Millions) | 5-yr Growth Rate (%) | Current FY P/E | Net Margin (%) | 1-yr EPS Growth (%) | Argus Rating |
|---|---|---|---|---|---|---|---|
| AWK | American Water Works Co Inc | 13,060 | 9.0 | 25.7 | 15.1 | 8.4 | BUY |
| WTR | Aqua America Inc | 5,352 | 9.0 | 22.5 | 25.4 | 6.0 | BUY |
| **Peer Average** | | **9,206** | **9.0** | **24.1** | **20.3** | **7.2** | |

## Analyst's Notes...Continued

$30. Over the past 52 weeks, the shares have traded between $24 and $36. From a technical standpoint, the shares had been in a bullish pattern of higher highs and higher lows that dates to September 2015, but the trend turned bearish in July.

WTR shares are trading at premium multiples that we feel are justified by the company's solid long-term fundamentals. The shares trade at 21-times our 2017 EPS estimate, above the peer average of 19.7 but below the midpoint of the historical five-year range (19.2-26.4). The stock trades near the midpoint of its five-year historical range for price/book, at 3.0-times (versus a range of 2.4-3.5) and for price/sales, at 6.7-times (versus a range of 4.1-7.7). The shares also trade at a premium to peers based on these metrics.

In our view, the company's financial strength, favorable risk profile, visible forward earnings stream and attractive integrated structure make WTR a compelling investment. We are maintaining our target price of $36.

On September 13 at midday, BUY-rated WTR traded at $29.90, down $0.29.

## About Argus

Argus Research, founded by Economist Harold Dorsey in 1934, has built a top-down, fundamental system that is used by Argus analysts. This six-point system includes Industry Analysis, Growth Analysis, Financial Strength Analysis, Management Assessment, Risk Analysis and Valuation Analysis.

Utilizing forecasts from Argus' Economist, the Industry Analysis identifies industries expected to perform well over the next one-to-two years.

The Growth Analysis generates proprietary estimates for companies under coverage.

In the Financial Strength Analysis, analysts study ratios to understand profitability, liquidity and capital structure.

During the Management Assessment, analysts meet with and familiarize themselves with the processes of corporate management teams.

Quantitative trends and qualitative threats are assessed under the Risk Analysis.

And finally, Argus' Valuation Analysis model integrates a historical ratio matrix, discounted cash flow modeling, and peer comparison.

**THE ARGUS RESEARCH RATING SYSTEM**

Argus uses three ratings for stocks: BUY, HOLD, and SELL. Stocks are rated relative to a benchmark, the S&P 500.

- A BUY-rated stock is expected to outperform the S&P 500 on a risk-adjusted basis over a 12-month period. To make this determination, Argus Analysts set target prices, use beta as the measure of risk, and compare expected risk-adjusted stock returns to the S&P 500 forecasts set by the Argus Market Strategist.
- A HOLD-rated stock is expected to perform in line with the S&P 500.
- A SELL-rated stock is expected to underperform the S&P 500.

## Argus Research Disclaimer



## Morningstar Disclaimer

ARGUS

Aqua America, Inc. is a publicly traded water and wastewater utility holding company with operating subsidiaries serving approximately three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

## Analyst's Notes

*Analysis by Jacob Kilstein, CFA, May 18, 2018*

**ARGUS RATING: BUY**

- Reaffirming BUY and maintaining target at $41
- WTR shares have underperformed the S&P MidCap 400 over the last quarter, declining 5% compared to a 2% increase for the index. Shares have also underperformed over the past year, rising 5% compared to the S&P MidCap 400's gain of 15%. WTR shares have a beta of 0.73, in line with peers.
- On May 8, Aqua America reported 1Q18 net income of $50.8 million or $0.29 per share, up 4% from the prior year. EPS matched the consensus estimate. Revenue rose 4% to $194.3 million, which missed the consensus estimate of $197.4 million, while regulated segment revenues, which make up over 99% of the business, also rose 4% to $193.5 million, reflecting higher consumption, organic growth, and rate increases.
- Along with 1Q earnings, management reiterated its 2018 EPS of $1.37-$1.42. Management's guidance assumes total customer growth of 2.0%-3.0%, higher than last year, and $500 million in capital spending.
- We are lowering our 2018 EPS estimate to $1.42 from $1.45, due to lower guidance than we had anticipated. Our estimate implies 4% growth this year and assumes higher rates in the company's regulated operations. We are establishing a 2019 estimate of $1.50.

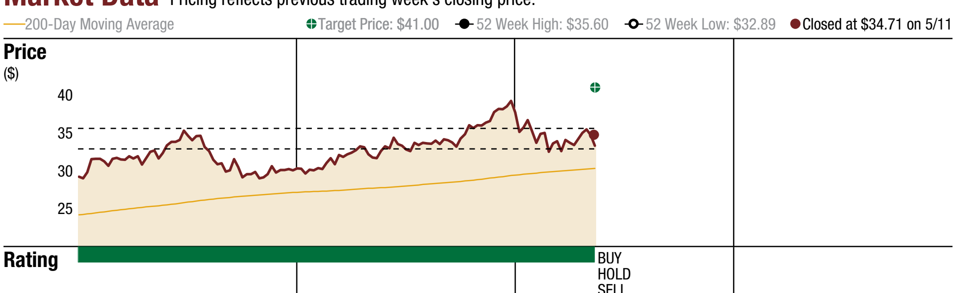
**INVESTMENT THESIS**

BUY-rated Aqua America Inc. (NYSE: WTR) has a solid business model, a history of steady earnings growth, and a growing dividend. We think the company will continue to provide shareholders with solid risk-adjusted returns as it stands to benefit from expected investment of more than $700 billion in the nation's water and wastewater infrastructure recommended by the EPA over the next two decades. The company expects to grow its customer base not only through acquisitions but also organically, as it is well positioned in states such as North Carolina and Texas, where population growth is above the national average. The company also benefits from an experienced management team and balanced rate regulation. Lastly, we like the company's consistent earnings results and rising dividend. We are maintaining our 12-month target price of $41.

**RECENT DEVELOPMENTS**

## Market Data

Pricing reflects previous trading week's closing price.




| | 2016 Q1 | 2016 Q2 | 2016 Q3 | 2016 Q4 | 2017 Q1 | 2017 Q2 | 2017 Q3 | 2017 Q4 | 2018 Q1 | 2018 Q2 | 2018 Q3 | 2018 Q4 | 2019 Q1 | 2019 Q2 | 2019 Q3 | 2019 Q4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPS ($) Quarterly | 0.29 | 0.33 | 0.41 | 0.28 | 0.28 | 0.34 | 0.43 | 0.32 | 0.29 | 0.36 | 0.44 | 0.33 | 0.31 | 0.39 | 0.46 | 0.35 |
| EPS Annual | 1.32 | | | | 1.35 | | | | 1.42 (Estimate) | | | | 1.50 (Estimate) | | | |
| Revenue ($ in Mil.) Quarterly | 192.6 | 203.9 | 226.6 | 197.0 | 187.8 | 203.4 | 215.0 | 203.3 | 194.3 | 213.6 | 232.2 | 211.4 | 206.0 | 229.6 | 243.8 | 219.9 |
| Revenue Annual | 820.1 | | | | 809.5 | | | | 851.5 (Estimate) | | | | 899.3 (Estimate) | | | |

FY ends Dec 31

## Argus Recommendations

| | | | |
|---|---|---|---|
| Twelve Month Rating | SELL | HOLD | **BUY** |
| Five Year Rating | SELL | HOLD | **BUY** |
| Sector Rating | **Under Weight** | Market Weight | Over Weight |

Argus assigns a 12-month BUY, HOLD, or SELL rating to each stock under coverage.

- BUY-rated stocks are expected to outperform the market (the benchmark S&P 500 Index) on a risk-adjusted basis over the next year.
- HOLD-rated stocks are expected to perform in line with the market.
- SELL-rated stocks are expected to underperform the market on a risk-adjusted basis.

**The distribution of ratings across Argus' entire company universe is: 67% Buy, 33% Hold, 1% Sell.**

## Key Statistics

Key Statistics pricing data reflects previous trading day's closing price. Other applicable data are trailing 12-months unless otherwise specified

### Market Overview

| | |
|---|---|
| Price | $33.17 |
| Target Price | $41.00 |
| 52 Week Price Range | $31.18 to $39.55 |
| Shares Outstanding | 177.90 Million |
| Dividend | $0.82 |

### Sector Overview

| | |
|---|---|
| Sector | Utility |
| Sector Rating | UNDER WEIGHT |
| Total % of S&P 500 Market Cap. | 2.00% |

### Financial Strength

| | |
|---|---|
| Financial Strength Rating | MEDIUM |
| Debt/Capital Ratio | 52.3% |
| Return on Equity | 12.3% |
| Net Margin | 29.6% |
| Payout Ratio | 0.60 |
| Current Ratio | 0.46 |
| Revenue | $816.09 Million |
| After-Tax Income | $241.51 Million |

### Valuation

| | |
|---|---|
| Current FY P/E | 23.36 |
| Prior FY P/E | 24.57 |
| Price/Sales | 7.23 |
| Price/Book | 2.99 |
| Book Value/Share | $11.09 |
| Market Capitalization | $5.90 Billion |

### Forecasted Growth

| | |
|---|---|
| 1 Year EPS Growth Forecast | 5.19% |
| 5 Year EPS Growth Forecast | 9.00% |
| 1 Year Dividend Growth Forecast | 7.59% |

### Risk

| | |
|---|---|
| Beta | 0.78 |
| Institutional Ownership | 54.95% |

Please see important information about this report on page 5

## Analyst's Notes...Continued

WTR shares have underperformed the S&P MidCap 400 over the last quarter, declining 5% compared to a 2% increase for the index. Shares have also underperformed over the past year, rising 5% compared to the S&P MidCap 400's gain of 15%. WTR shares have a beta of 0.73, in line with peers.

On May 8, Aqua America reported 1Q18 net income of $50.8 million or $0.29 per share, up 4% from the prior year. EPS matched the consensus estimate. Revenue rose 4% to $194.3 million, which missed the consensus estimate of $197.4 million. Regulated segment revenues, which make up over 99% of the business, also rose 4% to $193.5 million, reflecting higher consumption, organic growth, and rate increases.

Operations and maintenance expense rose 9% to $74 million, driven by higher employee costs and overtime due to repairs to infrastructure during the winter. As a result, the operating margin declined by 220 basis points to 35.7%.

Along with 1Q earnings, management reiterated its 2018 EPS of $1.37-$1.42. Management's guidance assumes total customer growth of 2.0%-3.0%, higher than last year, and $500 million in capital spending. Management expects to spend $1.4 billion on capital projects through 2020.

### EARNINGS & GROWTH ANALYSIS

So far in 2018, WTR has completed rate cases or surcharges in seven states, providing $24 million in additional revenue. Pending rate cases in Indiana, Ohio, North Carolina, and Virginia are seeking an additional $9 million of revenue. Lastly, a rate case in Pennsylvania is expected to be filed in 3Q18 with rates taking affect in mid-2019.

During the first three months of 2018, the company completed three small acquisitions of water and wastewater systems, which added 448 customers. The company has pending acquisition agreements with six municipal systems, totaling approximately 16,000 additional customers (or connections), at a cost of $151,000. WTR plans to finance those acquisitions with debt.

We are lowering our 2018 EPS estimate to $1.42 from $1.45, due to lower guidance than we had anticipated. Our estimate implies 4% growth this year and assumes higher rates in the company's regulated operations. We are also establishing a 2019 estimate of $1.50.

Our estimates assume that the company will control costs and improve the efficiency of acquired assets, invest in infrastructure projects, and grow its customer base both organically and through acquisitions. Year-to-date, the company has already spent $105 million and expects to invest $500 million in infrastructure in 2018, following a record investment of $478 million in 2017. This spending will include improvements to replace pipes, enhance water quality, and strengthen service reliability.

### FINANCIAL STRENGTH & DIVIDEND

Our financial strength rating for Aqua America is Medium, the midpoint on our five-point scale. Our three main criteria include

## Growth & Valuation Analysis

| GROWTH ANALYSIS ($ in Millions, except per share data) | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Revenue | 762 | 780 | 814 | 820 | 810 |
| COGS | 284 | 289 | 309 | 305 | 287 |
| Gross Profit | 478 | 491 | 505 | 515 | 522 |
| SG&A | — | — | — | — | — |
| R&D | — | — | — | — | — |
| Operating Income | 302 | 314 | 321 | 326 | 329 |
| Interest Expense | 77 | 76 | 77 | 81 | 88 |
| Pretax Income | 224 | 239 | 217 | 255 | 257 |
| Income Taxes | 21 | 25 | 15 | 21 | 17 |
| Tax Rate (%) | 9 | 11 | 7 | 8 | 7 |
| Net Income | 221 | 233 | 202 | 234 | 240 |
| Diluted Shares Outstanding | 177 | 178 | 178 | 178 | 178 |
| EPS | 1.25 | 1.31 | 1.14 | 1.32 | 1.35 |
| Dividend | 0.58 | 0.63 | 0.69 | 0.74 | 0.79 |
| **GROWTH RATES (%)** | | | | | |
| Revenue | 1.5 | 2.4 | 4.4 | 0.7 | -1.3 |
| Operating Income | -5.0 | 4.2 | 2.1 | 1.4 | 1.0 |
| Net Income | 12.6 | 5.4 | -13.5 | 16.1 | 2.4 |
| EPS | 10.6 | 4.3 | -5.0 | 15.8 | 2.3 |
| Dividend | 9.0 | 8.6 | 8.2 | 7.7 | 7.2 |
| Sustainable Growth Rate | 9.0 | 6.9 | 6.6 | 4.7 | 5.2 |
| **VALUATION ANALYSIS** | | | | | |
| Price: High | $28.12 | $28.22 | $31.09 | $35.83 | $39.55 |
| Price: Low | $20.59 | $22.40 | $24.40 | $28.03 | $29.41 |
| Price/Sales: High-Low | 6.5 - 4.8 | 6.4 - 5.1 | 6.8 - 5.3 | 7.8 - 6.1 | 8.7 - 6.5 |
| P/E: High-Low | 22.5 - 16.5 | 21.5 - 17.1 | 27.3 - 21.4 | 27.1 - 21.2 | 29.3 - 21.8 |
| Price/Cash Flow: High-Low | 13.0 - 9.5 | 13.8 - 11.0 | 14.9 - 11.7 | 16.9 - 13.2 | 18.1 - 13.5 |

## Financial & Risk Analysis

| FINANCIAL STRENGTH | 2015 | 2016 | 2017 |
|---|---|---|---|
| Cash ($ in Millions) | 3 | 4 | 4 |
| Working Capital ($ in Millions) | -65 | -173 | -153 |
| Current Ratio | 0.66 | 0.43 | 0.46 |
| LT Debt/Equity Ratio (%) | 99.7 | 93.9 | 102.6 |
| Total Debt/Equity Ratio (%) | 102.7 | 103.1 | 109.7 |
| **RATIOS (%)** | | | |
| Gross Profit Margin | 62.0 | 62.8 | 64.5 |
| Operating Margin | 39.4 | 39.7 | 40.6 |
| Net Margin | 24.8 | 28.6 | 29.6 |
| Return On Assets | 3.6 | 3.9 | 3.8 |
| Return On Equity | 11.9 | 13.1 | 12.6 |
| **RISK ANALYSIS** | | | |
| Cash Cycle (days) | -30.4 | -20.1 | -21.1 |
| Cash Flow/Cap Ex | 1.0 | 1.0 | 0.8 |
| Oper. Income/Int. Exp. (ratio) | — | — | — |
| Payout Ratio | 51.7 | 53.8 | 60.4 |



Please see important information about this report on page 5

## Analyst's Notes...Continued

debt levels, fixed-cost coverage and profitability.

The company's total debt/total capitalization ratio was 53% at the end of 1Q, in line with the peer average. EBITDA covered interest expense by a factor of 5.3 in 1Q, below the peer average of 6.5. The 1Q adjusted net margin of 26% was much higher than the 14% average for peers. As of March 31, WTR had $3 million in cash, $2.0 billion in debt, and $228 million available on its credit lines. In the first three months of 2018, cash from operations totaled $88 million and covered capital expenditures of $105 million by a factor of 0.8, compared to 2.0 for peers.

WTR pays a quarterly dividend of $0.2047, or $0.8188 annually, for a yield of about 2.5%, below the 3.2% peer average. On April 25, the board of directors declared a quarterly dividend of $0.2047 per share, payable on June 1 to shareholders of record on May 18. The company has grown its dividend at a 7.5% average rate over the last 10 years, has paid consecutive quarterly dividends for 73 years, and has raised the dividend 26 times in the past 25 years. Our 2018 dividend estimate is $0.85 per share and our 2019 estimate is $0.92.

### MANAGEMENT & RISKS

Christopher Franklin has been CEO since July 2015. Mr. Franklin is a 25-year veteran of the company, and previously served as president and chief operating officer of its regulated operations.

The U.S. water industry is extremely fragmented, with more than 53,000 individual water systems. Many of these systems cannot afford to meet the EPA's increasingly stringent standards, and have put themselves up for sale. In fact, several companies have sought to be acquired by Aqua America. The range of acquisition targets has also grown as cash-strapped municipalities look to monetize their utility assets. We believe that WTR will have the opportunity to acquire additional municipal water systems in the coming years at attractive prices.

Key risks for water utilities include the effect of adverse weather on revenues, regulatory issues (especially related to construction cost recovery), and potential environmental and safety-related liabilities. In addition, the capital-intensive nature of the utility industry creates ongoing liquidity risk that must be actively managed by each company.

### COMPANY DESCRIPTION

Aqua America, Inc. is a publicly traded water and wastewater utility holding company with operating subsidiaries serving approximately three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

### VALUATION

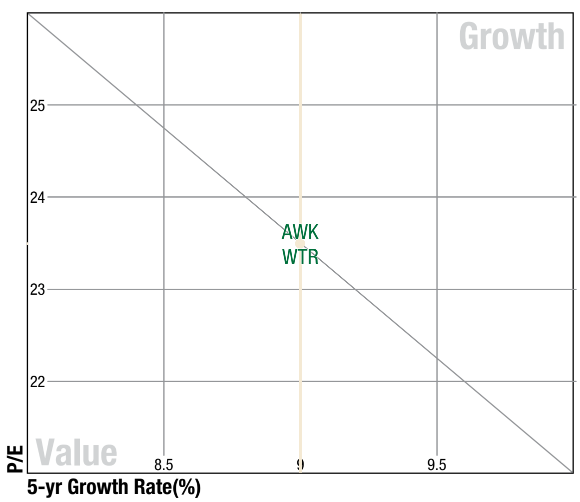
WTR shares appear attractively valued at current prices near $33. Over the past 52 weeks, the shares have traded between $31 and $40.

WTR shares are trading at premium multiples that we feel are justified by the company's solid long-term fundamentals. The

## Peer & Industry Analysis

**The graphics in this section are designed to allow investors to compare WTR versus its industry peers, the broader sector, and the market as a whole, as defined by the Argus Universe of Coverage.**

- **The scatterplot shows how WTR stacks up versus its peers on two key characteristics: long-term growth and value. In general, companies in the lower left-hand corner are more value-oriented, while those in the upper right-hand corner are more growth-oriented.**
- **The table builds on the scatterplot by displaying more financial information.**
- **The bar charts on the right take the analysis two steps further, by broadening the comparison groups into the sector level and the market as a whole. This tool is designed to help investors understand how WTR might fit into or modify a diversified portfolio.**




| Ticker | Company | Market Cap ($ in Millions) | 5-yr Growth Rate (%) | Current FY P/E | Net Margin (%) | 1-yr EPS Growth (%) | Argus Rating |
|---|---|---|---|---|---|---|---|
| AWK | American Water Works Co. Inc. | 14,304 | 9.0 | 23.6 | 13.1 | 8.8 | BUY |
| WTR | Aqua America Inc | 5,901 | 9.0 | 23.4 | 29.6 | 5.6 | BUY |
| **Peer Average** | | **10,103** | **9.0** | **23.5** | **21.3** | **7.2** | |

## Analyst's Notes...Continued

shares trade at 22.9-times our 2018 EPS estimate, above the peer average of 19.1 but below the midpoint of the historical five-year range of 19.2-28.9. The stock trades below the midpoint of its five-year historical range for price/book, with a multiple of 3.0 (versus a range of 2.6-3.9) but above the midpoint for price/sales, with a multiple of 7.2 (versus a range of 5.4-8.6). The shares also trade above the peer average for both price/book (2.0 for peers) and price/sales (2.1).

In our view, the company's financial strength, favorable risk profile, visible forward earnings stream and attractive integrated structure make WTR a compelling investment. We are maintaining our 12-month price target at $41, implying a total return potential of 26% including dividends.

On May 18 at midday, BUY-rated WTR traded at $33.31, up $0.14.

## About Argus

Argus Research, founded by Economist Harold Dorsey in 1934, has built a top-down, fundamental system that is used by Argus analysts. This six-point system includes Industry Analysis, Growth Analysis, Financial Strength Analysis, Management Assessment, Risk Analysis and Valuation Analysis.

Utilizing forecasts from Argus' Economist, the Industry Analysis identifies industries expected to perform well over the next one-to-two years.

The Growth Analysis generates proprietary estimates for companies under coverage.

In the Financial Strength Analysis, analysts study ratios to understand profitability, liquidity and capital structure.

During the Management Assessment, analysts meet with and familiarize themselves with the processes of corporate management teams.

Quantitative trends and qualitative threats are assessed under the Risk Analysis.

And finally, Argus' Valuation Analysis model integrates a historical ratio matrix, discounted cash flow modeling, and peer comparison.

**THE ARGUS RESEARCH RATING SYSTEM**

Argus uses three ratings for stocks: BUY, HOLD, and SELL. Stocks are rated relative to a benchmark, the S&P 500.

- A BUY-rated stock is expected to outperform the S&P 500 on a risk-adjusted basis over a 12-month period. To make this determination, Argus Analysts set target prices, use beta as the measure of risk, and compare expected risk-adjusted stock returns to the S&P 500 forecasts set by the Argus Market Strategist.
- A HOLD-rated stock is expected to perform in line with the S&P 500.
- A SELL-rated stock is expected to underperform the S&P 500.

## Argus Research Disclaimer



## Morningstar Disclaimer

Aqua America, Inc. is a publicly traded water and wastewater utility holding company with operating subsidiaries serving approximately three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

## Analyst's Notes

*Analysis by John Eade and Katelyn Bayone, May 31, 2016*

**ARGUS RATING: BUY**

- Raising target price by $1 to $36
- WTR shares have outperformed the S&P 500 over the last year, gaining 23% compared to the S&P 500's decline of 0.4%.
- Our EPS estimates imply growth of 6%-7% annually for the next two years for this water utility.
- Aqua America recently increased its quarterly cash dividend by 7%. The current yield is about 2.2%.
- WTR shares are trading at premium multiples that we feel are justified by the company's solid long-term fundamentals.

**INVESTMENT THESIS**

BUY-rated Aqua America Inc. (NYSE: WTR) has a solid business model, a history of steady earnings growth, and a growing dividend. We think the company will continue to provide shareholders with solid risk-adjusted returns as it stands to benefit from expected investment of more than $700 billion in the nation's water and wastewater infrastructure recommended by the EPA over the next two decades. The company expects to grow its customer base not only through acquisitions but also organically, as it is well positioned in states such as North Carolina and Texas, where population growth is above the national average. The company also benefits from an experienced management team and balanced rate regulation. Our 12-month target price is $36, raised from $35.

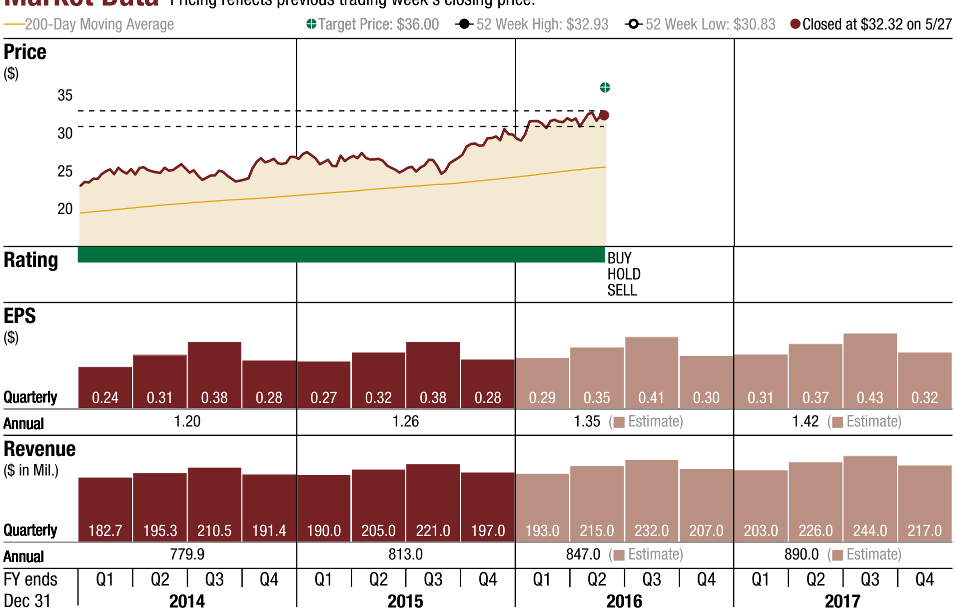
**RECENT DEVELOPMENTS**

WTR shares have underperformed the S&P 500 over the last quarter, rising 5.7% compared to an 8.6% advance for the index. Over the past year, the shares have outperformed, gaining 23% compared to the S&P 500's decline of 0.4%. WTR shares, with a beta of 0.55, have historically been less volatile than the S &P.

On May 3, Aqua America reported 1Q earnings of $0.29 per share, up $0.02 over 1Q15 and a penny above the consensus estimate. Revenue missed estimates by $5 million, but still rose 1.2% to $192.6 million. Increases in rates, surcharges and regulated customer growth helped to increase revenue by approximately $7 million, while the divestiture of certain market-based activities and a decline in consumption offset the increase by $3

## Market Data

Pricing reflects previous trading week's closing price.




## Argus Recommendations

| | | | |
|---|---|---|---|
| Twelve Month Rating | SELL | HOLD | **BUY** |
| Five Year Rating | SELL | HOLD | **BUY** |
| Sector Rating | **Under Weight** | Market Weight | Over Weight |

Argus assigns a 12-month BUY, HOLD, or SELL rating to each stock under coverage.

- BUY-rated stocks are expected to outperform the market (the benchmark S&P 500 Index) on a risk-adjusted basis over the next year.
- HOLD-rated stocks are expected to perform in line with the market.
- SELL-rated stocks are expected to underperform the market on a risk-adjusted basis.

**The distribution of ratings across Argus' entire company universe is: 47% Buy, 47% Hold, 6% Sell.**

## Key Statistics

Key Statistics pricing data reflects previous trading day's closing price. Other applicable data are trailing 12-months unless otherwise specified

**Market Overview**

| | |
|---|---|
| Price | $32.32 |
| Target Price | $36.00 |
| 52 Week Price Range | $24.40 to $32.93 |
| Shares Outstanding | 177.27 Million |
| Dividend | $0.71 |

**Sector Overview**

| | |
|---|---|
| Sector | Utility |
| Sector Rating | UNDER WEIGHT |
| Total % of S&P 500 Market Cap. | 3.00% |

**Financial Strength**

| | |
|---|---|
| Financial Strength Rating | MEDIUM |
| Debt/Capital Ratio | 51.0% |
| Return on Equity | 13.6% |
| Net Margin | 25.1% |
| Payout Ratio | 0.54 |
| Current Ratio | 0.66 |
| Revenue | $816.49 Million |
| After-Tax Income | $204.98 Million |

**Valuation**

| | |
|---|---|
| Current FY P/E | 22.76 |
| Prior FY P/E | 23.94 |
| Price/Sales | 7.02 |
| Price/Book | 3.25 |
| Book Value/Share | $9.93 |
| Market Capitalization | $5.73 Billion |

**Forecasted Growth**

| | |
|---|---|
| 1 Year EPS Growth Forecast | 7.14% |
| 5 Year EPS Growth Forecast | 9.00% |
| 1 Year Dividend Growth Forecast | 5.80% |

**Risk**

| | |
|---|---|
| Beta | 0.61 |
| Institutional Ownership | 48.67% |

**Please see important information about this report on page 5**

## Analyst's Notes...Continued

million. Net income rose 6.6% to $51.7 million.

Along with 1Q earnings, management also reaffirmed FY16 earnings guidance of $1.30-$1.45, with the total customer base expected to grow 1.5%-2%. Same-system O&M expenses are expected to increase 1%-2%. Through 2018, management expects to use $1.1 billion in capital investments, with $350 million being in FY16.

Management also announced plans to reevaluate and exit some of its non-core businesses, which currently represent about 4% of revenue. This is expected to impact revenue growth over the next year by up to $30.5 million, but have no impact on EPS due to the offset of lowered operating expenses.

Despite an earnings beat, the stock hasn't moved much since the release. Shares declined about 1%. Management issued a subdued outlook on the conference call, suggesting that 2Q results may be slightly weaker than previously anticipated, as 1Q EPS was a penny more than expected.

Aqua America's business is heavily regulated. In April, Pennsylvania legislation passed House Bill 1326, which allows a company to use 'fair market value' when acquiring municipal and wastewater systems, as opposed to the old system where acquisitions were valued at original cost minus depreciation. This is a benefit for Aqua America, given its growth through acquisition strategy. The new rule will give the company flexibility to make more valuable acquisitions. During the quarter, the company's regulated subsidiaries closed deals to acquire nine water and wastewater systems. The acquisitions added 5,250 customers and boosted the overall customer base by 0.5%.

Aqua America also continues to seek rate increases at its regulated utilities. Thus far in 2016, Aqua's regulated subsidiaries received rate awards and infrastructure surcharges totaling an estimated increase in revenue of $4.5 million annually. The company has a combined $5.1 million in rate or surcharge proceedings pending.

Aqua in 4Q recognized a noncash impairment charge of $33 million due to the reassessment of the value of its 49% stake in pipeline assets that supply raw water to natural gas and drilling operations in the Marcellus Shale. Aqua has lowered forecasts for raw water sales to operations in the Marcellus Shale due to difficult market conditions in the oil and gas market.

### EARNINGS & GROWTH ANALYSIS

Aqua America's revenue growth during the quarter was primarily due to increased rates, increased usage, and customer growth, driven by acquisitions in both regulated and nonregulated businesses.

That growth was partially offset by the divestiture of some non-core businesses which reduced revenue by $3 million. O&M expenses increased as well, up 0.5% to $73.2 million.

Based on current sales and expense trends, we are maintaining our 2016 estimate of $1.35, implying 7% growth. Our 2016 estimate assumes higher rates in the company's regulated segments

## Growth & Valuation Analysis

### GROWTH ANALYSIS

| ($ in Millions, except per share data) | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| Revenue | 719 | 774 | 773 | 788 | 816 |
| COGS | | | | | — |
| Gross Profit | 719 | 774 | 773 | 788 | — |
| SG&A | — | — | — | — | — |
| R&D | — | — | — | — | — |
| Operating Income | 288 | 327 | 305 | 319 | 322 |
| Interest Expense | 78 | 78 | 77 | 38 | -75 |
| Pretax Income | 218 | 255 | 228 | 245 | 218 |
| Income Taxes | 76 | 56 | 21 | 25 | 13 |
| Tax Rate (%) | 26 | 9 | 11 | 7 | — |
| Net Income | 151 | 205 | 218 | 239 | 205 |
| Diluted Shares Outstanding | 175 | 177 | 178 | 178 | — |
| EPS | 1.12 | 1.25 | 1.31 | 1.14 | — |
| Dividend | 0.54 | 0.58 | 0.63 | 0.69 | — |
| **GROWTH RATES (%)** | | | | | |
| Revenue | 9.2 | 1.5 | 2.4 | 4.4 | — |
| Operating Income | 13.1 | -5.0 | 4.2 | 2.1 | — |
| Net Income | 37.4 | 12.6 | 5.4 | -13.5 | — |
| EPS | 26.8 | 10.6 | 4.3 | -5.0 | — |
| Dividend | 6.3 | 9.0 | 8.6 | 8.2 | — |
| Sustainable Growth Rate | 7.3 | 9.0 | 6.9 | 6.6 | 4.7 |
| **VALUATION ANALYSIS** | | | | | |
| Price: High | $21.54 | $28.12 | $28.22 | $31.09 | — |
| Price: Low | $16.85 | $20.59 | $22.40 | $24.40 | — |
| Price/Sales: High-Low | 5.2 - 4.1 | 6.4 - 4.7 | 6.5 - 5.2 | 7.0 - 5.5 | — - — |
| P/E: High-Low | 19.2 - 15.0 | 22.5 - 16.5 | 21.5 - 17.1 | 27.3 - 21.4 | — - — |
| Price/Cash Flow: High-Low | 10.2 - 8.0 | 13.0 - 9.5 | 13.8 - 11.0 | 14.9 - 11.7 | — - — |

## Financial & Risk Analysis

| FINANCIAL STRENGTH | 2014 | 2015 | 2016 |
|---|---|---|---|
| Cash ($ in Millions) | — | — | — |
| Working Capital ($ in Millions) | — | — | — |
| Current Ratio | 0.68 | 0.66 | — |
| LT Debt/Equity Ratio (%) | 94.3 | 101.0 | — |
| Total Debt/Equity Ratio (%) | 98.9 | 104.1 | — |
| **RATIOS (%)** | | | |
| Gross Profit Margin | 100.0 | 100.0 | — |
| Operating Margin | 40.3 | 39.4 | — |
| Net Margin | 29.9 | 24.8 | — |
| Return On Assets | 4.5 | 3.6 | — |
| Return On Equity | 14.6 | 11.9 | — |
| **RISK ANALYSIS** | | | |
| Cash Cycle (days) | — | — | — |
| Cash Flow/Cap Ex | 1.2 | — | — |
| Oper. Income/Int. Exp. (ratio) | — | — | — |
| Payout Ratio | 45.2 | 51.7 | 53.8 |



Please see important information about this report on page 5

## Analyst's Notes...Continued

along with growth in its nonregulated businesses. We are also maintaining our 2017 estimate of $1.42 per share.

Our estimates assume that the company will control costs and improve the efficiency of acquired assets, invest in infrastructure projects to increase its rate base, and grow its customer base both organically and through acquisitions. In 1Q, the company invested $73 million in infrastructure improvements, following investments of $364.6 million in fiscal 2015. It expects to invest more than $350 million in 2016. This capex will include improvements to replace pipes, enhance water quality, and strengthen service reliability.

**FINANCIAL STRENGTH & DIVIDEND**

Our financial strength rating for Aqua America is Medium, the midpoint on our five-point scale. The company achieves above-average scores on our three main criteria of debt levels, fixed-cost coverage and profitability.

The company's total debt/total capitalization ratio was 51% at the end of 1Q, flat to the end of 2015. EBITDA covered interest expense by a factor of 5.4 in 1. As of March 31, 2016, WTR had $4 million in cash on hand and $249 million available on its credit lines. For the past twelve months, cash from operations totaled $375.6 million and covered capital expenditures of $367.4 million by a factor of 1.02.

The company pays a dividend. In September 2015, it increased its quarterly payout by 7.9% to $0.178, or $0.71 annually. The yield is about 2.2%. The company has grown its dividend at a 7.6% average rate over the last 10 years, has paid consecutive quarterly dividends for 71 years, and has raised the dividend 25 times in the past 24 years. We expect the dividend to continue to grow. Our 2016 dividend estimate is $0.73 and our 2017 estimate is $0.80.

**MANAGEMENT & RISKS**

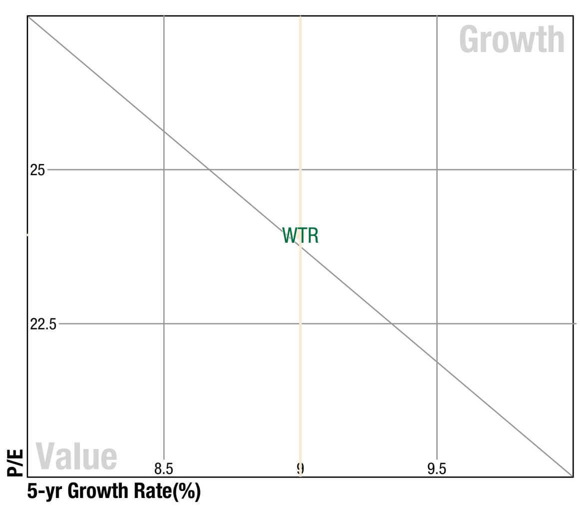
On July 1, 2015, WTR appointed Christopher H. Franklin as its new CEO, succeeding Nicholas DeBenedictis. Mr. Franklin is a 24-year veteran of the company, and was most recently the President and Chief Operating Officer of its regulated operations. The company promoted Richard S. Fox to Chief Operating Officer of regulated operations on July 16, filling Mr. Franklin's former role. Mr. Fox has worked at Aqua for 14 years, most recently serving as the company's regional president and overseeing operations in five states. The company also created a new position, executive vice president of strategy and corporate development, and named Daniel J. Schuller, formerly of J.P. Morgan Asset Management, to this post. Mr. Schuller will focus on growing the company's regulated and market-based businesses. David P. Smeltzer is the CFO and is a 28-year company veteran. During the first quarter, the company hired two new executives - Susan Haindl will now serve as the new Chief Administrative Officer and Whitney Khellett will serve as the new Chief Information Officer

The U.S. water industry is extremely fragmented, with more

## Peer & Industry Analysis

**The graphics in this section are designed to allow investors to compare WTR versus its industry peers, the broader sector, and the market as a whole, as defined by the Argus Universe of Coverage.**

- **The scatterplot shows how WTR stacks up versus its peers on two key characteristics: long-term growth and value. In general, companies in the lower left-hand corner are more value-oriented, while those in the upper right-hand corner are more growth-oriented.**
- **The table builds on the scatterplot by displaying more financial information.**
- **The bar charts on the right take the analysis two steps further, by broadening the comparison groups into the sector level and the market as a whole. This tool is designed to help investors understand how WTR might fit into or modify a diversified portfolio.**




| Ticker | Company | Market Cap ($ in Millions) | 5-yr Growth Rate (%) | Current FY P/E | Net Margin (%) | 1-yr EPS Growth (%) | Argus Rating |
|---|---|---|---|---|---|---|---|
| WTR | Aqua America Inc | 5,729 | 9.0 | 23.9 | 25.1 | 5.2 | BUY |
| **Peer Average** | | **5,729** | **9.0** | **23.9** | **25.1** | **5.2** | |


Please see important information about this report on page 5

## Analyst's Notes...Continued

than 53,000 individual water systems. Many of these systems cannot afford to meet the EPA's increasingly stringent standards, and have put themselves up for sale. In fact, several companies have sought to be acquired by Aqua America. The range of acquisition targets has also grown as cash-strapped municipalities look to monetize their utility assets. We believe that WTR will have the opportunity to acquire additional municipal water systems in the coming years at attractive prices.

Key risks for stocks in our water utility coverage universe include the effect of adverse weather on revenues, regulatory issues (especially related to construction cost recovery), and potential environmental and safety-related liabilities. In addition, the capital-intensive nature of the utility industry creates ongoing liquidity risk that must be actively managed by each company.

### COMPANY DESCRIPTION

Aqua America, Inc. is a publicly traded water and wastewater utility holding company with operating subsidiaries serving approximately three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

### VALUATION

WTR shares appear attractively valued at current prices near $32. Over the past 52 weeks, the shares have traded between $24 and $33. From a technical standpoint, the shares have been in a bullish pattern of higher highs and higher lows that dates to September 2015.

WTR shares are trading at premium multiples that we feel are justified by the company's solid long-term fundamentals. The shares trade at 22.5-times our 2017 EPS estimate, above the peer average of 20.5 times but slightly below the midpoint of the historical five-year range (16.7-32.7). The stock trades in the upper half of its five-year historical range for price/book, at 3.2-times (versus a range of 2.3-3.4) and for price/sales, at 6.9-times (versus a range of 4.1-7.1). The shares trade at a premium to peers based on these metrics as well.

In our view, the company's financial strength, favorable risk profile, visible forward earnings stream and attractive integrated structure make WTR a compelling investment. We are raising our target price to $36.

On May 31 at midday, BUY-rated WTR traded at $32.27, down $0.05.

## About Argus

Argus Research, founded by Economist Harold Dorsey in 1934, has built a top-down, fundamental system that is used by Argus analysts. This six-point system includes Industry Analysis, Growth Analysis, Financial Strength Analysis, Management Assessment, Risk Analysis and Valuation Analysis.

Utilizing forecasts from Argus' Economist, the Industry Analysis identifies industries expected to perform well over the next one-to-two years.

The Growth Analysis generates proprietary estimates for companies under coverage.

In the Financial Strength Analysis, analysts study ratios to understand profitability, liquidity and capital structure.

During the Management Assessment, analysts meet with and familiarize themselves with the processes of corporate management teams.

Quantitative trends and qualitative threats are assessed under the Risk Analysis.

And finally, Argus' Valuation Analysis model integrates a historical ratio matrix, discounted cash flow modeling, and peer comparison.

**THE ARGUS RESEARCH RATING SYSTEM**

Argus uses three ratings for stocks: BUY, HOLD, and SELL. Stocks are rated relative to a benchmark, the S&P 500.

- A BUY-rated stock is expected to outperform the S&P 500 on a risk-adjusted basis over a 12-month period. To make this determination, Argus Analysts set target prices, use beta as the measure of risk, and compare expected risk-adjusted stock returns to the S&P 500 forecasts set by the Argus Market Strategist.
- A HOLD-rated stock is expected to perform in line with the S&P 500.
- A SELL-rated stock is expected to underperform the S&P 500.

## Argus Research Disclaimer



## Morningstar Disclaimer

# Aqua America, Inc.

**(WTR-NYSE)**

**February 23, 2017**

**Water & Environment**

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $30.47 |
| Target Price: | NA |

## 4Q a penny light as Aqua affirms 2017 guidance, Pennsylvania rate case timing.

**Investment Conclusion:** Aqua is among the best-run companies in the water space, and enjoys a structural advantage over peers given its majority position in the favorable regulatory jurisdiction of Pennsylvania. Still, the company's consolidated growth rate is likely to remain below its long-term average/potential until the company is able to get rate relief in Pennsylvania (rate case filing likely in 2018, with new rates benefiting the P&L in 2019). We rate WTR Neutral, with the current forward P/E of 22.4 times roughly in-line with the peer group average of 22.8 times.

**Key Points:**

- **4Q EPS below expectations, but 2017 guidance affirmed.** Aqua reported fourth quarter EPS of $0.28, a penny below consensus of $0.29, as the exiting of non-core businesses weighed on the top-line and Operations & Maintenance expenses continue to creep higher deep into the rate cycle in the company's core Pennsylvania franchise territory. Revenue slipped 0.1%, with 2.4% growth from regulated operations offset by a 2.5% headwind from the ongoing initiative to exit various market-based businesses. Regulated O&M expenses increased 5.8%, driven by labor cost inflation and acquisition-related costs, offset by a 6.2% decline in costs stemming from the divested business lines. Management affirmed its 2017 EPS guidance range of $1.34-$1.39.
- **New rates in IN, NC, OH, but PA the focus as DSIC looms.** Aqua has received $3.7 million in rates in Indiana, North Carolina, and Ohio YTD, and the company has a further $5.6 million in new rates pending in Ohio. Still, underscoring Pennsylvania's importance in the growth story, this rate activity in three key states represents an incremental growth contribution of just 0.9% (assuming a final rate award of $3.6 million, or 65% of requested, on the latest Ohio rate case). Management reiterated its planned timeline for Pennsylvania rate activity, which includes a DSIC filing in 2017, filing of a general rate case in 2018, and new rates hitting the P&L in 2019. Aqua's growth will likely remain below-trend until the company gets rate relief in PA.
- **Pipeline robust, but scale a handicap on large deals.** Aqua has four deals pending for a total of 9,000 new customers, and management expects 2017 customer growth of 1.5%-2.0%, driven by municipal acquisitions. Fair value legislation is clearly driving an uptick in muni deals in Pennsylvania, but despite its considerable size, Aqua's smaller scale relative to rival American Water **(AWK-$74.92-Neutral)** creates a disadvantage in pursuing the largest transactions (Aqua serves 1.4 million in PA vs. AWK's >2 million). The ability to obscure necessary post-deal rate increases across as large a unified tariff base as possible is key to minimizing rate impact at the individual customer level (and to getting regulators on board); in our view it is no accident that AWK has had more success in landing big fish like Scranton and McKeesport.
- **Bottom-Line: Reward/Risk balanced as PA rate case approaches.** Aqua remains the water industry's gold standard in terms of operational efficiency, and the robust M&A pipeline shows that the company is holding its own in the competitive world of "fair value" municipal M&A. After years of lackluster earnings growth following the effective pull-forward of multiple years of growth in 2013 via repair tax flow-through, the company is set to resume a more traditional growth trajectory in the years ahead as it finally gets back in for base rate relief in its core (60% of sales) Pennsylvania franchise. Still, while there is a lot to like fundamentally about the story, we believe the current in-line P/E appropriately calibrates reward and risk in the stock.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2015A | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 |
| 2016A | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017E | $0.29 | $0.34 | $0.44 | $0.29 | $1.36 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.29 | $0.33 | $0.41 | $0.31 | $1.34 |
| 2017 | $0.28 | $0.33 | $0.44 | $0.30 | $1.36 |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017 | $0.28 | $0.35 | $0.44 | $0.29 | $1.37 |

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2015A | $814 | $814 | $818 |
| 2016A | $820 | $855 | $836 |
| 2017E | $842 | $881 | $869 |

| Market Data | |
|---|---|
| Current Price | $30.47 |
| 52-Week Range: | $28.03 - $35.83 |
| Market Cap. (M) | $5,404 |
| Shares Out. (M): | 177.4 |
| Avg. Daily Vol. (Shs.Th.): | 365.2 |
| ADTV (M): | $11.13 |
| **Valuation** | |
| P/E 2016 | 23.1x |
| P/E 2017E | 22.4x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,298.9 |
| Dividend / Share: | $0.77 |
| Dividend Yield: | 2.5% |

*Source: Capital IQ, B&S Estimates*

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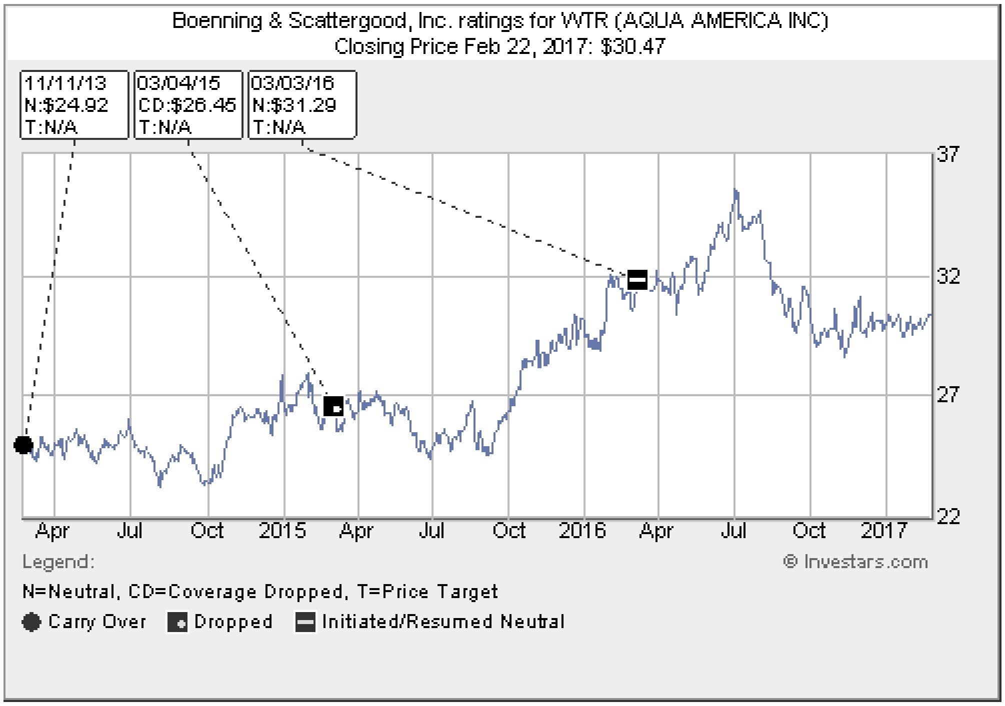
# Disclosure Appendix

## Rating and Price Target History:




## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

## Important Disclosures:

Analyst compensation is based on, in part, Boenning & Scattergood, Inc.'s profitability, which includes revenues from investment banking. Boenning & Scattergood expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

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## Boenning & Scattergood's Ratings System:

Our three-tier investment ratings are based on a stock's return potential relative to a broad market index:

- ***Outperform (Buy):*** The security's total return over the year or longer is expected to exceed the total return of the S&P 500™ over the identical period.
- ***Neutral (Hold):*** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- ***Underperform (Sell):*** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group:

- ***Low:*** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- ***Moderate:*** The security has average fundamental predictability and/or average price volatility.
- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

## Ratings Distribution (12/31/16):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 24% |
| Neutral (Hold) | 50% |
| Underperform (Sell) | 12% |
| Not Rated | 14% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 17% |
| Neutral (Hold) | 14% |
| Underperform (Sell) | 0% |
| Not Rated | 20% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

Additional information on companies in a research report, including financial models, is available on request. Boenning & Scattergood, Inc. does and seeks to do business with companies covered in its research reports. As a result, Investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. This report is not a complete analysis of every material fact representing company, industry, or security mentioned herein. The information has been obtained from sources believed reliable, but is not necessarily complete and is not guaranteed. The reports are prepared for general information only and do not have regard to the specific investment objectives, the financial situation, or the particular needs of any specific person who may receive this report. The information is not to be relied upon in substitution for the exercise of independent judgment. It is recommended that Investors seek financial advice regarding the appropriateness of investing in any securities or investment strategies discussed in any report and should understand that statements regarding future prospects, earnings estimates and forecasts may not be realized. This communication shall not be deemed to constitute an offer, or solicitation on our part with respect to the sale or purchase of any securities. Securities and financial instruments mentioned herein may not be qualified for sale in all states. Opinions are subject to change without notice and reflect the opinion at its original date of publication. Boenning & Scattergood may have issued a trading opinion that may have identified a short term trading opportunity that may differ from the analyst's stock rating which is based on the expected return over a 12-month period. Boenning & Scattergood may trade for its own accounts as market maker, may have a long or short position in any securities of this issuer or related investments, and/or may be the opposite side of public orders. This firm or its officers, directors, stockholders, employees and clients, in the normal course of business, may have, acquire or sell a position including options, if any, in the securities mentioned. Boenning & Scattergood may also act as underwriter, placement agent, advisor, or lender to an issuer mentioned herein.

Member FINRA/SIPC

# Aqua America, Inc.

**(WTR-NYSE)**

**March 13, 2017**

**Water & Environment**

| | |
|---|---|
| Rating/Risk: | Outperform/Low |
| Price: | $30.86 |
| Target Price: | $36.00 |

## Upgrade to Outperform: Sentiment bottoming as looming PA DSIC marks first step in return to normalcy; Relative reward/risk compelling as sector P/Es surge.

**Summary:** We met with Aqua at the company's Bryn Mawr, PA HQ and came away believing that the outlook is improving, with light finally visible at the end of the tunnel after years of sub-par growth. Meanwhile, sentiment appears to be bottoming, with WTR shares trading at a notable discount to the peer group. We upgrade WTR to Outperform with a price target of $36.

**Key Points:**

- **Impending Pennsylvania DSIC a key regulatory mile marker.** Aqua is getting set for a DSIC filing in Pennsylvania, marking the first time the company has been in for rate relief in its home state (>60% of sales) since 2012. While the company's repair tax flow-through settlement was a financial positive, it pulled several years of growth forward into 2012-2013, and the upcoming DSIC marks an important first step in returning to a normal (~2-3 year) rate cycle in PA that sets the stage for the company to resume a more consistent earnings growth trajectory.
- **Aqua maintaining discipline amid municipal acquisition frenzy.** The mainstreaming of "fair value" legislation (which enables IOUs to embed deal premiums into rate base) in various key states (IL, NJ, PA) is creating a privatization craze that is leading many utilities to aggressively chase municipal deals. Aqua has been among the more judicious actors in this saga so far, with the company's acquisition activity remaining mostly bolt-ons. Larger muni deals carry hidden risks that are being largely brushed aside in the current fair-value aided frenzy for acquisition-driven growth, and we believe Aqua's conservative approach is a positive for investors.
- **Willingness to acquire outside of water creates unique optionality.** When Aqua broached the idea of expanding beyond the water sector by acquisition, reaction was generally negative, with investors fearing this could erode the stock's "water premium" and drag the company into a strategic quagmire. After discussing the issue with both management and regulators, however, we believe there is merit to a multi-utility format, particularly if it creates regulatory synergies. While each individual deal must be evaluated on its own merits, the core competency of a water utility is regulatory management, not laying pipe, and arbitrarily confining the business to water risks missing out on potential transformational opportunities emerging in the utility space.
- **PA PUC turnover a (manageable) risk.** Longtime Pennsylvania Public Utilities Commission member Rob Powelson was nominated for the Federal Energy Regulatory Commission by the Trump administration last week, and if confirmed, he must resign from the PUC. This would create a notable void given Powelson's stalwart advocacy for progressive utility regulation and the water industry in particular, and with a democratic governor in charge, the odds are that his PUC replacement will tilt somewhat more toward ratepayer interests. Still, overall, we believe that PA is likely to remain among the nation's most attractive regulatory jurisdictions.
- **Discount valuation a plus as value of safety increases.** WTR trades at a forward P/E of 22.4 times, a 14% discount to the water utility peer group average (25.9 times) and 10% below peer American Water **(AWK-$75.92-Neutral)**. This discount offers the best reward/risk equation in the space, timely given the run-up in the market (which has impacted both water utilities and water equipment names). WTR would likely hold up relatively well in a short-term pullback, while a return to growth in core business provides the opportunity for upside longer term. Our $36 price target reflects a peer group average forward P/E multiple of 25.9 times.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2015A | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 |
| 2016A | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017E | $0.29 | $0.34 | $0.44 | $0.29 | $1.36 |
| 2018E | $0.30 | $0.36 | $0.46 | $0.30 | $1.42 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017 | $0.29 | $0.34 | $0.44 | $0.29 | $1.36 |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017 | $0.29 | $0.35 | $0.43 | $0.30 | $1.38 |
| 2018 | $0.30 | $0.37 | $0.46 | $0.31 | $1.44 |

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2015A | $814 | $814 | $818 |
| 2016A | $820 | $820 | $836 |
| 2017E | $842 | $842 | $845 |
| 2018E | $863 | - | $908 |

| Market Data | |
|---|---|
| Current Price | $30.86 |
| 52-Week Range: | $28.03 - $35.83 |
| Market Cap. (M) | $5,476 |
| Shares Out. (M): | 177.4 |
| Avg. Daily Vol. (Shs.Th.): | 494.4 |
| ADTV (M): | $15.26 |
| **Valuation** | |
| P/E 2016 | 23.4x |
| P/E 2017E | 22.6x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,367.0 |
| Dividend / Share: | $0.77 |
| Dividend Yield: | 2.5% |

*Source: Capital IQ, B&S Estimates*

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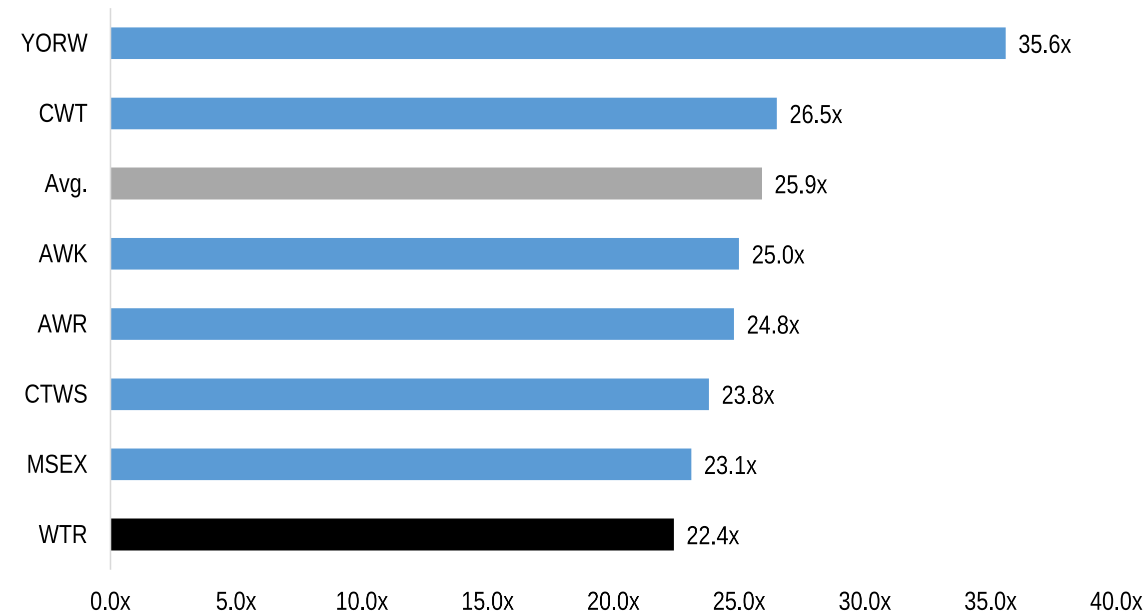
PLEASE SEE THE IMPORTANT DISCLOSURE APPENDIX ON PAGES 3 AND 4

U.S. Water Utilities: Forward P/E




*Source: S&P CapIQ*

| **Aqua America Inc.** | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2017E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | 1Q17E | *yoy* | 2Q17E | *yoy* | 3Q17E | *yoy* | 4Q17E | *yoy* | 2017E | *yoy* |
| **Operating Revenue** | **$196,459** | 2.0% | **$207,954** | 2.0% | **$235,657** | 4.0% | **$201,719** | 2.5% | **$841,788** | *2.7%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 75,012 | 2.0% | 75,474 | 2.0% | 81,408 | 2.0% | 79,101 | 2.0% | 310,995 | *2.0%* |
| Depreciation | 32,627 | 1.5% | 32,093 | 1.5% | 34,389 | 1.5% | 33,842 | 1.5% | 132,952 | *1.5%* |
| Amortization | 454 | 0.8% | 532 | 0.8% | 392 | 0.8% | 659 | 0.8% | 2,037 | *0.8%* |
| Taxes ex-Income Taxes | 14,423 | 2.0% | 14,527 | 2.0% | 15,006 | 2.0% | 13,557 | 2.0% | 57,513 | *2.0%* |
| Operating Expenses | 122,515 | *1.9%* | 122,626 | *1.9%* | 131,196 | *1.9%* | 127,159 | *1.9%* | $503,497 | *1.9%* |
| Operating Income | 73,944 | *2.2%* | 85,327 | *2.2%* | 104,461 | *6.8%* | 74,560 | *3.6%* | $338,292 | *3.9%* |
| *Operating Margin* | *37.6%* | | *41.0%* | | *44.3%* | | *37.0%* | | *40.2%* | |
| Other Expense (Income) | 18,000 | *2.3%* | 18,000 | *-1.9%* | 18,000 | *11.0%* | 18,000 | *-1.5%* | $72,000 | *2.2%* |
| Interest Expense, Net | 20,150 | | 20,150 | | 20,150 | | 20,150 | | $80,600 | |
| AFUDC | (2,100) | | (2,100) | | (2,100) | | (2,100) | | (8,400) | |
| (Gain)Loss on Asset Sales | (50) | | (50) | | (50) | | (50) | | (200) | |
| (Gain)Loss on JV | | | | | | | | | 0 | |
| Income from Cont. Ops | 55,944 | *2.2%* | 67,327 | *3.4%* | 86,461 | *6.0%* | 56,560 | *5.3%* | $266,292 | *4.4%* |
| Income Taxes | 5,035 | | 6,059 | | 7,781 | | 5,090 | | 23,966 | |
| *Tax Rate* | *9.0%* | | *9.0%* | | *9.0%* | | *9.0%* | | *9.0%* | |
| **Net Income (Cont Ops)** | **$50,909** | *-1.6%* | **$61,268** | *2.8%* | **$78,679** | *7.5%* | **$51,469** | *3.7%* | **$242,325** | *3.5%* |
| **EPS (Cont Ops)** | **$0.29** | *-1.6%* | **$0.34** | *2.9%* | **$0.44** | *7.5%* | **$0.29** | *3.7%* | **$1.36** | *3.5%* |
| Net Income (incl. Disc. Ops) | $50,909 | *-1.6%* | $61,268 | *2.8%* | $78,679 | *7.5%* | $51,469 | *3.7%* | $242,325 | *3.5%* |
| Shares Outstanding | 177,850 | | 177,850 | | 177,850 | | 177,850 | | 177,850 | |

*Source: Company filings; B&S Estimates*

BOENNING & SCATTERGOOD
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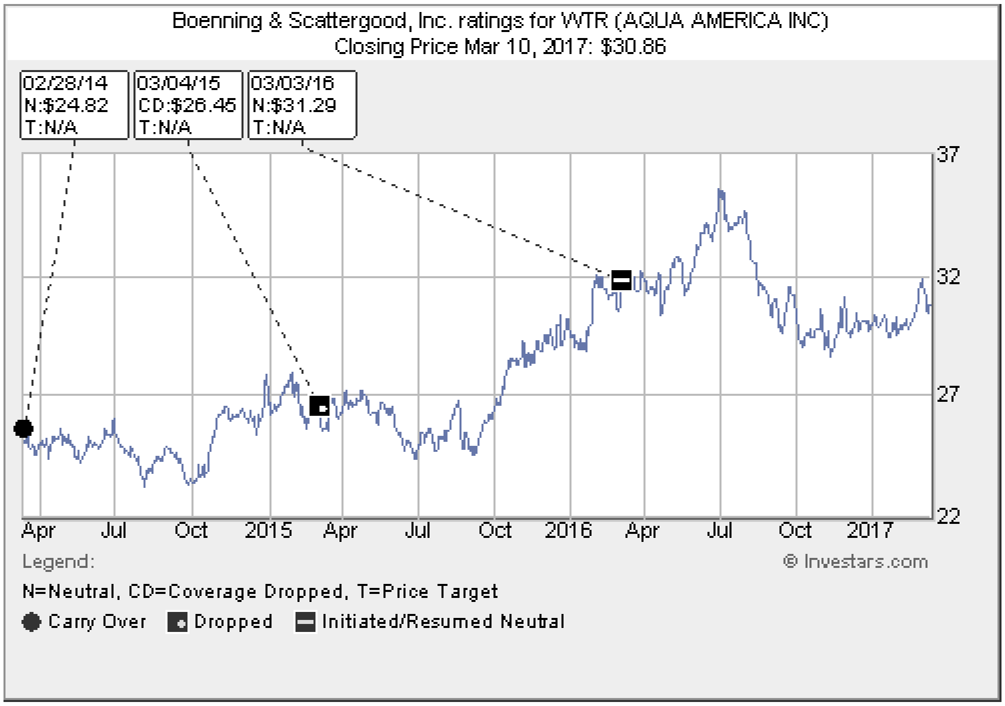
# Disclosure Appendix

## Rating and Price Target History:




## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock and prevent it from reaching our target price: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

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### Boenning & Scattergood's Ratings System:

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- ***Neutral (Hold):*** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- ***Underperform (Sell):*** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group:

- ***Low:*** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- ***Moderate:*** The security has average fundamental predictability and/or average price volatility.
- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

### Ratings Distribution (12/31/16):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 24% |
| Neutral (Hold) | 50% |
| Underperform (Sell) | 12% |
| Not Rated | 14% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 17% |
| Neutral (Hold) | 14% |
| Underperform (Sell) | 0% |
| Not Rated | 20% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

# Aqua America, Inc.

**(WTR-NYSE)**

April 26, 2018

**Water | Environment**

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $34.52 |
| Target Price: | NA |

**Heads you win, tails we lose: PA decoupling legislation creates long-term ROE risk while affirming portfolio dilution risk inherent in FMV acquisitions.**

**Summary:** Over 60% of Aqua's business lies in Pennsylvania, and the state's attractive regulatory climate has long been a key aspect of the investment thesis. PA fell from the #1 spot in our annual rankings for the first time in 2017, and recent developments suggest the regulatory environment continues to head in the wrong direction, with the potential adoption of decoupling of particular concern. We lower WTR (which at a P/E of 25 times trades in-line with peers) to Neutral.

**Key Points:**

- **HB 1782 proposes decoupling in Pennsylvania.** House Bill 1782 (link to pdf HERE) recently emerged from committee in the PA General Assembly, focusing on "Alternative Ratemaking" for regulated utilities. While a variety of mechanisms are outlined in the bill, including formula rates, performance-based rates, and multi-year rate plans, by far the biggest development in HB 1782 is the proposed adoption of decoupling. Pioneered in California, decoupling enables water utilities to offset lower volume sales with higher rates (thereby "decoupling" the top-line from volumetric sales). Overall, while HB 1782 does have some constructive elements, the potential implementation of decoupling in PA is concerning given the precedent set in other states, where the adoption of decoupling was the catalyst for a prolonged slide in regulatory climate.
- **Evidence clear: Decoupling creates downward ROE pressure.** While decoupling is, all else equal, a good thing in that it increases earnings visibility and in particular reduces the near-term earnings impact of lower sales, all else is ***not*** equal. Decoupling has proven time and again to prompt fierce arguments from consumer advocates that the resulting reduction in business risk should be met with a corresponding cut in ROE. As a result, California, Connecticut, and other decoupling states consistently have some of the nation's lowest ROEs, and earlier this year the CA ratepayer advocate successfully applied this argument yet again, and the result was a further reduction in ROE from already low levels (see our note HERE). Our discussions with the PA OCA confirm that they are likely to push for lower ROEs if decoupling is adopted.
- **"Customers served" clause affirms portfolio dilution concerns.** HB 1782 includes language calling for decoupling to help manage "fluctuations in the number of customers served", distinct from the usual purpose of decoupling, which is managing against declining *per household* water usage (conservation). Fair market value acquisitions skew toward fiscally challenged cities with declining populations, and with the PUC insisting on separate rate districts rather than allowing IOUs to blend these acquisitions into statewide tariffs, utilities' push to include this provision implies a recognition that FMV deals are creating affordability issues and hindering customer growth. We're no fans of decoupling, but IOUs' push for protection against negative customer growth suggests that *not* getting it could create issues in integrating FMV deals into rates.
- **Pennsylvania's long-standing regulatory supremacy fading.** For many years, Pennsylvania was viewed as the most progressive state for water utility regulation, but in 2017 the state fell from the top spot in our annual rankings for the first time. The historical genius of PA's system was its elegance, and that those mechanisms that were adopted (notably single tariff and DSIC) were simple and straightforward in their application. Increasingly, PA utilities are succumbing to the temptation to "overengineer" the system, and although such efforts are well-intentioned, experience in other states confirms they typically lead to unintended consequences. Legendary former Aqua CEO Nick DeBenedictis once told us he never wanted to see decoupling come to Pennsylvania for these reasons, and in our view his words will likely prove prescient.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2017A | $0.28 | $0.34 | $0.43 | $0.30 | $1.35 |
| 2018E | $0.29 | $0.37 | $0.44 | $0.32 | $1.42 |
| 2019E | - | - | - | - | - |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2018 | $0.29 | $0.37 | $0.44 | $0.32 | $1.42 |
| 2019 | - | - | - | - | - |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2017 | $0.30 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.36 | $0.44 | $0.31 | $1.41 |
| 2019 | $0.35 | $0.42 | $0.45 | $0.34 | $1.51 |

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2017A | $810 | $810 | $821 |
| 2018E | $842 | $842 | $866 |
| 2019E | - | - | $917 |

| **Market Data** | |
|---|---|
| Current Price | $34.52 |
| 52-Week Range: | $31.18 - $39.55 |
| Market Cap. (M) | $6,141 |
| Shares Out. (M): | 177.9 |
| Float Shs. (M): | 177.4 |
| Inst. Ownership: | 5521% |
| Short Interest (M) | 5.7 |
| Avg. Daily Vol. (Shs.Th.): | 408.0 |
| ADTV (M): | $14.09 |
| **Valuation** | |
| P/E 2018E | 25.6x |
| P/E 2019E | - |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Net Cash / Shares: | $0.02 |
| Enterprise Value (M): | $8,283.5 |
| Dividend / Share: | $0.82 |
| Dividend Yield: | 2.4% |

*Source: Capital IQ, B&S Estimates*

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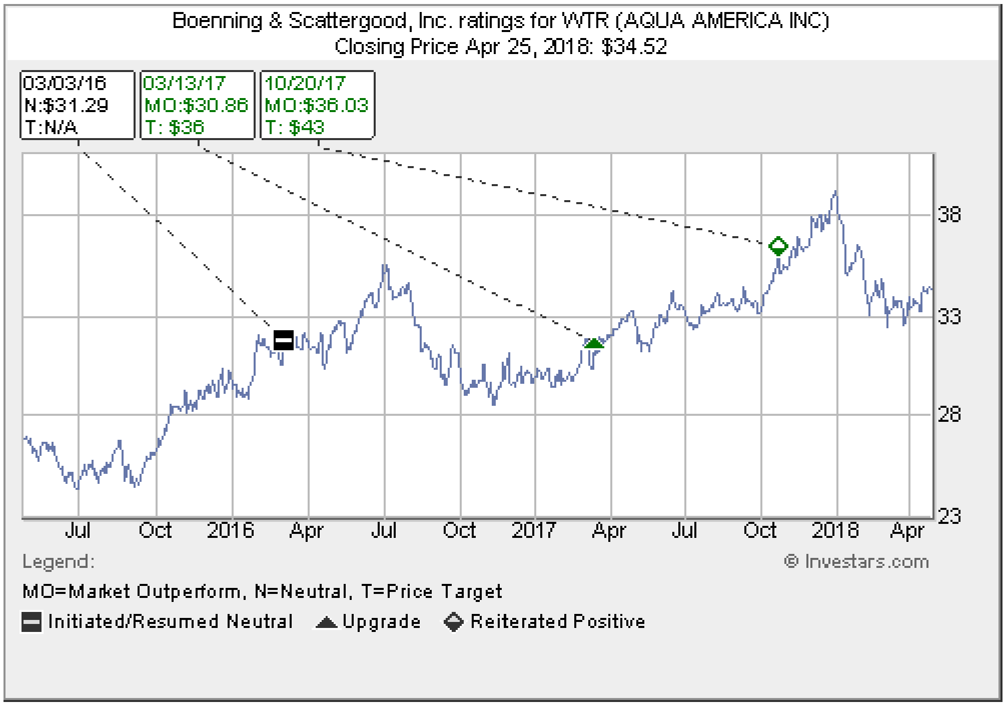
# Disclosure Appendix

## Rating and Price Target History:




## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

## Important Disclosures:

Analyst compensation is based on, in part, Boenning & Scattergood, Inc.'s profitability, which includes revenues from investment banking. Boenning & Scattergood expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

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### Boenning & Scattergood's Ratings System:

Our three-tier investment ratings are based on a stock's return potential relative to a broad market index:

- ***Outperform (Buy):*** The security's total return over the year or longer is expected to exceed the total return of the S&P 500™ over the identical period.
- ***Neutral (Hold):*** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- ***Underperform (Sell):*** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group:

- ***Low:*** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- ***Moderate:*** The security has average fundamental predictability and/or average price volatility.
- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

### Ratings Distribution (12/31/17):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 32% |
| Neutral (Hold) | 49% |
| Underperform (Sell) | 10% |
| Not Rated | 9% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 21% |
| Neutral (Hold) | 9% |
| Underperform (Sell) | 0% |
| Not Rated | 0% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

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# Aqua America, Inc.

**(WTR-NYSE)**

**August 3, 2017**

**Water & Environment**

| | |
|---|---|
| Rating/Risk: | Outperform/Low |
| Price: | $33.58 |
| Target Price: | $36.00 |

## 2Q earnings in-line, 2017 guidance affirmed, thesis intact; Reiterate Outperform.

**Summary:** Aqua America is a bellwether name in the attractive water utility space, which boasts a compelling reward/risk outlook in an environment where valuations for many water industrials are becoming stretched. In addition to the "flight-to-safety" benefits inherent in the water utility space, Aqua has a number of important company-specific fundamental catalysts on the horizon as well – notably including a return to rate relief in its core regulatory jurisdiction of Pennsylvania (the company has been out of rates in PA for nearly five years). Aqua offers a unique combination of defense and offense, and the stock's discount valuation further improves the risk-adjusted total return outlook. We rate shares of WTR Outperform, with our $36 target price reflecting a forward P/E multiple of 25 times, in-line with the investor-owned water utility peer group average.

**Key Points:**

- **2Q EPS in-line.** Aqua America posted 2Q17 EPS of $0.34, in-line with both our estimate and consensus and up a penny from $0.33 in 2Q16, with revenue dipping 0.2%, but operations and maintenance expenses falling 4.2% due in part to recent divestitures of non-core market-based businesses. The tax rate remains attractively low, declining 10 basis points to 8.4% from 8.5% a year ago, as the company continues to benefit on the income tax line from the repair tax flow-through accounting arrangement in Pennsylvania. Importantly, management indicates that the sales of market-based businesses are now complete, with such activities projected to contribute a miniscule ~$4 million in annual revenue going forward and Aqua now focused squarely on growing its regulated *water and wastewater* business. In addition, the company affirmed its 2017 EPS guidance range of $1.34-$1.39. Overall, it was a solid quarterly report, with Aqua demonstrating strong execution late in the rate cycle in its key Pennsylvania territory.
- **Rate activity brisk; PA looms large.** Year-to-date, Aqua has received rate relief (both base rates and infrastructure surcharges) of $11.1 million, representing an annualized revenue tailwind of 1.4% across a number of states including Indiana, Illinois, New Jersey, Ohio, and, importantly, Pennsylvania (this is the first official word of rate relief in PA, and it comes earlier than the 4Q timeframe we had expected). In addition, Aqua currently has rate requests pending in Illinois and Virginia for a total of $12.2 million. This is a notable level of activity for Aqua, providing a strong and consistent cadence of rate relief as the company prepares to file a general rate case in its critical home jurisdiction of Pennsylvania (~60% of sales). Management now expects to file the Pennsylvania rate case sometime in 2018 with a decision expected in 2019. Though recent PA-PUC testimony suggests there could be downward pressure on ROEs, the prospect of long-awaited rate relief in Pennsylvania is a critical catalyst for WTR shares.
- **Acquisitions: Balancing act continues.** Municipal acquisitions have become a central growth strategy for Aqua and its peers, with fair market value legislation and other regulatory catalysts driving an increasingly aggressive privatization push. Aqua has been a disciplined actor so far, focusing on small/mid-size deals in areas where attractive demographics minimize the negative impact on long-term customer growth and limit affordability issues. Aqua has four active muni deals in the pipeline totaling 12,000 customers and an aggregate purchase price of $126 million, and management expects municipal acquisitions to remain a core growth driver going forward. Still, Aqua's (and the industry's) privatization push is not without risks, with evidence building that ratepayer advocates are pushing hard against unified tariffs for fair value deals and arguing that recent IOU regulatory/legislative wins should be paid for in the form of lower ROEs.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016A | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017E* | $0.28 | $0.34 | $0.45 | $0.29 | $1.36 |
| 2018E | $0.29 | $0.36 | $0.46 | $0.31 | $1.42 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2017 | $0.28 | $0.34 | $0.45 | $0.29 | $1.36 |
| 2018 | $0.29 | $0.36 | $0.46 | $0.31 | $1.42 |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017 | $0.30 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.37 | $0.47 | $0.31 | $1.44 |

**Q1 and Q2 represent actual results*

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2016A | $820 | $820 | $836 |
| 2017E | $829 | $832 | $840 |
| 2018E | $855 | $863 | $895 |

| **Market Data** | |
|---|---|
| Current Price | $33.58 |
| 52-Week Range: | $28.03 - $34.41 |
| Market Cap. (M) | $5,964 |
| Shares Out. (M): | 177.6 |
| Avg. Daily Vol. (Shs.Th.): | 418.8 |
| ADTV (M): | $14.06 |
| **Valuation** | |
| P/E 2017E | 24.7x |
| P/E 2018E | 23.6x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,997.5 |
| Dividend / Share: | $0.82 |
| Dividend Yield: | 2.4% |

*Source: Capital IQ, B&S Estimates*

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| Aqua America Inc. | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2017E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | **1Q17** | *yoy* | **2Q17** | *yoy* | **3Q17E** | *yoy* | **4Q17E** | *yoy* | **2017E** | *yoy* |
| **Operating Revenue** | **$187,787** | -2.5% | **$203,418** | -0.2% | **$235,657** | 4.0% | **$201,719** | 2.5% | **$828,581** | *1.1%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 69,128 | -6.0% | 70,853 | -4.2% | 81,408 | 2.0% | 79,101 | 2.0% | 300,490 | *-1.4%* |
| Depreciation | 33,837 | 5.3% | 33,407 | 5.7% | 34,389 | 1.5% | 33,842 | 1.5% | 135,475 | *3.4%* |
| Amortization | 189 | -58.0% | 127 | -75.9% | 392 | 0.8% | 659 | 0.8% | 1,367 | *-32.3%* |
| Taxes ex-Income Taxes | 14,737 | 4.2% | 14,419 | 1.2% | 15,006 | 2.0% | 13,557 | 2.0% | 57,719 | *2.4%* |
| Operating Expenses | 117,891 | *-2.0%* | 118,806 | *-1.3%* | 131,196 | *1.9%* | 127,159 | *1.9%* | $495,052 | *0.2%* |
| Operating Income | 69,896 | *-3.4%* | 84,612 | *1.3%* | 104,461 | *6.8%* | 74,560 | *3.6%* | $333,529 | *2.4%* |
| *Operating Margin* | *37.2%* | | *41.6%* | | *44.3%* | | *37.0%* | | *40.3%* | |
| Other Expense (Income) | 17,894 | *1.7%* | 18,075 | *-1.5%* | 18,000 | *11.0%* | 18,000 | *-1.5%* | $71,969 | *2.2%* |
| Interest Expense, Net | 21,326 | | 21,387 | | 20,150 | | 20,150 | | $83,013 | |
| AFUDC | (3,193) | | (3,463) | | (2,100) | | (2,100) | | (10,856) | |
| (Gain)Loss on Asset Sales | (269) | | (10) | | (50) | | (50) | | (379) | |
| (Gain)Loss on JV | 30 | | 161 | | | | | | 191 | |
| Income from Cont. Ops | 52,002 | *-5.0%* | 66,537 | *2.1%* | 86,461 | *6.0%* | 56,560 | *5.3%* | $261,560 | *2.5%* |
| Income Taxes | 2,930 | | 5,569 | | 6,917 | | 4,525 | | 19,941 | |
| *Tax Rate* | *5.6%* | | *8.4%* | | *8.0%* | | *8.0%* | | *7.6%* | |
| **Net Income (Cont Ops)** | **$49,072** | *-5.2%* | **$60,968** | *2.3%* | **$79,544** | *8.7%* | **$52,035** | *4.8%* | **$241,619** | *3.2%* |
| **EPS (Cont Ops)** | **$0.28** | *-5.2%* | **$0.34** | *2.3%* | **$0.45** | *8.6%* | **$0.29** | *4.7%* | **$1.36** | *3.1%* |
| Net Income (incl. Disc. Ops) | $49,072 | *-5.2%* | $60,968 | *2.3%* | $79,544 | *8.7%* | $52,035 | *4.8%* | $241,619 | *3.2%* |
| Shares Outstanding | 177,969 | | 178,045 | | 177,975 | | 177,975 | | 177,991 | |

*Source: Company filings; B&S Estimates*

| Aqua America Inc. | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2018E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | 1Q18E | *yoy* | 2Q18E | *yoy* | 3Q18E | *yoy* | 4Q18E | *yoy* | 2018E | *yoy* |
| **Operating Revenue** | **$195,298** | 4.0% | **$209,521** | 3.0% | **$242,726** | 3.0% | **$207,771** | 3.0% | **$855,316** | 3.2% |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 70,165 | 1.5% | 71,916 | 1.5% | 82,629 | 1.5% | 80,288 | 1.5% | 304,998 | 1.5% |
| Depreciation | 34,345 | 1.5% | 33,908 | 1.5% | 34,905 | 1.5% | 34,350 | 1.5% | 137,507 | 1.5% |
| Amortization | 191 | 0.8% | 128 | 0.8% | 395 | 0.8% | 665 | 0.8% | 1,378 | 0.8% |
| Taxes ex-Income Taxes | 14,884 | 1.0% | 14,563 | 1.0% | 15,156 | 1.0% | 13,692 | 1.0% | 58,296 | 1.0% |
| Operating Expenses | 119,584 | 1.4% | 120,515 | 1.4% | 133,086 | 1.4% | 128,994 | 1.4% | $502,180 | 1.4% |
| Operating Income | 75,714 | 8.3% | 89,005 | 5.2% | 109,640 | 5.0% | 78,776 | 5.7% | $353,136 | 5.9% |
| *Operating Margin* | *38.8%* | | *42.5%* | | *45.2%* | | *37.9%* | | *41.3%* | |
| Other Expense (Income) | 18,850 | 5.3% | 18,850 | 4.3% | 18,850 | 4.7% | 18,850 | 4.7% | $75,400 | 4.8% |
| Interest Expense, Net | 21,000 | | 21,000 | | 21,000 | | 21,000 | | $84,000 | |
| AFUDC | (2,100) | | (2,100) | | (2,100) | | (2,100) | | (8,400) | |
| (Gain)Loss on Asset Sales | (50) | | (50) | | (50) | | (50) | | (200) | |
| (Gain)Loss on JV | | | | | | | | | 0 | |
| Income from Cont. Ops | 56,864 | 9.3% | 70,155 | 5.4% | 90,790 | 5.0% | 59,926 | 6.0% | $277,736 | 6.2% |
| Income Taxes | 5,118 | | 6,314 | | 8,171 | | 5,393 | | 24,996 | |
| *Tax Rate* | *9.0%* | | *9.0%* | | *9.0%* | | *9.0%* | | *9.0%* | |
| **Net Income (Cont Ops)** | **$51,746** | 5.4% | **$63,841** | 4.7% | **$82,619** | 3.9% | **$54,533** | 4.8% | **$252,740** | 4.6% |
| **EPS (Cont Ops)** | **$0.29** | 5.4% | **$0.36** | 4.7% | **$0.46** | 3.9% | **$0.31** | 4.8% | **$1.42** | 4.6% |
| Net Income (incl. Disc. Ops) | $51,746 | 5.4% | $63,841 | 4.7% | $82,619 | 3.9% | $54,533 | 4.8% | $252,740 | 4.6% |
| Shares Outstanding | 178,000 | | 178,000 | | 178,000 | | 178,000 | | 178,000 | |

*Source: Company filings; B&S Estimates*

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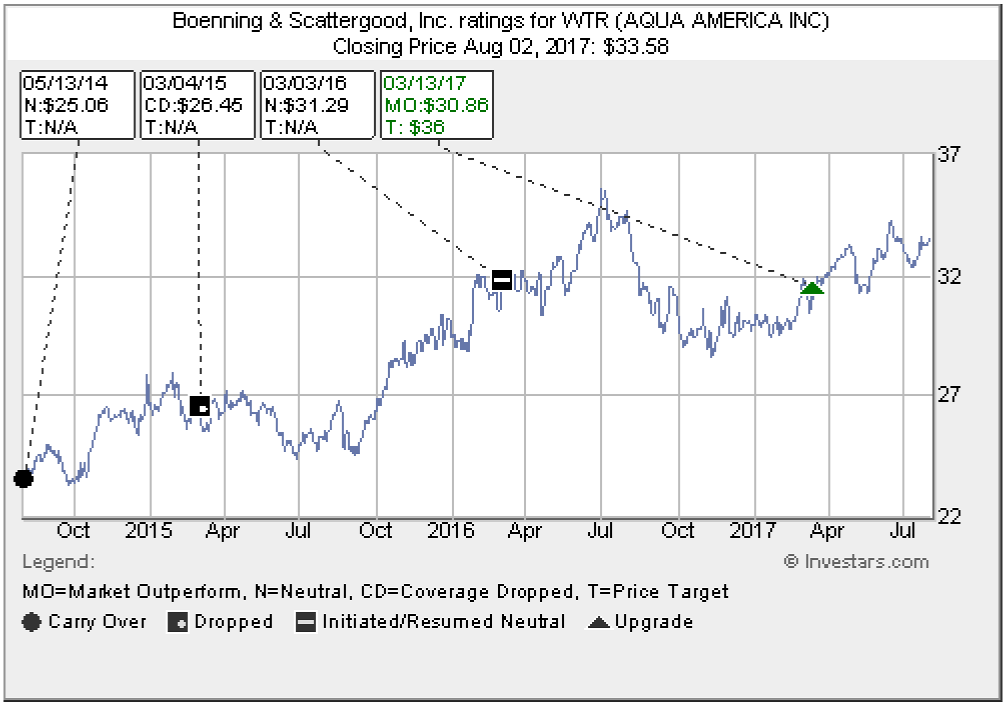
## Disclosure Appendix

### Rating and Price Target History:




### Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock and prevent it from reaching our target price: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

### Analyst Certification:

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- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

### Ratings Distribution (6/30/17):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 26% |
| Neutral (Hold) | 53% |
| Underperform (Sell) | 9% |
| Not Rated | 11% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 22% |
| Neutral (Hold) | 11% |
| Underperform (Sell) | 0% |
| Not Rated | 20% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

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Equity Research

# Aqua America, Inc.

**(WTR-NYSE)**

November 1, 2017

**Water & Environment**

| | |
|---|---|
| Rating/Risk: | Outperform/Low |
| Price: | $35.48 |
| Target Price: | $43.00 |

## Third quarter EPS in-line, guidance affirmed; Maintain Outperform.

**Investment Conclusion:** Aqua is a bellwether name in the water utility space, operating in an attractive mix of regulatory jurisdictions (highlighted by OH, PA, and IL) and enjoying a well-earned reputation for operational efficiency and best-in-class profitability. Currently, there are a number of fundamental catalysts on the horizon, including a long-awaited rate case in PA and the potential for accelerated M&A activity as new laws designed to incentivize municipal asset sales kick into gear. We rate WTR Outperform, with our $43 target price based upon our proprietary regulation-weighted valuation model, under which Aqua shines given its exposure to the top three states in our latest state regulatory rankings (click HERE for rankings and valuation model).

**Key Points:**

- **3Q EPS in-line as wet weather trumps strong cost control.** Aqua reported 3Q17 EPS of $0.43, in-line with consensus, as weather-related demand headwinds weighed on the top-line. Revenue declined 5.1% on a year/year basis, with wet weather across a number of key geographies driving a 3.7% decline in regulated sales (the Mid-Atlantic region experienced 38 rainfall days in 3Q17 vs. 33 in 3Q16, and 14.9" in total 3Q17 precipitation vs. 9.1" in 3Q16) and divestitures of market-based businesses creating a further 1.5% top-line headwind. Despite the revenue decline, cost control was excellent, with O&M expense down 14.8% year/year, and the tax rate was just 4.3% versus 10.3% a year ago and 8.4% in the prior quarter. The strong cost control enabled EPS to rise 4% year/year despite the revenue decline, highlighting Aqua's well-earned reputation for operational efficiency. In conjunction with the third quarter results, the company affirmed its 2017 EPS guidance of $1.34-$1.39 (consensus is currently $1.36).
- **Rate activity picking up; PA DSIC in effect, rate case next.** After a lengthy lull exemplified by a nearly 5-year stay-out in Pennsylvania, the cadence of Aqua's rate pipeline is picking up. Year-to-date, the company has received more than $21 million in rate relief, including DSICs and base rates, across six of its eight states (Illinois, Indiana, New Jersey, North Carolina, Ohio, and Pennsylvania). Currently, an additional $14 million in rate requests is pending, including further relief in IL and NC, as well as Virginia. Most importantly, Aqua implemented DSIC surcharges in PA effective 10/1/2017, so new PA rates will roll onto the P&L in 4Q for the first time since 2012. Aqua expects to file a general rate case in PA in 2018, with resolution and new rates expected to hit the P&L in 2019. We believe that Aqua has the industry's most attractive regulatory footprint, with more than 80% of sales coming from the top three ranked states (OH, PA, IL) in our recent 2017 regulatory rankings (click HERE for full rankings).
- **Accelerating customer growth with prudent acquisitions.** Aqua currently has five municipal acquisitions pending, which together with the Tobyhanna deal ($5.1 million, 740 connections, closed in June) position the company to acquire 15,700 customer connections for an aggregate purchase price of $150 million. Though the price tag sounds high ($9,500 per customer), this is the new world of "fair market value" acquisitions, where investor-owned water utilities can offer substantially higher prices to cities looking to monetize water assets. This ability to pay-up is a clear positive for Aqua (and peers), as it not only helps to coax municipalities to the bargaining table, but also enables accelerated rate base growth that can subsequently be earned-on via unified statewide tariffs (although the carve-out of Scranton WW in American Water's **[AWK-$87.76-Neutral]** recent rate case settlement creates a worrying precedent). So far, Aqua has employed a prudent approach to municipal acquisitions, limiting regulatory risks.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016A | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017E* | $0.28 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018E | $0.29 | $0.37 | $0.45 | $0.35 | $1.45 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2017 | $0.28 | $0.34 | $0.45 | $0.29 | $1.36 |
| 2018 | $0.29 | $0.36 | $0.46 | $0.31 | $1.42 |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017 | $0.30 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.37 | $0.47 | $0.31 | $1.44 |

**Q1, Q2, and Q3 represent actual results*

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2016A | $820 | $820 | $836 |
| 2017E | $809 | $829 | $840 |
| 2018E | $845 | $855 | $895 |

| **Market Data** | |
|---|---|
| Current Price | $35.48 |
| 52-Week Range: | $28.03 - $34.41 |
| Market Cap. (M) | $6,301 |
| Shares Out. (M): | 177.6 |
| Avg. Daily Vol. (Shs.Th.): | 418.8 |
| ADTV (M): | $60.50 |
| **Valuation** | |
| P/E 2017E | 26.1x |
| P/E 2018E | 24.4x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,997.5 |
| Dividend / Share: | $0.82 |
| Dividend Yield: | 2.3% |

*Source: Capital IQ, B&S Estimates*

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| Aqua America Inc. | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2017E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | 1Q17 | *yoy* | 2Q17 | *yoy* | 3Q17 | *yoy* | 4Q17E | *yoy* | 2017E | *yoy* |
| **Operating Revenue** | **$187,787** | -2.5% | **$203,418** | -0.2% | **$215,008** | -5.1% | **$202,703** | 3.0% | **$808,916** | *-1.3%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 69,128 | -6.0% | 70,853 | -4.2% | 67,982 | -14.8% | 74,448 | -4.0% | 282,411 | *-7.4%* |
| Depreciation | 33,837 | 5.3% | 33,407 | 5.7% | 34,264 | 1.1% | 33,742 | 1.2% | 135,250 | *3.3%* |
| Amortization | 189 | -58.0% | 127 | -75.9% | 42 | -89.2% | 229 | -65.0% | 587 | *-71.0%* |
| Taxes ex-Income Taxes | 14,737 | 4.2% | 14,419 | 1.2% | 15,234 | 3.5% | 13,756 | 3.5% | 58,146 | *3.1%* |
| Operating Expenses | 117,891 | -2.0% | 118,806 | *-1.3%* | 117,522 | *-8.8%* | 122,175 | *-2.1%* | $476,394 | *-3.6%* |
| Operating Income | 69,896 | *-3.4%* | 84,612 | *1.3%* | 97,486 | *-0.3%* | 80,528 | *11.9%* | $332,522 | *2.1%* |
| *Operating Margin* | *37.2%* | | *41.6%* | | *45.3%* | | *39.7%* | | *41.1%* | |
| Other Expense (Income) | 17,894 | *1.7%* | 18,075 | *-1.5%* | 17,861 | *10.1%* | 18,200 | *-0.4%* | $72,030 | *2.3%* |
| Interest Expense, Net | 21,326 | | 21,387 | | 22,411 | | 22,250 | | $87,374 | |
| AFUDC | (3,193) | | (3,463) | | (3,914) | | (3,500) | | (14,070) | |
| (Gain)Loss on Asset Sales | (269) | | (10) | | (43) | | (50) | | (372) | |
| (Gain)Loss on JV | 30 | | 161 | | (593) | | (500) | | (902) | |
| Income from Cont. Ops | 52,002 | *-5.0%* | 66,537 | *2.1%* | 79,625 | *-2.4%* | 62,328 | *16.1%* | $260,492 | *2.1%* |
| Income Taxes | 2,930 | | 5,569 | | 3,400 | | 6,233 | | 18,132 | |
| *Tax Rate* | *5.6%* | | *8.4%* | | *4.3%* | | *10.0%* | | *7.0%* | |
| **Net Income (Cont Ops)** | **$49,072** | *-5.2%* | **$60,968** | *2.3%* | **$76,225** | *4.2%* | **$56,095** | *13.0%* | **$242,360** | *3.5%* |
| **EPS (Cont Ops)** | **$0.28** | *-5.2%* | **$0.34** | *2.3%* | **$0.43** | *4.0%* | **$0.31** | *12.8%* | **$1.36** | *3.4%* |
| Shares Outstanding | 177,969 | | 178,045 | | 178,124 | | 178,135 | | 178,068 | |

| Aqua America Inc. | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2018E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | 1Q18E | *yoy* | 2Q18E | *yoy* | 3Q18E | *yoy* | 4Q18E | *yoy* | 2018E | *yoy* |
| **Operating Revenue** | **$195,298** | 4.0% | **$211,555** | 4.0% | **$227,478** | 5.8% | **$210,811** | 4.0% | **$845,143** | *4.5%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 70,165 | 1.5% | 71,916 | 1.5% | 69,002 | 1.5% | 75,565 | 1.5% | 286,647 | *1.5%* |
| Depreciation | 34,345 | 1.5% | 33,908 | 1.5% | 34,778 | 1.5% | 34,248 | 1.5% | 137,279 | *1.5%* |
| Amortization | 191 | 0.8% | 128 | 0.8% | 42 | 0.8% | 231 | 0.8% | 592 | *0.8%* |
| Taxes ex-Income Taxes | 14,884 | 1.0% | 14,563 | 1.0% | 15,386 | 1.0% | 13,894 | 1.0% | 58,728 | *1.0%* |
| Operating Expenses | 119,584 | *1.4%* | 120,515 | *1.4%* | 119,208 | *1.4%* | 123,937 | *1.4%* | $483,245 | *1.4%* |
| Operating Income | 75,714 | *8.3%* | 91,040 | *7.6%* | 108,270 | *11.1%* | 86,874 | *7.9%* | $361,897 | *8.8%* |
| *Operating Margin* | *38.8%* | | *43.0%* | | *47.6%* | | *41.2%* | | *42.8%* | |
| Other Expense (Income) | 18,500 | *3.4%* | 18,500 | *2.4%* | 18,500 | *3.6%* | 18,500 | *1.6%* | $74,000 | *2.7%* |
| Interest Expense, Net | 22,500 | | 22,500 | | 22,500 | | 22,500 | | $90,000 | |
| AFUDC | (3,500) | | (3,500) | | (3,500) | | (3,500) | | (14,000) | |
| (Gain)Loss on Asset Sales | | | | | | | | | 0 | |
| (Gain)Loss on JV | (500) | | (500) | | (500) | | (500) | | (2,000) | |
| Income from Cont. Ops | 57,214 | *10.0%* | 72,540 | *9.0%* | 89,770 | *12.7%* | 68,374 | *9.7%* | $287,897 | *10.5%* |
| Income Taxes | 5,721 | | 7,254 | | 8,977 | | 6,837 | | 28,790 | |
| *Tax Rate* | *10.0%* | | *10.0%* | | *10.0%* | | *10.0%* | | *10.0%* | |
| **Net Income (Cont Ops)** | **$51,493** | *4.9%* | **$65,286** | *7.1%* | **$80,793** | *6.0%* | **$61,536** | *9.7%* | **$259,108** | *6.9%* |
| **EPS (Cont Ops)** | **$0.29** | *4.8%* | **$0.37** | *7.0%* | **$0.45** | *6.0%* | **$0.35** | *9.7%* | **$1.45** | *6.9%* |
| Shares Outstanding | 178,150 | | 178,160 | | 178,170 | | 178,180 | | 178,165 | |

*Source: Company filings; B&S Estimates*

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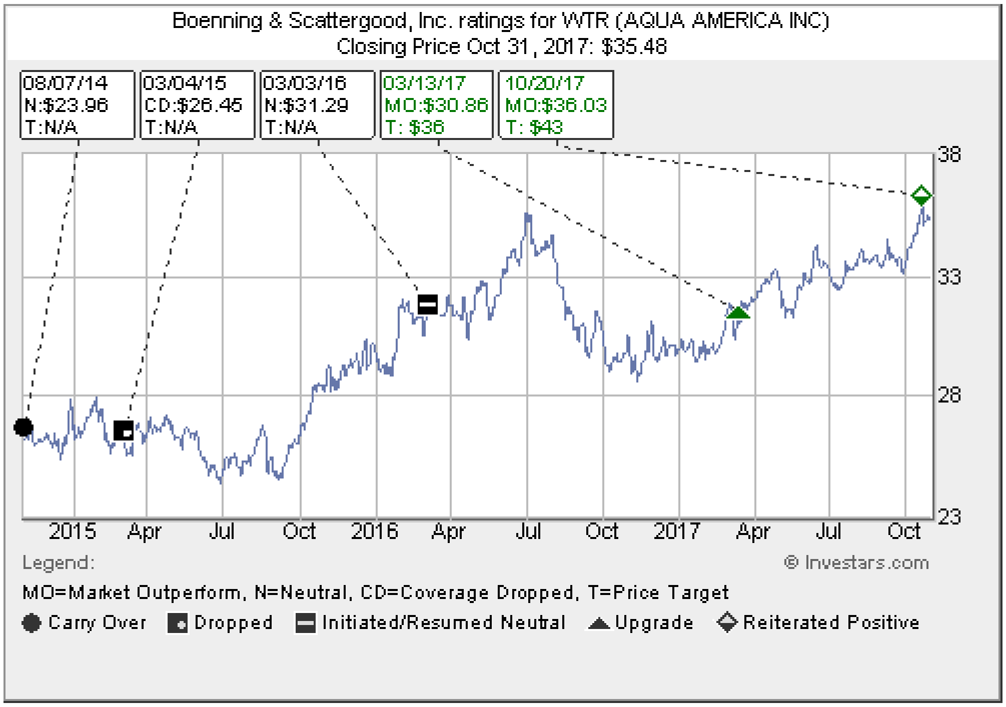
# Disclosure Appendix

## Rating and Price Target History:




## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock and prevent it from reaching our target price: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

## Important Disclosures:

Analyst compensation is based on, in part, Boenning & Scattergood, Inc.'s profitability, which includes revenues from investment banking. Boenning & Scattergood expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

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## Boenning & Scattergood's Ratings System:

Our three-tier investment ratings are based on a stock's return potential relative to a broad market index:

- ***Outperform (Buy):*** The security's total return over the year or longer is expected to exceed the total return of the S&P 500™ over the identical period.
- ***Neutral (Hold):*** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- ***Underperform (Sell):*** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group:

- ***Low:*** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- ***Moderate:*** The security has average fundamental predictability and/or average price volatility.
- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

## Ratings Distribution (9/30/17):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 33% |
| Neutral (Hold) | 47% |
| Underperform (Sell) | 11% |
| Not Rated | 9% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 20% |
| Neutral (Hold) | 10% |
| Underperform (Sell) | 0% |
| Not Rated | 13% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

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# Aqua America, Inc.

**(WTR-NYSE)**

November 6, 2017

**Water & Environment**

| | |
|---|---|
| Rating/Risk: | Outperform/Low |
| Price: | $36.03 |
| Target Price: | $43.00 |

## Aqua's $320 million bid for Chester Water back in play following board meeting.

**Summary:** Last Friday, we attended an emergency board meeting of the Chester Water Authority, called to discuss recent developments suggesting that the government of the City of Chester wants to force CWA to accept Aqua's $320 million bid. We came away feeling that the deal (previously thought dead) has new life, a plus for Aqua given CWA's potential as a needle-moving acquisition (at current rates, CWA would add 5.3% to the top-line, or 9.5% at Aqua's statewide tariff). While a legal battle looms over who has selling authority and who the beneficiaries of a sale would be (CWA serves parts of three counties), it looks likely that all or part of CWA will come to market. We rate WTR Outperform, with our $43 target price based on our regulatory valuation model.

**Key Points:**

- **Chester Water back in play as Aqua's largest acquisition target.** In May 2017, Aqua made a $320 million unsolicited bid for Chester Water Authority (CWA), which serves a population of 200,000 immediately south of Aqua's core territory in the western suburbs of Philadelphia. The bid was promptly rejected, and the issue was thought dead until last week, when the mayor of Chester issued a public letter to the CWA board asserting it had overstepped its authority in rejecting Aqua's bid without consulting the city, which he says has ultimate power over CWA. CWA is a regional system serving both the City of Chester and nearby suburbs, and while the suburban municipalities are in decent financial shape, the city is on the brink of being assigned a state emergency fiscal manager. A state-appointed fiscal manager could take over as soon as May 2018, and could move quickly to monetize CWA, which is why the city seems inclined to move proactively on Aqua's offer to avoid entering state receivership in the first place.
- **CWA board meeting heated; Legal battle likely looms.** Last Friday, we attended a special meeting of the CWA board called in response to the letter from the City of Chester, and it was clear that the CWA board will not agree to a sale without a fight. The board believes that Aqua was discussing the monetization of CWA with Pennsylvania officials more than a year prior to Aqua's bid, and voted Friday to explore legal options to block a sale. CWA lawyers suggested malfeasance by Pennsylvania officials in conferring with a private company about the sale of a municipal water system prior to a state manager even being appointed; and further complicating matters, there are indications that the City of Chester was also involved in these discussions. It remains to be seen whether there is anything illegal about the state and a city that is approaching receivership discussing potential options for stabilizing the fiscal situation, but either way, the CWA board seems intent on exploring all legal avenues in an attempt to block the sale.
- **Aqua offers 10-year rate stay-out, employment for all CWA staff.** In addition to its sizable $320 million ticket price ($250 million cash plus $70 million in assumed debt), Aqua's original offer included generous provisions, such as employment for all CWA staff and board members and keeping CWA customer rates "below Aqua's state-wide tariff" for a decade. Aqua further sweetened the pot at Friday's special meeting, saying that it would hold CWA rates flat for a decade (CWA charges $38/month vs. Aqua's $65/month), a surprising turn that makes the deal even more attractive for CWA ratepayers. While these terms make it harder for the CWA board to argue the deal is not in ratepayers' interest, they also create the risk that Aqua will underearn on the deal for an extended period. CWA had a net profit of $3.4 million on $43 million in sales in 2016, so if Aqua can't raise rates or realize employment synergies, its ROI would be just 1%. One wild card is that the state, in return for Aqua's help in rescuing Chester from receivership, would let Aqua bill existing ratepayers for the necessary ROI in its upcoming rate case.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016A | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017E* | $0.28 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018E | $0.29 | $0.37 | $0.45 | $0.35 | $1.45 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2017 | $0.28 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.37 | $0.45 | $0.35 | $1.45 |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017 | $0.30 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.38 | $0.45 | $0.32 | $1.44 |

**Q1, Q2, and Q3 represent actual results*

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2016A | $820 | $820 | $836 |
| 2017E | $809 | $809 | $819 |
| 2018E | $845 | $845 | $883 |

| **Market Data** | |
|---|---|
| Current Price | $36.03 |
| 52-Week Range: | $28.03 - $36.27 |
| Market Cap. (M) | $6,402 |
| Shares Out. (M): | 177.7 |
| Avg. Daily Vol. (Shs.Th.): | 598.0 |
| ADTV (M): | $21.54 |
| **Valuation** | |
| P/E 2017E | 26.5x |
| P/E 2018E | 24.8x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $8,456.2 |
| Dividend / Share: | $0.82 |
| Dividend Yield: | 2.3% |

*Source: Capital IQ, B&S Estimates*

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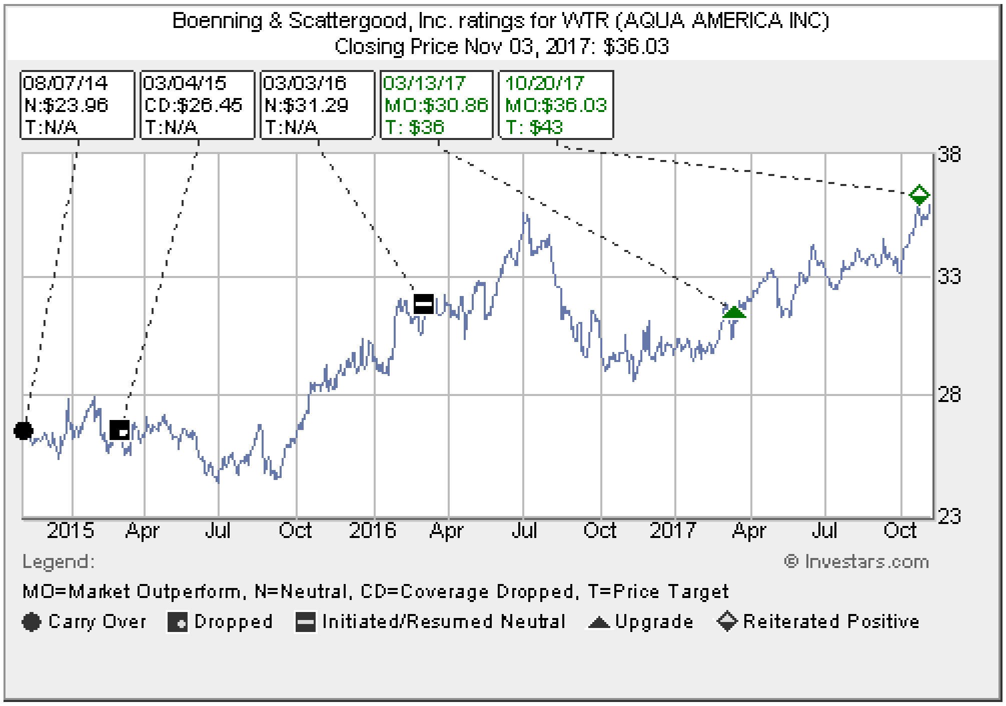
Disclosure Appendix

## Disclosure Appendix

### Rating and Price Target History:




### Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock and prevent it from reaching our target price: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

### Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

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## Ratings Distribution (9/30/17):

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|---|---|
| Outperform (Buy) | 33% |
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| Not Rated | 9% |

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|---|---|
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| Neutral (Hold) | 10% |
| Underperform (Sell) | 0% |
| Not Rated | 13% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

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Member FINRA/SIPC

# Water Sector: Flash Update

July 13, 2017

Water & Environment

## ROE slippage continues as Pennsylvania PUC sets DSIC ROEs at 9.75%; Move increases odds of similar downward pressure in AWK, WTR rate cases.

*Yesterday the Pennsylvania Public Utility Commission set DSIC proxy ROEs for investor-owned water utilities at 9.75%, well below the 10.2% level that most water companies are earning in PA currently. Though technically not applicable to base rate cases (each of which is evaluated on its own merits), the considerable shortfall relative to prevailing ROEs skews the risks to the downside in upcoming rate cases, including for American Water (filed in April 2017) and Aqua America (to be filed in 2018). Overall, this development reinforces our view that the recent momentum toward adoption of progressive regulatory mechanisms (which companies understandably prefer to focus on) masks an important underlying shift in the tenor of the U.S. regulatory environment.*

**Key Points:**

- **PA PUC sets DSIC ROEs at 9.75%, well below prevailing levels.** Yesterday, the PA Public Utilities Commission set DSIC proxy ROEs at 9.75%, meaning that DSIC surcharge rates will now earn at this rate (as opposed to the traditional policy of earning at the ROE set in an IOU's most recent general rate case). Going forward, DSIC proxy ROEs will be reset periodically to reflect interest rate movements and other factors. Importantly, the 9.75% level set by the PUC falls well below the prevailing level for most investor-owned utilities, including Aqua America (10.2%) and American Water (10.25%). While the 9.75% technically applies only to DSIC, it provides a timely window into the PUC's current thinking on appropriate return levels.
- **9.75% approved 4-1; Lone dissenter leans harsher.** The PUC passed the 9.75% DSIC ROE with a vote of 4-1, with the lone dissenter (Commissioner Andrew Place) citing the need for case-by-case flexibility and various regulatory mechanisms favoring water IOUs, notably DSIC itself and the recent passage of fair market value acquisition legislation. Place's comments lean more harshly than the rest of the commission on where ROEs should be, continuing his recent trend of becoming increasingly hawkish on matters relating to water utility regulation (Place was a vociferous dissenter in the June 14 vote to approve Aqua's New Garden acquisition). The direction of the traditionally progressive PA PUC could be in flux going forward as Rob Powelson moves to FERC, and Place's increasingly dissident positioning merits attention.
- **Do DSIC ROEs create risk for awarded ROEs?** Technically, the 9.75% proxy ROE applies only to DSIC, a point AWK emphasized in reaction to yesterday's developments. Still, the cost of capital methodologies (CAPM, etc.) discussed yesterday mirror those used in general rate cases, and 9.75% is the latest, best update we have on the commission's view of the appropriate return for water IOUs. The magnitude of the shortfall (~50 basis points) relative to prevailing ROEs clearly suggests that ROE risks skew toward the downside in upcoming rate cases for both Aqua and American Water. While Aqua has greater PA exposure (and will be hit directly in its imminent DSIC filing), American is arguably more exposed near-term, as it has a PA rate case pending (asking for $108 million and a 10.8% ROE on $3.2 billion in rate base).
- **EPS impact minor, but is PA regulatory trend still a friend?** Assuming a 9.75% ROE, we estimate a $0.02-$0.04 EPS impact for American Water (relative to its current ROE of 10.25%), so from an earnings standpoint the issue is manageable. Still, the prospect of solidly sub-10% ROEs in Pennsylvania is a notable negative development for a state long regarded as the most favorable jurisdiction for water IOUs. Water utilities enjoyed a dramatic upward rerating after DSIC kicked off the regulatory revolution in the late 1990s, with P/Es going from 13-15 times previously to 22-24 times since (and higher at times). If the regulatory pendulum were to swing the other direction in precedent-setting Pennsylvania, water utilities' premium valuations could begin to erode, and therefore directional trends in regulation are a critical point of focus.

### Coverage Universe

**Water & Environmental Equities:**

A.O. Smith Corp.
AOS-$57.47-Outperform; TP: $58.00

Advanced Drainage Systems, Inc.
WMS-$20.10-Neutral

American Water Works, Inc.
AWK-$78.52-Neutral

Aqua America, Inc.
WTR-$32.71-Outperform; TP: $36.00

Badger Meter Inc.
BMI-$40.55-Neutral

Crane Company
CR-$83.37-Neutral

Franklin Electric Company
FELE-$41.55-Outperform; TP: $44.00

Flowserve Corporation
FLS-$46.26-Neutral

The Gorman-Rupp Company
GRC-$26.51-Neutral

Lindsay Corporation
LNN-$90.08-Neutral

Mueller Water Products, Inc.
MWA-$11.43-Neutral

Tetra Tech, Inc.
TTEK-$46.10-Outperform; TP: $54.00

Valmont Industries, Inc.
VMI-$151.65-Neutral

Watts Water Technologies, Inc.
WTS-$62.70-Outperform; TP: $72.00

Xylem Inc.
XYL-$55.32-Outperform; TP: $55.00

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# Water Sector: Flash Update

**August 19, 2016**

**Water | Environment**

## Act 12 Update: PUC gets vastly different views from utilities, consumer advocate in public comments; OCA digging in on Utility Valuation Expert (UVE) setup.

**Summary:** Our analysis of public comments on Act 12 filed in recent days by PA water utilities and the state's Office of Consumer Advocate suggests an unusually spirited debate taking shape in a jurisdiction usually known for cordial and seamless adoption of progressive regulation. Much of the debate centers on how much discretion "Utility Valuation Experts" will have in conducting their fair value analysis and how they will be compensated – key issues that will have a material impact on whether Act 12 is able to successfully drive an acceleration in municipal acquisitions by investor-owned utilities. While Act 12 remains a notable positive development that will create growth opportunities for PA water utilities, we believe that the impact will be incremental rather than transformational, with deal flow starting slowly and being mostly on the bold-on side.

- **OCA: UVE system "will encourage inflation of fair market value".** In hard-hitting official feedback on the Act 12 tentative implementation order (click HERE for full document), the PA Office of Consumer Advocate requests that the PUC make a range of material changes. Issues raised by the OCA include DSIC (objecting to immediate post-deal DSIC hikes) and how "fair value" amounts will be divvied up into specific rate base plant accounts; but the most extensive pushback came on the Utility Valuation Expert (UVE) system. The OCA takes issue with various elements of the current UVE setup, including qualifications, conflicts of interest, valuation methods, fiduciary duties, jurisdiction of approvals, and (most stridently) UVE fees. The OCA notes the risk that the existing approach of capping fees at 5% of total deal value may "encourage the inflation of the fair market value by appraisers", and suggests implementing a flat fee/hours worked approach that will help mitigate the incentive to puff up valuations.

- **American Water: Hefty document belies largely benign comments.** American Water's was by far the *largest* document filed in response to the PUC's request for comments on the Act 12 tentative implementation order (click HERE for the 58 page filing), but the issues raised by the company are more procedural than structural – suggesting that American Water is generally satisfied with the current setup. On UVE fees, American Water takes a position nearly opposite that of the OCA, saying that allowing the PUC "discretion to approve fees above the (5%) cap is critically important to the successful implementation of Act 12". American Water also notes that the inclusion of traditional original cost valuation as one element of the assessment creates "an implementation process that is contrary to the language of Section 1329 (the relevant law), confusing, and administratively burdensome". In our view, these comments confirm that the principal motivation for investor-owned utilities is coaxing municipal sellers to the bargaining table, with price a secondary concern so long as the entire deal price goes into rate base.

- **Aqua America: "Presumption of Reasonableness" should prevail.** A good deal of Aqua's comments are focused on administrative aspects of the current implementation order, which the company believes are onerous (the current checklist for a typical Act 12 deal application includes 65 documents vs. five). Like American Water, Aqua objects to the requirement that cost-based valuation be included in the engineering report, stating flatly that "the language of the (Act 12) statute does not reference the use of original cost valuation". Aqua says the PUC should make a "presumption of reasonableness" on UVE fees and that extensive documentation requirements on how UVE fees are derived should be relaxed (click HERE for Aqua's entire filing). UVEs stand to become pivotal players in Act 12 transactions, and both Aqua's and American Water's comments suggest a desire to grant UVEs as much leeway and flexibility as possible in order to prevent excessively rigid rules from keeping a lid on valuations.

**Coverage Universe**

A.O. Smith Corp.
AOS-$93.90-Outperform; TP: $100.00

American Water Works, Inc.
AWK-$77.40-Neutral

Badger Meter Inc.
BMI-$69.19-Neutral

Crane Corporation
CR-$64.99-Outperform; TP: $65.00

Franklin Electric Co., Inc.
FELE-$39.46-Outperform; TP: $42.00

Flowserve Corporation
FLS-$48.85-Neutral

The Gorman-Rupp Company
GRC-$27.06-Neutral

Lindsay Corporation
LNN-$71.74-Neutral

Mueller Water Products, Inc.
MWA-$12.18-Neutral

Valmont Industries, Inc.
VMI-$130.93-Neutral

Advanced Drainage Systems, Inc.
WMS-$24.90-Neutral

Aqua America, Inc.
WTR-$31.79-Neutral

Watts Water Technologies, Inc.
WTS-$65.00-Outperform; TP: $70.00

Xylem, Inc.
XYL-$50.44-Outperform; TP: $50.00

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# Water Sector: Flash Update

July 5, 2017

Water & Environment

## MACRUC 2017 Takeaways: Are "Fair Market Value" acquisition laws over-hyped? ROEs may drift still lower near-term despite Fed tightening.

*We were in Hershey, PA last week for MACRUC (Mid-Atlantic Conference of Regulatory Utility Commissioners), an important annual event for key AWK and WTR states such as New Jersey and Pennsylvania, and our meetings yielded a number of timely takeaways. Overall, the regulatory pendulum continues to show signs of drifting back toward ratepayer interests after years of the utilities gaining ground, although utilities recognize the shift and are moving aggressively on countermeasures. Ironically, fair value legislation appears to be driving few actual transactions, and this is expected to continue, leading some to assert that utilities may have misspent valuable political capital on an effort that may ultimately lead to surprisingly few deals. In addition, channel feedback suggests awarded ROEs may slip further in the next 12-18 months despite the recent uptick in benchmark interest rates. Still, the event yielded some positive takeaways as well, notably the potential for more favorable treatment of lead service line replacement in PA and other states. Below we discuss selected takeaways from our MACRUC 2017 meetings.*

### Key Takeaways: Industry

- **Skepticism spreading as fair value deals get off to slow start.** Fair market value acquisition laws are the most hyped regulatory development to hit the water space in years, with IOUs practically giddy over their potential to act as a catalyst for privatization of the nation's tens of thousands of locally-owned water/sewer systems. Still, despite all the excitement, there have been few actual fair value transactions, and MACRUC revealed an emerging view that the new laws may ultimately fall short of proponents' expectations for reasons that vary by state. In NJ, some question whether onerous "emergent conditions" can be met by *any* system, while in PA, there is staunch OCA pushback on the implications for unified ratemaking. A recurring theme, however, is that water and sewer authorities are devising strategies to resist what they see as an attempt by the private sector to raid the municipal sector for growth – including moving toward full-cost pricing (making systems more attractive as cash flowing assets for local governments), regionalization (whereby systems unite and recapitalize with a debt offering, which happened in Allentown, PA), and getting more involved in the regulatory process (in some cases seeking to intervene directly in rate cases to point out perceived flaws with fair value legislation).
- **ROEs may drift lower near-term despite uptick in interest rates.** Awarded ROEs have been on a steady downward slide for more than five years as rock-bottom interest rates impacted the CAPM models utilized by expert consultants in rate cases, and tighter monetary policy provides a welcome light at the end of the tunnel. Still, the feedback from MACRUC is that low interest rates are just one of many factors that have been weighing on ROEs, and that while in the long-run higher interest rates will likely lead to a recovery in awarded returns, in the near-term ROEs could actually drift still lower before inflecting positively. Regulators say that the increasing prevalence of "progressive" mechanisms (such as DSIC, single tariff pricing, future test years, etc.) has led ratepayer advocates to aggressively assert that the regulated water utility business has shed risk and therefore deserves to shed return. A timely ROE skirmish is currently playing out in NJ, where Suez **(SEV.EN-€16.12-Not Rated)** is seeking to hold the line at 9.75% by arguing that this level has become "established policy" for the BPU. While the Street does see 9.75% as the prevailing and sustainable level, NJ regulators present at MACRUC noted that 9.75% is in fact <u>not</u> policy, and that each rate case undergoes its own distinct evaluation.
- **IOUs pushing for rate base treatment on lead service laterals.** Among the most prominent MACRUC panels on water pertained to devising regulatory approaches that allow IOUs to deal with lead service laterals and be appropriately recompensed for their capital outlays (despite the fact that these lines are often owned by customers). Across the board, utilities say they are

### Coverage Universe

**<u>Water & Environmental Equities</u>:**

A.O. Smith Corp.
AOS-$56.55-Outperform; TP: $58.00

Advanced Drainage Systems, Inc.
WMS-$20.20-Neutral

American Water Works, Inc.
AWK-$78.07-Neutral

Aqua America, Inc.
WTR-$33.04-Outperform; TP: $36.00

Badger Meter Inc.
BMI-$39.90-Neutral

Crane Company
CR-$80.11-Neutral

Franklin Electric Company
FELE-$42.10-Outperform; TP: $44.00

Flowserve Corporation
FLS-$46.94-Neutral

The Gorman-Rupp Company
GRC-$25.56-Neutral

Lindsay Corporation
LNN-$89.30-Neutral

Mueller Water Products, Inc.
MWA-$11.83-Neutral

Tetra Tech, Inc.
TTEK-$46.90-Outperform; TP: $54.00

Valmont Industries, Inc.
VMI-$151.55-Neutral

Watts Water Technologies, Inc.
WTS-$63.00-Outperform; TP: $72.00

Xylem Inc.
XYL-$55.45-Outperform; TP: $55.00

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dissatisfied with the approach taken recently by York Water Company **(YORW-$35.25-Not Rated)** in PA, which allows dollar-for-dollar cost recovery, but falls short of full rate base treatment. The York Water situation was unique in that York is an older urban area which has acute lead service lateral issues, while most other IOUs predominantly serve more recently developed suburban areas, and regulators appear open to exploring different approaches that incentivize IOUs to direct valuable capital toward this issue. AWK is looking to address the issue in PA via its recently filed rate case, seeking full rate base treatment and even DSIC eligibility for replacement of customer-owned service laterals. Though it won't move the needle overnight for a company like American Water, the ability to add service lateral investments to rate base would be an important win and would enlist the private sector as a solutions provider in an issue that is becoming increasingly prominent nationally.

- **New Jersey: New legislation to level municipal/IOU playing field.** The scope of regulation is set to widen in NJ, with the Water Quality Accountability Act (S2384) needing only the Governor's signature to become law (the bill has unanimous bipartisan support, having passed the Assembly with a vote of 76-0). S2384 would subject municipal water authorities to the same rigorous (and costly) system management guidelines that the NJ Board of Public Utilities applies to investor-owned systems on issues such as equipment testing, cyber security, and establishment of a formal asset management program (including plans to get to a 150-year pipe replacement cycle). Faced with elevated compliance costs under S2384, some municipals may explore alternatives, creating acquisition opportunities for IOUs, an angle that MACRUC meetings clearly suggest companies are focused on proactively exploiting. Still, some managements say that while in *theory* the law could drive a rapid acceleration in acquisition pipelines (the bill sets a narrow 120-day compliance deadline for some provisions), in *practice* the NJ Department of Environmental Protection has been known to be "selective" in its enforcement of such laws, at times granting municipal systems extended compliance timelines via consent decrees. S2384 will likely be signed into law by Governor Christie in the weeks ahead.
- **Pittsburgh to PUC looks like a done deal; Is privatization next?** According to sources who attended a key procedural hearing last week, all signs point toward the Pittsburgh Water and Sewer Authority being placed under PUC control via HB1490. Though the law applies to only one municipal system, in theory the net effect for Pittsburgh is much the same as that of S2384 on municipal systems across NJ, with Pittsburgh now facing the same regulatory standards as IOUs. Complying with the more stringent regulatory burden will require substantial incremental investment by PWSA, and as in NJ many believe this could lead Pittsburgh to ultimately explore alternatives, including a potential asset sale to American Water (which already provides water service to significant sections of the city). The unique nature of the Pittsburgh situation, coupled with Pennsylvania's newly minted Act 12 fair market value law, could lead to Pittsburgh commanding a sizeable buy-out price well over $1 billion, which may complicate efforts to maintain local control. Still, so far the Mayor has been emphatic in stating that the city will not privatize PWSA. Relatedly, another MACRUC takeaway is that utilities are increasingly contemplating using Act 12 as a means of pressuring local governments to the bargaining table by loudly publicizing the sizeable sums left on the table by <u>not</u> doing so.
- **Atlantic City gives NJ its own high-profile privatization saga.** New Jersey is playing out its own high-profile saga in the case of Atlantic City, which is under state financial oversight under which the state is said to be considering a sale of the city's water system as a means of shoring up its finances. In June, anti-private sector advocacy group Food & Water Watch conducted a door-to-door campaign gathering signatures to force the issue to a referendum, and the press has zeroed in on the issue (largely taking the anti-privatization side). Although Atlantic City's year-round population is just 40,000, the city has 12,000 casino hotel rooms, providing a sizable seasonal commercial/industrial demand profile, and would likely approach Scranton in deal size ($195 million), with AWK seen as the logical suitor given its scale and presence in the region (including nearby Ocean City, NJ). In theory, the Water Infrastructure Protection Act (which allows systems that meet "emergent conditions" to be sold without a referendum) could streamline the deal, but the prevailing view is that although Atlantic City sits within one of the NJDEP's "Critical Water Supply Areas" (technically one of the qualifying "emergent" criteria), it is unlikely to be classified as an emergent system given the lack of egregious water quality violations and/or operational problems and the high-profile nature of the situation.

*MACRUC revealed an emerging view that "Fair Market Value" acquisition laws may ultimately fall short of expectations.*

*Ratepayer groups are increasingly arguing that risk-reducing progressive mechanisms (DSIC, etc.) justify lower ROEs.*

*Faced with elevated compliance costs under S2384, IOUs hope New Jersey municipals will explore privatization.*

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# Water Sector: Drips & Drops

June 6, 2017

Water & Environment

## PA legislators want to put Pittsburgh water/WW system under PUC control, but privatization unlikely near-term; Eversource/Aquarion deal creates multi-utility.

*Drips & Drops* provides real-time data points and insights into trends shaping the water industry.

- **PA lawmakers seek to place Pittsburgh water system under PUC control.** The Pittsburgh Water & Sewer Authority (PWSA) has suffered a series of high-profile crises over the last year, with the lowlights including water quality problems, city-wide boil water advisories, botched attempts to rectify widespread lead service line issues, and disorderly management shake-ups. In the wake of these ongoing problems, a bill seeking to put PWSA under the direct supervision of the Pennsylvania Public Utilities Commission was introduced in the Pennsylvania General Assembly last week. If passed, PA H.B. 1490 would subject PWSA to the same environmental, economic, and governance standards as investor-owned utilities, with sponsors believing this will help stabilize the situation and alleviate public health concerns. Given the magnitude of the public safety issue, heightened sensitivity after the Flint, Michigan crisis, and the fact that the bill originated locally, we believe that H.B. 1490 stands a strong chance of passing.
- **Despite AWK proximity and expertise, privatization unlikely near-term.** American Water has a strong presence in/around the city of Pittsburgh, including a number of connections within city limits, and is a natural partner as the PWSA situation unfolds given its status as a trusted local water supplier. In addition, an asset sale would likely bring a windfall under the new Act 12 fair market value rules (for perspective, AWK bought Scranton WW for $195 million, and Pittsburgh is 4x Scranton's size; with PWSA including both water *and* WW, this implies that the system could fetch upwards of $1.5 billion). Still, the mayor is emphatic that privatization is a non-starter, and appears likely to breeze to another 4-year term. Recent cases (such as Atlantic City, NJ) demonstrate that a resolute mayor can single-handedly obstruct even a highly compelling deal. As a result, while AWK could end up being involved in some capacity (for example, contract operation), a PWSA asset sale looks unlikely to materialize near-term.
- **Water & Electric combinations make no sense? Eversource begs to differ.** Last week, New England energy utility Eversource **(ES-$62.29-Not Rated)** said it will buy Connecticut water utility Aquarion (formerly owned by Macquarie-**MQG:ASX-A$86.18-Not Rated)** for an EV of $1.675 billion ($880 million in cash, $795 million in assumed debt). The sale marks the largest water utility deal in over a decade, with the outcome somewhat of a surprise, as many expected AWK (or maybe WTR) to be the buyer. Aquarion and Eversource have substantial geographic and regulatory overlap, with both firms operating systems in CT, MA, and NH. This "electric + water" deal is notable given that Aqua America has received nearly uniform criticism from the Street (though not from us) for having the audacity to say it would *consider* acquiring anything outside of water. In our view, regulatory relations (not pipe tapping or power plant operation) are the core competency of a utility holding company, and the Aquarion/Eversource deal suggests renewed momentum for the multi-utility format.
- **Could Connecticut Water be next on Eversource shopping list?** The Aquarion/Eversource deal is already prompting speculation that Connecticut Water **(CTWS-$54.41-Not Rated)** could be next on Eversource's list of targets, and on a fundamental level this makes sense. Increased scale is known to drive superior regulatory outcomes in the water industry (this was a key part of the rationale for the "asset swaps" between American Water and Aqua America in the early 2010s), and adding CTWS would augment Eversource/Aquarion's presence in both Connecticut and Maine. From a valuation perspective, however, a deal looks unlikely at CTWS' prevailing share price. CTWS serves 90,000 customers to Aquarion's 230,000, so a back-of-the-envelope calculation implies an EV of ~$650 million for CTWS at a similar deal multiple – significantly below Connecticut Water's enterprise value of $880 million.

### Coverage Universe

**Water & Environmental Equities:**

A.O. Smith Corp.
AOS-$56.17-Outperform, TP-$58.00

Advanced Drainage Systems, Inc.
WMS-$19.15-Neutral

American Water Works, Inc.
AWK-$78.81-Neutral

Aqua America, Inc.
WTR-$32.98-Outperform, TP-$36.00

Badger Meter Inc.
BMI-$40.10-Neutral

Crane Company
CR-$78.40-Neutral

Franklin Electric Company
FELE-$40.30-Outperform, TP-$44.00

Flowserve Corporation
FLS-$48.56-Neutral

The Gorman-Rupp Company
GRC-$24.82-Neutral

Lindsay Corporation
LNN-$85.79-Neutral

Mueller Water Products, Inc.
MWA-$11.30-Neutral

Tetra Tech, Inc.
TTEK-$46.45-Outperform, TP-$54.00

Valmont Industries, Inc.
VMI-$147.40-Neutral

Watts Water Technologies, Inc.
WTS-$63.80-Outperform, TP-$72.00

Xylem Inc.
XYL-$53.20-Outperform, TP-$55.00

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# Aqua America, Inc.

**(WTR-NYSE)**

May 9, 2018

**Water | Environment**

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $34.63 |
| Target Price: | NA |

## First quarter EPS in-line, with tax benefit offsetting lower operating earnings.

**Summary:** Aqua posted in-line 1Q EPS, but earnings were aided by tax benefits, with operating income falling short of expectations. The fundamental story remains stable, but there are a number of significant regulatory and M&A wildcards on the horizon, and the reward versus risk equation is balanced. We rate WTR (which at a P/E of 25 times trades in-line with peers) Neutral.

**Key Points:**

- **Operating earnings decline on soft top-line, margin pressure.** Aqua posted first quarter EPS of $0.29, up 4.7% year/year, in-line with our model and consensus (both $0.29), but earnings quality was poor, with an unexpected tax gain driving the quarter. Excluding the $0.04 impact of a *negative* 4.3% tax rate, EPS was $0.25 in the quarter. Revenue increased 3.5% year/year, below our estimate of +4%, while Operations & Maintenance and Depreciation expenses rose 7% and 6.3%, respectively. As a result, operating margin declined 150 bps to 35.7% from 37.2% a year ago, leading to a 0.8% year/year decline in operating income. Management notes that adjusting for costs related to severe winter weather, O&M expenses would have risen ~2.3%; normalizing for this, first quarter EPS would have been approximately $0.27.
- **Chester enters negotiations to carve out city assets.** On March 14, Chester Water Authority and the City of Chester entered negotiations on an agreement that would allow the city to sell Aqua its portion of the water system assets (click HERE for agreement). Essentially, the city is bankrupt and wants to sell, but the surrounding suburbs also served by CWA are in good fiscal shape and vehemently oppose a sale. Pro-rating Aqua's $320 million bid by the city/suburb rate base split implies a ~$60 million deal. While this would still be a sizable rate base addition, the City of Chester is among the poorest in Pennsylvania, and acquiring it as a stand-alone asset could create affordability issues under Aqua's existing unified tariff. The two primary potential outcomes seem to be (a) a severely downsized deal, or (b) Aqua walking away entirely.
- **"Customers served" decoupling legislation raises eyebrows.** House Bill 1782 (pdf HERE) is making its way through PA legislature and, among other alternative ratemaking mechanisms, proposes adopting a unique "customers served" decoupling system for water utilities. As in the case of Chester, fair market value deals skew toward troubled cities with declining populations, and with the PUC insisting on separate rate districts rather than allowing IOUs to blend these acquisitions into unified tariffs, utilities' push for this provision implies a concern that FMV deals may create affordability issues and hinder customer growth. It's a Catch-22 for utilities: the addition of decoupling in PA would almost certainly lead to ROE pressure, but IOUs' push for protection against negative customer growth suggests that *not* getting it could create issues in integrating FMV deals into rates. For more on this issue, see our April 26 note HERE.
- **Aqua notably absent from recent M&A drama.** Given its history as an aggressive player in the industry's last big round of consolidation in the early 2000s, Aqua's absence from the recent bidding activity in the water utility space is notable. The conventional wisdom has long been that Aqua (and its other large-cap peers) would eventually subsume the remaining small/micro-cap players, but so far the company has not been involved despite the fact that a number of the relevant states (Connecticut, Maine, and California) would further diversify the portfolio by adding new regulatory jurisdictions. While muni/fair market value deals remain the focus, these have been mostly smaller, and if the recent flurry of M&A activity continues, we expect Aqua would get involved, although acquiring other listed players poses valuation challenges.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2017A | $0.28 | $0.34 | $0.43 | $0.30 | $1.35 |
| 2018E* | $0.29 | $0.37 | $0.44 | $0.32 | $1.42 |
| 2019E | $0.29 | $0.40 | $0.47 | $0.36 | $1.52 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2018 | $0.29 | $0.37 | $0.44 | $0.32 | $1.42 |
| 2019 | - | - | - | - | - |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2017 | $0.30 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.36 | $0.44 | $0.31 | $1.41 |
| 2019 | $0.35 | $0.42 | $0.45 | $0.34 | $1.50 |

**Q1 represents actual results*

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2017A | $810 | $810 | $821 |
| 2018E | $841 | $842 | $849 |
| 2019E | $883 | - | $897 |

**Market Data**

| | |
|---|---|
| Current Price | $34.63 |
| 52-Week Range: | $31.18 - $39.55 |
| Market Cap. (M) | $6,160 |
| Shares Out. (M): | 177.9 |
| Float Shs. (M): | 177.4 |
| Inst. Ownership: | 5548% |
| Short Interest (M) | 5.7 |
| Avg. Daily Vol. (Shs.Th.): | 533.1 |
| ADTV (M): | $18.46 |

**Valuation**

| | |
|---|---|
| P/E 2018E | 25.7x |
| P/E 2019E | 24.4x |

**Capitalization**

| | |
|---|---|
| Book Value / Share: | $9.37 |
| Net Cash / Shares: | $0.00 |
| Enterprise Value (M): | $8,303.0 |
| Dividend / Share: | $0.82 |
| Dividend Yield: | 2.4% |

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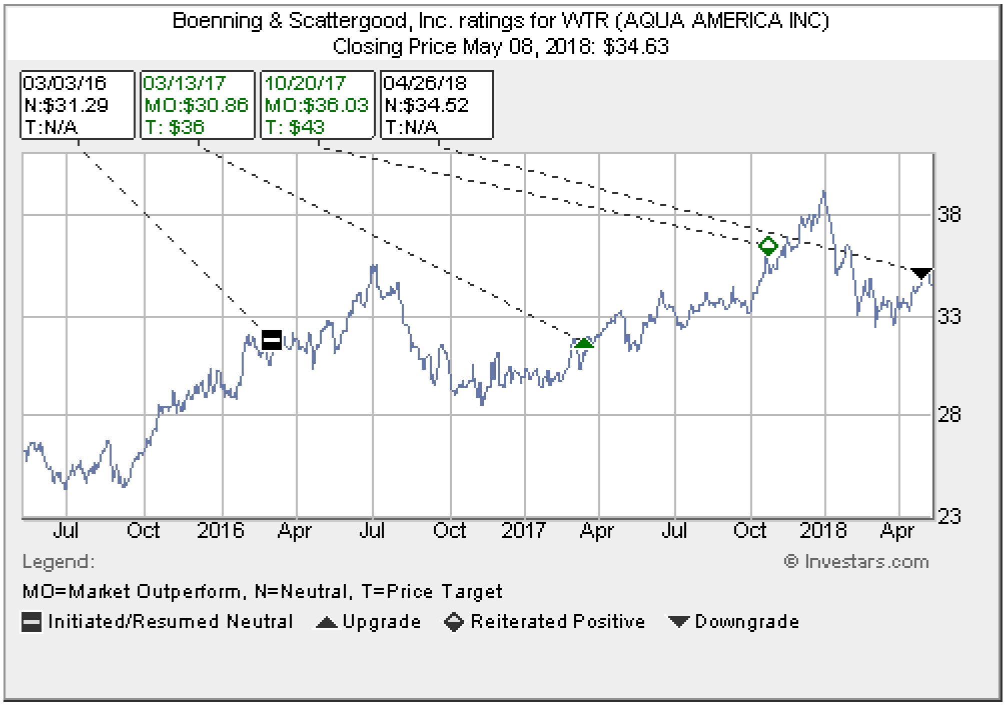
## Disclosure Appendix

### Rating and Price Target History:




### Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

### Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

### Important Disclosures:

Analyst compensation is based on, in part, Boenning & Scattergood, Inc.'s profitability, which includes revenues from investment banking. Boenning & Scattergood expects to receive or intends to seek compensation for investment banking services from the subject company in the next three months.

## Boenning & Scattergood's Ratings System:

Our three-tier investment ratings are based on a stock's return potential relative to a broad market index:

- ***Outperform (Buy):*** The security's total return over the year or longer is expected to exceed the total return of the S&P 500™ over the identical period.
- ***Neutral (Hold):*** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- ***Underperform (Sell):*** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group:

- ***Low:*** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- ***Moderate:*** The security has average fundamental predictability and/or average price volatility.
- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

## Ratings Distribution (3/31/18):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 33% |
| Neutral (Hold) | 48% |
| Underperform (Sell) | 10% |
| Not Rated | 9% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 17% |
| Neutral (Hold) | 7% |
| Underperform (Sell) | 0% |
| Not Rated | 0% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

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# Aqua America, Inc.

**(WTR-NYSE)**

January 17, 2017

**Water | Environment**

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $30.28 |
| Target Price: | NA |

## 2017 guidance so-so, but M&A pipeline heating up; PA rate case likely in 2018.

**Investment Conclusion:** Aqua is among the best-run companies in the water space, and enjoys a structural advantage over peers given its majority position in the favorable regulatory jurisdiction of Pennsylvania. Management's initial 2017 EPS guidance is modestly below the Street, but the fundamental outlook is solid as municipal acquisition activity accelerates and a rate filing in the critical Pennsylvania territory draws closer (2018). Still, we rate WTR Neutral, with the current forward P/E multiple of 22.3 times roughly in-line with the peer group average of 22.6 times.

**Key Points:**

- **Tweaking 2017 estimate lower as guidance below Street.** Aqua issued 2017 EPS guidance of $1.34-$1.39, with the midpoint of $1.365 below both our prior estimate of $1.40 and consensus of $1.39. The company maintains 2016 guidance of $1.30-$1.35, so at the respective midpoints this implies 2017 EPS growth of 3%. The 2017 guidance assumes a 1%-2% increase in same-system Operating & Maintenance expense, which coupled with the lack of rate relief in the core Pennsylvania territory (due in part to the de facto rate stay-out following the adoption of repair tax flow-through accounting in 2012), explains the below-trend bottom-line growth. Still, the company also issued a robust acquisition pipeline update, and it appears that recent legislative changes regarding municipal acquisitions are driving a tangible uptick in M&A.

- **PA rate case now seen in 2018, with new rates hitting P&L in 2019.** Aqua expects to file an infrastructure investment charge (aka DSIC) in Pennsylvania in 2017 in order to help offset the upward drift in costs in the near-term. In terms of base rates, management anticipates a rate case in 2018, with rate relief coming in 2019. Overall, the company has prudently managed through the financial benefits of the repair tax flow-through, though bottom-line growth has predictably decelerated late in the rate cycle. The 2018 Pennsylvania rate case will be closely watched, with recent positive regulatory developments in PA leading some smaller utilities to believe that the OCA/PUC could take a harder line on some elements of rate filings going forward.

- **Aqua expects banner year of municipal deals in 2017.** Despite a recent setback in New Jersey (in November, the town of Westville voted down a potential sale to Aqua), management expects 2017 to be a big year for municipal acquisitions. Anticipated 2017 closings include two sizable deals: a 5,400 connection system for $75 million and a 2,100 connection system for $30 million. All told, Aqua expects to spend more than $113 million on acquisitions (almost exclusively of municipal systems) in 2017, marking a five-fold increase over 2016 ($22 million). Management cites "fair value" legislation in key states as driving the acceleration in municipal acquisitions, the latest evidence that this regulatory trend is leading to an uptick in privatization activity.

- **Bottom-Line: Reward/Risk balanced as PA rate case approaches.** Aqua remains the water industry's gold standard in terms of operational efficiency, and the robust M&A pipeline shows that the company is holding its own in the competitive world of "fair value" municipal M&A. After years of lackluster earnings growth following the effective pull-forward of multiple years of growth in 2013 via repair tax flow-through, the company is set to resume a more traditional growth trajectory in the years ahead as it finally gets back in for base rate relief in its core (60% of sales) Pennsylvania franchise. Still, while there is a lot to like fundamentally about the story, we believe the current in-line P/E appropriately calibrates reward and risk in the stock.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2015A | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 |
| 2016E* | $0.29 | $0.33 | $0.41 | $0.31 | $1.34 |
| 2017E | $0.28 | $0.33 | $0.44 | $0.30 | $1.36 |

**Q1, Q2, & Q3 represent actual results*

| Prior | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | $0.29 | $0.33 | $0.41 | $0.31 | $1.34 |
| 2017E | $0.29 | $0.35 | $0.45 | $0.31 | $1.40 |

| Consensus | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017E | $0.29 | $0.35 | $0.45 | $0.31 | $1.39 |

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2015A | $814 | $814 | $818 |
| 2016E | $824 | $855 | $835 |
| 2017E | $843 | $881 | $876 |

**Market Data**

| | |
|---|---|
| Current Price | $30.28 |
| 52-Week Range: | $28.03 - $35.83 |
| Market Cap. (M) | $5,370 |
| Shares Out. (M): | 177.4 |
| Avg. Daily Vol. (Shs.Th.): | 372.8 |
| ADTV (M): | $11.29 |

**Valuation**

| | |
|---|---|
| P/E 2016E | 22.5x |
| P/E 2017E | 22.3x |

**Capitalization**

| | |
|---|---|
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,225.0 |
| Dividend / Share: | $0.77 |
| Dividend Yield: | 2.5% |

*Source: Capital IQ, B&S Estimates*

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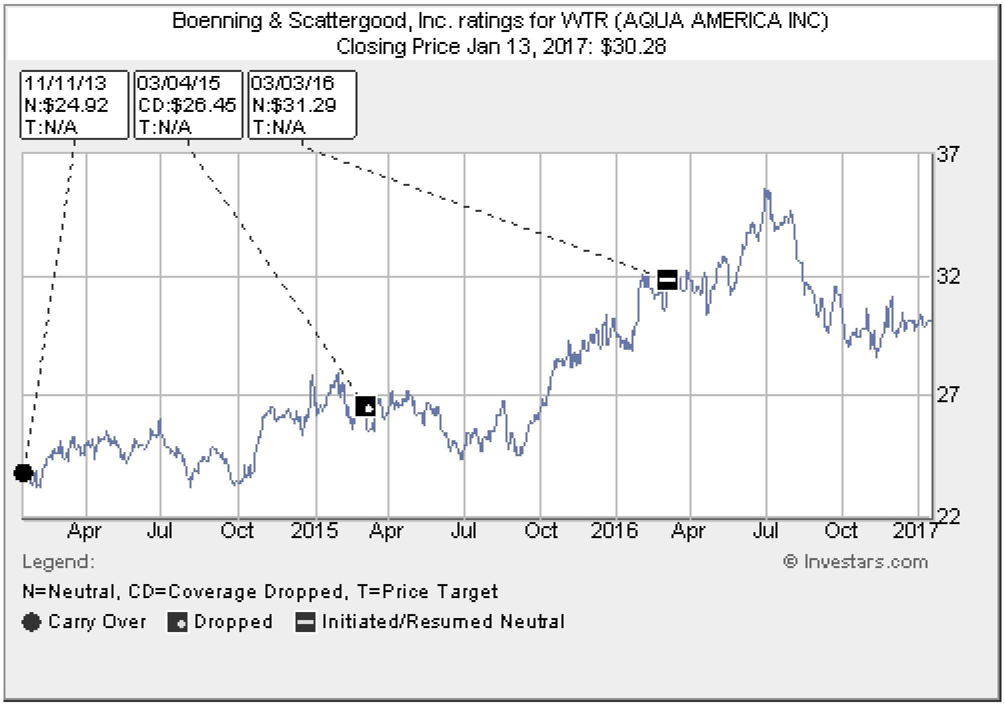
# Disclosure Appendix

## Rating and Price Target History:




## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

The research analyst whose name appears on this research report certifies that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

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- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

## Ratings Distribution (9/30/16):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 28% |
| Neutral (Hold) | 52% |
| Underperform (Sell) | 7% |
| Not Rated | 12% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 17% |
| Neutral (Hold) | 12% |
| Underperform (Sell) | 0% |
| Not Rated | 20% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

# Aqua America, Inc.

**(WTR-NYSE)**

August 3, 2017

**Water & Environment**

| | |
|---|---|
| Rating/Risk: | Outperform/Low |
| Price: | $33.58 |
| Target Price: | $36.00 |

## 2Q earnings in-line, 2017 guidance affirmed, thesis intact; Reiterate Outperform.

**Summary:** Aqua America is a bellwether name in the attractive water utility space, which boasts a compelling reward/risk outlook in an environment where valuations for many water industrials are becoming stretched. In addition to the "flight-to-safety" benefits inherent in the water utility space, Aqua has a number of important company-specific fundamental catalysts on the horizon as well – notably including a return to rate relief in its core regulatory jurisdiction of Pennsylvania (the company has been out of rates in PA for nearly five years). Aqua offers a unique combination of defense and offense, and the stock's discount valuation further improves the risk-adjusted total return outlook. We rate shares of WTR Outperform, with our $36 target price reflecting a forward P/E multiple of 25 times, in-line with the investor-owned water utility peer group average.

**Key Points:**

- **2Q EPS in-line.** Aqua America posted 2Q17 EPS of $0.34, in-line with both our estimate and consensus and up a penny from $0.33 in 2Q16, with revenue dipping 0.2%, but operations and maintenance expenses falling 4.2% due in part to recent divestitures of non-core market-based businesses. The tax rate remains attractively low, declining 10 basis points to 8.4% from 8.5% a year ago, as the company continues to benefit on the income tax line from the repair tax flow-through accounting arrangement in Pennsylvania. Importantly, management indicates that the sales of market-based businesses are now complete, with such activities projected to contribute a miniscule ~$4 million in annual revenue going forward and Aqua now focused squarely on growing its regulated *water and wastewater* business. In addition, the company affirmed its 2017 EPS guidance range of $1.34-$1.39. Overall, it was a solid quarterly report, with Aqua demonstrating strong execution late in the rate cycle in its key Pennsylvania territory.
- **Rate activity brisk; PA looms large.** Year-to-date, Aqua has received rate relief (both base rates and infrastructure surcharges) of $11.1 million, representing an annualized revenue tailwind of 1.4% across a number of states including Indiana, Illinois, New Jersey, Ohio, and, importantly, Pennsylvania (this is the first official word of rate relief in PA, and it comes earlier than the 4Q timeframe we had expected). In addition, Aqua currently has rate requests pending in Illinois and Virginia for a total of $12.2 million. This is a notable level of activity for Aqua, providing a strong and consistent cadence of rate relief as the company prepares to file a general rate case in its critical home jurisdiction of Pennsylvania (~60% of sales). Management now expects to file the Pennsylvania rate case sometime in 2018 with a decision expected in 2019. Though recent PA-PUC testimony suggests there could be downward pressure on ROEs, the prospect of long-awaited rate relief in Pennsylvania is a critical catalyst for WTR shares.
- **Acquisitions: Balancing act continues.** Municipal acquisitions have become a central growth strategy for Aqua and its peers, with fair market value legislation and other regulatory catalysts driving an increasingly aggressive privatization push. Aqua has been a disciplined actor so far, focusing on small/mid-size deals in areas where attractive demographics minimize the negative impact on long-term customer growth and limit affordability issues. Aqua has four active muni deals in the pipeline totaling 12,000 customers and an aggregate purchase price of $126 million, and management expects municipal acquisitions to remain a core growth driver going forward. Still, Aqua's (and the industry's) privatization push is not without risks, with evidence building that ratepayer advocates are pushing hard against unified tariffs for fair value deals and arguing that recent IOU regulatory/legislative wins should be paid for in the form of lower ROEs.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016A | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 |
| 2017E* | $0.28 | $0.34 | $0.45 | $0.29 | $1.36 |
| 2018E | $0.29 | $0.36 | $0.46 | $0.31 | $1.42 |
| **Prior** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2017 | $0.28 | $0.34 | $0.45 | $0.29 | $1.36 |
| 2018 | $0.29 | $0.36 | $0.46 | $0.31 | $1.42 |
| **Consensus** | **Q1** | **Q2** | **Q3** | **Q4** | **FY** |
| 2016 | $0.28 | $0.33 | $0.40 | $0.29 | $1.32 |
| 2017 | $0.30 | $0.34 | $0.43 | $0.31 | $1.36 |
| 2018 | $0.29 | $0.37 | $0.47 | $0.31 | $1.44 |

**Q1 and Q2 represent actual results*

| Revenue | Current | Prior | Consensus |
|---|---|---|---|
| 2016A | $820 | $820 | $836 |
| 2017E | $829 | $832 | $840 |
| 2018E | $855 | $863 | $895 |

| **Market Data** | |
|---|---|
| Current Price | $33.58 |
| 52-Week Range: | $28.03 - $34.41 |
| Market Cap. (M) | $5,964 |
| Shares Out. (M): | 177.6 |
| Avg. Daily Vol. (Shs.Th.): | 418.8 |
| ADTV (M): | $14.06 |
| **Valuation** | |
| P/E 2017E | 24.7x |
| P/E 2018E | 23.6x |
| **Capitalization** | |
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,997.5 |
| Dividend / Share: | $0.82 |
| Dividend Yield: | 2.4% |

*Source: Capital IQ, B&S Estimates*

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| Aqua America Inc. | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2017E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | **1Q17** | *yoy* | **2Q17** | *yoy* | **3Q17E** | *yoy* | **4Q17E** | *yoy* | **2017E** | *yoy* |
| **Operating Revenue** | **$187,787** | -2.5% | **$203,418** | -0.2% | **$235,657** | 4.0% | **$201,719** | 2.5% | **$828,581** | *1.1%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 69,128 | -6.0% | 70,853 | -4.2% | 81,408 | 2.0% | 79,101 | 2.0% | 300,490 | *-1.4%* |
| Depreciation | 33,837 | 5.3% | 33,407 | 5.7% | 34,389 | 1.5% | 33,842 | 1.5% | 135,475 | *3.4%* |
| Amortization | 189 | -58.0% | 127 | -75.9% | 392 | 0.8% | 659 | 0.8% | 1,367 | *-32.3%* |
| Taxes ex-Income Taxes | 14,737 | 4.2% | 14,419 | 1.2% | 15,006 | 2.0% | 13,557 | 2.0% | 57,719 | *2.4%* |
| Operating Expenses | 117,891 | *-2.0%* | 118,806 | *-1.3%* | 131,196 | *1.9%* | 127,159 | *1.9%* | $495,052 | *0.2%* |
| Operating Income | 69,896 | *-3.4%* | 84,612 | *1.3%* | 104,461 | *6.8%* | 74,560 | *3.6%* | $333,529 | *2.4%* |
| *Operating Margin* | *37.2%* | | *41.6%* | | *44.3%* | | *37.0%* | | *40.3%* | |
| Other Expense (Income) | 17,894 | *1.7%* | 18,075 | *-1.5%* | 18,000 | *11.0%* | 18,000 | *-1.5%* | $71,969 | *2.2%* |
| Interest Expense, Net | 21,326 | | 21,387 | | 20,150 | | 20,150 | | $83,013 | |
| AFUDC | (3,193) | | (3,463) | | (2,100) | | (2,100) | | (10,856) | |
| (Gain)Loss on Asset Sales | (269) | | (10) | | (50) | | (50) | | (379) | |
| (Gain)Loss on JV | 30 | | 161 | | | | | | 191 | |
| Income from Cont. Ops | 52,002 | *-5.0%* | 66,537 | *2.1%* | 86,461 | *6.0%* | 56,560 | *5.3%* | $261,560 | *2.5%* |
| Income Taxes | 2,930 | | 5,569 | | 6,917 | | 4,525 | | 19,941 | |
| *Tax Rate* | *5.6%* | | *8.4%* | | *8.0%* | | *8.0%* | | *7.6%* | |
| **Net Income (Cont Ops)** | **$49,072** | *-5.2%* | **$60,968** | *2.3%* | **$79,544** | *8.7%* | **$52,035** | *4.8%* | **$241,619** | *3.2%* |
| **EPS (Cont Ops)** | **$0.28** | *-5.2%* | **$0.34** | *2.3%* | **$0.45** | *8.6%* | **$0.29** | *4.7%* | **$1.36** | *3.1%* |
| Net Income (incl. Disc. Ops) | $49,072 | *-5.2%* | $60,968 | *2.3%* | $79,544 | *8.7%* | $52,035 | *4.8%* | $241,619 | *3.2%* |
| Shares Outstanding | 177,969 | | 178,045 | | 177,975 | | 177,975 | | 177,991 | |

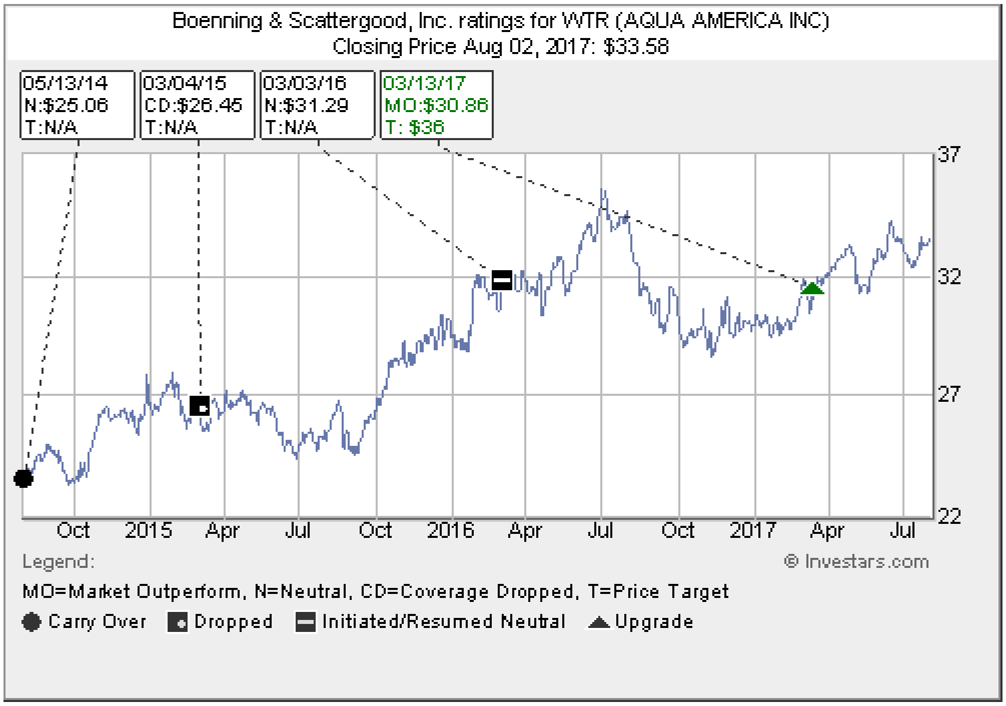
*Source: Company filings; B&S Estimates*

| Aqua America Inc. | | | | | | | | | Boenning & Scattergood, Inc. | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2018E* | | | | | | | | | *Ryan M. Connors* | |
| *(in Thousands)* | 1Q18E | *yoy* | 2Q18E | *yoy* | 3Q18E | *yoy* | 4Q18E | *yoy* | 2018E | *yoy* |
| **Operating Revenue** | **$195,298** | 4.0% | **$209,521** | 3.0% | **$242,726** | 3.0% | **$207,771** | 3.0% | **$855,316** | *3.2%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 70,165 | 1.5% | 71,916 | 1.5% | 82,629 | 1.5% | 80,288 | 1.5% | 304,998 | *1.5%* |
| Depreciation | 34,345 | 1.5% | 33,908 | 1.5% | 34,905 | 1.5% | 34,350 | 1.5% | 137,507 | *1.5%* |
| Amortization | 191 | 0.8% | 128 | 0.8% | 395 | 0.8% | 665 | 0.8% | 1,378 | *0.8%* |
| Taxes ex-Income Taxes | 14,884 | 1.0% | 14,563 | 1.0% | 15,156 | 1.0% | 13,692 | 1.0% | 58,296 | *1.0%* |
| Operating Expenses | 119,584 | *1.4%* | 120,515 | *1.4%* | 133,086 | *1.4%* | 128,994 | *1.4%* | $502,180 | *1.4%* |
| Operating Income | 75,714 | *8.3%* | 89,005 | *5.2%* | 109,640 | *5.0%* | 78,776 | *5.7%* | $353,136 | *5.9%* |
| *Operating Margin* | *38.8%* | | *42.5%* | | *45.2%* | | *37.9%* | | *41.3%* | |
| Other Expense (Income) | 18,850 | *5.3%* | 18,850 | *4.3%* | 18,850 | *4.7%* | 18,850 | *4.7%* | $75,400 | *4.8%* |
| Interest Expense, Net | 21,000 | | 21,000 | | 21,000 | | 21,000 | | $84,000 | |
| AFUDC | (2,100) | | (2,100) | | (2,100) | | (2,100) | | (8,400) | |
| (Gain)Loss on Asset Sales | (50) | | (50) | | (50) | | (50) | | (200) | |
| (Gain)Loss on JV | | | | | | | | | 0 | |
| Income from Cont. Ops | 56,864 | *9.3%* | 70,155 | *5.4%* | 90,790 | *5.0%* | 59,926 | *6.0%* | $277,736 | *6.2%* |
| Income Taxes | 5,118 | | 6,314 | | 8,171 | | 5,393 | | 24,996 | |
| *Tax Rate* | *9.0%* | | *9.0%* | | *9.0%* | | *9.0%* | | *9.0%* | |
| **Net Income (Cont Ops)** | **$51,746** | *5.4%* | **$63,841** | *4.7%* | **$82,619** | *3.9%* | **$54,533** | *4.8%* | **$252,740** | *4.6%* |
| **EPS (Cont Ops)** | **$0.29** | *5.4%* | **$0.36** | *4.7%* | **$0.46** | *3.9%* | **$0.31** | *4.8%* | **$1.42** | *4.6%* |
| Net Income (incl. Disc. Ops) | $51,746 | *5.4%* | $63,841 | *4.7%* | $82,619 | *3.9%* | $54,533 | *4.8%* | $252,740 | *4.6%* |
| Shares Outstanding | 178,000 | | 178,000 | | 178,000 | | 178,000 | | 178,000 | |

*Source: Company filings; B&S Estimates*

# Disclosure Appendix

## Rating and Price Target History:




## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock and prevent it from reaching our target price: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

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### Boenning & Scattergood's Ratings System:

Our three-tier investment ratings are based on a stock's return potential relative to a broad market index:

- ***Outperform (Buy)*:** The security's total return over the year or longer is expected to exceed the total return of the S&P 500™ over the identical period.
- ***Neutral (Hold)*:** The security's total return over the next year or longer is expected to be roughly equivalent to the total return of the S&P 500™ over the identical period.
- ***Underperform (Sell)*:** The security's total return over the next year or longer is expected to be less than the total return of the S&P 500™ over the identical period.

Our four-tier risk ratings are based on a mix of price volatility and fundamental factors relative to the market and peer group:

- ***Low*:** The security has higher-than-average fundamental predictability and/or lower-than-average price volatility.
- ***Moderate*:** The security has average fundamental predictability and/or average price volatility.
- ***High*:** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative*:** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

### Ratings Distribution (6/30/17):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 26% |
| Neutral (Hold) | 53% |
| Underperform (Sell) | 9% |
| Not Rated | 11% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 22% |
| Neutral (Hold) | 11% |
| Underperform (Sell) | 0% |
| Not Rated | 20% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

# Aqua America, Inc.

**(WTR-NYSE)**

August 3, 2016

Water | Environment

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $34.40 |
| Target Price: | NA |

## 2Q16 earnings in-line as lower costs offset reduced sales; Maintain Neutral.

**Investment Conclusion:** Aqua America's 2Q16 results affirm both the "good news" and the "bad news" of the story, with the good news being that Aqua is among the best run utilities in the nation from an operational perspective (O&M expense was just 36% of sales in 2Q), and the bad news being that during the ongoing rate stay-out in PA, growth remains hard to come by (revenue fell 1%). Coupled with an epic YTD run-up in P/E multiples across the entire water utility space that leaves the stock trading near the high end of its historical valuation range, this hinders the reward-risk equation in our view, and as a result we maintain our Neutral rating for shares of WTR.

**Key Points:**

- **2Q in-line as lower O&M expenses offset soft top-line.** Aqua posted 2Q16 EPS of $0.33, in-line with consensus, as a sharp drop in Operations & Maintenance expenses offset a 1% decline in revenue that the company attributes in part to reduced volumes (our model assumed a 2% increase in sales). Management says the decline in O&M expenses was driven by a combination of market-based divestitures, lower production expenses, and other non-recurring factors, and says that on a "same system" basis, O&M expenses rose 1.3% year-over-year. Overall, it was a solid, if noisy, quarter for Aqua, though the results also underscore the challenge the company faces trying to grow during its PA rate stay-out, with EPS up just 3.8% year-over-year.

- **Rate case pipeline active, but all eyes remain on PA.** Measured by the number of rate awards, 2016 has been a banner year for Aqua, with new rates hitting the P&L in IL, OH, NC, OH, TX, and VA, and rate cases outstanding in IN, NJ, and OH. Still, new awards year-to-date total just $5 million (~0.5% of sales), and cases pending total $10.5 million (with final awards subject to the customary haircut), underscoring the vital importance of Pennsylvania (~70% of rate base) to Aqua's overall growth picture. The company continues to invest aggressively (capex targeted at $350 million for 2016), and we expect DSIC surcharges to begin in PA in 2017, with a rate filing likely by early 2018. In the meantime, consolidated growth will remain muted.

- **Tweaking 2016 estimate lower on likely 3Q weather headwinds.** July is a key swing month for demand from a weather standpoint, and July 2016 precipitation levels were heavy in Aqua's two largest territories. In Southeastern PA, there were 14 days of measurable rainfall in July for a total of 6.8 inches, versus 10 days for 2.5 inches in July 2015 (which itself was wetter than normal). In Ohio, there were 15 days of rain in July for 6.3 inches, versus 8 days for 0.9 inches in July 2015. As a result, we believe demand could be softer in 3Q16, and lower our top-line assumption (to –0.5% from +2%), and tweak our 2016 EPS estimate downward to $1.30 from $1.35 previously (management affirmed it 2016 EPS guidance range of $1.30-$1.35).

- **Maintain Neutral: Fundamentals remain compelling, but largely priced-in.** Aqua is among the best-run companies in the water space, and enjoys a structural advantage over water utility peers in that the progressive regulatory jurisdiction of Pennsylvania represents >50% of sales and ~70% of rate base. The company's new leadership is taking proactive steps to enhance the long-term growth outlook (including taking a less inhibited view of strategic M&A), and the addition of fair value legislation in PA provides the opportunity for muni acquisitions to finally gain steam. Still, these positives are largely priced in, with WTR trading at forward P/E of 24.7 times, at the high end of their historical range of 19-25 times. We rate the stock Neutral.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2015A | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 |
| 2016E* | $0.29 | $0.33 | $0.38 | $0.30 | $1.30 |
| 2017E | $0.29 | $0.36 | $0.42 | $0.31 | $1.38 |

**Q1 & Q2 represent actual results*

| Prior | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | - | - | $0.41 | $0.30 | $1.35 |
| 2017E | $0.29 | $0.35 | $0.43 | $0.31 | $1.38 |

| Consensus | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | $0.28 | $0.33 | $0.41 | $0.29 | $1.33 |
| 2017E | $0.29 | $0.35 | $0.44 | $0.32 | $1.41 |

**Market Data**

| | |
|---|---|
| Current Price | $34.40 |
| 52-Week Range: | $24.40 - $32.93 |
| Market Cap. (M) | $6,098 |
| Shares Out. (M): | 177.3 |
| Avg. Daily Vol. (Shs.Th.): | 790.6 |
| ADTV (M): | $16.50 |

**Valuation**

| | |
|---|---|
| P/E 2016E | 26.4x |
| P/E 2017E | 24.9x |

**Capitalization**

| | |
|---|---|
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,516.0 |
| Dividend / Share: | $0.71 |
| Dividend Yield: | 2.1% |

*Source: Capital IQ, B&S Estimates*

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## Key Water Utility Service Territories: Year/Year Precipitation Trends (July 2016)

| Region | Southeast PA | | Central IN | | Central NJ | | Western PA | | Central IL | | Central OH | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Material Impact | AWK, WTR | | AWK, WTR | | AWK | | AWK | | AWK, WTR | | WTR | |
| Second Quarter 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 |
| Total Rainfall (Inches) | 9.4 | 10.4 | 14.8 | 14.1 | 9.5 | 7.3 | 16.9 | 12.2 | 20.0 | 8.9 | 13.1 | 11.1 |
| Days of Measurable Rainfall | 34 | 35 | 37 | 37 | 37 | 35 | 53 | 35 | 39 | 29 | 42 | 39 |
| Weather Impact: 2Q16 | Immaterial | | Immaterial | | Immaterial | | Tailwind | | Tailwind | | Immaterial | |
| July 2016 (3Q-to-date) | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 | 2015 | 2016 |
| Total Rainfall (Inches) | 2.5 | 6.8 | 13.1 | 5.5 | 3.1 | 7.1 | 3.1 | 4.3 | 5.8 | 5.0 | 0.9 | 6.3 |
| Days of Measurable Rainfall | 10 | 14 | 13 | 11 | 12 | 14 | 13 | 13 | 11 | 10 | 8 | 15 |
| Weather Impact: 3Q16 | Headwind | | Tailwind | | Headwind | | Immaterial | | Immaterial | | Headwind | |

*Source: Weather Underground, Boenning & Scattergood*

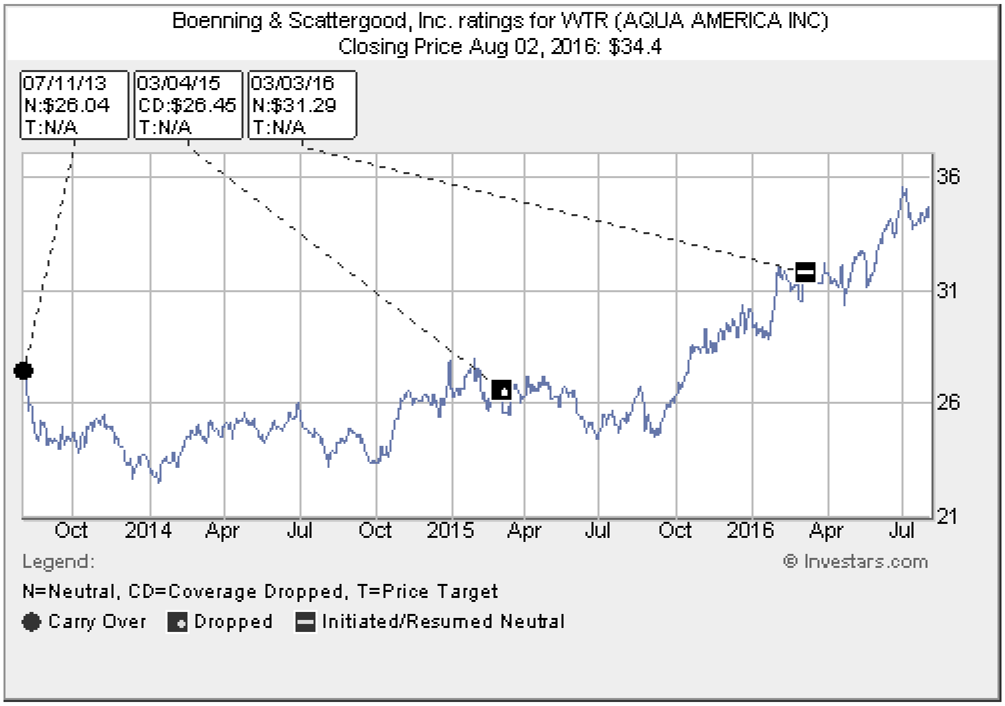
| **Aqua America Inc.** | | | | | | | | | | Boenning & Scattergood, Inc. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Quarterly Income Statement 2016E* | | | | | | | | | | *Ryan M. Connors* |
| *(in Thousands)* | **1Q16** | *yoy* | **2Q16** | *yoy* | **3Q16E** | *yoy* | **4Q16E** | *yoy* | **2016E** | *yoy* |
| **Operating Revenue** | **$192,607** | 1.2% | **$203,876** | -0.9% | **$219,946** | -0.5% | **$201,008** | 2.0% | **$817,437** | *0.4%* |
| Costs & Expenses | | | | | | | | | | |
| Operations & Maintenance | 73,541 | *0.5%* | 73,994 | *-7.2%* | 79,461 | 1.2% | 78,790 | 1.2% | 305,787 | *-1.1%* |
| Depreciation | 32,145 | *5.4%* | 31,619 | *1.8%* | 33,740 | 5.5% | 33,507 | 5.5% | 131,011 | *4.6%* |
| Amortization | 450 | *-47.0%* | 528 | *-42.9%* | 490 | -40.0% | 515 | -40.0% | 1,982 | *-42.5%* |
| Taxes ex-Income Taxes | 14,140 | *-3.3%* | 14,242 | *3.2%* | 14,956 | 2.0% | 12,098 | 1.0% | 55,436 | *0.7%* |
| Operating Expenses | 120,276 | *0.9%* | 120,383 | *-4.1%* | 128,647 | *2.1%* | 124,910 | *2.0%* | $494,216 | *0.2%* |
| Operating Income | 72,331 | *1.6%* | 83,493 | *4.0%* | 91,299 | *-4.0%* | 76,099 | *2.0%* | $323,221 | *0.7%* |
| *Operating Margin* | *37.6%* | | *41.0%* | | *41.5%* | | *37.9%* | | *39.5%* | |
| Other Expense (Income) | 17,587 | *-2.4%* | 18,352 | *2.3%* | 18,150 | *0.5%* | 18,150 | *4.7%* | $72,239 | *1.2%* |
| Interest Expense, Net | 19,853 | | 20,115 | | 20,000 | | 20,000 | | $79,968 | |
| AFUDC | (2,308) | | (1,871) | | (2,000) | | (2,000) | | (8,179) | |
| (Gain)Loss on Asset Sales | (207) | | (121) | | (50) | | (50) | | (428) | |
| (Gain)Loss on JV | 249 | | 229 | | 200 | | 200 | | 878 | |
| Income from Cont. Ops | 54,744 | *3.0%* | 65,141 | *4.6%* | 73,149 | *-5.0%* | 57,949 | *1.2%* | $250,982 | *0.5%* |
| Income Taxes | 3,007 | | 5,515 | | 5,852 | | 4,636 | | 19,010 | |
| *Tax Rate* | *5.5%* | | *8.5%* | | *8.0%* | | *8.0%* | | *7.6%* | |
| **Net Income (Cont Ops)** | **$51,737** | *6.6%* | **$59,626** | *3.9%* | **$67,297** | *-0.2%* | **$53,313** | *6.9%* | **$231,973** | *3.9%* |
| **EPS (Cont Ops)** | **$0.29** | *6.6%* | **$0.33** | *3.8%* | **$0.38** | *-0.5%* | **$0.30** | *6.4%* | **$1.30** | *3.7%* |
| Discontinued operations | | | | | | | | | | |
| Net Income (incl. Disc. Ops) | $51,737 | *6.6%* | $59,626 | *3.9%* | $67,297 | *-0.2%* | $53,313 | *6.9%* | $231,973 | *3.9%* |
| Shares Outstanding | 177,819 | | 178,084 | | 178,100 | | 178,100 | | 178,026 | |

*Source: Company filings; B&S Estimates*

Disclosure Appendix

## Disclosure Appendix

### Rating and Price Target History:




### Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

### Analyst Certification:

The research analyst whose name appears on this research report certify that: (1) all of the views expressed in this research report accurately reflect their personal views about the subject security or issuer, and (2) no part of the research analysts' compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analysts in this research report.

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- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

## Ratings Distribution (6/30/16):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 37% |
| Neutral (Hold) | 42% |
| Underperform (Sell) | 5% |
| Not Rated | 16% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 17% |
| Neutral (Hold) | 15% |
| Underperform (Sell) | 0% |
| Not Rated | 23% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

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Member FINRA/SIPC

# Aqua America, Inc.

**(WTR-NYSE)**

November 2, 2016

**Water | Environment**

| | |
|---|---|
| Rating/Risk: | Neutral/Low |
| Price: | $29.99 |
| Target Price: | NA |

## Another solid quarter for Aqua; Maintain Neutral on valuation.

**Investment Conclusion:** Aqua is among the best-run companies in the water space, and enjoys a structural advantage over peers given its majority position in the favorable regulatory jurisdiction of Pennsylvania. At the moment, Aqua belies the stereotype of humdrum water utility, with a much anticipated rate case filing on the horizon in PA, and management looking to diversify the portfolio by acquiring into regulated utility sectors outside of water. We rate WTR shares Neutral, with the current P/E of 21.4 times roughly in-line with the peer group average of 21.8 times.

**Key Points:**

- **3Q in-line as top line returns to growth, margins expand.** Aqua posted 3Q16 EPS of $0.41, modestly above consensus of $0.40, with revenue increasing 2.5% year-over-year and operating margin expanding 20 basis points to 43.2% versus 43.0% in 3Q15. EPS increased 8.5%, Aqua's best growth rate since 1Q15, with the combination of revenue growth and cost control (O&M expenses rose just 1.6% in 3Q, and are actually down 1.8% YTD through September 30) enabling solid bottom-line leverage. In addition, management affirmed the full-year 2016 EPS guidance range of $1.30-$1.35. Overall, it was a solid 3Q report for Aqua America, with the company leveraging its trademark cost discipline to drive a nice acceleration in earnings growth despite being deep into its rate cycle in its dominant Pennsylvania franchise territory.
- **Rate case pipeline active, but PA filing looms on horizon.** Aqua has received annualized rate relief of $5.5 million in 2016, including new base rates and infrastructure surcharges in Illinois, North Carolina, Ohio, Texas, Virginia, and New Jersey. The company has another $8.1 million in rate requests pending across several states, but "the big one" (Aqua's long-awaited rate filing in Pennsylvania – its first since the landmark repair tax deal) likely remains more than a year away in early 2017. In the typically staid world of regulated water utilities, Aqua Pennsylvania's upcoming rate case is shaping up as an important one for both the company and industry, and channel discussions suggest it is already a topic of lively conversation in Harrisburg.
- **Acquisition pipeline active; Another New Jersey deal on Nov. 8 ballot.** Year-to-date, Aqua has added 5,700 connections via acquisition across several states, including New Jersey, where the company faces stiff competition for deals from larger rivals. Aqua appears determined to continue building its New Jersey business, with residents of Westville, NJ set to vote November 8th on whether to allow Aqua to acquire the water system for $8.4 million. With the regulatory climate in NJ improving (now a Top Five state in our rankings), the decision to expand in the state is well timed. Still, the competitive deal environment may be forcing Aqua to compromise somewhat on terms (the Westville deal would require Aqua to freeze rates for five years).
- **Ex-water acquisitions remain a wild card; Time will tell.** Aqua is unique among listed water utilities for unapologetically maintaining that it sees navigating the regulated return system as its core competency, and for its confidence that it can leverage this skill set to drive shareholder value in a multi-utility format. Parallel to its ongoing bolt-on strategy in water, Aqua is seeking deals in other utility sectors, and we expect to see a transaction at some point (with gas the most likely option). For our part, we've come around to the idea, particularly if financed as a stock deal, enabling Aqua to leverage its premium valuation as currency. While there's no way of knowing if/when a deal gets done, this is an important point of differentiation versus peers.

**EPS**

| Current | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2015A | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 |
| 2016E* | $0.29 | $0.33 | $0.41 | $0.31 | $1.34 |
| 2017E | $0.29 | $0.35 | $0.45 | $0.31 | $1.40 |

**Q1, Q2, & Q3 represent actual results*

| Prior | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | $0.29 | $0.33 | $0.38 | $0.30 | $1.30 |
| 2017E | $0.29 | $0.36 | $0.42 | $0.31 | $1.38 |

| Consensus | Q1 | Q2 | Q3 | Q4 | FY |
|---|---|---|---|---|---|
| 2016E | $0.28 | $0.33 | $0.40 | $0.30 | $1.33 |
| 2017E | $0.28 | $0.35 | $0.44 | $0.32 | $1.40 |

**Market Data**

| | |
|---|---|
| Current Price | $29.99 |
| 52-Week Range: | $28.05 - $35.83 |
| Market Cap. (M) | $5,318 |
| Shares Out. (M): | 177.3 |
| Avg. Daily Vol. (Shs.Th.): | 898.6 |
| ADTV (M): | $26.95 |

**Valuation**

| | |
|---|---|
| P/E 2016E | 22.3x |
| P/E 2017E | 21.4x |

**Capitalization**

| | |
|---|---|
| Book Value / Share: | $9.37 |
| Enterprise Value (M): | $7,176.4 |
| Dividend / Share: | $0.77 |
| Dividend Yield: | 2.6% |

*Source: Capital IQ, B&S Estimates*

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# Disclosure Appendix

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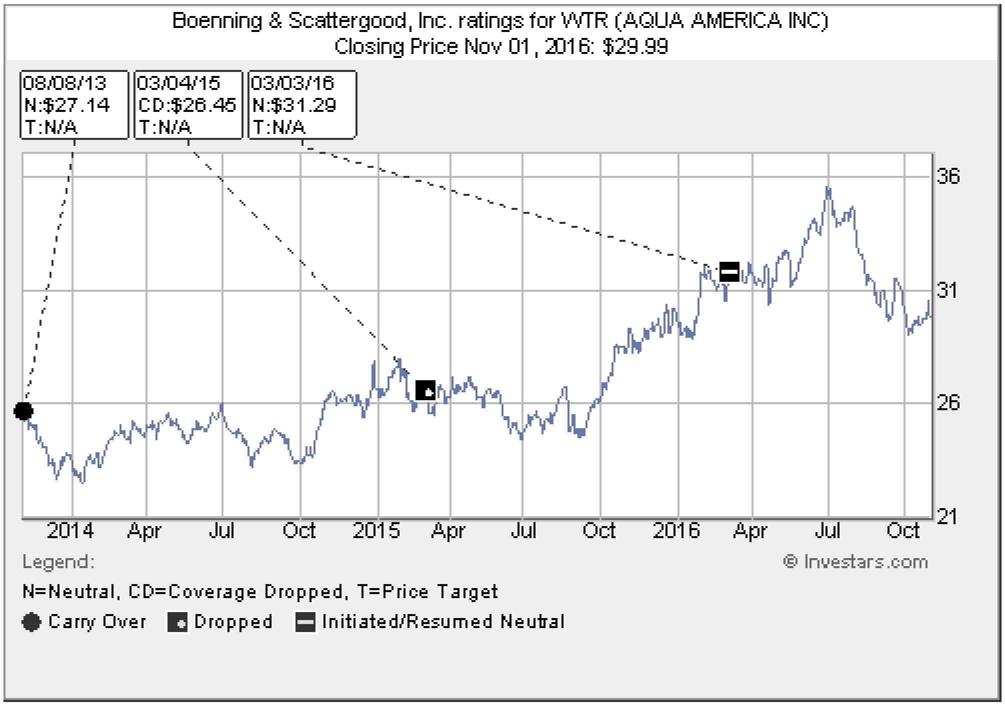


## Risk Factors:

The realization of any or all of the following risk factors, among others, may adversely affect the company's stock: regulatory lag; economic regulation; environmental law; water availability; weather; funding; and inputs.

## Analyst Certification:

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- ***High:*** The security has lower-than-average fundamental predictability and/or higher-than-average price volatility.
- ***Speculative:*** The security has very inconsistent fundamental predictability and/or very high relative price volatility.

## Ratings Distribution (9/30/16):

| Coverage Universe (a) | % of Universe |
|---|---|
| Outperform (Buy) | 28% |
| Neutral (Hold) | 52% |
| Underperform (Sell) | 7% |
| Not Rated | 12% |

| Investment Banking Clients (b) | % of Rating Group |
|---|---|
| Outperform (Buy) | 17% |
| Neutral (Hold) | 12% |
| Underperform (Sell) | 0% |
| Not Rated | 20% |

(a) Total may not add up to 100% due to rounding.
(b) Related to services provided within the past 12 months.

# Water Sector: Flash Update

August 19, 2016

Water | Environment

## Act 12 Update: PUC gets vastly different views from utilities, consumer advocate in public comments; OCA digging in on Utility Valuation Expert (UVE) setup.

**Summary:** Our analysis of public comments on Act 12 filed in recent days by PA water utilities and the state's Office of Consumer Advocate suggests an unusually spirited debate taking shape in a jurisdiction usually known for cordial and seamless adoption of progressive regulation. Much of the debate centers on how much discretion "Utility Valuation Experts" will have in conducting their fair value analysis and how they will be compensated – key issues that will have a material impact on whether Act 12 is able to successfully drive an acceleration in municipal acquisitions by investor-owned utilities. While Act 12 remains a notable positive development that will create growth opportunities for PA water utilities, we believe that the impact will be incremental rather than transformational, with deal flow starting slowly and being mostly on the bold-on side.

- **OCA: UVE system "will encourage inflation of fair market value".** In hard-hitting official feedback on the Act 12 tentative implementation order (click HERE for full document), the PA Office of Consumer Advocate requests that the PUC make a range of material changes. Issues raised by the OCA include DSIC (objecting to immediate post-deal DSIC hikes) and how "fair value" amounts will be divvied up into specific rate base plant accounts; but the most extensive pushback came on the Utility Valuation Expert (UVE) system. The OCA takes issue with various elements of the current UVE setup, including qualifications, conflicts of interest, valuation methods, fiduciary duties, jurisdiction of approvals, and (most stridently) UVE fees. The OCA notes the risk that the existing approach of capping fees at 5% of total deal value may "encourage the inflation of the fair market value by appraisers", and suggests implementing a flat fee/hours worked approach that will help mitigate the incentive to puff up valuations.

- **American Water: Hefty document belies largely benign comments.** American Water's was by far the *largest* document filed in response to the PUC's request for comments on the Act 12 tentative implementation order (click HERE for the 58 page filing), but the issues raised by the company are more procedural than structural – suggesting that American Water is generally satisfied with the current setup. On UVE fees, American Water takes a position nearly opposite that of the OCA, saying that allowing the PUC "discretion to approve fees above the (5%) cap is critically important to the successful implementation of Act 12". American Water also notes that the inclusion of traditional original cost valuation as one element of the assessment creates "an implementation process that is contrary to the language of Section 1329 (the relevant law), confusing, and administratively burdensome". In our view, these comments confirm that the principal motivation for investor-owned utilities is coaxing municipal sellers to the bargaining table, with price a secondary concern so long as the entire deal price goes into rate base.

- **Aqua America: "Presumption of Reasonableness" should prevail.** A good deal of Aqua's comments are focused on administrative aspects of the current implementation order, which the company believes are onerous (the current checklist for a typical Act 12 deal application includes 65 documents vs. five). Like American Water, Aqua objects to the requirement that cost-based valuation be included in the engineering report, stating flatly that "the language of the (Act 12) statute does not reference the use of original cost valuation". Aqua says the PUC should make a "presumption of reasonableness" on UVE fees and that extensive documentation requirements on how UVE fees are derived should be relaxed (click HERE for Aqua's entire filing). UVEs stand to become pivotal players in Act 12 transactions, and both Aqua's and American Water's comments suggest a desire to grant UVEs as much leeway and flexibility as possible in order to prevent excessively rigid rules from keeping a lid on valuations.

### Coverage Universe

A.O. Smith Corp.
AOS-$93.90-Outperform; TP: $100.00

American Water Works, Inc.
AWK-$77.40-Neutral

Badger Meter Inc.
BMI-$69.19-Neutral

Crane Corporation
CR-$64.99-Outperform; TP: $65.00

Franklin Electric Co., Inc.
FELE-$39.46-Outperform; TP: $42.00

Flowserve Corporation
FLS-$48.85-Neutral

The Gorman-Rupp Company
GRC-$27.06-Neutral

Lindsay Corporation
LNN-$71.74-Neutral

Mueller Water Products, Inc.
MWA-$12.18-Neutral

Valmont Industries, Inc.
VMI-$130.93-Neutral

Advanced Drainage Systems, Inc.
WMS-$24.90-Neutral

Aqua America, Inc.
WTR-$31.79-Neutral

Watts Water Technologies, Inc.
WTS-$65.00-Outperform; TP: $70.00

Xylem, Inc.
XYL-$50.44-Outperform; TP: $50.00

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## Disclosure Appendix

### Rating and Price Target History:

Note: Please refer to http://www.boenninginc.com/research/disclosures/ for analyst certifications, important disclosures regarding possible conflicts of interest, ratings definitions, ratings distribution, recommendation histories, and other disclosures concerning the recommendations referenced herein. Alternatively, call 800-883-1212 or write to Boenning & Scattergood, Inc. at Four Tower Bridge, 200 Barr-Harbor Drive, West Conshohocken, PA 19428 to the attention of the analyst listed on the front page of this report.

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# Aqua America, Inc. (WTR)

## Q4 Conference Call Highlights

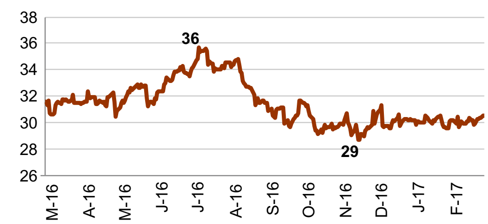
**Reiterate Neutral rating after WTR's Q4 conference call.** Q4 results missed our/consensus revenue estimates due to the exit of market-based businesses, but beat on the bottom line. WTR achieved the low end of its customer growth targets, and believes its municipal acquisition strategy will contribute to revenue growth in 2017. WTR plans to file for DSIC in 2017 and a full rate case in 2018, which should help EPS growth. That said, we continue to believe shares are fairly valued at current levels.

- **The exit of market-based business segments offset revenue increases in Q4, but management reiterated FY:17 guidance.** Lower revenue due to the sale of market-based business segments more than offset increased revenue from customer growth and rate recovery mechanisms in Q4. Management reiterated its FY:2017 EPS guidance of $1.34 to $1.39 and capital investment of $450M. For additional details about Q4 performance see: Q4 Results First Look.
- **WTR grew its customer base 1.6%, which is in line with its targets, but the majority of customer growth was organic.** While WTR was within its guided customer growth range, overall customer growth was down 0.3% y/y from 1.9% growth in 2015. The company added ~6,558 customers through 19 acquisitions in 2016, which represents ~0.7% customer growth, down from 1.1% customer growth via acquisitions in 2015. Organic growth was a larger percentage of total customer growth in 2016 (~8,700 customers, ~0.9% of growth) than 2015, and we would have liked to see more customers added via acquisition.
- **That said, WTR expects its strategy of focusing on larger municipal acquisitions will begin to pay off in 2017.** WTR has four municipal deals it expects will close in 2017, totaling nearly 9,000 customers. We expect the acquisition environment to remain favorable following positive legislative changes in key states (such as fair market value legislation), and WTR should benefit from its strategy emphasizing municipal water/wastewater acquisitions.
- **WTR has almost completed divestment from market-based businesses.** WTR's regulated segment made up >98% of revenues in Q4 as WTR continues to divest from market-based businesses. Management indicated the company only has one market-based business left and plans to divest shortly. While these divestments reduced revenue, management believes it should ultimately be beneficial for net income.
- **WTR tentatively plans to file for a DSIC in 2017, which may provide rate relief towards the end of the year.** WTR expects to file to recover revenue in 2017, with a full rate case in 2018. Under this timeline, new rates from a 2018 rate case filing should come into effect in 2019.
- **We will update our financial model after WTR's 10-K is filed.**

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### RESEARCH UPDATE

#### 1-Year Price Chart




#### Stock Data

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (2/23/17): | $30.75 |
| Market Cap (mil): | $5,470 |
| Shares Out (mil): | 177.9 |
| Average Daily Vol (mil): | 0.62 |
| Dividend Yield: | 2.5% |

#### Estimates

| FY Dec | 2015A | 2016A | 2017E |
|---|---|---|---|
| Q1 | 0.27 A | 0.29 A | |
| Q2 | 0.32 A | 0.33 A | |
| Q3 | 0.38 A | 0.41 A | |
| Q4 | 0.28 A | 0.28 A | |
| **Fiscal EPS** | **1.26 A** | **1.32 A** | **1.34 E** |
| Fiscal P/E | 24.4x | 23.3x | 22.9x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, in line with peers when fully valued (20x-22x 2018E EPS), reflecting average EPS growth opportunities and generally more constructive regulatory mechanisms.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

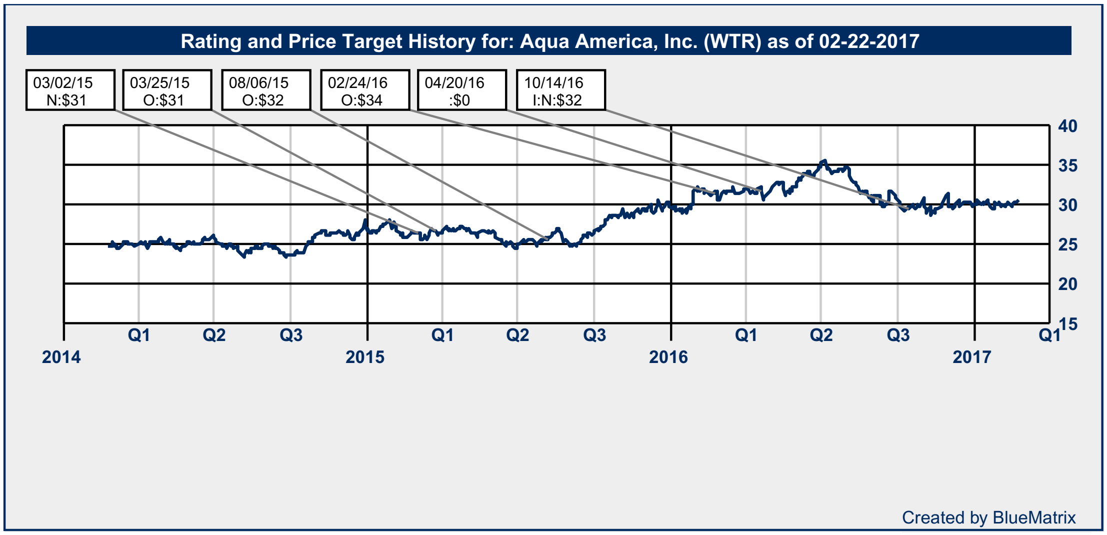
**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Appendix - Important Disclosures and Analyst Certification

Approved on 23 February 2017 14:49EST/ Published on 23 February 2017 14:49EST.




1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR.

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# Aqua America, Inc. (WTR)

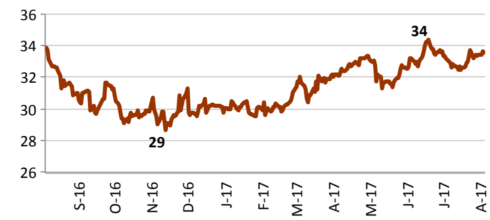
## Q2 First Look

**Reiterate Neutral rating after Q2 earnings release.** WTR missed estimates on the top line but was in line on EPS due to lower operating expenses. Importantly, the company reaffirmed EPS guidance of $1.34 to $1.39 for 2017, and indicated it is on track to invest more than $450M in capital improvements. WTR has received $11M in annualized revenue increases in 2017 ($14M pending) and has four additional acquisitions under contract (three expected to close by YE:17). We will look for additional information on the conference call.

- **Q2 results missed on the top line but were in line on EPS due to lower operating expenses.** Q2 revenue was ~$203M vs. our/consensus estimates of $209M/$208M. Net income was $61M vs. $58M/$61M, and EPS was $0.34 vs. $0.33/$0.34.
- **WTR reaffirmed 2017 guidance.** WTR continues to expect $1.34 to $1.39 in EPS, same-system O&M expenses to increase 1% to 2%, and more than $450M in capital investments during 2017 (>$1.2B through 2019). WTR has invested ~$208.5M in water infrastructure through 1H:17. Additionally, WTR affirmed its expectation of 1.5%-2.0% total customer growth.
- **We believe WTR should be able to achieve its customer growth targets of 1.5%-2% in 2017.** WTR added ~1,000 customer connections in 1H:17, and its acquisitions and organic customer growth have increased WTR's customer base by 0.5%. Importantly, WTR has three additional municipalities under contract which should close by YE:17, and a fourth municipality expected to close in 2018.
- **Rate increases and surcharges continue to contribute to revenue growth.** WTR has received $11M in annualized revenue increases thus far in 2017 due to favorable decisions in rate cases and infrastructure charges in six states. Additionally, a decision on a total of ~$14M in annualized revenue increase is pending in Illinois and Virginia, although the timing of potential regulatory approvals remains unclear.
- **WTR's Q2 earnings call will be held today at 10:00 a.m. CT**. The call can be accessed at www.ir.aquaamerica.com. We will update our model following the call.

### RESEARCH UPDATE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (8/2/17): | $33.58 |
| Market Cap (mil): | $5,977 |
| Shares Out (mil): | 178.0 |
| Average Daily Vol (mil): | 0.57 |
| Dividend Yield: | 2.3% |

**Estimates**

| FY Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| Q1 | 0.29 A | 0.28 A | |
| Q2 | 0.33 A | 0.34 A | |
| Q3 | 0.41 A | 0.43 E | |
| Q4 | 0.28 A | 0.31 E | |
| **Fiscal EPS** | **1.32 A** | **1.34 E** | **1.46 E** |
| Fiscal P/E | 25.4x | 25.1x | 23.0x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

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**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

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**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, below peers (~25x 2018E EPS), which we believe will expand as WTR executes on EPS growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

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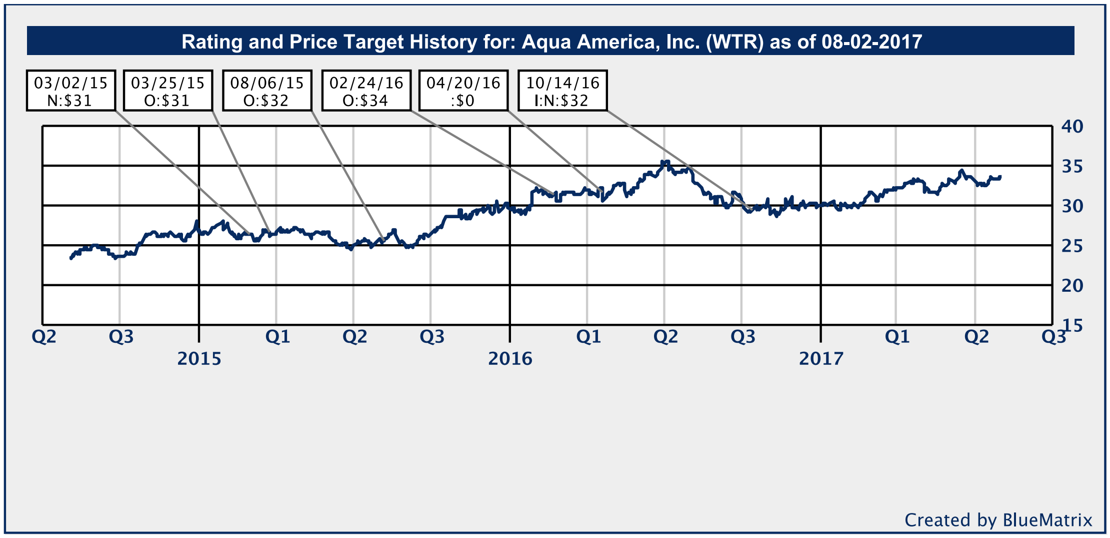
# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Appendix - Important Disclosures and Analyst Certification

Approved on 2 August 2017 21:51EDT/ Published on 3 August 2017 01:00EDT.

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# Aqua America, Inc. (WTR)

## Q3 First Look

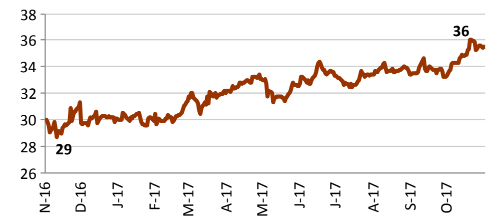
**Reiterate Neutral rating after Q3 earnings release.** WTR reported results which were in-line with our/consensus EPS estimates. Importantly, the company reaffirmed EPS guidance of $1.34 to $1.39 for 2017, and indicated it is on track to invest more than $450M in capital improvements. WTR has received $21.4M in annualized revenue increases in 2017 ($14.1M pending) and has five additional acquisitions under contract. We will look for additional information on the conference call.

- **Q3 results missed our/consensus revenue estimates, but were in-line on the bottom line due to lower operations and maintenance expenses.** Q3 revenue was ~$215M vs. our/consensus estimates of $240M/$236M, largely due to lower water demand stemming from wet weather in WTR's service territory. That said, net income was $76M vs. $76M/$76M, and EPS was $0.43 vs. $0.43/$0.43, respectively, due to lower water production expenses.
- **WTR reaffirmed 2017 guidance.** WTR expects $1.34 to $1.39 in EPS, same-system O&M expenses to increase less than 2%, and more than $450M in capital investments during 2017 (>$1.2B through 2019). WTR has invested ~$337.7M in water infrastructure through Q3:17. Additionally, WTR reaffirmed its expectation of 1.5%-2.0% total customer growth.
- **We believe WTR should be able to achieve its customer growth targets of 1.5%-2% in 2017.** WTR has added ~1,000 customer connections in Pennsylvania and Indiana through Q3:17, and acquisitions and organic customer growth have increased WTR's customer base by 0.8%. Importantly, WTR has five additional municipalities under contract (totaling 15,700 customers, including the acquisition which already closed in 2017) though some deals may not close until 2018.
- **Rate increases and surcharges continue to contribute to revenue growth.** WTR has received $21.4M in annualized revenue increases thus far in 2017 due to favorable decisions in rate cases and infrastructure charges in six states. Additionally, a decision on a total of ~$14.1M in annualized revenue increase is pending in Illinois, North Carolina, and Virginia, although the timing of potential regulatory approvals remains unclear.
- **WTR's Q3 earnings call will be held today at 10:00 a.m. CT**. The call can be accessed at www.ir.aquaamerica.com. We will update our model following the call.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

**RESEARCH UPDATE**

### 1-Year Price Chart




### Stock Data

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (10/31/17): | $35.48 |
| Market Cap (mil): | $6,315 |
| Shares Out (mil): | 178.0 |
| Average Daily Vol (mil): | 0.45 |
| Dividend Yield: | 2.3% |

### Estimates

| FY Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| Q1 | 0.29 A | 0.28 A | |
| Q2 | 0.33 A | 0.34 A | |
| Q3 | 0.41 A | 0.43 A | |
| Q4 | 0.28 A | 0.30 E | |
| **Fiscal EPS** | **1.32 A** | **1.34 E** | **1.46 E** |
| Fiscal P/E | 26.9x | 26.5x | 24.3x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/ wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** The majority of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth.

**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions.

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, below peers (~25x 2018E EPS), which we believe will expand as WTR executes on EPS growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

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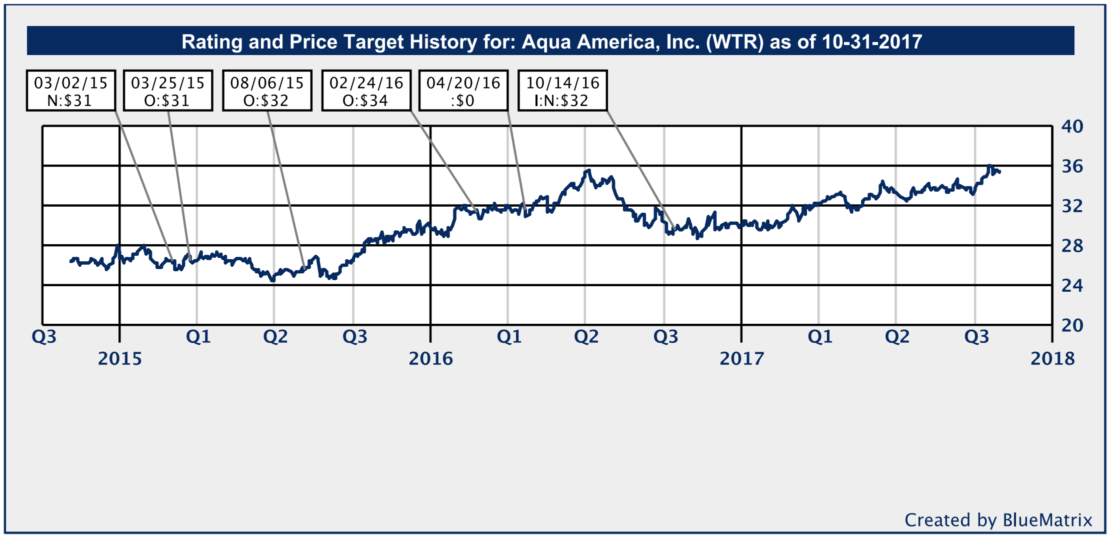
Approved on 31 October 2017 19:37EDT/ Published on 1 November 2017 01:00EDT.

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# Aqua America, Inc. (WTR)

## In-line EPS Driven by Cost Cuts

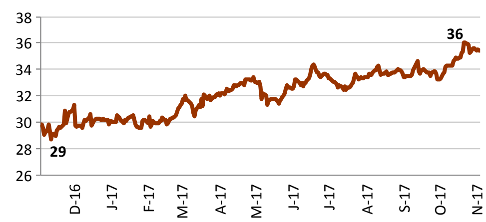
**Reiterate Neutral rating and raising price target to $38.** WTR filed for a DSIC in Pennsylvania, and expects to file for a GRC next year, which should contribute to revenue growth. WTR has 14,925 customers in pending acquisitions, which should enable WTR to reach customer growth targets, and the company is targeting larger, municipal acquisitions with a solid pipeline. While we acknowledge WTR is trading at a discount to peers, we remain Neutral-rated and will look for execution on EPS growth before becoming more constructive.

- **Lower water demand due to wet weather across WTR's service territory offset increases in regulated revenue in Q3, but lower operations and maintenance expenses contributed to a ~5% increase in EPS, y/y.** Operating revenue fell ~5% y/y as favorable rate decisions and regulated customer growth (+$2.8M y/y) were more than offset by a $11.6M revenue headwind from reduced water consumption, particularly in Texas, Ohio, and the East Coast. For more information, please see Q3 First Look.
- **EPS increased ~5% y/y as net expense decreases, tax repair benefits, and favorable rate decisions more than offset lower consumption.** Importantly, operations and maintenance expenses fell ~15% y/y (from $79.8M in Q3:16 to $68.0M in Q3:17) due to lower production costs (~25%), lower costs for market-based activities (~35%), and reduced employee-related costs (~36%). Together, lower expenses contributed ~$0.027 to EPS in Q3.
- **WTR filed for an infrastructure surcharge in Pennsylvania effective October 1, and could file up to two more infrastructure surcharges ahead of its general rate case filing, which is expected in 2018.** WTR filed for a 2.5% infrastructure surcharge in Pennsylvania and was awarded an annualized revenue increase of ~ $9.7M. Management indicated WTR could file for up to two more surcharges ahead of its expected general rate case filing in 2018 (to take effect 2019).
- **WTR has five pending acquisitions which should contribute to growth in the intermediate term.** WTR has five municipal deals pending, totaling ~14,925 customers and a $146M purchase price (in addition to a 740-customer acquisition in Pennsylvania which already closed), but multiple deals are towards the lower end of the company's target size range (2,500-25,000 customers). We expect the acquisition environment to remain favorable following positive legislative changes in key states (such as fair market value legislation), and we expect WTR to target larger, municipal acquisitions in the intermediate term.
- **Rolling forward valuation to 2019 and raising price target to $38.** Our $38 price target is ~24x our 2019 EPS estimate, below peers (~25x 2019E EPS), which we believe could expand as WTR executes on EPS growth.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### RAISING PRICE TARGET

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target/Previous: | ▲$38/$32 |
| Price (11/1/17): | $35.43 |
| Market Cap (mil): | $6,310 |
| Shares Out (mil): | 178.1 |
| Average Daily Vol (mil): | 0.44 |
| Dividend Yield: | 2.3% |

**Estimates**

| FY Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| Q1 | 0.29 A | 0.28 A | |
| Q2 | 0.33 A | 0.34 A | |
| Q3 | 0.41 A | 0.43 A | |
| Q4 | 0.28 A | 0.30 E | |
| **Fiscal EPS** | **1.32 A** | **1.34 E** | **1.46 E** |
| Fiscal P/E | 26.8x | 26.4x | 24.3x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Details

**Updating estimates to reflect Q3 results and introducing 2019 estimates**. For 2017 we now estimate revenue of $817M and EPS of $1.34 vs. our prior estimates of $842M/$1.34. For 2019, we estimate revenue of $921M and EPS of $1.55, vs consensus estimates of $946M/$1.55.

# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** The majority of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth.

**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions.

**Valuation.** Our $38 price target is ~24x our 2019 EPS estimate, below peers (~25x 2019E EPS), which we believe will expand as WTR executes on EPS growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Aqua America
## (WTR - NYSE)

| Income Statement (in millions) | 2012 | 2013 | 2014 | 2015 | 2016 | Q1:17A | Q2:17A | Q3:17A | Q4:17E | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenue** | 770.5 | 768.6 | 779.9 | 814.2 | 819.9 | 187.8 | 203.4 | 215.0 | 210.8 | 817.0 | 877.0 | 921.4 |
| *Growth (%)* | *6%* | *0%* | *1%* | *4%* | *1%* | *-2%* | *0%* | *-5%* | *7%* | *0%* | *7%* | *5%* |
| **Expenses** | | | | | | | | | | | | |
| O&M | 278.7 | 285.3 | 288.6 | 309.3 | 304.9 | 69.1 | 70.9 | 68.0 | 81.4 | 289.4 | 297.0 | 313.4 |
| Depreciation | 113.6 | 119.3 | 123.1 | 125.3 | 131.0 | 33.8 | 33.4 | 34.3 | 34.0 | 135.5 | 141.6 | 148.7 |
| Amortization | 5.5 | 5.5 | 3.5 | 3.4 | 2.0 | 0.2 | 0.1 | 0.0 | 0.7 | 1.0 | 1.1 | 1.1 |
| Taxes other than income tax | 48.6 | 53.3 | 50.5 | 55.1 | 56.4 | 14.7 | 14.4 | 15.2 | 13.6 | 57.9 | 59.5 | 61.2 |
| **Total Expense** | 446.4 | 463.4 | 465.5 | 493.1 | 494.3 | 117.9 | 118.8 | 117.5 | 129.7 | 483.9 | 499.1 | 524.5 |
| *Expense Growth (%)* | *1%* | *4%* | *0%* | *6%* | *7%* | *-2%* | *-1%* | *-9%* | *4%* | *4%* | *1%* | *6%* |
| **EBITDA** | 443.2 | 430.0 | 440.9 | 449.8 | 458.6 | 103.9 | 118.1 | 131.8 | 115.8 | 469.7 | 520.5 | 546.7 |
| **EBIT** | 324.1 | 305.2 | 314.4 | 321.1 | 325.6 | 69.9 | 84.6 | 97.5 | 81.1 | 333.1 | 377.9 | 396.9 |
| *EBIT Margin* | *42.1%* | *39.7%* | *40.3%* | *39.4%* | *39.7%* | *37.2%* | *41.6%* | *45.3%* | *38.5%* | *40.8%* | *43.1%* | *43.1%* |
| *Growth (%)* | *13%* | *-6%* | *3%* | *2%* | *1%* | *-3%* | *1%* | *0%* | *13%* | *2%* | *13%* | *5%* |
| Other expense (income) | 72.5 | 74.9 | 71.3 | 69.8 | 71.4 | 17.9 | 17.9 | 18.5 | 22.5 | 76.7 | 84.0 | 84.0 |
| Equity loss in JV | 1.7 | (1.0) | (4.0) | (2.2) | 1.0 | (0.0) | (0.2) | 0.6 | 0.5 | 0.9 | 5.0 | 5.0 |
| Pretax Income | 253.3 | 229.4 | 239.1 | 249.1 | 255.2 | 52.0 | 66.5 | 79.6 | 59.1 | 257.3 | 298.9 | 317.9 |
| *PT Margin* | *32.9%* | *29.8%* | *30.7%* | *30.6%* | *31.1%* | *27.7%* | *32.7%* | *37.0%* | *28.1%* | *31.5%* | *34.1%* | *34.5%* |
| Income Tax Expense | 67.9 | 24.8 | 25.2 | 26.0 | 21.0 | 2.9 | 5.6 | 3.4 | 6.5 | 18.4 | 38.9 | 41.3 |
| **Net Income** | 184.5 | 204.6 | 213.9 | 223.1 | 234.2 | 49.1 | 61.0 | 76.2 | 52.6 | 238.9 | 260.0 | 276.6 |
| Shares Outstanding, Diluted | 174.9 | 176.8 | 177.8 | 177.8 | 177.9 | 178.0 | 178.0 | 178.1 | 178.1 | 178.1 | 178.1 | 178.1 |
| **EPS** | $1.05 | $1.16 | $1.20 | $1.26 | $1.32 | $0.28 | $0.34 | $0.43 | $0.30 | $1.34 | $1.46 | $1.55 |
| *Growth (%)* | *22%* | *10%* | *4%* | *4%* | *5%* | *-5%* | *2%* | *4%* | *6%* | *2%* | *9%* | *6%* |
| **EPS including Disc Ops** | $1.05 | $1.05 | $1.31 | $1.26 | $1.32 | $0.28 | $0.34 | $0.43 | $0.30 | $1.34 | $1.46 | $1.55 |
| **Expense Ratios (% Total Rev)** | | | | | | | | | | | | |
| O&M | 36.2% | 37.1% | 37.0% | 38.0% | 37.2% | 36.8% | 34.8% | 31.6% | 38.6% | 35.4% | 33.9% | 34.0% |
| Depreciation | 14.7% | 15.5% | 15.8% | 15.4% | 16.0% | 18.0% | 16.4% | 15.9% | 16.1% | 16.6% | 16.1% | 16.1% |
| Amortization | 0.7% | 0.7% | 0.4% | 0.4% | 0.2% | 0.1% | 0.1% | 0.0% | 0.3% | 0.1% | 0.1% | 0.1% |
| Taxes other than income tax | 6.3% | 6.9% | 6.5% | 6.8% | 6.9% | 7.8% | 7.1% | 7.1% | 6.4% | 7.1% | 6.8% | 6.6% |

Source: Company Reports & Baird estimates



**11/2/17**

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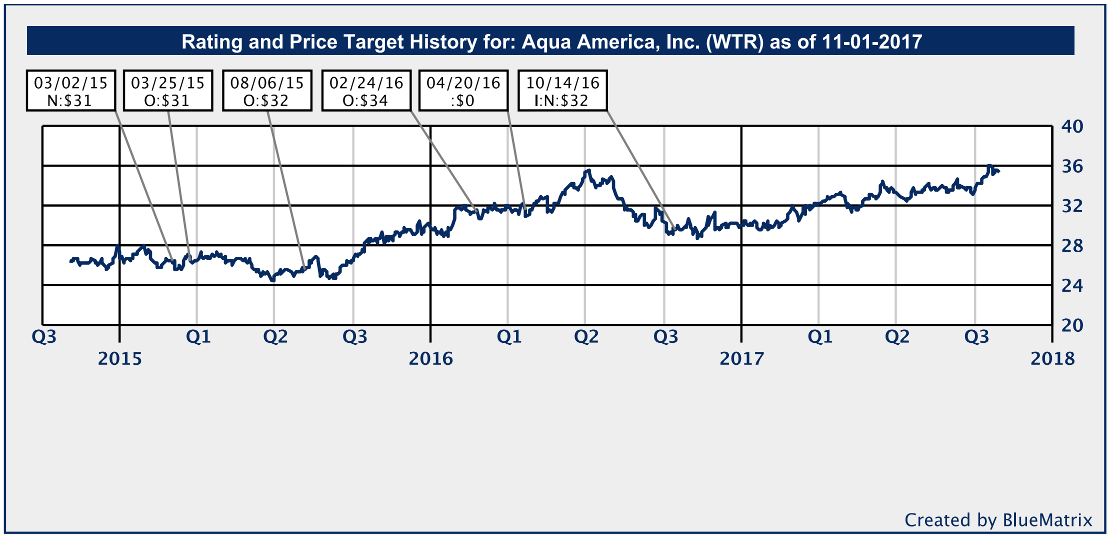
# Appendix - Important Disclosures and Analyst Certification

Approved on 1 November 2017 23:14EDT/ Published on 2 November 2017 01:00EDT.

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# Aqua America, Inc. (WTR)

## Initiating at Neutral Given Near-Term Growth Uncertainty

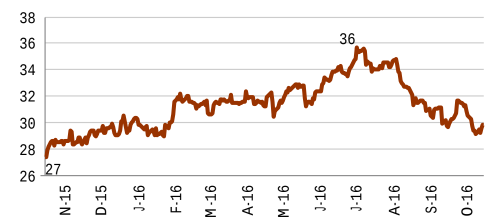
**We are initiating with a Neutral rating and a $32 price target**. WTR is the second-largest IOU, with solid long-term prospects given its capital investment strategy and successful track record of growth through acquisitions. That said, WTR is currently overearning in several key states, making it more difficult for the company to increase revenue through capital investments. We believe this could make it difficult to outperform peers in the intermediate term, and are waiting for a clearer path to near-term revenue growth before becoming more constructive.

- **We are adding water utilities (WTR, AWK, CWT) to our coverage as water and water infrastructure continue to become a larger theme in resource management.** We believe water utilities will continue to attract new investor interest given their strong regulatory support, favorable backdrop for CAPEX and industry consolidation, and NIMBY headlines relating to water and utility projects. Additionally, water utilities have scarcity value and end market crossover with other companies in our coverage, including ITRI and CCC.
- **Aqua America is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA, and the company has completed over 75 acquisitions in the past five years to help drive growth.
- **WTR is currently overearning in several states, which may mute earnings growth from near-term capital investment.** As a result, WTR may have to rely more heavily on acquisitions to drive EPS. That said, the company has $1.1B in capital investment planned through 2018, and should have a new rate filing in PA become effective in 2019, positioning the company for revenue and earnings growth over the long term.
- **Constructive regulatory mechanisms could increase profitability in the long run**. The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which could lead to a premium peer valuation over time.
- **Focused acquisition growth strategy has increased M&A opportunities**. We expect M&A to remain at heightened levels reflecting recent positive legislative changes in key states.
- **$32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### INITIATING COVERAGE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (10/13/16): | $29.77 |
| Market Cap (mil): | $5,302 |
| Shares Out (mil): | 178.1 |
| Average Daily Vol (mil): | 0.72 |
| Dividend Yield: | 2.6% |

**Estimates**

| FY Dec | 2015A | 2016E | 2017E |
|---|---|---|---|
| Q1 | 0.27 A | 0.29 A | |
| Q2 | 0.32 A | 0.33 A | |
| Q3 | 0.38 A | 0.38 E | |
| Q4 | 0.28 A | 0.31 E | |
| **Fiscal EPS** | **1.26 A** | **1.32 E** | **1.37 E** |
| Fiscal P/E | 23.6x | 22.6x | 21.7x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Details

## Investment Highlights

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $350-$360 million annual capex investment, (~2.6x depreciation). $1.1B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth.

**M&A opportunities expand with focused growth strategy.** WTR completed 16 acquisitions in 2015, providing 1.1% to WTR's overall customer growth of 1.9%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Potential expansion into non-regulated water space could drive growth in the long run.** The company has recently divested from many of its market-based businesses that it considers too risky and hard to grow. WTR is actively evaluating other market-based activity, and believes that it will contribute to growth in the long run, but does not foresee non-regulated business becoming more than 15% to 20% of Aqua America. WTR has also indicated that it would consider moving into other regulated utility space, believing the core competencies of the regulated water utility market would be profitable in other utility spaces.

**FIGURE 1: BAIRD VERSUS CONSENSUS ESTIMATES (2016E-2018E)**

| | 2016E | | 2017E | | 2018E | |
|---|---|---|---|---|---|---|
| | Baird Estimates | Consensus Estimates | Baird Estimates | Consensus Estimates | Baird Estimates | Consensus Estimates |
| Operating Revenue | $831.7 | $830.4 | $870.8 | $882.6 | $927.2 | $943.7 |
| Growth | | | 4.7% | 6.3% | 6.5% | 6.9% |
| Net Income | $234.7 | $236.0 | $243.5 | $248.4 | $262.6 | $266.5 |
| EPS | $1.32 | $1.33 | $1.37 | $1.40 | $1.47 | $1.50 |

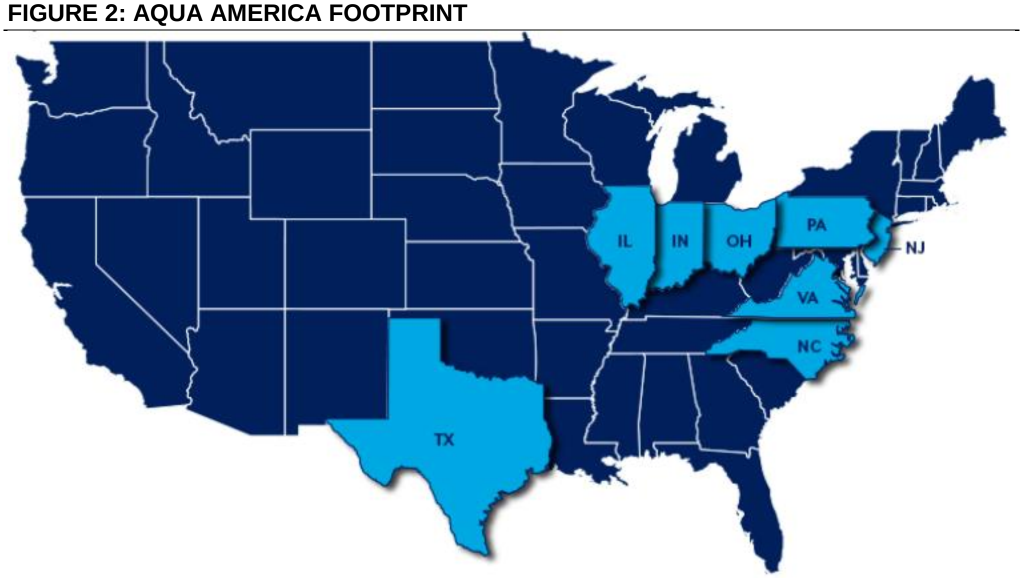
*Source: FactSet, Baird Estimates*

**We are initiating with a Neutral rating and a $32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

## Company Overview

**Aqua America is the second-largest investor-owned water utility in the US.** WTR is a holding company for numerous regulated water and wastewater utilities operating in eight states largely in the eastern half of the U.S. that serve almost 3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**FIGURE 2: AQUA AMERICA FOOTPRINT**




*Source: Company Reports*

## Industry Overview

**The United States' public water system provides water to the vast majority of Americans.** US water utilities are broken down into municipal systems and investor-owned utilities. Municipal systems are owned and operated by local governments and account for ~84% of all community water systems, according to the EPA. The current water utility industry is highly fragmented, consisting of ~53k community water systems and ~16k community waste water facilities.

**Consolidation in the industry revolves around small and medium-sized systems.** According to the Environmental Protection Agency (EPA), 1.2% of community systems are "large" (defined as serving over 100,000 people), 16.0% are "medium" (serving 3,301 to 100,000 people) and 82.8% are "small" (serving less than 3,300 people). Large community water systems are believed to serve 46.3% of the population, however, while medium and small systems serve 45.6% and 8.1%, respectively. Smaller systems generally cannot take advantage of economies-of-scale like larger systems, which leads to higher costs per customer. This makes smaller systems attractive acquisition targets for larger investor-owned utilities.

**FIGURE 3: STATE COMMUNITY WATER SYSTEM 20-YEAR NEED BY SIZE AND POPULATION ($B)**

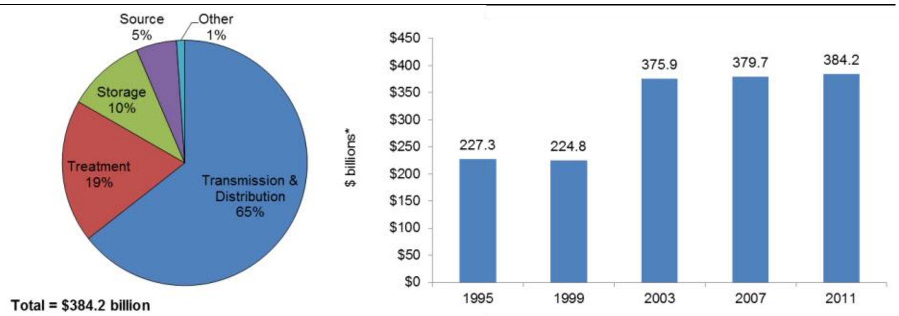
| System Size | Need | | Water Systems | | Population Served | |
|---|---|---|---|---|---|---|
| | $ Billions | % of Need | Number of Systems‡ | % of Water Systems‡ | Population (millions)§ | % of Population Served§ |
| Large Community Water Systems (serving over 100,000 persons)** | $145.1 | 39.1% | 611 | 1.2% | 137.4 | 46.3% |
| Medium Community Water Systems (serving 3,301 to 100,000 persons)** | $161.8 | 43.6% | 8,063 | 16.0% | 135.2 | 45.6% |
| Small Community Water Systems (serving 3,300 and fewer persons) | $64.5 | 17.4% | 41,801 | 82.8% | 24.0 | 8.1% |

Note: Numbers may not total due to rounding.
* This exhibit reports the need for community water systems in the states, Washington D.C., Puerto Rico, and the U.S. Territories. It does not discuss findings for not-for-profit noncommunity systems, needs associated with proposed or recently promulgated regulations, or needs for American Indian or Alaska Native Village water systems.
‡ Based on the DWINSA sample frame as discussed in Appendix A of this report.
§ Data on population served from EPA's *Annual Trends data, including summary inventory, violations and GPR*. June 2011 http://water.epa.gov/scitech/datait/databases/drink/sdwisfed/pivottables.cfm#summary. Does not include populations for systems defined as "Federal Systems" or "Native American," but does include populations served by Alaska Native Village Water Systems. Database distinguished system sizes for "very small," "small," "medium," "large," and "very large," allowing direct comparisons to system size in the Assessment.
** "Large" and "medium" community water systems are defined differently for this Assessment than in the 2003, 1999, and 1995 Assessments. See Appendix A for more information.

*Source: United States EPA, Drinking Water Infrastructure Needs Survey*

**Large US water infrastructure creates long-term earnings potential for regulated water utilities.** According to the EPA, the US public water system infrastructure has a 20-year capital improvement need of $384.2B. This encourages capital investment for water utilities, thereby increasing the rate base and, ultimately, earnings. Other assessment efforts have arrived at similar conclusions; the Congressional Budget Office (CBO) estimates annual water system needs of $16.6B to $28.6B (extrapolates to a 20-year need of $331.2-$571.7B), the EPA's "Clean Water and Drinking Water Infrastructure Gap Analysis" estimates $231-$670B, and the Water Infrastructure Network estimates $28.5B annually.

**FIGURE 4: US WATER INFRASTRUCTURE NEEDS PROJECTIONS**

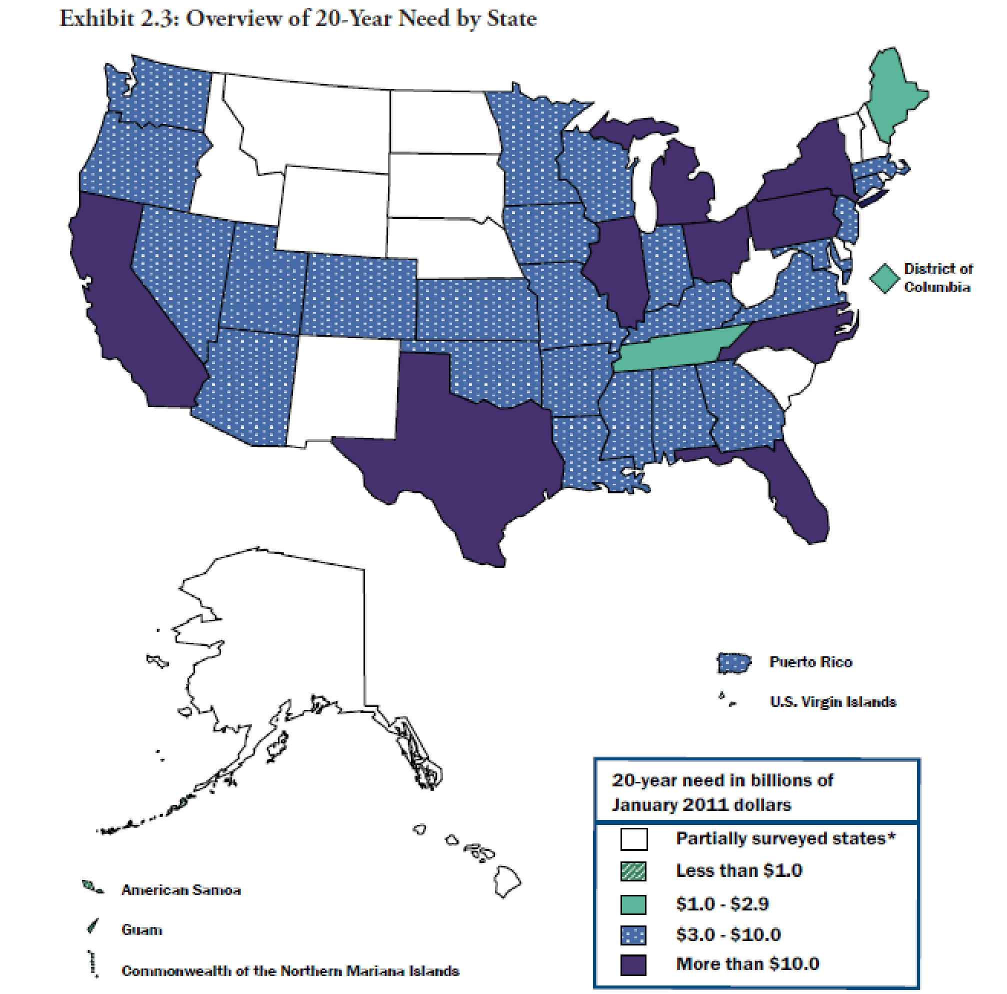



**EPA 2013-2033 Estimates** **DWINSA 20-Year National Needs**

*Source: United States EPA, Drinking Water Infrastructure Needs Survey*

**Major water utilities tend to concentrate in states with significant infrastructure needs.** AWK and WTR both have large presences in PA, a state with ~$14.2B of required infrastructure investment and a favorable regulatory outlook. Similarly, CWT and AWK have operations in CA, where an estimated $44.5B in investment is required over the next 20 years. Figure 4, from the EPA, below outlines projected infrastructure needs by state; in general states with more than $10.0B in 20-year need are better investment opportunities.

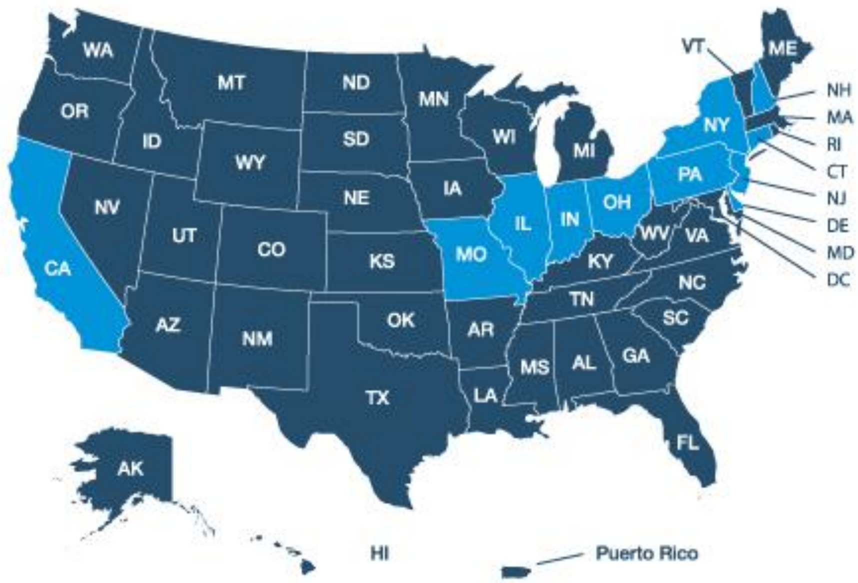
**FIGURE 5: OVERVIEW OF 20-YEAR NEED BY STATE**




*Source: United States EPA, Drinking Water Infrastructure Needs Survey*

**Constructive regulatory environments allow utilities to recoup infrastructure investments more quickly and efficiently, and therefore increase earnings.** The Distribution System Investment Charge (DSIC) is a mechanism designed to reduce regulatory lag (the time between capital investment and increased revenue) by allowing for rate increases outside of a general rate proceeding. The figure below, from the National Association of Water Companies (NAWC), shows states which have implemented DSIC policies, and therefore have more favorable regulatory environments. Generally, large water utilities prefer to invest in states that have both large infrastructure needs and constructive regulatory environments, like PA, CA, NY, and IL.

FIGURE 6: STATES WITH DISTRIBUTION SYSTEM INVESTMENT CHARGE



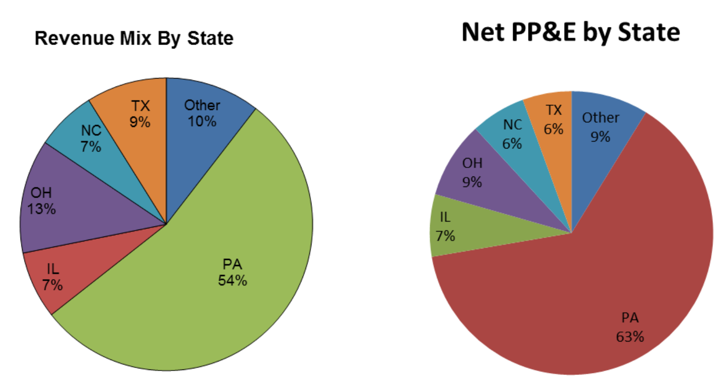

*Source: National Association of Water Companies (NAWC)*

## Business Segments

### Regulated Operations

**Aqua America is concentrated in Eastern states with a rich water supply and favorable regulatory environments.** Aqua generates the majority of its earnings in the state of Pennsylvania, with 63% of net PP&E and 54% of regulated revenue coming from the state (see Figure 5). North Carolina, Illinois, Ohio and Texas are the next largest states, each representing 5-10% of Aqua's earnings potential.

FIGURE 7: NET PP&E AND REGULATED REVENUE MIX BY STATE (2015)




*Source: Company Reports*

**Pennsylvania**

Aqua America's Pennsylvania subsidiary represents ~54% of Aqua America's regulated revenue and ~63% of its asset base. Aqua Pennsylvania serves roughly 420,000 connections representing approximately 1.4 million people in 30 counties. Water supply typically comes from surface water sources, such as streams, rivers and reservoirs, backed by 12 surface water treatment plants in the state. Additionally, WTR has ~5,600 miles of pipe and 200 wells in the state.

Aqua Pennsylvania has also provided wastewater services to various municipalities since 1996. It now provides wastewater services to approximately 14,500 customers throughout Pennsylvania.

**New Jersey**
Aqua New Jersey provides water and wastewater services to over 57,000 customers and 165,000 people in 27 municipalities. Aqua New Jersey became part of Aqua America in 1999 with the Consumers Water acquisition. It owns over 650 miles of pipe and 73 wells. Water supply principally comes from groundwater and wells.

**Ohio**
Aqua Ohio serves over 140,000 customers representing more than 500,000 people in 19 counties across Ohio. Aqua Ohio owns over 2,200 miles of pipe, 95 wells, and 33 water treatment facilities. Water supply generally comes from a combination of wells, Lake Erie, man-made lakes.

**Illinois**
Aqua Illinois serves over 70,000 water and wastewater customers representing approximately 225,000 people in 13 different counties throughout Illinois. Aqua Illinois owns ~928 miles of pipe, six water treatment facilities, nine wastewater treatment facilities, and 30 wells. Water supply comes from a combination of rivers, wells and lakes.

**Indiana**
Aqua Indiana serves around 24,500 customers representing more than 77,000 people in 11 counties throughout the state. The vast majority of connections in Indiana are wastewater customers. Aqua Indiana owns one water treatment facility and nine wastewater facilities.

**North Carolina**
Aqua North Carolina serves ~75,000 customers and 270,000 people in 52 counties. Water is supplied through a combination of wells and interconnections to adjacent water systems.

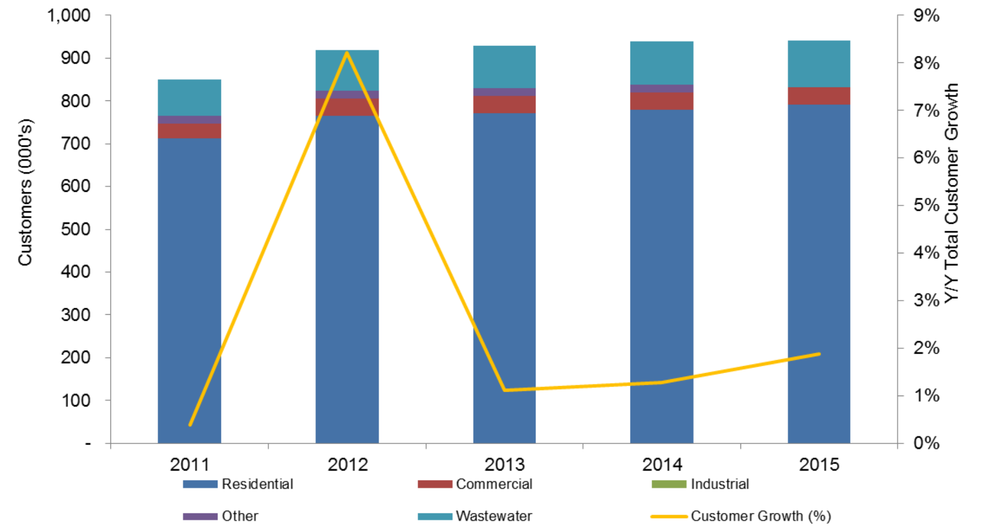
**Texas**
Aqua Texas serves over 60,000 customers and 170,000 people through ~400 water and wastewater facilities in 53 counties. Aqua Texas owns over 500 wells and 750 miles of pipe. Water supply principally comes from the 547 wells in the state.

**Virginia**
Aqua Virginia serves over 30,000 customers and 75,000 people. Water supply principally comes from the Middle Potomac Aquifer, using WTR's 343 wells in the state, and surface water from the Rivanna River.

## Customer Base

**WTR has reached its stated customer growth target of 1.5-2.0% in every year since 2011.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. The company currently serves over 950,000 customers and has maintained a growth rate of ~1.5% in recent years.

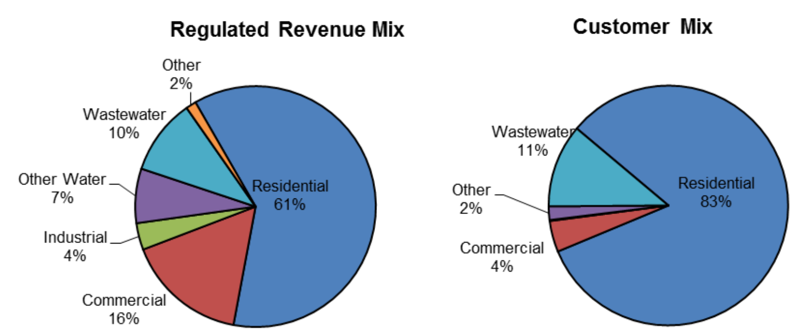
**FIGURE 8: UTILITY CUSTOMERS (000'S)**




*Source: Company Reports*

**Aqua America provides water and/or wastewater service to over 950,000 customers, the majority of which are residential water customers.** While 83% of the customer base is residential, only 61% of revenue comes from residential customers as average bill sizes are lower due to lower usage. Over the last five years, customers receiving wastewater services has maintained the highest growth rate among Aqua's customer classes as the company has sought to establish a presence in this market through acquisitions.

**FIGURE 9: UTILITY REVENUE AND CUSTOMER MIX (2015)**




*Source: Company Reports*

## Market-Based Operations

**WTR is in the process of reevaluating its Market-Based business segments as part of a larger effort to consolidate the business around more profitable segments.** The company has recently divested from many of its market-based businesses that it considers too risky and hard to grow. At the end of 2015, market-based business accounts for less than ~4% of WTR revenue.

**The company plans to retain two segments, which it considers particularly low risk and low cost.** WTR will continue to operate Home Services, where it operates as the insurance product that protects service lines between water mains and customers' homes. In this business, WTR receives a royalty for work done by a company called HomeServe, so it is seen as low risk. WTR will also retain a limited number of O&M contracts that contribute to earnings.

**WTR is actively evaluating other market-based activity, and believes that it will contribute to growth in the long run.** Importantly, the company does not foresee non-regulated business becoming more than 15% to 20% of Aqua America.

## Major Acquisitions

**FIGURE 10: MAJOR ACQUISTIONS**

| WTR Major Acquisitions | | | | | |
|---|---|---|---|---|---|
| Date | Company | Acquired From | Customers Added | Cost | Locations |
| Mar-99 | Consumers Water Company | Merger | 700,000 | Merger | OH, IL, ME, NJ |
| Jul-03 | AquaSource, Inc. | DQE | 130,000 | $178.4M cash | 9 States |
| Jul-04 | Florida Water Services | ALLETE | 40,000 | $13.1M cash | Central FL |
| Jun-04 | Heater Utilities, Inc. | ALLETE | 50,000 | $75.7M cash/debt | NC |
| Jan-07 | New York Water Service Corp. | Utilities & Industries Corp. | 45,000 | $52.3M cash/debt | NY |
| May-12 | American Water's Ohio Operations | AWK | 57,000 | $112.0M cash/debt | OH |

*Source: Company Reports*

**American Water's Ohio Operations** (May 2012) - Aqua America acquired American Water's Ohio regulated operations for $101M in cash plus assumed debt of $11M. The transaction gave WTR eight additional water systems and one wastewater system, amounting to ~57,000 new connections. At the same time, WTR sold its seven New York water systems to AWK for $39M in cash and assumed debt of $23M. This reflected WTR's effort to consolidate its customer base in fewer states and improve its operational efficiency.

**New York Water Service Corporation** (January 2007) – Aqua America acquired New York Water on 1/1/2007 for $52.3 million in cash and debt, recording $10.8 million in goodwill. New York Water has nearly 45,000 customers on Long Island and generated revenue of $21.8 million in 2005.

**Heater Utilities, Inc.** (June 2004) – Aqua America acquired Heater Utilities on 6/1/2004 for $75.7 million in cash and debt, recording $18.8 million in goodwill. Heater provided water and wastewater service to over 50,000 customers in North Carolina (principally suburban Raleigh, Charlotte, Gastonia and Fayetteville). The NCUC approved a mechanism to recover up to two-thirds of the acquired goodwill assuming certain conditions, principally upgrading existing infrastructure.

**Florida Water Services Corporation** (June 2004) – Aqua America acquired Florida Water Services from ALLETE on 6/30/2004 for $13.1 million in cash. Aqua America did not record any goodwill in the transaction following a 12/2005 ruling by the FPSC regarding rate base that reduced the final purchase price. Florida Water provided water and wastewater services to approximately 40,000 residents in 63 systems in central Florida.

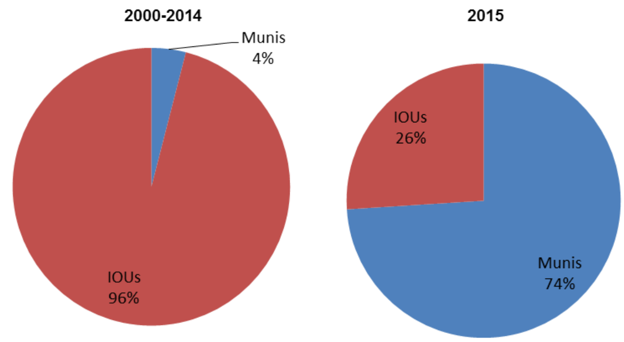
**AquaSource, Inc.** (July 2003) – Philadelphia Suburban acquired certain assets of AquaSource from DQE on 7/31/2003 for $190.7 million in cash, subsequently changing its corporate name to Aqua America on 1/16/2004 to reflect its growing national presence. The final purchase price was reduced to $178.4 million in August 2004 following working capital adjustments. The acquisition included four water and wastewater subsidiaries of AquaSource, including various integrated O&M contracts and related assets, serving over 130,000 customers in approximately 600 small systems within 11 states (nine states following disposal of several systems).

**Consumers Water Company** (March 1999) – Philadelphia Suburban merged with Consumers Water on 3/10/1999. Consumers Water provided water and wastewater services to approximately 700,000 customers in four states (Ohio, Illinois, Maine and New Jersey).

## Tuck-in Acquisition Strategy

**Aqua America has and will continue to rely on tuck-in acquisitions to increase its customer base.** Historically, WTR has acquired mostly Investor-Owned Utilities (IOUs). Between 2000 and 2014, WTR made 280 total acquisitions, amounting to 422,000 total connections. 96% of these connections were IOUs and 4% were wastewater connections. Going forward, WTR plans to focus on larger municipal deals and increasing its wastewater footprint. In 2015, WTR made 16 acquisitions, amounting to 10,621 connections; 74% of new connections were municipalities and 20% of connections were wastewater.

**FIGURE 11: NEW ACQUISITION STRATEGY**




*Source: Company Reports*

**WTR has historically done ~15 acquisitions a year, but currently the company targets growing the customer base ~1% through acquisitions**. In recent years, the company has consolidated its customer base in fewer states as part of an effort to improve operating efficiency. As a result, management has indicated that it will not move to a new state for less than ~25,000 customers, choosing instead to consolidate in states with favorable regulator environments. The ideal acquisition target for WTR would be sizeable (~2,500 customers or more), require significant capital upgrades, and would ideally be in a state in which it already does business.

### Non-Water Acquisitions

**WTR has indicated that it would consider moving into other regulated utility spaces**. The company indicated that the skill sets and core competencies of the regulated water utility market extend into other utility spaces. As a result, the company indicated that it would be willing to move into a new regulated market that would leverage its regulator relations and requires large capital investment.

## Regulatory Overview

**Regulated utilities generate income by filing rate cases with the state public utility commission (PUC).** During these proceedings, the PUC studies costs of construction, maintenance, operation, administration and financing. Based on these factors, the PUC sets the water rates, and in turn determines the utility's revenue. As a result, regulated utility growth relies on constant capital expenditures and constructive rate case results.

**Investor-owned utilities are subject to regulation at both the state and federal level**. State regulators are primarily responsible for economic regulation, reliability, and compliance with quality standards while federal regulation (e.g., Environmental Protection Agency (EPA)) sets national quality standards. The Safe Drinking Water Act, signed in 1974 and amended in 1986 and 1996, is designed to ensure the quality of the country's drinking water; the EPA enforces quality standards though a continuous and mandatory testing process. These tests are required periodically, usually daily, weekly, or monthly, depending on which compound is being tested. Municipality-owned utilities need to comply with EPA standards, but infrastructure investment decisions and subsequent rate increases are determined by the local politicians and the municipalities themselves. By contrast, the for-profit utilities have to comply with EPA standards but also need to seek regulatory approval from the state Public Service Commissions to earn on incremental investments and to receive rate increases.

**The state regulatory process varies by state and is an arduous and slow moving process (6-12 months typically, but some cases can take up to two years)**. When a previous case is set to expire, an investor-owned utility can file a new rate case with the state PUC. Rate cases are generally binding for multiple years; however, in a rising cost or accelerated infrastructure investment cycle (as seen between 2004 and 2009), rate cases are often filed more often (every few years). The parties involved in general rate cases include the company, the state PUC, including the PUC staff and an administrative law judge (ALJ), and the consumer advocate. Major consumers and politicians can also play an active role in rate cases.

**Simplistically, in the filing, the utility provides its rate base and the required revenue levels and rates necessary to recover investment and increased costs**. The utility provides its view on a reasonable required return and financing structure, anticipated costs to provide regulated services, proposed projects to maintain/enhance service, and requests revenue increases to offset investments. Other parties granted intervener status in the rate case then offer their opinion on some or all of the rate case details. The ALJ assigned to the case reviews all submitted evidence and renders a non-binding opinion. The ALJ's decision is then considered by the commissioners when providing a final decision. A rate case can be settled by all interested parties before a final commission order, or it can be appealed to the courts. Settlements are preferred, as they are less typically contentious, reduce regulatory/legal delays, and reduce costs.

## Regulatory Mechanisms

**A growing number of states have recognized the importance of consistent investment in system infrastructure and therefore have implemented regulatory policies to incent investor-owned utilities to invest in their infrastructure.** In particular, given the growing trend of water conservation and therefore lower water usage, it has become increasingly important to have regulatory mechanisms that allow the company to generate adequate returns on their invested capital regardless of usage. Below we list examples of important regulatory mechanisms that reduce regulatory lag:

- **DSIC (Distribution System Improvement Charge)** mechanisms allow regulated utilities to earn a return on certain infrastructure investments without having to file a full-blown rate case. In practice the amount recoverable is limited to a percentage of total revenue, and the investment is recovered through a surcharge on the customer's account that is typically adjusted on a quarterly basis. These infrastructure investments are ultimately rolled into the company's rate base during the next rate case proceeding. The percentage limit is then reset to zero upon completion of the next rate case. The DSIC is limited to investment in pipes and mains and cannot be used for growth projects. Therefore, companies can still experience regulatory lag on larger projects that require a rate case, but pipe/main replacement will start earning a return immediately with the DSIC. Pennsylvania was the first jurisdiction to adopt the DSIC mechanism in 1996, but other jurisdictions have followed like IL, IN, NJ and PA.
- **Infrastructure Rehabilitation Surcharges** allow WTR to add a surcharge to water or wastewater bills to offset depreciation and capital costs associated with capital expenditures related to upgrading water systems. This serves to limit the regulatory lag, which is the gap between the time that a capital project is completed and the recovery of its costs in rates. Currently six states allow for the use of surcharges, which provided revenues of $3.26M in 2015, $4.60M in 2014, and $3.21M in 2013. The states that allow surcharges, and their respective rates, are listed below.

**FIGURE 12: INFRASTRUCTURE RECOVERY SURCHARGES BY STATE**

| State | Allowed Surcharge |
|---|---|
| Ohio | 12.75% water<br>9% wastewater |
| Indiana | 10% |
| Pennsylvania | 7.5% water<br>5% wastewater |
| New Jersey | 5% |
| Illinois | 2.50% |
| North Carolina | 5% |

*Source: Company Reports*

### State Regulatory Commissions

**Pennsylvania (Pennsylvania Public Utilities Commission – PPUC)**
Pennsylvania is WTR's most favorable regulatory environment, as the commission has proactively adopted enhanced regulatory recovery mechanisms that encourage investment in the state's dated water distribution infrastructure. The most notable is the Distribution Systems Improvement Charge (DSIC) recovery mechanism, which was adopted in 1996. The DSIC mechanism allows companies to recover incremental pipe investment between rate cases proceedings, by allowing PAWC to quarterly adjust for and recover capital invested, without having to go through the formal rate case process. A surcharge of up to 7.5% of revenue can be recovered between rate cases. The DSIC mechanism has led to significantly higher infrastructure investment in PA's water system due to the minimal regulatory lag. WTR's PA rate base is estimated to be $2.41 billion.

**New Jersey (New Jersey Board of Public Utilities – NJBPU)**
New Jersey has a reasonably constructive regulatory environment, including DSIC, single tariff pricing, and expense mechanisms, but it lags behind Pennsylvania in terms of progressive reforms. New Jersey currently allows an infrastructure surcharge of 5%. WTR's NJ rate base is currently $134 million, and currently has a rate case pending with the NJPBU in which the company requests an annualized revenue increase of $2.5M.

**Illinois (Illinois Commerce Commission – ICC)**
WTR recently received an annualized revenue increase of $765,000 through a surcharge filing in Illinois, which allows a 2.5% surcharge recovery per year. As of December 31, 2015, WTR had a rate based of $213M in IL.

**Indiana (Indiana Utility Regulatory Commission – IURC)**
WTR has a rate base of $73M in Indiana, which allows a 10% infrastructure surcharge. WTR currently has a rate case pending with the IURC in which it requested an annualized revenue increase of $2.3M

**Ohio (Public Utilities Commission of Ohio- PUCO)**
WTR currently has a rate case pending with the PUCO in which is requests an additional $5.6M in annualized revenue, and has already been awarded $1.4M in revenue increases in 2016. Ohio allows high infrastructure surcharges of 12.75% for water and 9% for waste water. As of December 31, 2015, WTR had a rate base of $256M in Ohio

**Texas (Public Utility Commission of Texas- PUC)**
WTR had a rate base of $193M in Texas as of December 31, 2015. In 2016, WTR was awarded a revenue increase of $225,000 by the PUC.

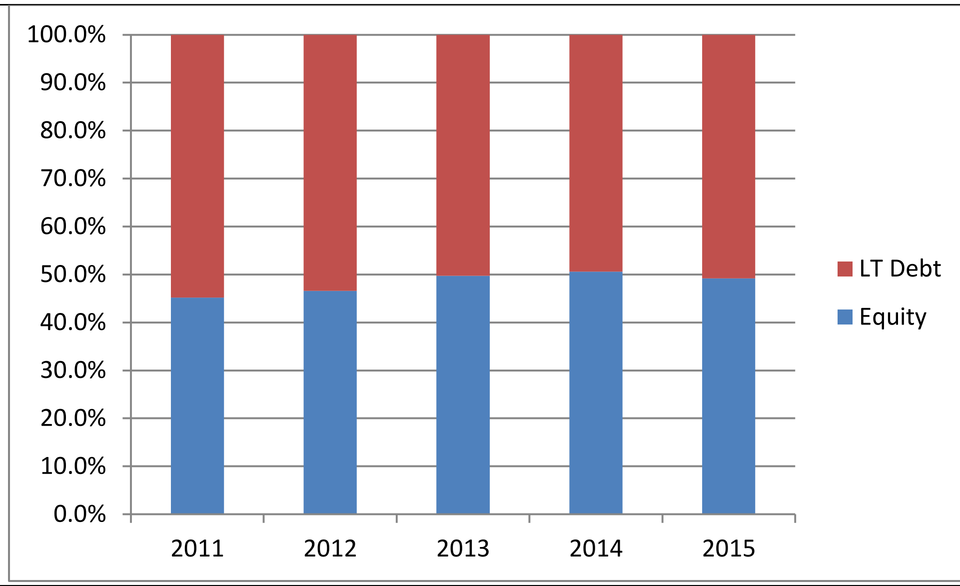
**North Carolina (North Carolina Utilities Commission- NCUC)**
As of December 31, 2015, WTR had a rate base of $124M in North Carolina, which allows an infrastructure surcharge of 5%. In 2016, WTR received a revenue increase of $1.0M from the NCUC.

**Virginia (State Corporation Commission- SCC)**
As of December 31, 2015, WTR had a rate base of $65M in Virginia. WTR was awarded a $1.6M revenue increase through rate case filings in 2016.

## Financials

**Aqua America maintains a fairly conservative balance sheet in line with its regulatory agreements**. As of December 31, 2015, equity represented 49% of total capitalization, in line with its average since 2011. The company issues equity, both through marketed secondary offerings and DRIP and direct stock purchases plans, in order to maintain an appropriate capitalization while funding numerous acquisition opportunities and significant capital expenditures.

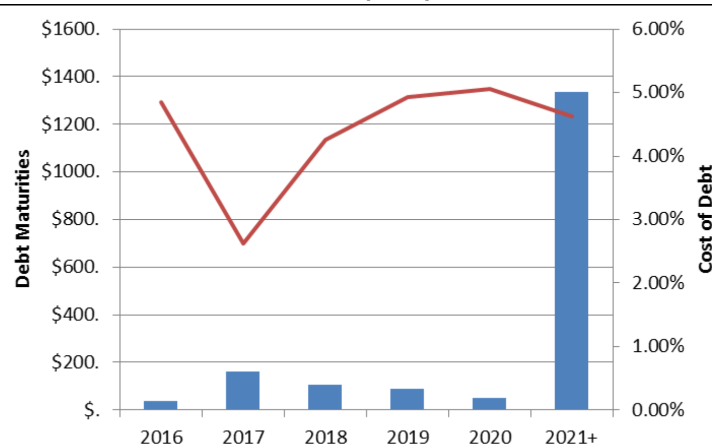
**FIGURE 13: FINANCIAL CAPITALIZATION**




*Source: Company Reports*

**Long-term debt issuance and refinancing is an ongoing necessity of Aqua's financial strategy to finance business expansion.** Aqua has limited debt maturities, totaling $441.5 million over the next five years. 9.2% of total long-term debt which matures in 2017.

**FIGURE 14: LONG-TERM DEBT MATURITIES ($MIL)**



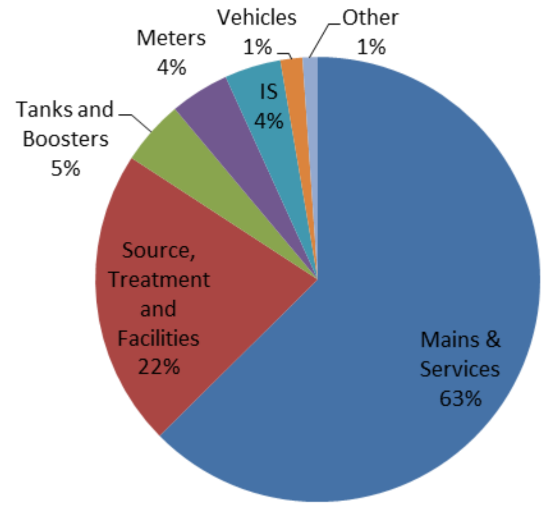

*Source: Company Reports*

**The current annualized dividend rate of Aqua America is $0.7652 and the expected payout ratio is 57.8%.** WTR has increased its dividend 26 times in the last 25 years. It targets a payout ratio of 60-70%, but has been slightly short of that; the dividend payout ratio since 2000 has been 55-60%. We expect Aqua will continue to provide steady dividend growth.

**We believe the long-term value in the stock comes from Aqua's capacity to fund capital infrastructure investments and complete acquisitions.** This leads to rate base growth and, in turn, earnings growth. The company has been able to grow rate base by 5.4% annually since 2000 through the combination of numerous acquisitions and significant capital investments. Since 2000, company-funded capital expenditures have been approximately 3x depreciation levels.

**Capital expenditure focus going forward has shifted towards maintaining and replacing existing water pipes.** Major capital projects in the past have included the addition of water treatment facilities to comply with EPA regulations and the rehabilitation of acquired water systems. The majority of the accelerated compliance related expenditures, however, have been made at this point. Management notes it plans to spend 62.6% of its capital budget on Mains and Services and 21.6% on Source, Treatment, and Facilities. All told, management plans to spend over $1.1B on capital investment over the next three years.

**FIGURE 15: 2016E TO 2018E CAPITAL INVESTMENT BREAKDOWN**



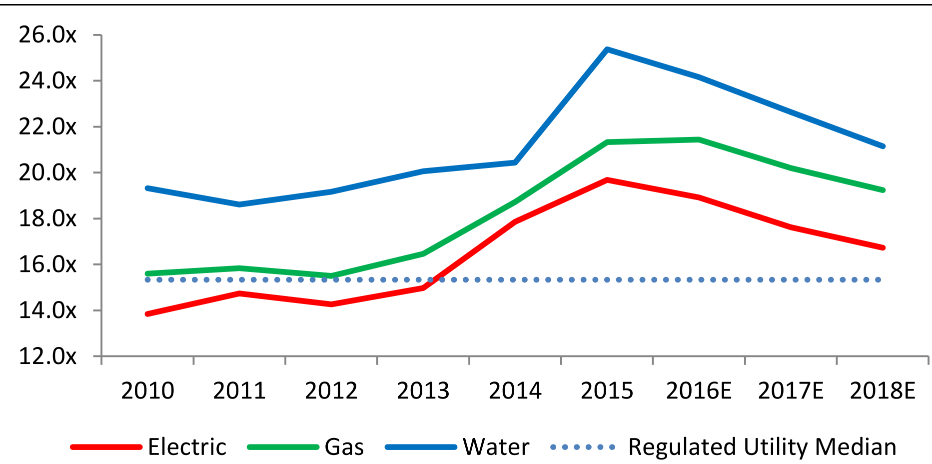

*Source: Company Reports*

## Financial Trends and Valuation

**We are initiating with a Neutral rating and a $32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

**As detailed in Figure 16, regulated utility forward P/E multiples have risen steadily from their 10-year lows during 2008-2009.** This was driven by gradually improving economic and market conditions in addition to an acceleration of M&A, infrastructure investment and improved margins reflecting more widespread implementation of improved regulatory recovery mechanisms for capital investment. We expect water utilities to be fully valued at a P/E multiple on 2018 EPS of 20.0-22.0x in the long term, a premium to electric and natural gas utilities given transparency for above-average EPS growth primarily fueled by accelerated pipe replacement needs recovered via tracking mechanisms that are expected to keep earned ROEs close to authorized levels.

**FIGURE 16: FORWARD P/E TRENDS FOR ELECTRIC, GAS AND WATER UTILITIES**




*Source: FactSet*

## FIGURE 17: EPS GROWTH TRENDS

| | Y/Y EPS Change | | | | | | | | | | 3 YR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | Median | CAGR |
| **WTR** | **16.9%** | **16.7%** | **4.8%** | **31.8%** | **3.4%** | **5.0%** | **5.5%** | **5.7%** | **6.9%** | **10.8%** | **6.0%** |
| Electric | 4.4% | 9.3% | 5.6% | 5.9% | 5.9% | 3.0% | 2.4% | 4.9% | 5.2% | 5.8% | 5.6% |
| Elec/Gas | 6.6% | 9.1% | 6.9% | 6.7% | 8.2% | 6.0% | 5.1% | 5.9% | 6.6% | 6.8% | 4.9% |
| Gas | 5.8% | 2.9% | 3.9% | 2.6% | 3.5% | 5.1% | 2.3% | 3.7% | 6.2% | 3.7% | 4.9% |
| Water | 12.0% | 8.4% | 9.3% | 11.4% | 9.0% | 10.0% | 4.4% | 4.1% | 6.4% | 9.7% | 4.3% |
| Utility Sector | 6.2% | 8.8% | 6.3% | 6.3% | 7.1% | 5.5% | 3.4% | 4.5% | 6.3% | 6.3% | 4.9% |

*Source: FactSet, consensus estimates*

*Note: Median calculations are from 2010-2015.*

**WTR is expected to have ~6% annual EPS growth from 2016 through 2018 based on consensus estimates.** This is slightly above the 4.1% to 6.4% annual EPS growth expected from AWK's water peer group.

## FIGURE 18: FORWARD P/E TRENDS BY UTILITY SUBSECTOR

| | Forward P/E | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | Average | Median |
| **WTR** | **23.2x** | **20.4x** | **21.1x** | **19.6x** | **21.0x** | **23.4x** | **22.1x** | **21.0x** | **19.8x** | **21.4x** | **21.0x** |
| Electric | 13.8x | 14.8x | 14.3x | 15.0x | 17.8x | 19.1x | 18.5x | 17.3x | 16.3x | 15.8x | 14.9x |
| Elec/Gas | 13.1x | 15.1x | 14.9x | 16.1x | 18.4x | 21.0x | 19.6x | 18.5x | 17.4x | 16.4x | 15.6x |
| Gas | 15.7x | 16.0x | 15.5x | 16.5x | 18.5x | 20.6x | 20.8x | 19.2x | 19.0x | 17.1x | 16.2x |
| Water | 19.3x | 18.6x | 19.2x | 20.1x | 20.2x | 24.5x | 23.7x | 22.6x | 21.6x | 20.3x | 19.7x |
| Utility Sector | 14.0x | 15.3x | 14.6x | 15.3x | 17.7x | 17.2x | 18.4x | 18.4x | 18.4x | 15.7x | 15.3x |

*Source: FactSet, consensus estimates*

*Note: Median calculations are from 2010-2015.*

**Shares of WTR currently trade at ~19.8x its 2018E consensus EPS estimate of $1.50**. This represents a slightly lower valuation relative to the 21.6x average multiple of its water peer group and is ~8% below its 2010-2015 average P/E level of 21.4x.

## FIGURE 19: DPS GROWTH TRENDS

| | Y/Y DPS Change | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | Median |
| **WTR** | **7.3%** | **6.8%** | **6.3%** | **9.0%** | **8.6%** | **8.2%** | **9.2%** | **5.2%** | **10.4%** | **7.7%** |
| Electric | 1.6% | 1.1% | 2.2% | 3.2% | 3.4% | 4.0% | 5.0% | 5.4% | 5.4% | 2.7% |
| Elec/Gas | 1.7% | 3.1% | 3.9% | 3.9% | 4.2% | 4.0% | 4.2% | 4.7% | 5.2% | 3.9% |
| Gas | 4.0% | 4.5% | 4.0% | 4.3% | 5.2% | 5.5% | 6.2% | 5.7% | 5.7% | 4.4% |
| Water | 2.6% | 2.6% | 2.6% | 3.2% | 3.3% | 3.5% | 4.6% | 4.7% | 4.8% | 2.9% |
| Utility Sector | 2.2% | 2.8% | 3.2% | 3.6% | 3.8% | 4.0% | 4.8% | 5.1% | 5.3% | 3.4% |

*Source: FactSet, Baird estimates*

*Note: Median calculations are from 2010-2015.*

**WTR has a strong dividend record**. WTR had a median dividend growth rate of 7.7% from 2010-2015, which was much higher than the median water utility growth rate (~2.9%) and all utilities which averaged 3.4% growth over the same time frame. Aqua targets a payout ratio of 60-70%, and since it is currently in the mid-50s, we expect its dividend to grow over the next three years.

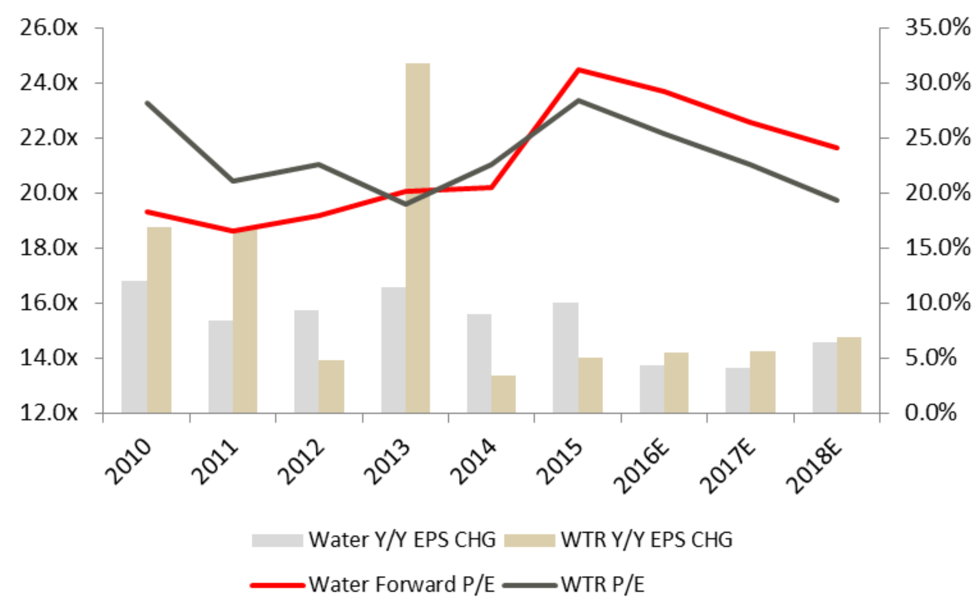
### FIGURE 20: HISTORICAL DIVIDEND YIELD

| Ticker | Company Name | Dividend Yield 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Current |
|---|---|---|---|---|---|---|---|---|
| **Water Companies** | | | | | | | | |
| AWK | American Water Works | 3.40% | 2.82% | 2.59% | 2.58% | 2.27% | 2.23% | 2.13% |
| WTR | Aqua America | 2.62% | 2.86% | 2.64% | 2.48% | 2.37% | 2.30% | 2.62% |
| CWT | California Water Services | 3.19% | 3.37% | 3.43% | 2.77% | 2.64% | 2.88% | 2.16% |
| AWR | American States Water | 3.02% | 3.15% | 2.65% | 2.65% | 2.21% | 2.08% | 2.32% |
| SJW | SJW Corp. | 2.57% | 2.92% | 2.67% | 2.45% | 2.33% | 2.63% | 1.90% |
| MSEX | Middlesex Water | 3.94% | 3.93% | 3.80% | 3.58% | 3.31% | 2.92% | 2.37% |
| YORW | York Water | 2.98% | 2.99% | 3.07% | 2.67% | 2.49% | 2.42% | 2.16% |
| CTWS | Connecticut Water Services | 3.30% | 3.46% | 3.22% | 2.76% | 2.78% | 2.76% | 2.28% |
| ARTNA | Artesian Resources- A | 3.97% | 4.05% | 3.53% | 3.59% | 3.75% | 3.15% | 3.39% |
| *Water Median* | | 3.19% | 3.15% | 3.07% | 2.67% | 2.49% | 2.63% | 2.28% |
| *Water Mean* | | 3.22% | 3.28% | 3.07% | 2.84% | 2.68% | 2.60% | 2.37% |
| *Electric Utility Median* | | 4.68% | 3.85% | 4.16% | 3.81% | 3.34% | 3.56% | 3.37% |
| *Electric/Gas Utility Median* | | 4.58% | 3.94% | 4.10% | 3.66% | 3.03% | 3.72% | 3.60% |
| *Gas Utility Median* | | 3.54% | 3.45% | 3.55% | 3.44% | 3.26% | 3.05% | 2.80% |

*Source: FactSet, Baird estimates*

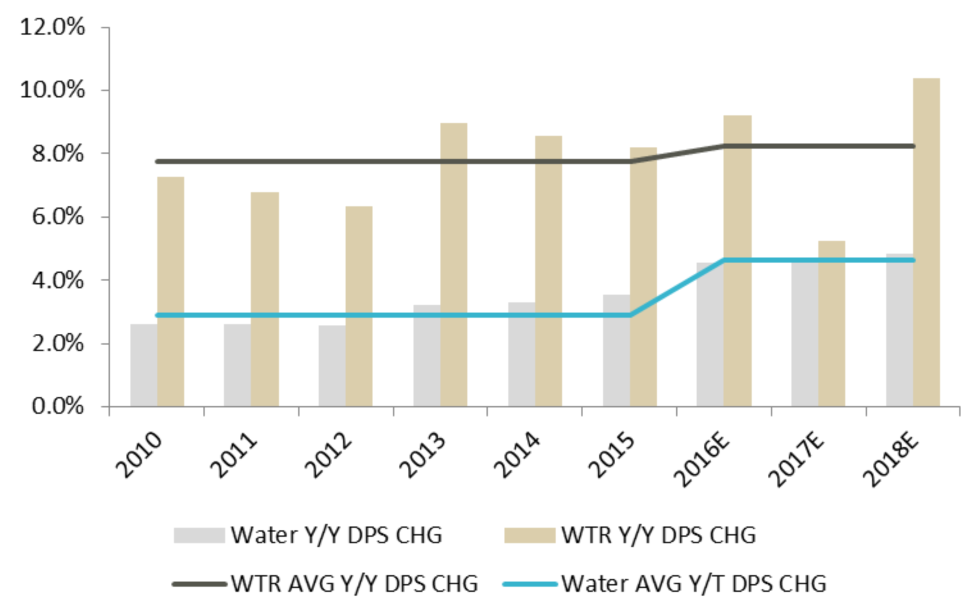
**WTR's current dividend yield is slightly above comparable water utilities.** Recently, WTR's dividend yield has been increasing as shares have declined from ~17% from $35.62 on July 5 to $29.52 on October 12. Historically, WTR's yield has been below peers.

### FIGURE 21: FORWARD P/E MULTIPLES, EPS GROWTH TRENDS




*Source: FactSet*

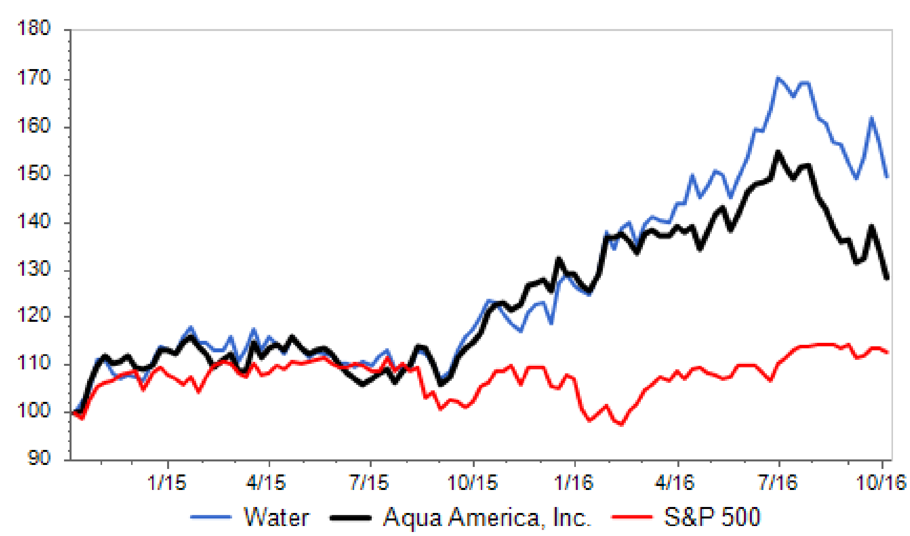
**FIGURE 22: AQUA AND PEER DIVIDEND GROWTH TRENDS**




*Source: FactSet*

**WTR's stock has improved ~8% in the past 12 months, underperforming other water utilities which have increased ~23% over the same period.** As Figure 23 displays, WTR largely performed in line with peers over the last two years, until the stock began to underperform in March 2016.

**FIGURE 23: WTR RELATIVE PRICE PERFORMANCE**




*Source: FactSet*

**FIGURE 24: BAIRD VERSUS CONSENSUS ESTIMATES (2016E-2018E)**

| | 2016E | | 2017E | | 2018E | |
|---|---|---|---|---|---|---|
| | Baird Estimates | Consensus Estimates | Baird Estimates | Consensus Estimates | Baird Estimates | Consensus Estimates |
| Operating Revenue | $831.7 | $830.4 | $870.8 | $882.6 | $927.2 | $943.7 |
| Growth | | | 4.7% | 6.3% | 6.5% | 6.9% |
| Net Income | $234.7 | $236.0 | $243.5 | $248.4 | $262.6 | $266.5 |
| EPS | $1.32 | $1.33 | $1.37 | $1.40 | $1.47 | $1.50 |

*Source: FactSet, Baird Estimates*

**Our initial estimates have WTR's revenue growing at a CAGR of 3.65% per annum from 2016 to 2018.** We believe it may be difficult for WTR to see significant EPS growth until the next rate case in Pennsylvania, which may not become effective until 2019. That said, increases in revenue and EPS could be driven through additional acquisitions, and/or capital investment in the intermediate term.

**We are initiating with a Neutral rating and a $32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

## Competition

**American Water Works (AWK-$71.29-Outperform).** AWK is the largest investor-owned regulated water/wastewater utility in North America. Its regulated utility serves about 3.1 million water and 140,000 wastewater customers (over 14 million people combined) in 16 states. Additionally, AWK has a non-regulated segment (~14% of total revenue). Including its non-Regulated Businesses, AWK's presence spans 47 states and Ontario, from the East coast and Midwest region to the Southwest. Pennsylvania and New Jersey account for almost 50% of total water revenue. AWK was founded in 1886 and is headquartered in Voorhees, NJ.

**California Water Services (CWT-$32.38-Neutral).** CWT is the largest publicly traded water utility west of the Mississippi River and third-largest in the United States. CWT's regulated business consists of the production, purchase, distribution and sale of water for residential, commercial, industrial, and public use. The non-regulated operations, called Utility Services, leverage CWT's expertise in operating water systems and provide related water utility services, such as meter reading and water testing services for third-party systems. CWT serves approximately ~509,000 customer connections, generates more than $580 million in annual revenue and owns over $1.7 billion in net utility plant assets.

**American States Water (AWR-Not Covered).** AWR provides water service to approximately 261,000 customers located throughout 10 counties in Northern, Coastal and Southern California. The company also distributes electricity to approximately 24,000 electric customers in the city of Big Bear and surrounding areas in San Bernardino County, California. The company also provides operations, maintenance, and construction management for water and wastewater systems located on military bases across the country.

**SJW Corp. (SJW-Not Covered)**. SJW provides water service to more than one million people in San Jose, California and surrounding communities and in Canyon Lake, Texas and nearby communities. It is the parent company of San Jose Water Company, SJWTX, Inc., Texas Water Alliance Limited, SJW Land Company, and SJW Group, Inc.

**Middlesex Water (MSEX-Not Covered).** MSEX operates water and wastewater systems in New Jersey and Delaware. The company serves ~60,000 retail customers in New Jersey and was incorporated as a water utility company in 1897.

**York Water (YORW-Not Covered)**. YORW is the oldest investor-owned water utility in the United States, and impounds, purifies, and distributes water across its territory. The company serves 47 municipalities, largely located in south-central Pennsylvania. The company serves an estimated population of 180,000 through approximately 64,000 service connections.

**Connecticut Water Services (CTWS-Not Covered).** CWTS is the largest publicly traded water company based in New England, serving ~124,000 customers in 77 municipalities throughout Connecticut and Maine.

**Artesian Resources- A (ARTNA-Not Covered).** ARTNA offers water, wastewater and related services on the Delmarva Peninsula. Artesian supplies 7.6 million gallons of water per year through 1,218 miles of water main to about 301,000 people.

## Management

**Christopher Franklin - President and Chief Executive Officer**
Mr. Franklin has been president and CEO since 2015. Before that he served as COO (2012-2015) and regional president of Midwest and Southern Operations (2010-2012) for WTR. He has worked with WTR since January 1993.

**David Smeltzer - Chief Financial Officer**
Mr. Smeltzer has served as CFO of Aqua America since 1999. Before that he served as the VP of Rates and Regulatory Relations for the Philadelphia Suburban Water Company, which would later become Aqua America. He has worked for the company since 1986.

**Richard Fox - Chief Operating Officer**
Mr. Fox has served as COO of Aqua America since 2015. He has previously served with the company as regional president of Regulated Utilities (2012-2015), and president of Aqua utilities in Florida (2011-2012). He joined WTR in 2002.

**FIGURE 25: MANAGEMENT OWNERSHIP STATISTICS**

| Management | Position | Age | Company Tenure (Yrs) | Insider Holdings (%) |
|---|---|---|---|---|
| Christopher H. Franklin, MBA | President, Chief Executive Officer & Director | 51 | 23 | 0.050% |
| Richard S. Fox, MBA | Chief Operating Officer & EVP-Regulated Operations | 54 | 4 | 0.006% |
| David P. Smeltzer, CPA | Chief Financial Officer & Executive Vice President | 57 | 17 | 0.059% |
| Karen M. Heisler | Chief Human Resources Officer & Senior VP | 57 | <1 | -- |
| Christopher Paul Luning | Secretary, Senior Vice President & General Counsel | 48 | 13 | 0.019% |
| Robert A. Rubin, CPA | Chief Accounting Officer, Senior VP & Controller | 53 | 17 | 0.046% |
| Dan J. Schuller, PhD | Executive VP-Strategy & Corporate Development | 46 | 1 | 0.004% |
| William C. Ross | Senior VP-Engineering & Environmental Affairs | 70 | 15 | 0.012% |

| Board Members | Title | Age | Board Tenure (Yrs) | Insider Holdings (%) |
|---|---|---|---|---|
| Nicholas DeBenedictis | Non-Executive Chairman | 70 | 23 | 0.018% |
| Christopher H. Franklin, MBA | President, Chief Executive Officer & Director | 51 | 23 | 0.050% |
| Carolyn Jeanne Burke, MBA | Director | 48 | <1 | 0.000% |
| Wendell F. Holland | Independent Director | 64 | 5 | 0.006% |
| Ellen T. Ruff | Independent Director | 67 | 10 | 0.012% |
| Lon R. Greenberg | Independent Director | 65 | 11 | 0.017% |
| William P. Hankowsky, III | Independent Director | 65 | 12 | 0.015% |
| Richard H. Glanton | Lead Independent Director | 69 | 21 | 0.005% |

*Source: FactSet*

## FIGURE 26: WATER UTILITY BALANCE SHEET COMPARISONS

### Major Water Utility Company Net Debt Position

| Net Debt Position ($, Millions) | Q1:13 | Q2:13 | Q3:13 | Q4:13 | Q1:14 | Q2:14 | Q3:14 | Q4:14 | Q1:15 | Q2:15 | Q3:15 | Q4:15 | Q1:16 | Q2:16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK | 5,819.1 | 5,818.4 | 5,897.3 | 5,832.0 | 5,922.4 | 5,983.2 | 6,157.7 | 6,258.2 | 6,490.0 | 6,666.0 | 6,790.0 | 6,490.0 | 6,666.0 | 6,790.0 |
| WTR | 1,586.6 | 1,606.2 | 1,636.1 | 1,649.2 | 1,633.5 | 1,665.8 | 1,730.7 | 1,752.7 | 1,792.7 | 1,797.3 | 1,835.4 | 1,792.7 | 1,797.3 | 1,835.4 |
| CWT | 452.2 | 475.1 | 480.5 | 460.9 | 484.5 | 500.6 | 524.6 | 507.8 | 543.2 | 566.6 | 605.0 | 543.2 | 566.6 | 605.0 |
| AWR | 294.2 | 281.4 | 254.4 | 259.2 | 250.1 | 251.3 | 282.1 | 313.6 | 349.5 | 355.8 | 380.2 | 349.5 | 355.8 | 380.2 |
| SJW | 355.7 | 369.3 | 381.2 | 387.7 | 395.8 | 391.1 | 399.6 | 399.4 | 413.7 | 411.4 | 419.2 | 413.7 | 411.4 | 419.2 |
| MSEX | 158.8 | 156.0 | 160.7 | 160.3 | 158.3 | 153.9 | 154.0 | 154.3 | 141.5 | 135.5 | 146.1 | 141.5 | 135.5 | 146.1 |
| YORW | 77.3 | 79.1 | 82.8 | 81.6 | 83.4 | 84.4 | 83.8 | 86.2 | 84.4 | 81.4 | 79.6 | 84.4 | 81.4 | 79.6 |
| CTWS | 160.8 | 163.3 | 167.6 | 174.0 | 178.6 | 183.2 | 180.4 | 188.5 | 196.6 | 202.7 | 214.6 | 196.6 | 202.7 | 214.6 |
| ARTNA | 117.3 | 115.1 | 117.8 | 121.3 | 124.6 | 120.0 | 119.6 | 117.8 | 115.8 | 111.5 | 109.7 | 115.8 | 111.5 | 109.7 |
| Avg | 1002.4 | 1007.1 | 1019.8 | 1014.0 | 1025.7 | 1037.1 | 1070.3 | 1086.5 | 1125.3 | 1147.6 | 1175.5 | 1125.3 | 1147.6 | 1175.5 |

*Source: Company Reports, FactSet, Robert W. Baird & Co.*

### Major Water Utility Company Debt to Equity Position

| Debt to Equity | Q1:13 | Q2:13 | Q3:13 | Q4:13 | Q1:14 | Q2:14 | Q3:14 | Q4:14 | Q1:15 | Q2:15 | Q3:15 | Q4:15 | Q1:16 | Q2:16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK | 1.25 | 1.26 | 1.23 | 1.24 | 1.22 | 1.22 | 1.20 | 1.21 | 1.21 | 1.25 | 1.23 | 1.30 | 1.33 | 1.33 |
| WTR | 1.16 | 1.15 | 1.09 | 1.04 | 1.04 | 1.03 | 1.02 | 0.99 | 1.00 | 1.02 | 1.02 | 1.04 | 1.02 | 1.03 |
| CWT | 1.00 | 0.88 | 0.82 | 0.80 | 0.85 | 0.86 | 0.79 | 0.81 | 0.86 | 0.88 | 0.87 | 0.86 | 0.95 | 1.00 |
| AWR | 0.73 | 0.72 | 0.69 | 0.68 | 0.72 | 0.67 | 0.62 | 0.64 | 0.66 | 0.68 | 0.73 | 0.76 | 0.78 | 0.81 |
| SJW | 1.31 | 1.07 | 1.07 | 1.11 | 1.17 | 1.20 | 1.10 | 1.11 | 1.10 | 1.11 | 1.09 | 1.09 | 1.09 | 1.09 |
| MSEX | 0.88 | 0.89 | 0.87 | 0.85 | 0.84 | 0.85 | 0.83 | 0.81 | 0.79 | 0.79 | 0.77 | 0.69 | 0.66 | 0.69 |
| YORW | 0.84 | 0.85 | 0.83 | 0.82 | 0.82 | 0.84 | 0.83 | 0.81 | 0.80 | 0.79 | 0.82 | 0.80 | 0.77 | 0.76 |
| CTWS | 0.97 | 0.95 | 0.92 | 0.90 | 0.90 | 0.87 | 0.83 | 0.86 | 0.88 | 0.85 | 0.85 | 0.88 | 0.90 | 0.94 |
| ARTNA | 0.99 | 0.97 | 0.98 | 0.97 | 0.94 | 0.96 | 0.99 | 0.99 | 0.97 | 0.94 | 0.92 | 0.88 | 0.84 | 0.81 |
| Avg | 1.01 | 0.97 | 0.94 | 0.94 | 0.94 | 0.94 | 0.91 | 0.91 | 0.92 | 0.92 | 0.92 | 0.92 | 0.93 | 0.94 |

*Source: Company Reports, FactSet, Robert W. Baird & Co.*

### Major Water Utility Company Gross Margin

| Gross Margin | Q1:13 | Q2:13 | Q3:13 | Q4:13 | Q1:14 | Q2:14 | Q3:14 | Q4:14 | Q1:15 | Q2:15 | Q3:15 | Q4:15 | Q1:16 | Q2:16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK | 35.3% | 41.4% | 46.2% | 38.6% | 36.2% | 40.9% | 47.0% | 38.3% | 38.2% | 43.0% | 47.0% | 37.2% | 37.6% | 43.7% |
| WTR | 45.0% | 48.0% | 49.4% | 43.8% | 43.2% | 47.6% | 51.2% | 44.5% | 45.1% | 45.7% | 49.6% | 43.9% | 44.9% | 47.9% |
| CWT | 35.4% | 41.0% | 44.3% | 34.0% | 25.0% | 37.5% | 46.6% | 36.8% | 33.7% | 36.8% | 45.7% | 37.6% | 32.2% | 35.5% |
| AWR | 48.8% | 49.8% | 49.7% | 46.4% | 49.5% | 50.6% | 49.6% | 47.2% | 51.5% | 51.6% | 51.9% | 42.0% | 53.9% | 51.1% |
| SJW | 45.9% | 43.9% | 41.9% | 42.4% | 38.8% | 38.9% | 60.7% | 47.2% | 48.6% | 48.4% | 44.4% | 57.2% | 47.3% | 54.8% |
| MSEX | 32.9% | 38.6% | 42.8% | 35.0% | 32.8% | 40.4% | 45.4% | 39.2% | 33.9% | 39.3% | 42.9% | 38.0% | 38.0% | 42.0% |
| YORW | 69.5% | 69.1% | 68.8% | 69.0% | 68.3% | 70.1% | 70.7% | 69.7% | 68.7% | 69.5% | 70.9% | 70.1% | 68.8% | 69.7% |
| CTWS | 44.1% | 55.8% | 57.5% | 28.9% | 33.5% | 47.6% | 51.1% | 25.2% | 27.8% | 44.9% | 47.1% | 22.9% | 31.9% | 53.2% |
| ARTNA | 30.1% | 38.3% | 39.2% | 31.9% | 33.7% | 33.7% | 43.7% | 35.5% | 36.6% | 42.2% | 43.2% | 31.8% | 37.7% | 40.2% |
| Avg | 43.0% | 47.3% | 48.9% | 41.1% | 40.1% | 45.3% | 51.8% | 42.6% | 42.7% | 46.8% | 49.2% | 42.3% | 43.6% | 48.7% |

*Source: Company Reports, FactSet, Robert W. Baird & Co.*

### Major Water Utility Company Operating Margin

| Operating Margin | Q1:13 | Q2:13 | Q3:13 | Q4:13 | Q1:14 | Q2:14 | Q3:14 | Q4:14 | Q1:15 | Q2:15 | Q3:15 | Q4:15 | Q1:16 | Q2:16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK | 25.8% | 33.4% | 39.2% | 30.4% | 27.2% | 33.4% | 39.9% | 30.3% | 29.1% | 35.3% | 40.3% | 29.6% | 28.7% | 35.9% |
| WTR | 37.5% | 41.2% | 42.8% | 36.9% | 36.6% | 40.9% | 45.2% | 37.9% | 37.4% | 39.0% | 43.0% | 37.9% | 37.6% | 41.0% |
| CWT | 4.1% | 19.6% | 25.5% | 8.3% | -2.4% | 19.2% | 31.4% | 15.1% | 6.6% | 15.0% | 25.9% | 13.4% | 4.4% | 16.7% |
| AWR | 25.3% | 27.6% | 27.6% | 19.7% | 22.3% | 26.8% | 28.8% | 23.1% | 24.7% | 26.6% | 31.0% | 19.9% | 22.7% | 28.4% |
| SJW | 11.5% | 22.8% | 22.7% | 16.9% | 11.1% | 17.2% | 47.1% | 22.5% | 20.6% | 23.8% | 22.0% | 36.2% | 17.3% | 34.3% |
| MSEX | 21.7% | 28.1% | 32.8% | 24.3% | 22.0% | 30.0% | 35.6% | 28.7% | 23.2% | 29.2% | 33.1% | 27.4% | 27.1% | 31.6% |
| YORW | 47.4% | 49.4% | 49.2% | 49.9% | 45.0% | 49.3% | 50.5% | 47.2% | 45.8% | 47.8% | 51.4% | 47.3% | 46.2% | 48.2% |
| CTWS | 22.7% | 35.0% | 42.4% | 19.4% | 21.7% | 39.7% | 43.2% | 13.2% | 16.1% | 37.1% | 39.1% | 10.6% | 20.5% | 44.6% |
| ARTNA | 23.6% | 32.8% | 33.6% | 25.6% | 26.9% | 27.7% | 38.5% | 29.7% | 30.3% | 36.7% | 38.0% | 25.9% | 31.5% | 34.5% |
| Avg | 24.4% | 32.2% | 35.1% | 25.7% | 23.4% | 31.6% | 40.0% | 27.5% | 26.0% | 32.3% | 36.0% | 27.6% | 26.2% | 35.0% |

*Source: FactSet, Baird*

## Energy Technology and Resource Management - Water Utility Comparison Sheet

| | | | Price | Price Change | | | Market | Enterprise | Price / EPS | | | EV / EBITDA | | | EV / Revenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ticker | Company Name | Rating | 10/13/16 | 1-Month | YTD | LTM | Cap ($M) | Value ($M) | 2016E | 2017E | 2018E | 2016E | 2017E | 2018E | 2016E | 2017E | 2018E |
| **Water Companies** | | | | | | | | | | | | | | | | | |
| AWK | American Water Works | O | $72.02 | -3.0% | 20.5% | 25.4% | $12,819.6 | $19,609.6 | 25.4x | 23.7x | 22.1x | 12.1x | 11.4x | 10.8x | 5.9x | 5.6x | 5.4x |
| WTR | Aqua America | N | $29.80 | -2.2% | 0.0% | 9.0% | $5,306.9 | $7,142.3 | 22.4x | 21.2x | 19.9x | 15.0x | 14.1x | 13.0x | 8.6x | 8.1x | 7.6x |
| CWT | California Water Services | N | $32.76 | 5.4% | 40.8% | 44.4% | $1,571.6 | $2,176.6 | 31.5x | 24.0x | 22.3x | 12.2x | 10.3x | 9.5x | 3.5x | 3.2x | 3.0x |
| AWR | American States Water | NC | $39.22 | 0.6% | -6.5% | -6.4% | $1,441.4 | $1,821.6 | 23.9x | 22.8x | 21.6x | 11.0x | 10.6x | 9.7x | 3.9x | 3.7x | 3.6x |
| SJW | SJW Corp. | NC | $43.65 | 1.9% | 47.2% | 33.1% | $898.3 | $1,317.5 | 24.3x | 26.0x | 24.3x | -- | -- | -- | 4.3x | 4.2x | -- |
| MSEX | Middlesex Water | NC | $34.20 | 0.7% | 28.9% | 34.5% | $561.8 | $710.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| YORW | York Water | NC | $29.30 | 2.7% | 17.5% | 27.8% | $376.5 | $456.1 | 30.8x | 28.7x | -- | 15.5x | 14.6x | -- | 9.6x | 9.1x | -- |
| CTWS | Connecticut Water Services | NC | $51.21 | 8.1% | 34.7% | 36.5% | $574.7 | $789.2 | 23.5x | 23.2x | 22.2x | 17.8x | 16.0x | -- | 8.0x | 7.5x | -- |
| ARTNA | Artesian Resources- A | NC | $27.74 | 1.9% | 0.1% | 7.6% | $254.0 | $363.7 | -- | -- | -- | 10.4x | 9.7x | -- | 4.7x | 4.4x | -- |
| *Median* | | | | 1.9% | 20.5% | 27.8% | $898.3 | $1,317.5 | 24.3x | 23.7x | 22.1x | 12.2x | 11.4x | 10.2x | 5.3x | 5.0x | 4.5x |
| *Mean* | | | | 1.8% | 20.4% | 23.5% | $2,645.0 | $3,820.8 | 26.0x | 24.2x | 22.1x | 13.4x | 12.4x | 10.7x | 6.0x | 5.7x | 4.9x |
| SP50 | S&P 500 | | | -0.9% | 3.8% | 5.2% | | | | | | | | | | | |
| COMP | NASDAQ | | | 0.5% | 3.7% | 7.3% | | | | | | | | | | | |

*Note: 2015, 2016, and 2017 multiples based on consensus estimates; ratings based on Baird analysis*

*Rating: O= Outperform; N= Neutral; U= Underperform; NC= Not Covered; R=Restricted*

*Source: FactSet, Robert W. Baird & Co.*

# Energy Technology & Resource Management

| | | | | Price Change | | | | | Price / EPS | | | EV / EBITDA | | | EV / Revenue | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ticker | Company Name | Rating | Price 10/13/16 | 1-Month | YTD | LTM | Market Cap ($M) | Enterprise Value ($M) | 2016E | 2017E | 2018E | 2016E | 2017E | 2018E | 2016E | 2017E | 2018E |
| **Advanced Fuels, Chemicals & Materials** | | | | | | | | | | | | | | | | | |
| ALB | Albemarle Corp. | N | $79.78 | 5.2% | 42.4% | 57.9% | $9,029.1 | $12,498.4 | 22.1x | 19.6x | 16.3x | 15.7x | 14.9x | 13.2x | 4.3x | 4.3x | 3.9x |
| ASPN | Aspen Aerogels, Inc. | O | $6.08 | 31.3% | 0.2% | -27.1% | $140.5 | $120.8 | -- | -- | 20.8x | 15.0x | 7.6x | 4.9x | 1.0x | 0.9x | 0.7x |
| CCC | Calgon Carbon Corporation | O | $16.04 | 7.5% | -7.0% | -8.2% | $817.8 | $875.7 | 25.2x | 17.9x | -- | 10.2x | 8.2x | -- | 1.7x | 1.6x | -- |
| CHMT | Chemtura Corporation | N | $32.83 | 16.4% | 20.4% | 7.7% | $2,107.7 | $2,398.7 | 18.5x | 15.5x | 13.4x | 8.4x | 7.7x | 6.9x | 1.4x | 1.4x | 1.3x |
| GRA | W.R. Grace | N | $69.86 | -6.2% | -12.6% | -11.7% | $4,953.1 | $6,341.3 | 22.8x | 19.9x | 17.9x | 12.7x | 11.5x | 10.7x | 3.9x | 3.7x | 3.6x |
| POL | PolyOne Corporation | O | $31.15 | -4.2% | -1.9% | -9.8% | $2,638.4 | $3,503.9 | 14.4x | 12.9x | 11.6x | 8.2x | 7.6x | 7.1x | 1.0x | 1.0x | 1.0x |
| *Median* | | | | 6.4% | -0.9% | -9.0% | $2,373.0 | $2,951.3 | 22.1x | 17.9x | 16.3x | 11.5x | 8.0x | 7.1x | 1.6x | 1.5x | 1.3x |
| *Mean* | | | | 8.3% | 6.9% | 1.5% | $3,281.1 | $4,289.8 | 20.6x | 17.2x | 16.0x | 11.7x | 9.6x | 8.6x | 2.2x | 2.2x | 2.1x |
| **Energy Efficiency & Services** | | | | | | | | | | | | | | | | | |
| ENOC | EnerNOC Inc. | O | $5.18 | -7.3% | 34.6% | -46.4% | $153.2 | $171.0 | -- | -- | -- | -- | -- | 14.3x | 0.4x | 0.5x | 0.4x |
| ITRI | Itron Inc. | O | $55.07 | 2.3% | 52.2% | 58.1% | $2,121.1 | $2,352.2 | 23.5x | 20.3x | 19.1x | 11.7x | 10.1x | 9.2x | 1.2x | 1.1x | 1.1x |
| SSNI | Silver Spring Networks | N | $13.68 | -0.6% | -5.1% | -3.9% | $721.9 | $608.8 | 99.9x | 47.0x | 32.0x | 35.3x | 21.5x | 15.5x | 2.0x | 1.8x | 1.6x |
| *Median* | | | | -0.6% | 34.6% | -3.9% | $721.9 | $608.8 | 61.7x | 33.6x | 25.5x | 23.5x | 15.8x | 14.3x | 1.2x | 1.1x | 1.1x |
| *Mean* | | | | -1.9% | 27.2% | 2.6% | $998.7 | $1,044.0 | 61.7x | 33.6x | 25.5x | 23.5x | 15.8x | 13.0x | 1.2x | 1.1x | 1.0x |
| **Renewables** | | | | | | | | | | | | | | | | | |
| CVA | Covanta Holding Corporation | N | $14.88 | 3.1% | -4.0% | -14.7% | $1,918.9 | $4,433.9 | -- | 216.7x | 56.4x | 10.7x | 10.5x | 9.2x | 2.7x | 2.6x | 2.5x |
| FSLR | First Solar Inc. | O | $38.49 | 2.2% | -41.7% | -24.3% | $3,998.1 | $2,519.2 | 10.7x | 17.6x | 12.5x | 4.2x | 5.5x | 4.1x | 0.7x | 0.9x | 0.7x |
| SCTY | SolarCity, Corporation | N | $19.94 | 12.3% | -60.9% | -58.5% | $1,983.7 | $6,065.3 | -- | -- | -- | -- | -- | -- | 8.9x | 6.4x | 4.0x |
| SPWR | SunPower Corporation | O | $8.26 | -13.3% | -72.5% | -66.6% | $1,139.9 | $2,891.4 | 19.1x | 15.8x | 7.4x | 11.1x | 8.5x | 6.9x | 1.0x | 0.9x | 0.9x |
| *Median* | | | | 2.6% | -51.3% | -41.4% | $1,951.3 | $3,662.6 | 14.9x | 17.6x | 12.5x | 10.7x | 8.5x | 6.9x | 1.8x | 1.8x | 1.7x |
| *Mean* | | | | 1.1% | -44.8% | -41.0% | $2,260.1 | $3,977.4 | 14.9x | 83.4x | 25.5x | 8.7x | 8.2x | 6.7x | 3.3x | 2.7x | 2.0x |
| **Advanced Transportation** | | | | | | | | | | | | | | | | | |
| TSLA | Tesla Motors | O | $199.92 | 1.6% | -16.7% | -7.3% | $27,985.4 | $28,381.6 | -- | 139.0x | 47.2x | 44.1x | 22.0x | 13.2x | 3.5x | 2.5x | 1.7x |
| *Median* | | | | 1.6% | -16.7% | -7.3% | $27,985.4 | $28,381.6 | -- | 139.0x | 47.2x | 44.1x | 22.0x | 13.2x | 3.5x | 2.5x | 1.7x |
| *Mean* | | | | 1.6% | -16.7% | -7.3% | $27,985.4 | $28,381.6 | -- | 139.0x | 47.2x | 44.1x | 22.0x | 13.2x | 3.5x | 2.5x | 1.7x |
| **Renewable & Energy Efficiency Yield Vehicles** | | | | | | | | | | | | | | | | | |
| HASI | Hannon Armstrong S.I.C., Inc. | O | $22.31 | -4.1% | 17.9% | 17.1% | $841.9 | $1,671.0 | 18.1x | 16.0x | 14.4x | 19.4x | 14.2x | 11.1x | 39.3x | 28.3x | 19.6x |
| CAFD | 8point3 Energy Partners | O | $14.15 | -7.5% | -12.3% | 9.9% | $1,103.7 | $1,797.1 | 14.8x | 22.9x | 15.1x | 23.9x | 16.2x | 11.9x | 30.5x | 20.4x | 13.3x |
| TERP | TerraForm Power | N | $13.43 | 0.7% | 6.8% | -28.7% | $1,880.2 | $5,019.1 | 48.4x | 26.5x | -- | 8.8x | 7.8x | -- | 7.1x | 6.6x | -- |
| *Median* | | | | -4.1% | 6.8% | 9.9% | $1,103.7 | $1,797.1 | 18.1x | 22.9x | 14.7x | 19.4x | 14.2x | 11.5x | 30.5x | 20.4x | 16.4x |
| *Mean* | | | | -3.6% | 4.1% | -0.6% | $1,275.3 | $2,829.1 | 27.1x | 21.8x | 14.7x | 17.3x | 12.7x | 11.5x | 25.6x | 18.4x | 16.4x |
| **Water Resource Management & Treatment** | | | | | | | | | | | | | | | | | |
| AWK | American Water Works Company | O | $71.97 | -3.0% | 20.5% | 25.3% | $12,810.7 | $19,600.7 | 25.4x | 23.7x | 22.1x | 12.1x | 11.4x | 10.8x | 5.9x | 5.6x | 5.4x |
| CWT | California Water Service Group | N | $32.72 | 5.4% | 40.6% | 44.2% | $1,569.6 | $2,174.6 | 31.5x | 24.0x | 22.3x | 12.2x | 10.3x | 9.5x | 3.5x | 3.2x | 3.0x |
| WTR | Aqua America | N | $29.82 | -2.2% | 0.1% | 9.1% | $5,310.5 | $7,145.9 | 22.4x | 21.2x | 19.9x | 15.0x | 14.2x | 13.0x | 8.6x | 8.1x | 7.6x |
| *Median* | | | | -2.2% | 20.5% | 25.3% | $5,310.5 | $7,145.9 | 25.4x | 23.7x | 22.1x | 12.2x | 11.4x | 10.8x | 5.9x | 5.6x | 5.4x |
| *Mean* | | | | 0.1% | 20.4% | 26.2% | $6,563.6 | $9,640.4 | 26.4x | 23.0x | 21.4x | 13.1x | 11.9x | 11.1x | 6.0x | 5.6x | 5.3x |

| | | | | |
|---|---|---|---|---|
| SP50 | S&P 500 | -0.9% | 4.0% | 5.4% |
| COMP | NASDAQ | 0.5% | 3.9% | 7.5% |
| NEXK | New Energy Global Innovation Index | -3.0% | -6.4% | -6.3% |

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*Note: 2016, 2017 and 2018 multiples based on consensus estimates; ratings based on Baird analysis*

*Rating: O= Outperform; N= Neutral; U= Underperform; NR= Not Rated*

*Source: FactSet, Robert W. Baird & Co.*

# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $350-$360 million annual capex investment, (~2.6x depreciation). $1.1B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 16 acquisitions in 2015, providing 1.1% to WTR's overall customer growth of 1.9%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Potential expansion into non-regulated water space could drive growth in the long run.** The company has recently divested from many of its market-based businesses that it considers too risky and hard to grow. WTR is actively evaluating other market-based activity, and believes that it will contribute to growth in the long run, but does not foresee non-regulated business becoming more than 15%-20% of Aqua America. WTR has also indicated that it would consider moving into other regulated utility space, believing the core competencies of the regulated water utility market would be profitable in other utility spaces.

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, in line with peers when fully valued (20x-22x 2018E EPS), reflecting average EPS growth opportunities and generally more constructive regulatory mechanisms.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Aqua America

## (WTR - NYSE)

## **Income Statement** ($millions)

| | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 4Q15 | 2015 | 1Q16 | 2Q16 | 3Q16E | 4Q16E | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Operating Revenue | 770.5 | 768.6 | 779.9 | 190.3 | 205.8 | 221.1 | 197.1 | 814.2 | 192.6 | 203.9 | 224.7 | 210.6 | 831.7 | 870.8 | 927.2 |
| *Growth (%)* | *6%* | *0%* | *1%* | *4%* | *5%* | *5%* | *3%* | *4%* | *1%* | *-1%* | *2%* | *7%* | *2%* | *5%* | *6%* |
| **Expenses** | | | | | | | | | | | | | | | |
| O&M | 278.7 | 285.3 | 288.6 | 73.2 | 79.7 | 78.5 | 77.9 | 309.3 | 73.5 | 74.0 | 79.3 | 85.6 | 312.4 | 317.1 | 326.6 |
| Depreciation | 113.6 | 119.3 | 123.1 | 30.5 | 31.0 | 32.0 | 31.8 | 125.3 | 32.1 | 31.6 | 32.9 | 32.3 | 129.0 | 131.6 | 138.2 |
| Amortization | 5.5 | 5.5 | 3.5 | 0.8 | 0.9 | 0.8 | 0.9 | 3.4 | 0.5 | 0.5 | 0.8 | 1.7 | 3.4 | 3.4 | 3.4 |
| Taxes other than income tax | 48.6 | 53.3 | 50.5 | 14.6 | 13.8 | 14.7 | 12.0 | 55.1 | 14.1 | 14.2 | 14.8 | 12.4 | 55.6 | 56.2 | 58.4 |
| **Total Expense** | 446.4 | 463.4 | 465.5 | 119.2 | 125.5 | 126.0 | 122.5 | 493.1 | 120.3 | 120.4 | 127.9 | 132.0 | 500.5 | 508.3 | 526.7 |
| ***Operating Ratio*** | ***57.9%*** | ***60.3%*** | ***59.7%*** | ***62.6%*** | ***61.0%*** | ***57.0%*** | ***62.1%*** | ***60.6%*** | ***62.4%*** | ***59.0%*** | ***56.9%*** | ***62.7%*** | ***60.2%*** | ***58.4%*** | ***56.8%*** |
| *Expense Growth (%)* | *1%* | *4%* | *0%* | *3%* | *9%* | *9%* | *3%* | *6%* | *1%* | *-4%* | *2%* | *8%* | *8%* | *9%* | *7%* |
| **EBITDA** | 443.2 | 430.0 | 440.9 | 102.5 | 112.2 | 127.9 | 107.2 | 449.8 | 104.9 | 115.6 | 130.5 | 112.6 | 463.7 | 497.6 | 542.2 |
| *EBITDA Margin* | *57.5%* | *55.9%* | *56.5%* | *54%* | *55%* | *58%* | *54%* | *55.2%* | *1* | *1* | *58.1%* | *53.5%* | *55.8%* | *57.1%* | *58.5%* |
| *Growth (%)* | *10%* | *-3%* | *3%* | *4%* | *0%* | *2%* | *2%* | *2%* | *2%* | *3%* | *2%* | *5%* | *3%* | *7%* | *9%* |
| **EBIT** | 324.1 | 305.2 | 314.4 | 71.2 | 80.2 | 95.1 | 74.6 | 321.1 | 72.3 | 83.5 | 96.8 | 78.6 | 331.2 | 362.5 | 400.5 |
| *EBIT Margin* | *42.1%* | *39.7%* | *40.3%* | *37%* | *39%* | *43%* | *38%* | *39.4%* | *37.6%* | *41.0%* | *43.1%* | *37.3%* | *39.8%* | *41.6%* | *43.2%* |
| *Growth (%)* | *13%* | *-6%* | *3%* | *7%* | *0%* | *0%* | *3%* | *2%* | *2%* | *4%* | *2%* | *5%* | *3%* | *9%* | *10%* |
| Other expense (income) | 72.5 | 74.9 | 71.3 | 17.3 | 17.9 | 17.4 | 16.6 | 69.8 | 17.3 | 18.1 | 21.4 | 21.6 | 78.4 | 94.0 | 103.7 |
| Shale JV | 1.7 | (1.0) | (4.0) | (0.7) | (0.1) | (0.7) | (0.7) | (2.2) | (0.2) | (0.2) | 1.3 | 4.2 | 5.0 | 5.0 | 5.0 |
| Pretax Income | 253.3 | 229.4 | 239.1 | 53.1 | 62.3 | 77.0 | 57.3 | 249.1 | 54.7 | 65.1 | 76.6 | 61.3 | 257.7 | 273.6 | 301.8 |
| *PT Margin* | *32.9%* | *29.8%* | *30.7%* | *27.9%* | *30.3%* | *34.8%* | *29.1%* | *30.6%* | *28.4%* | *32.0%* | *34.1%* | *29.1%* | *31.0%* | *31.4%* | *32.5%* |
| Income Tax Expense | 67.9 | 24.8 | 25.2 | 4.6 | 4.9 | 9.6 | 6.9 | 26.0 | 3.0 | 5.5 | 8.0 | 6.4 | 23.0 | 30.1 | 39.2 |
| **Net Income** | 184.5 | 204.6 | 213.9 | 48.5 | 57.4 | 67.4 | 50.4 | 223.1 | 51.7 | 59.6 | 68.6 | 54.8 | 234.7 | 243.5 | 262.6 |
| Shares Outstanding, Diluted | 174.9 | 176.8 | 177.8 | 177.8 | 177.9 | 177.5 | 177.3 | 177.8 | 177.8 | 178.1 | 178.1 | 178.1 | 178.0 | 178.1 | 178.1 |
| **EPS** | $1.05 | $1.16 | $1.20 | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 | $0.29 | $0.33 | $0.38 | $0.31 | $1.32 | $1.37 | $1.47 |
| *Growth (%)* | *22%* | *10%* | *4%* | *15%* | *5%* | *0%* | *3%* | *4%* | *7%* | *4%* | *1%* | *8%* | *5%* | *4%* | *8%* |
| **EPS including Disc Ops** | $1.05 | $1.05 | $1.31 | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 | $0.29 | $0.33 | $0.38 | $0.31 | $1.32 | $1.37 | $1.47 |
| | | | | | | | | | | | | | | | |
| **Expense Ratios (% Total Rev)** | | | | | | | | | | | | | | | |
| O&M | 36.2% | 37.1% | 37.0% | 38.5% | 38.8% | 35.5% | 39.5% | 38.0% | 38.2% | 36.3% | 35.3% | 40.6% | 37.6% | 36.4% | 35.2% |
| Depreciation | 14.7% | 15.5% | 15.8% | 16.0% | 15.1% | 14.5% | 16.1% | 15.4% | 16.7% | 15.5% | 14.7% | 15.4% | 16.0% | 15.1% | 14.9% |
| Amortization | 0.7% | 0.7% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.2% | 0.3% | 0.4% | 0.8% | 0.4% | 0.4% | 0.4% |
| Taxes other than income tax | 6.3% | 6.9% | 6.5% | 7.7% | 6.7% | 6.6% | 6.1% | 6.8% | 7.3% | 7.0% | 6.6% | 5.9% | 6.7% | 6.4% | 6.3% |

Source: Company Reports & Baird estimates

**Research disclosures can be accessed at http://www.rwbaird.com/research-insights/research/coverage/research-disclosure.aspx**

**10/13/16**

**Ben Kallo 415.364.3345 Sr. Research Analyst**
**Tyler Frank 415.364.3342 Sr. Research Associate**

# Aqua America
## (WTR - NYSE)
## Balance Sheet ($mln)

| | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | 1Q16 | 2Q16 |
|---|---|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | | | |
| Cash and Cash Equivalents | 6 | 6 | 4 | 9 | 5 | 4 | 3 | 4 | 5 |
| Accounts Receivable, net | 93 | 95 | 97 | 95 | 109 | 111 | 99 | 92 | 100 |
| Materials and Supplies | 12 | 11 | 13 | 13 | 14 | 28 | 12 | 12 | 12 |
| Other Current Assets | 151 | 60 | 39 | 47 | 48 | 25 | 14 | 14 | 16 |
| **Total Current** | **261** | **172** | **153** | **164** | **175** | **168** | **128** | **123** | **132** |
| Gross PPE | 5,050 | 5,388 | 5,707 | 5,764 | 5,879 | 5,985 | 6,088 | 6,184 | 6,282 |
| Accumulated Depreciation | 1,114 | 1,221 | 1,305 | 1,331 | 1,357 | 1,380 | 1,399 | 1,431 | 1,459 |
| Net Property & Equipment | 3,936 | 4,167 | 4,402 | 4,433 | 4,522 | 4,606 | 4,689 | 4,753 | 4,823 |
| Regulatory Assets | 521 | 586 | 726 | 749 | 772 | 800 | 830 | 860 | 887 |
| Funds Restricted for Construction | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Goodwill | 28 | 28 | 31 | 34 | 34 | 34 | 34 | 42 | 42 |
| Investment in Joint Venture | 39 | 49 | 43 | 43 | 43 | 41 | 8 | 7 | 7 |
| Other Assets | 50 | 50 | 52 | 55 | 55 | 52 | 52 | 30 | 30 |
| **Total Assets** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** |
| | | | | | | | | | |
| **LIABILITIES & EQUITIES** | | | | | | | | | |
| Accounts Payable | 56 | 64 | 63 | 35 | 48 | 45 | 56 | 34 | 41 |
| Short-term Borrowing | 80 | 144 | 18 | 33 | 36 | 28 | 17 | 28 | 26 |
| Long-term Debt Due Within One Year | 45 | 123 | 59 | 47 | 39 | 48 | 36 | 29 | 38 |
| Accrued Liabilities | 93 | (64) | 85 | 90 | 81 | 95 | 84 | 83 | 74 |
| **Total Current** | **274** | **267** | **225** | **205** | **203** | **216** | **193** | **174** | **179** |
| Long-term Debt & Commercial Paper | 1,544 | 1,469 | 1,561 | 1,595 | 1,661 | 1,681 | 1,744 | 1,744 | 1,776 |
| Deferred Income Taxes & Inv. Tax Credits | 723 | 868 | 1,001 | 1,041 | 1,080 | 1,116 | 1,119 | 1,152 | 1,190 |
| Regulatory Liabilities | 241 | 281 | 278 | 274 | 269 | 264 | 260 | 255 | 254 |
| Customers' Advances for Construction | 72 | 74 | 78 | 76 | 84 | 87 | 87 | 87 | 88 |
| Contributions in Aid of Construction | 460 | 477 | 498 | 504 | 506 | 510 | 512 | 531 | 535 |
| Other Liabilities | 158 | 82 | 110 | 106 | 95 | 98 | 100 | 111 | 109 |
| Shareholder's Equity | 1,386 | 1,535 | 1,655 | 1,676 | 1,703 | 1,729 | 1,726 | 1,761 | 1,791 |
| **Total Liabilities and Equity** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** |

| Balance Sheet Analysis | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | 1Q16 | 2Q16 |
|---|---|---|---|---|---|---|---|---|---|
| ROE | 13.6% | 13.8% | 13.6% | 13.5% | 13.7% | 13.6% | 13.7% | 13.1% | 13.2% |
| Rate Base | 2,902 | 3,022 | 3,100 | 3,259 | 3,259 | 3,259 | 3,259 | 3,477 | 3,477 |
| Current Ratio | 1.0 | 0.6 | 0.7 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 |
| Days Sales Outstanding (DSO) | 5.4 | 5.5 | 5.7 | 5.7 | 5.9 | 9.3 | 5.6 | 5.7 | 5.4 |
| EBIT/ Interest Expense | 4.2 | 3.9 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 |
| Debt / Total Cap | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% |
| Debt / Total Cap (incl Op Leases) | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% |
| Book Value/Share | $7.92 | $8.68 | $9.31 | $9.43 | $9.57 | $9.74 | $9.71 | $9.90 | $10.06 |

Source: Company Reports & Baird estimates

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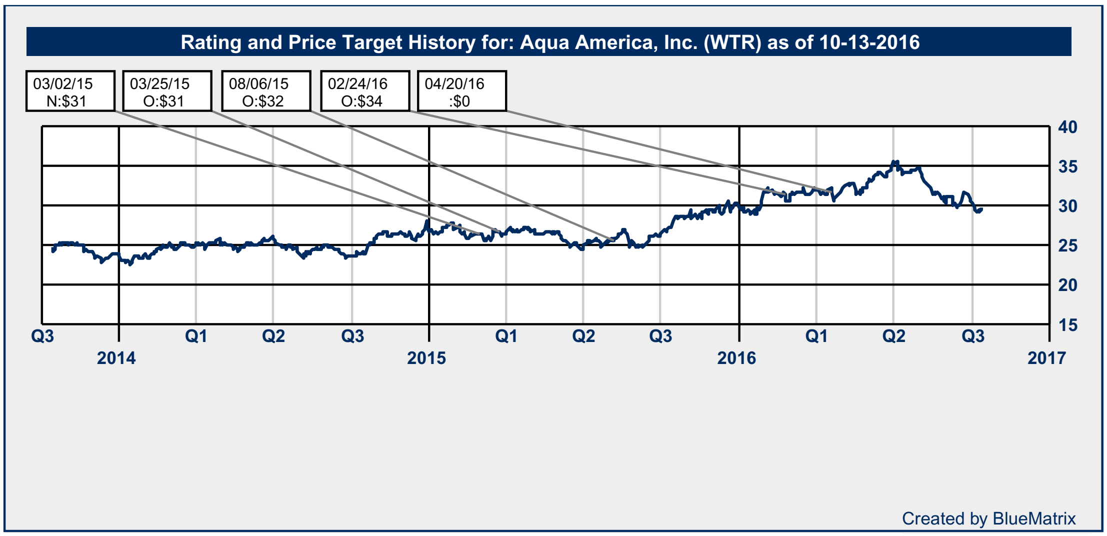
# Appendix - Important Disclosures and Analyst Certification

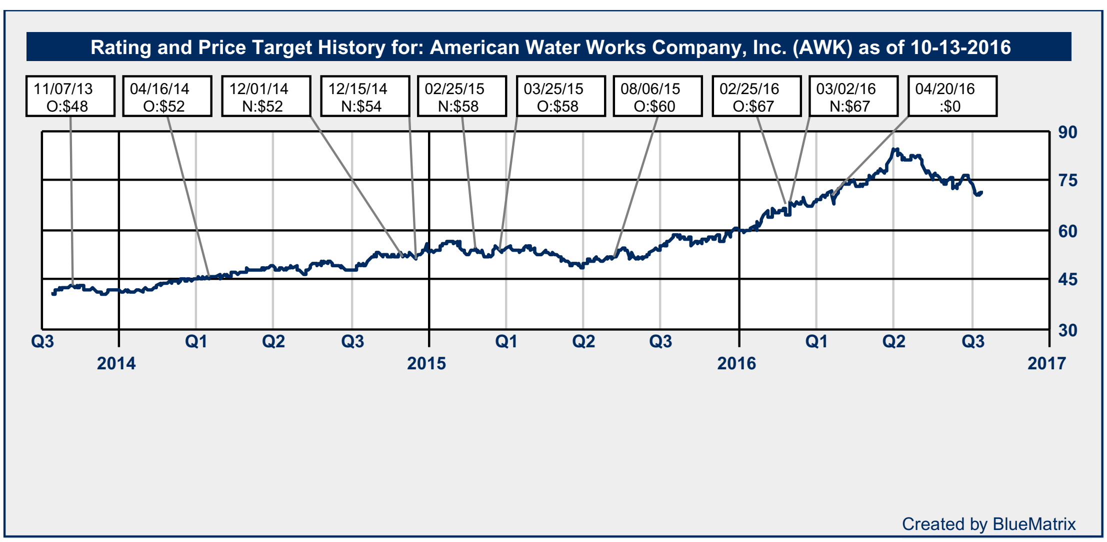
Approved on 13 October 2016 23:52EDT/ Published on 14 October 2016 01:00EDT.

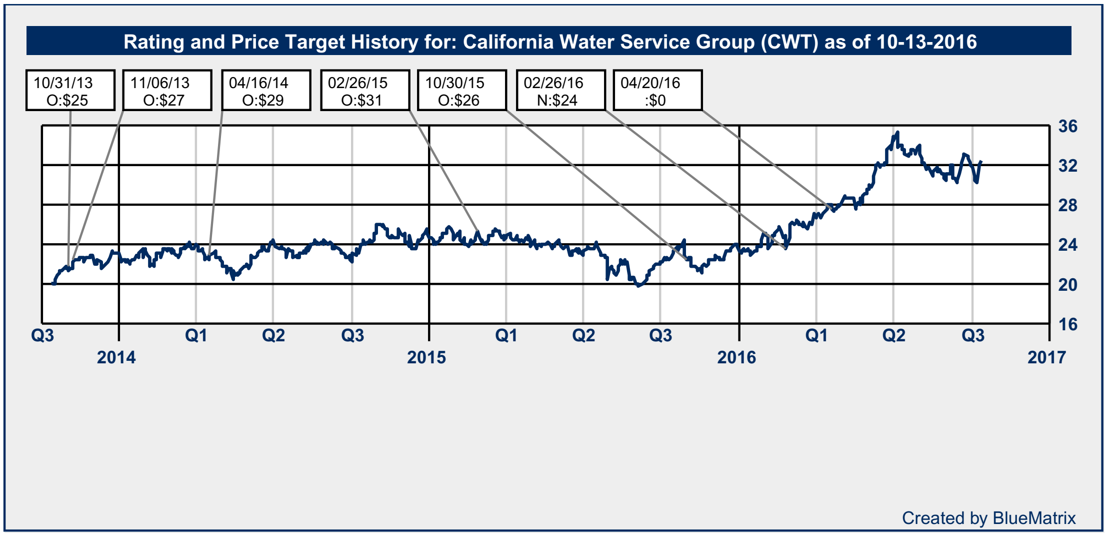
### Covered Companies Mentioned

All stock prices below are the 10/13/2016 closing price.

American Water Works Company, Inc. (AWK - $71.76 - Outperform)
Aqua America, Inc. (WTR - $29.77 - Neutral)
California Water Service Group (CWT - $32.53 - Neutral)
(See recent research reports for more information)






1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR, AWK and CWT.

3 Robert W. Baird & Co. Incorporated and/or its affiliates have received investment banking compensation from California Water Service Group in the past 12 months.

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# Aqua America, Inc. (WTR)

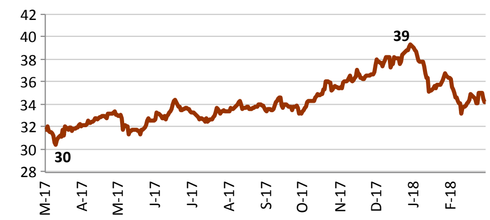
## Quick Thoughts Following Investor Day

**Reiterate Neutral rating.** While we remain constructive on the broader water utility space over the long term, given capital investments needs and potential for industry consolidation, we remain on the sidelines as we look for WTR to execute on earnings growth initiatives. Importantly, the company indicated it has a large pipeline of municipal acquisition opportunities (including six acquisitions totaling ~16.3k customers expected to close in 2018) and intends to file for a rate case in Pennsylvania in mid-2018, which could contribute to EPS growth over time.

- **WTR continues to work on driving growth through the acquisition of larger municipal utilities, but we will look for execution on the growth strategy to get more constructive.** Management indicated WTR's municipal acquisition initiative will be a core driver of growth moving forward and targets 2%-3% customer growth in 2018. The company has signed six municipal deals, totaling ~16.3k customers and $150M purchase price, which are expected to close in 2018, and highlighted 10 municipal acquisition opportunities in development, totaling ~289k customer connections. We will look for execution on the acquisition pipeline or other indications WTR's intended shift towards larger, municipal acquisitions is progressing as planned to get more constructive.
- **WTR tentatively plans to file for a rate case in Pennsylvania in mid-2018, which could contribute to EPS growth when effective in 2019.** WTR targets ~ $1.4B in infrastructure investment through 2020 which should contribute to ~7% rate base growth. While we view the investment targets favorably, the company is currently overearning in certain geographies, which could dampen EPS growth in the intermediate term. Importantly, the company expects to file a rate case in Pennsylvania in mid-2018 to recover ~$2B of prior capital investment, which could contribute to EPS growth when rates come in effect in 2019.
- **We remain constructive on the broader water utility industry over the long term given the infrastructure need and potential for consolidation.** The current water utility industry is highly fragmented, consisting of ~53k community water systems and ~16k community waste water facilities. Coupled with a significant need for infrastructure investment (the EPA projects a 20-year capital improvement need of $384B for U.S. public water infrastructure) and enhanced regulatory recovery mechanisms, we believe there is a favorable backdrop for growth for water utilities.
- **A favorable regulatory environment should continue to encourage consolidation and accelerated capital investment in the industry.** Favorable regulatory developments in recent years, including the adoption of DSIC mechanisms in several geographies, the implementation of forward test years, and fair market value legislation, should continue to contribute to a favorable acquisition environment and encourage capital investment for WTR.

**LOWERING PRICE TARGET**

### 1-Year Price Chart




### Stock Data

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target/Previous: | ▼$35/$38 |
| Price (2/28/18): | $34.19 |
| Market Cap (mil): | $6,093 |
| Shares Out (mil): | 178.2 |
| Average Daily Vol (mil): | 0.72 |
| Dividend Yield: | 2.4% |

### Estimates

| FY Dec | 2017A | 2018E | 2019E |
|---|---|---|---|
| Q1 | 0.28 A | 0.28 E | |
| Q2 | 0.34 A | 0.35 E | |
| Q3 | 0.43 A | 0.42 E | |
| Q4 | 0.30 A | 0.32 E | |
| **Fiscal EPS** | **1.35 A** | **1.38 E** | **1.45 E** |
| Previous Est | | 1.46 E | 1.55 E |
| Fiscal P/E | 25.3x | 24.8x | 23.6x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

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# Details

**Lowering estimates to reflect 2018 guidance.** For 2018 we model revenue of $848M and EPS of $1.38 vs. consensus of $881M/$1.43. For 2019 we model revenue of $884M and EPS of $1.45 vs. consensus of $926M/$1.51.

**Lowering price target to $35.** Our price target is based on a ~24x P/E multiple of our 2019 EPS estimate, which is in line with comps which are currently trading at a ~22x-26x multiple. We believe this is justified as WTR works to execute on earnings growth.

# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's ~$500 million annual capex investment. $1.4B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** The majority of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 2-3% customer growth in 2018 driven by acquisitions of municipal utilities. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth.

**$35 price target.** Our price target is based on a ~24x P/E multiple of our 2019 EPS estimate, which is in line with comps which are currently trading at a ~22x-26x multiple. We believe this is justified as WTR works to execute on earnings growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Appendix - Important Disclosures and Analyst Certification

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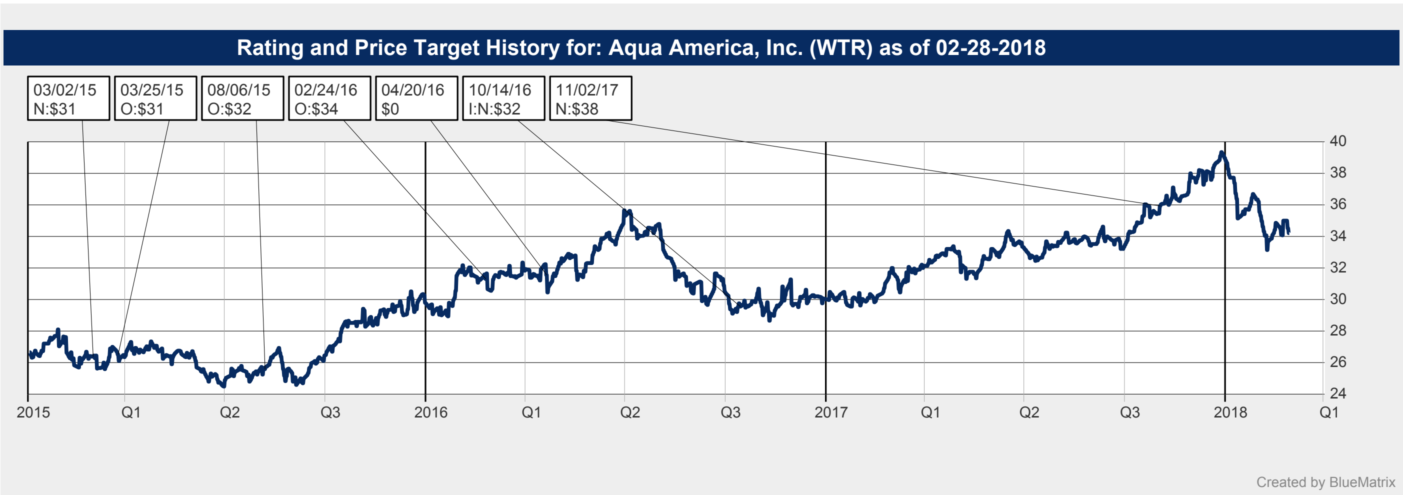


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# Aqua America, Inc. (WTR)

## Q1 Results: First Look

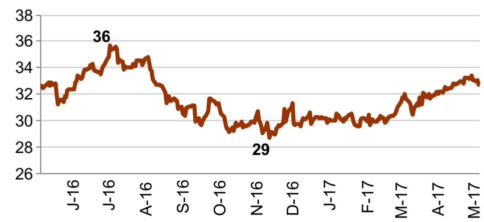
**Reiterate Neutral rating after Q1 earnings release.** WTR missed consensus estimates on the top and bottom line due, in part, to decreased consumption. Importantly, the company reaffirmed EPS guidance of $1.34 to $1.39 for 2017, and indicated it is on track to invest more than $450M in capital improvements. The company has received $10.7M in annualized revenue increases in 2017 ($12.2M pending) and has four acquisitions under contract (~9,000 customers) it expects to close in 2017. We will look for additional information on the conference call.

- **Q1 results missed consensus estimates.** Q1 revenue was ~$188M vs. consensus estimates of $195M. Net income was $49M vs. $52M, and EPS was $0.28 vs. $0.30. Q1 revenue and EPS decreased ~3% y/y due to decreased consumption and difficult comps in Q1:16.
- **WTR reaffirmed 2017 guidance despite Q1 miss.** WTR continues to expect $1.34 to $1.39 in EPS, same-system O&M expenses to increase 1% to 2%, and more than $450M in capital investments during 2017 (>$1.2B through 2019). WTR invested ~$95M in water infrastructure in Q1:17.
- **We believe WTR should be able to achieve its customer growth targets of 1.5-2% in 2017.** WTR has added ~262 connections through acquisitions in Indiana thus far in 2017, leading to ~0.2% growth in its customer base YTD (including organic growth). Importantly, WTR has four municipal acquisitions under contract (~9,000 customers and $113M price) it expects to close in 2017.
- **Rate increases and surcharges continue to contribute to revenue growth.** WTR received $10.7M in annualized revenue increases thus far in 2017 due to favorable decisions in rate cases and infrastructure charges in five states. Additionally, a decision on a total of ~$12.2M in annualized revenue increase is pending in two states, although the timing of potential regulatory approvals remains unclear.
- **WTR's Q1 earnings call will be held today at 10:00 a.m. CT**. The call can be accessed at www.ir.aquaamerica.com . We will update our model following the call.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### RESEARCH UPDATE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (5/3/17): | $32.72 |
| Market Cap (mil): | $5,824 |
| Shares Out (mil): | 178.0 |
| Average Daily Vol (mil): | 0.62 |
| Dividend Yield: | 2.4% |

**Estimates**

| FY Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| Q1 | 0.29 A | | |
| Q2 | 0.33 A | | |
| Q3 | 0.41 A | | |
| Q4 | 0.28 A | | |
| **Fiscal EPS** | **1.32 A** | **1.34 E** | **1.46 E** |
| Fiscal P/E | 24.8x | 24.4x | 22.4x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, in line with peers when fully valued (20x-22x 2018E EPS), reflecting average EPS growth opportunities and generally more constructive regulatory mechanisms.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

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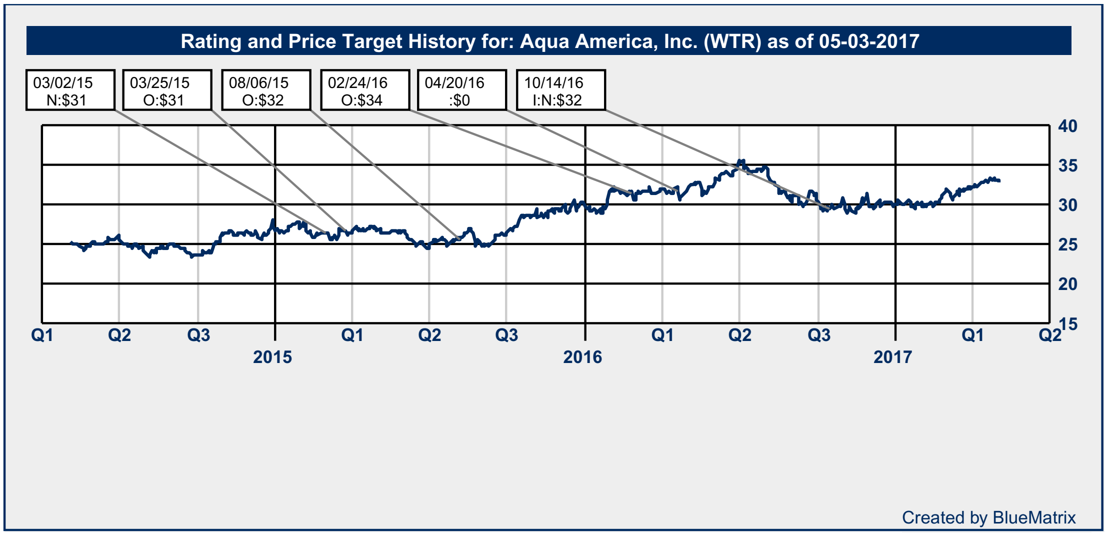


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# Aqua America, Inc. (WTR)

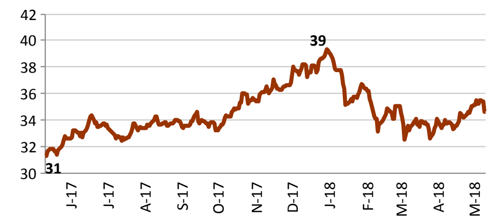
## Q1 Conference Call Highlights

**Reiterate Neutral rating.** WTR provided an update on executive team changes; Dave Smeltzer will retire following the Pennsylvania rate case, and will be replaced at CFO by Dan Schuller, who has been at the company since 2015. WTR continues to plan to file for a rate case in Pennsylvania in mid-2018, which could contribute to EPS growth when effective, and targets 2%-3% customer growth, which we believe is achievable. We will look for execution on WTR's acquisition pipeline or EPS growth to get more constructive.

- **Dave Smeltzer will retire from WTR following the Pennsylvania rate case, and will be replaced at CFO by Dan Schuller.** Mr. Smeltzer has been CFO of WTR for 19 years, and played an important role in closing 300 acquisitions and securing favorable regulatory mechanisms across WTR's footprint. Dan Schuller will take over as CFO following Smeltzer's retirement in October; Mr. Schuller has been at the company since 2015 and has previously worked in Infrastructure Investments at J.P. Morgan. Additionally, the company named Matthew Rhodes, a former investment banker at Goldman Sachs, EVP of Strategy and Corporate Development, and Christina Kelly, former VP of HR at AmerisourceBergen, as Chief Human Resources Officer.
- **WTR continues to plan to file for a rate case in Pennsylvania in mid-2018, which could contribute to EPS growth when effective in 2019.** WTR is currently overearning in certain geographies, which could dampen EPS growth in the intermediate term despite capital investment targets which we view favorably. Importantly, the company expects to file a rate case in Pennsylvania in mid-2018 to recover ~$2B of prior capital investment, which could contribute to EPS growth when rates come in effect in 2019.
- **WTR continues to target 2%-3% customer growth, which we believe is achievable given the company's acquisition pipeline.** The company has added 2,259 new customers YTD through three acquisitions and organic growth. Additionally, the company has signed six municipal deals, totaling ~16.3k customers and $150M purchase price, which are expected to close in 2018. We will look for execution on the acquisition pipeline or other indications WTR's intended shift towards larger, municipal acquisitions is progressing as planned to get more constructive.
- **Maintain $35 price target.** Our price target is based on a ~24x P/E multiple of our 2019 EPS estimate, which is in line with comps which are currently trading at a ~22x-26x multiple. We believe this is justified as WTR works to execute on earnings growth.

### RESEARCH UPDATE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $35 |
| Price (5/9/18): | $34.17 |
| Market Cap (mil): | $6,089 |
| Shares Out (mil): | 178.2 |
| Average Daily Vol (mil): | 0.61 |
| Dividend Yield: | 2.4% |

**Estimates**

| FY Dec | 2017A | 2018E | 2019E |
|---|---|---|---|
| Q1 | 0.28 A | 0.29 A | |
| Q2 | 0.34 A | 0.35 E | |
| Q3 | 0.43 A | 0.42 E | |
| Q4 | 0.30 A | 0.32 E | |
| **Fiscal EPS** | **1.35 A** | **1.38 E** | **1.45 E** |
| Fiscal P/E | 25.3x | 24.8x | 23.6x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

Please refer to Appendix - Important Disclosures and Analyst Certification

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

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# Investment Thesis

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's ~$500 million annual capex investment. $1.4B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** The majority of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 2-3% customer growth in 2018 driven by acquisitions of municipal utilities. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth.

**$35 price target.** Our price target is based on a ~24x P/E multiple of our 2019 EPS estimate, which is in line with comps which are currently trading at a ~22x-26x multiple. We believe this is justified as WTR works to execute on earnings growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Appendix - Important Disclosures and Analyst Certification

Approved on 9 May 2018 12:20EDT/ Published on 9 May 2018 12:20EDT.


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# Aqua America, Inc. (WTR)

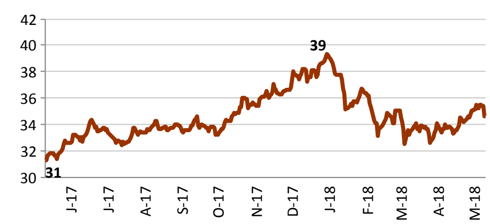
## First Look at Q1 Results

**Reiterate Neutral rating after Q1 earnings release.** WTR reported results which were in line with our estimates but below consensus due to adverse impacts of tax reform and increased O&M expenses. Importantly, the company reaffirmed EPS guidance of $1.37 to $1.42 and indicated it is on track to invest ~$500M in capital improvements. WTR received $23.6M in annualized revenue increases YTD ($8.6M pending) and has several acquisitions totaling ~16k customers which are expected to close in 2018. We will look for additional information on the conference call.

- **Q1 results were in-line with our estimates, but missed consensus numbers due to adverse impacts of tax reform and increased O&M expenses.** Q1 revenue was ~$194M vs. our/consensus estimates of $197M/$203M, as additional revenue from infrastructure surcharges was partially offset by a $2.5M headwind from tax reform. Net income was $51M vs. $50M/$54M, and EPS was $0.29 vs. $0.28/$0.32, respectively, due to increased O&M expenses.
- **WTR reaffirmed 2018 guidance.** WTR continues to expect $1.37 to $1.42 in EPS, total customer growth of ~2%-3%, and ~$500M in infrastructure investments during 2018 (~$1.4B through 2020). WTR has invested ~$105M in water infrastructure YTD.
- **We believe WTR should be able to achieve its customer growth targets of ~2%-3% in 2018.** WTR has added ~448 customer connections through acquisitions YTD, and organic growth added an additional 1,811 customers. Importantly, WTR has several acquisitions under contract totaling ~16k customers which are expected to close in 2018, although the timing of acquisitions may vary.
- **Rate increases and surcharges continue to contribute to revenue growth.** WTR has received $23.6M in annualized revenue increases thus far in 2018 due to favorable decisions in rate cases and infrastructure charges in seven states. Additionally, a decision on a total of ~$8.6M in annualized revenue increases is pending in four states, although the timing of potential regulatory approvals remains unclear.
- **WTR's Q1 earnings call will be held today at 10:00 a.m. CT.** The call can be accessed at www.ir.aquaamerica.com. We will update our model following the call.

### RESEARCH UPDATE

**1-Year Price Chart**

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| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
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| Price (5/8/18): | $34.63 |
| Market Cap (mil): | $6,171 |
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**Estimates**

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| **Fiscal EPS** | **1.35 A** | **1.38 E** | **1.45 E** |
| Fiscal P/E | 25.7x | 25.1x | 23.9x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/ wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's ~$500 million annual capex investment. $1.4B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

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# Risks & Caveats

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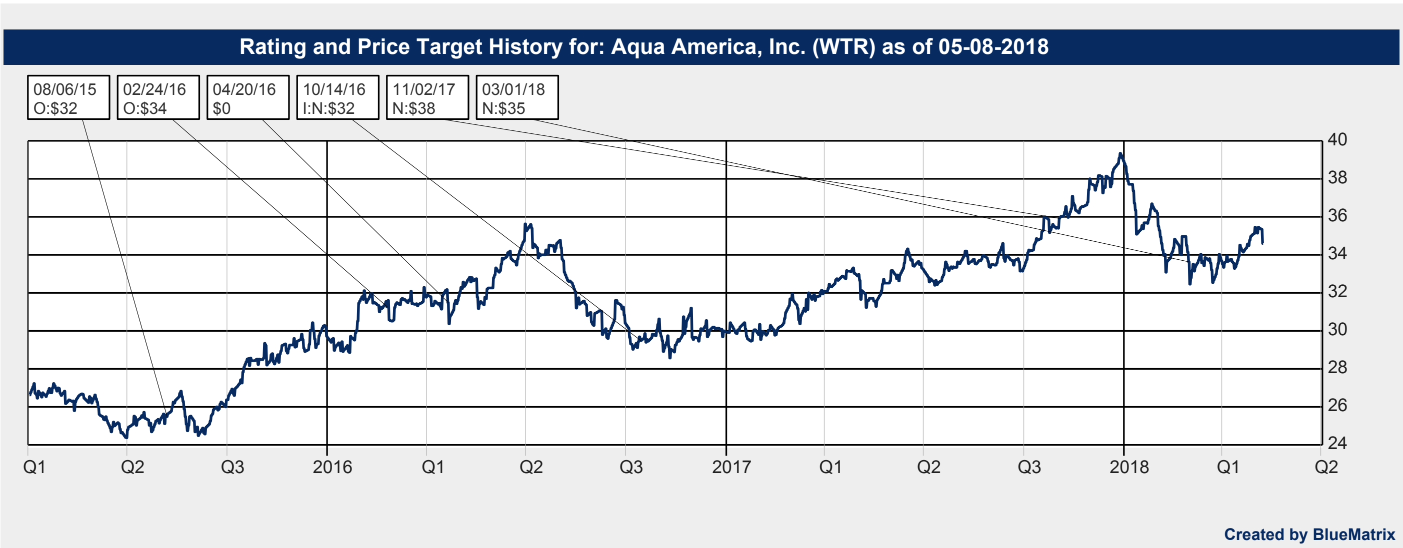
Approved on 8 May 2018 21:01EDT/ Published on 9 May 2018 01:00EDT.

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# Aqua America, Inc. (WTR)

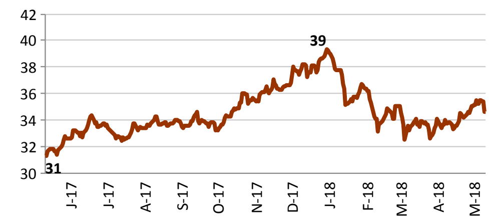
## Q1 Conference Call Highlights

**Reiterate Neutral rating.** WTR provided an update on executive team changes; Dave Smeltzer will retire following the Pennsylvania rate case, and will be replaced at CFO by Dan Schuller, who has been at the company since 2015. WTR continues to plan to file for a rate case in Pennsylvania in mid-2018, which could contribute to EPS growth when effective, and targets 2%-3% customer growth, which we believe is achievable. We will look for execution on WTR's acquisition pipeline or EPS growth to get more constructive.

- **Dave Smeltzer will retire from WTR following the Pennsylvania rate case, and will be replaced at CFO by Dan Schuller.** Mr. Smeltzer has been CFO of WTR for 19 years, and played an important role in closing 300 acquisitions and securing favorable regulatory mechanisms across WTR's footprint. Dan Schuller will take over as CFO following Smeltzer's retirement in October; Mr. Schuller has been at the company since 2015 and has previously worked in Infrastructure Investments at J.P. Morgan. Additionally, the company named Matthew Rhodes, a former investment banker at Goldman Sachs, EVP of Strategy and Corporate Development, and Christina Kelly, former VP of HR at AmerisourceBergen, as Chief Human Resources Officer.
- **WTR continues to plan to file for a rate case in Pennsylvania in mid-2018, which could contribute to EPS growth when effective in 2019.** WTR is currently overearning in certain geographies, which could dampen EPS growth in the intermediate term despite capital investment targets which we view favorably. Importantly, the company expects to file a rate case in Pennsylvania in mid-2018 to recover ~$2B of prior capital investment, which could contribute to EPS growth when rates come in effect in 2019.
- **WTR continues to target 2%-3% customer growth, which we believe is achievable given the company's acquisition pipeline.** The company has added 2,259 new customers YTD through three acquisitions and organic growth. Additionally, the company has signed six municipal deals, totaling ~16.3k customers and $150M purchase price, which are expected to close in 2018. We will look for execution on the acquisition pipeline or other indications WTR's intended shift towards larger, municipal acquisitions is progressing as planned to get more constructive.
- **Maintain $35 price target.** Our price target is based on a ~24x P/E multiple of our 2019 EPS estimate, which is in line with comps which are currently trading at a ~22x-26x multiple. We believe this is justified as WTR works to execute on earnings growth.

### RESEARCH UPDATE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $35 |
| Price (5/9/18): | $34.17 |
| Market Cap (mil): | $6,089 |
| Shares Out (mil): | 178.2 |
| Average Daily Vol (mil): | 0.61 |
| Dividend Yield: | 2.4% |

**Estimates**

| FY Dec | 2017A | 2018E | 2019E |
|---|---|---|---|
| Q1 | 0.28 A | 0.29 A | |
| Q2 | 0.34 A | 0.35 E | |
| Q3 | 0.43 A | 0.42 E | |
| Q4 | 0.30 A | 0.32 E | |
| **Fiscal EPS** | **1.35 A** | **1.38 E** | **1.45 E** |
| Fiscal P/E | 25.3x | 24.8x | 23.6x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

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# Investment Thesis

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's ~$500 million annual capex investment. $1.4B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** The majority of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 2-3% customer growth in 2018 driven by acquisitions of municipal utilities. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth.

**$35 price target.** Our price target is based on a ~24x P/E multiple of our 2019 EPS estimate, which is in line with comps which are currently trading at a ~22x-26x multiple. We believe this is justified as WTR works to execute on earnings growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Appendix - Important Disclosures and Analyst Certification

Approved on 9 May 2018 12:20EDT/ Published on 9 May 2018 12:20EDT.


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# Aqua America, Inc. (WTR)

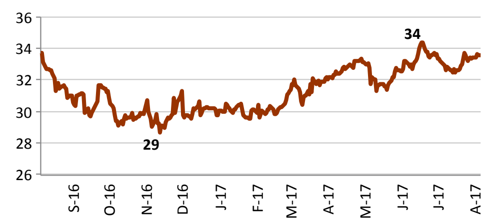
## Q2 Conference Call Highlights

**Reiterate Neutral rating after Q2 conference call.** The exit of market-based business offset increases in regulated revenue in Q2, but increased consumption and favorable rate case decisions led to a ~3% increase in EPS, y/y. WTR has five acquisitions pending totaling ~12,000 customers, which should help the company reach targeted customer growth of 1.5%-2%, but we are looking for an indication WTR's intended shift towards larger, municipal acquisitions is progressing as planned. We remain rated Neutral and look for execution on EPS growth before becoming more constructive.

- **The exit of market-based business segments continued to offset revenue increases in Q2, but management indicated it has largely completed divestments.** Favorable rate decisions and regulated customer growth increased revenue by ~$2.9M y/y, but was more than offset by $4.4M in reduced revenue from market-based activities. For more information, please see Q2 First Look.
- **EPS increased ~3% y/y as increased consumption, favorable rate case decisions, and growth in regulated segments more than offset increased expenses.** Additionally, the company increased its quarterly dividend by 7%, relatively in line with the six-year dividend CAGR of 7.9%. WTR also reiterated its 2017 EPS guidance of $1.34 to $1.39.
- **WTR has five pending acquisitions which should contribute to growth in the intermediate term, but deals are towards the lower end (or below) the company's target deal size (2,500-25,000 customers).** WTR has five municipal deals pending, totaling ~12,000 customers and $126M purchase price, but deals are towards the lower end of the company's target size range. Importantly, WTR has identified 70 acquisition prospects totaling ~500k connections, which include 18 systems with >10,000 connections. While we expect the acquisition environment to remain favorable following positive legislative changes in key states (such as fair market value legislation), we will continue look for indications WTR's intended shift towards larger, municipal acquisitions is progressing as planned.
- **Updating estimates to reflect Q2 results.** For 2017 we now estimate revenue of $842M and EPS of $1.34 vs. our prior estimates of $847M/$1.34. For 2018, we now estimate revenue of $887M and EPS of $1.46, vs our prior estimates of $898M/$1.46.
- **Reiterate $32 price target.** Our $32 price target is 22x our 2018 EPS estimate, below peers (~25x 2018E EPS), which we believe will expand as WTR executes on EPS growth.

**ESTIMATE CHANGE**

### 1-Year Price Chart




### Stock Data

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (8/3/17): | $33.59 |
| Market Cap (mil): | $5,979 |
| Shares Out (mil): | 178.0 |
| Average Daily Vol (mil): | 0.57 |
| Dividend Yield: | 2.4% |

### Estimates

| FY Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| Q1 | 0.29 A | 0.28 A | |
| Q2 | 0.33 A | 0.34 A | |
| Q3 | 0.41 A | 0.43 E | |
| Q4 | 0.28 A | 0.30 E | |
| **Fiscal EPS** | **1.32 A** | **1.34 E** | **1.46 E** |
| Fiscal P/E | 25.4x | 25.1x | 23.0x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/ wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, below peers (~25x 2018E EPS), which we believe will expand as WTR executes on EPS growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Aqua America

## (WTR - NYSE)

| Income Statement (in millions) | 2012 | 2013 | 2014 | 2015 | Q1:16A | Q2:16A | Q3:16A | Q4:16A | 2016 | Q1:17A | Q2:17A | Q3:17E | Q4:17E | 2017E | 2018E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenue** | 770.5 | 768.6 | 779.9 | 814.2 | 192.6 | 203.9 | 226.6 | 196.8 | 819.9 | 187.8 | 203.4 | 239.6 | 210.8 | 841.6 | 887.3 |
| *Growth (%)* | *6%* | *0%* | *1%* | *4%* | *1%* | *-1%* | *3%* | *0%* | *1%* | *-2%* | *0%* | *6%* | *7%* | *3%* | *5%* |
| **Expenses** | | | | | | | | | | | | | | | |
| O&M | 278.7 | 285.3 | 288.6 | 309.3 | 73.5 | 74.0 | 79.8 | 77.6 | 304.9 | 69.1 | 70.9 | 83.0 | 80.7 | 303.6 | 308.2 |
| Depreciation | 113.6 | 119.3 | 123.1 | 125.3 | 32.1 | 31.6 | 33.9 | 33.3 | 131.0 | 33.8 | 33.4 | 34.6 | 34.0 | 135.8 | 141.2 |
| Amortization | 5.5 | 5.5 | 3.5 | 3.4 | 0.5 | 0.5 | 0.4 | 0.7 | 2.0 | 0.2 | 0.1 | 0.4 | 0.7 | 1.4 | 1.4 |
| Taxes other than income tax | 48.6 | 53.3 | 50.5 | 55.1 | 14.1 | 14.2 | 14.7 | 13.3 | 56.4 | 14.7 | 14.4 | 15.0 | 13.6 | 57.7 | 59.5 |
| **Total Expense** | 446.4 | 463.4 | 465.5 | 493.1 | 120.3 | 120.4 | 128.8 | 124.8 | 494.3 | 117.9 | 118.8 | 133.0 | 128.9 | 498.5 | 510.3 |
| *Expense Growth (%)* | *1%* | *4%* | *0%* | *6%* | *1%* | *-4%* | *2%* | *2%* | *7%* | *-2%* | *-1%* | *3%* | *3%* | *7%* | *3%* |
| **EBITDA** | 443.2 | 430.0 | 440.9 | 449.8 | 104.9 | 115.6 | 132.1 | 106.0 | 458.6 | 103.9 | 118.1 | 141.6 | 116.6 | 480.2 | 519.6 |
| **EBIT** | 324.1 | 305.2 | 314.4 | 321.1 | 72.3 | 83.5 | 97.8 | 72.0 | 325.6 | 69.9 | 84.6 | 106.6 | 81.9 | 343.0 | 377.0 |
| *EBIT Margin* | *42.1%* | *39.7%* | *40.3%* | *39.4%* | *37.6%* | *41.0%* | *43.2%* | *36.6%* | *39.7%* | *37.2%* | *41.6%* | *44.5%* | *38.9%* | *40.8%* | *42.5%* |
| *Growth (%)* | *13%* | *-6%* | *3%* | *2%* | *2%* | *4%* | *3%* | *-4%* | *1%* | *-3%* | *1%* | *9%* | *14%* | *5%* | *10%* |
| Other expense (income) | 72.5 | 74.9 | 71.3 | 69.8 | 17.3 | 18.1 | 17.8 | 18.1 | 71.4 | 17.9 | 17.9 | 22.0 | 22.5 | 80.3 | 84.0 |
| Equity loss in JV | 1.7 | (1.0) | (4.0) | (2.2) | (0.2) | (0.2) | 1.6 | (0.2) | 1.0 | (0.0) | (0.2) | 0.5 | 0.5 | 0.8 | 5.0 |
| Pretax Income | 253.3 | 229.4 | 239.1 | 249.1 | 54.7 | 65.1 | 81.6 | 53.7 | 255.2 | 52.0 | 66.5 | 85.1 | 59.9 | 263.6 | 298.0 |
| *PT Margin* | *32.9%* | *29.8%* | *30.7%* | *30.6%* | *28.4%* | *32.0%* | *36.0%* | *27.3%* | *31.1%* | *27.7%* | *32.7%* | *35.5%* | *28.4%* | *31.3%* | *33.6%* |
| Income Tax Expense | 67.9 | 24.8 | 25.2 | 26.0 | 3.0 | 5.5 | 8.4 | 4.0 | 21.0 | 2.9 | 5.6 | 9.4 | 6.6 | 24.5 | 38.7 |
| **Net Income** | 184.5 | 204.6 | 213.9 | 223.1 | 51.7 | 59.6 | 73.2 | 49.6 | 234.2 | 49.1 | 61.0 | 75.8 | 53.3 | 239.1 | 259.2 |
| Shares Outstanding, Diluted | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 178.1 | 177.8 | 177.9 | 177.9 | 178.0 | 178.0 | 178.0 | 178.0 | 178.0 | 178.0 |
| **EPS** | $1.05 | $1.16 | $1.20 | $1.26 | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 | $0.28 | $0.34 | $0.43 | $0.30 | $1.34 | $1.46 |
| *Growth (%)* | *22%* | *10%* | *4%* | *4%* | *7%* | *4%* | *8%* | *-2%* | *5%* | *-5%* | *2%* | *3%* | *7%* | *2%* | *8%* |
| **EPS including Disc Ops** | $1.05 | $1.05 | $1.31 | $1.26 | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 | $0.28 | $0.34 | $0.43 | $0.30 | $1.34 | $1.46 |
| **Expense Ratios (% Total Rev)** | | | | | | | | | | | | | | | |
| O&M | 36.2% | 37.1% | 37.0% | 38.0% | 38.2% | 36.3% | 35.2% | 39.4% | 37.2% | 36.8% | 34.8% | 34.6% | 38.3% | 36.1% | 34.7% |
| Depreciation | 14.7% | 15.5% | 15.8% | 15.4% | 16.7% | 15.5% | 15.0% | 16.9% | 16.0% | 18.0% | 16.4% | 14.4% | 16.1% | 16.1% | 15.9% |
| Amortization | 0.7% | 0.7% | 0.4% | 0.4% | 0.2% | 0.3% | 0.2% | 0.3% | 0.2% | 0.1% | 0.1% | 0.2% | 0.3% | 0.2% | 0.2% |
| Taxes other than income tax | 6.3% | 6.9% | 6.5% | 6.8% | 7.3% | 7.0% | 6.5% | 6.8% | 6.9% | 7.8% | 7.1% | 6.3% | 6.4% | 6.9% | 6.7% |

Source: Company Reports & Baird estimates

**Research disclosures can be accessed at http://www.rwbaird.com/research-insights/research/coverage/research-disclosure.aspx**

**8/4/17**

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# Aqua America
## (WTR - NYSE)

| Balance Sheet (Millions) | 2012 | 2013 | 2014 | 2015 | Q1:16 | Q2:16 | Q3:16 | Q4:16 | 2016 | Q1:17 | Q2:17 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | | | | | |
| Cash and Cash Equivalents | 6 | 6 | 4 | 3 | 4 | 5 | 4 | 4 | 4 | 4 | 8 |
| Accounts Receivable, net | 93 | 95 | 97 | 99 | 92 | 100 | 110 | 97 | 97 | 89 | 99 |
| Materials and Supplies | 12 | 11 | 13 | 12 | 12 | 12 | 12 | 13 | 13 | 14 | 17 |
| Other Current Assets | 151 | 60 | 39 | 14 | 14 | 16 | 15 | 15 | 15 | 15 | 15 |
| **Total Current** | **261** | **172** | **153** | **128** | **123** | **132** | **141** | **129** | **129** | **122** | **138** |
| Gross PPE | 5,050 | 5,388 | 5,707 | 6,088 | 6,184 | 6,282 | 6,386 | 6,509 | 6,509 | 6,591 | 6,718 |
| Accumulated Depreciation | 1,114 | 1,221 | 1,305 | 1,399 | 1,431 | 1,459 | 1,485 | 1,508 | 1,508 | 1,533 | 1,559 |
| Net Property & Equipment | 3,936 | 4,167 | 4,402 | 4,689 | 4,753 | 4,823 | 4,901 | 5,002 | 5,002 | 5,058 | 5,159 |
| Regulatory Assets | 521 | 586 | 726 | 830 | 860 | 887 | 911 | 949 | 949 | 975 | 1,004 |
| Funds Restricted for Construction | 24 | 0 | 0 | 0 | | | | | 0 | | |
| Goodwill | 28 | 28 | 31 | 34 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| Investment in Joint Venture | 39 | 49 | 43 | 8 | 7 | 7 | 9 | 7 | 7 | 7 | 7 |
| Other Assets | 50 | 50 | 52 | 52 | 30 | 30 | 31 | 31 | 31 | 31 | 34 |
| **Total Assets** | **4,859** | **5,052** | **5,407** | **5,741** | **5,815** | **5,923** | **6,036** | **6,159** | **6,159** | **6,236** | **6,384** |
| | | | | | | | | | | | |
| **LIABILITIES & EQUITIES** | | | | | | | | | | | |
| Accounts Payable | 56 | 64 | 63 | 56 | 34 | 41 | 44 | 60 | 60 | 50 | 46 |
| Short-term Borrowing | 80 | 144 | 18 | 17 | 28 | 26 | 48 | 7 | 7 | 28 | 67 |
| Long-term Debt Due Within One Year | 45 | 123 | 59 | 36 | 29 | 38 | 84 | 151 | 151 | 119 | 144 |
| Accrued Liabilities | 93 | (64) | 85 | 84 | 83 | 74 | 76 | 84 | 84 | 80 | 75 |
| **Total Current** | **274** | **267** | **225** | **193** | **174** | **179** | **252** | **302** | **302** | **278** | **333** |
| Long-term Debt & Commercial Paper | 1,544 | 1,469 | 1,561 | 1,744 | 1,744 | 1,776 | 1,726 | 1,738 | 1,738 | 1,798 | 1,823 |
| Deferred Income Taxes & Inv. Tax Credits | 723 | 868 | 1,001 | 1,119 | 1,152 | 1,190 | 1,237 | 1,269 | 1,269 | 1,301 | 1,340 |
| Regulatory Liabilities | 241 | 281 | 278 | 260 | 255 | 254 | 250 | 251 | 251 | 245 | 245 |
| Customers' Advances for Construction | 72 | 74 | 78 | 87 | 87 | 88 | 93 | 92 | 92 | 90 | 91 |
| Contributions in Aid of Construction | 460 | 477 | 498 | 512 | 531 | 535 | 538 | 542 | 542 | 546 | 552 |
| Other Liabilities | 158 | 82 | 110 | 100 | 111 | 109 | 108 | 116 | 116 | 110 | 105 |
| Shareholder's Equity | 1,386 | 1,535 | 1,655 | 1,726 | 1,761 | 1,791 | 1,832 | 1,850 | 1,850 | 1,867 | 1,897 |
| **Total Liabilities and Equity** | **4,859** | **5,052** | **5,407** | **5,741** | **5,815** | **5,923** | **6,036** | **6,159** | **6,159** | **6,236** | **6,384** |
| | | | | | | | | | | | |
| **Balance Sheet Analysis** | 2012 | 2013 | 2014 | 2015 | Q1:16 | Q2:16 | Q3:16 | Q4:16 | 2016 | Q1:17 | Q2:17 |
| Current Ratio | 1.0 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.4 | 0.4 | 0.4 | 0.4 |
| EBIT/ Interest Expense | 4.2 | 3.9 | 4.1 | 4.2 | 4.1 | 4.1 | 4.1 | 4.0 | 4.0 | 3.9 | 3.9 |
| Debt / Total Cap | 53% | 51% | 49% | 51% | 50% | 50% | 50% | 51% | 51% | 51% | 51% |
| Debt / Total Cap (incl Op Leases) | 53% | 51% | 49% | 51% | 50% | 50% | 50% | 51% | 51% | 51% | 51% |
| Book Value/Share | $7.92 | $8.68 | $9.31 | $9.71 | $9.90 | $10.06 | $10.30 | $10.40 | $10.40 | $10.49 | $10.65 |

Source: Company Reports & Baird estimates


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# Appendix - Important Disclosures and Analyst Certification

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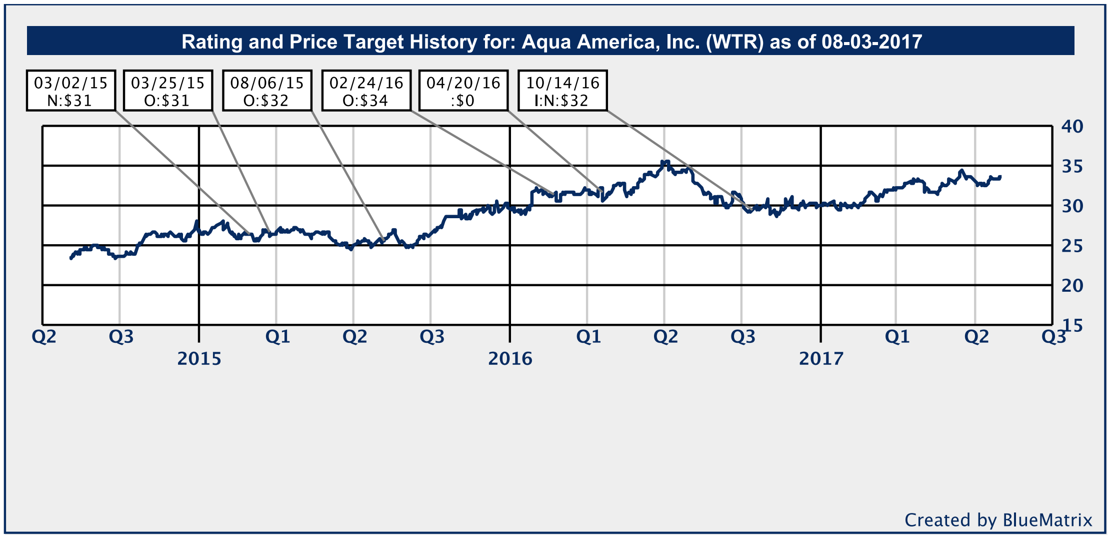


1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR.

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# Aqua America, Inc. (WTR)

## Q3 Beat but Remain Cautious

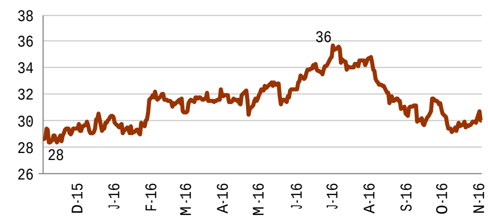
**Reiterate Neutral and $32 price target.** Q3 results exceeded estimates across the board, and the company reaffirmed 2016 guidance. Importantly, WTR remains on track to reach its 2016 investment (>$350M) and customer growth targets. Additionally, WTR continues to see revenue expansion through rate increases and infrastructure charges. That said, the company continues to over earn in several states, which may make it challenging for the company to outperform peers in the intermediate-term. We are waiting for a clearer path to earnings growth before becoming more constructive.

- **Q3 results beat estimates across the board.** Q3 revenue was ~$226.6M vs. our/consensus estimates of $224.7M/$223.8M. Net income was $73.2M vs. $68.6M/$69.5M, and EPS was $0.41 vs. $0.38/$0.40. Q3 EPS results increased 7.9% y/y to $0.41 from $0.38 in Q3:15. The Y/Y EPS improvement primarily reflects higher regulated growth, consumption, and rates and surcharges, as well as lower production and acquisition costs.
- **WTR reaffirmed 2016 guidance.** WTR continues to expect $1.30 to $1.35 in EPS, same-system O&M expenses to increase 1% to 2%, and more than $350M in capital to be invested during 2016 (>$1.1B through 2018). WTR has invested ~$270M through Q3:16 in water infrastructure.
- **We believe WTR is on track to reach its customer growth targets.** WTR has added ~5,700 customers through acquisitions in 2016, reflecting ~1.3% YTD growth in its customer base. We believe WTR is positioned to reach its targeted customer base growth of 1.5%-2.0% in 2016.
- **Rate increases and surcharges continue to drive revenue expansion.** Aqua has received YTD awards from rate increases and infrastructure surcharges expects to increased annualized revenue by $5.5M (including revenue collected under interim rates from 2015 of $1.1M). Additionally, a total of ~$8.1M has been requested in filings which are pending in OH, VA, and IN, although the timings of potential regulatory approvals remain unclear.
- **Available credit should allow for continued acquisitions.** WTR has ~$160M available on its credit lines, which should provide sufficient liquidity for additional acquisitions.
- **Q3 earnings call will be held at 10:00 a.m. CDT**. The call can be accessed at aquaamerica.com.
- **$32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### ESTIMATE CHANGE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (11/1/16): | $29.99 |
| Market Cap (mil): | $5,332 |
| Shares Out (mil): | 177.8 |
| Average Daily Vol (mil): | 0.77 |
| Dividend Yield: | 2.6% |

**Estimates**

| FY Dec | 2015A | 2016E | 2017E |
|---|---|---|---|
| Q1 | 0.27 A | 0.29 A | |
| Q2 | 0.32 A | 0.33 A | |
| Q3 | 0.38 A | 0.41 A | |
| Q4 | 0.28 A | 0.31 E | |
| **Fiscal EPS** | **1.26 A** | **1.35 E** | **1.37 E** |
| Previous Est | | 1.32 E | |
| Fiscal P/E | 23.8x | 22.2x | 21.9x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $350-$360 million annual capex investment, (~2.6x depreciation). $1.1B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 16 acquisitions in 2015, providing 1.1% to WTR's overall customer growth of 1.9%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Potential expansion into non-regulated water space could drive growth in the long run.** The company has recently divested from many of its market-based businesses that it considers too risky and hard to grow. WTR is actively evaluating other market-based activity, and believes that it will contribute to growth in the long run, but does not foresee non-regulated business becoming more than 15%-20% of Aqua America. WTR has also indicated that it would consider moving into other regulated utility space, believing the core competencies of the regulated water utility market would be profitable in other utility spaces.

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, in line with peers when fully valued (20x-22x 2018E EPS), reflecting average EPS growth opportunities and generally more constructive regulatory mechanisms.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

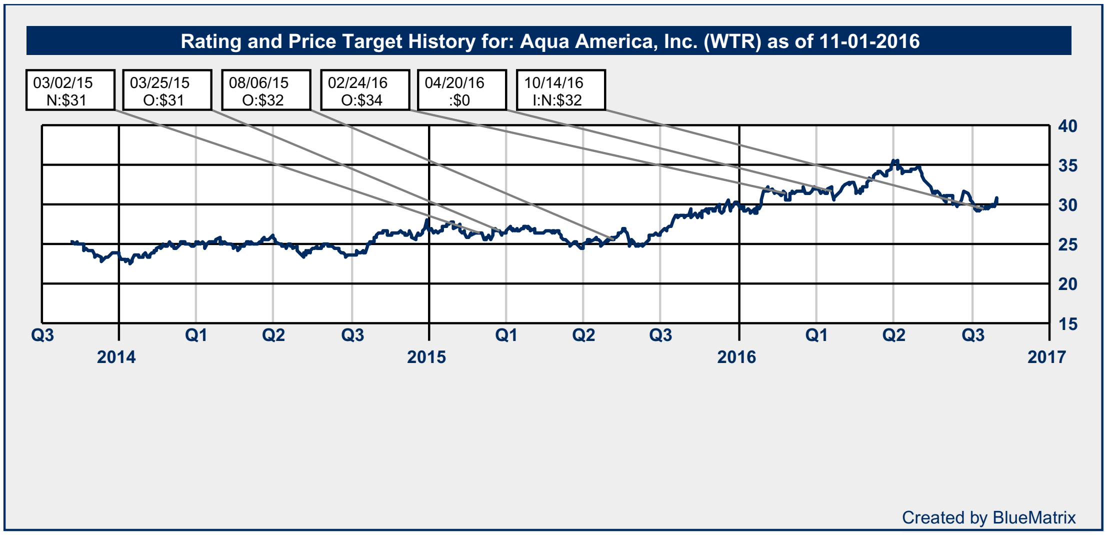
**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Appendix - Important Disclosures and Analyst Certification

Approved on 2 November 2016 07:50EDT/ Published on 2 November 2016 07:50EDT.




1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR.

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**Investment Ratings: Outperform (O)** - Expected to outperform on a total return, risk-adjusted basis the broader U.S. equity market over the next 12 months. **Neutral (N)** - Expected to perform in line with the broader U.S. equity market over the next 12 months. **Underperform (U)** - Expected to underperform on a total return, risk-adjusted basis the broader U.S. equity market over the next 12 months.

**Risk Ratings: L - Lower Risk** - Higher-quality companies for investors seeking capital appreciation or income with an emphasis on safety. Company characteristics may include: stable earnings, conservative balance sheets, and an established history of revenue and earnings. **A - Average Risk** - Growth situations for investors seeking capital appreciation with an emphasis on safety. Company characteristics may include: moderate volatility, modest balance-sheet leverage, and stable patterns of revenue and earnings. **H - Higher Risk** - Higher-growth situations appropriate for investors seeking capital appreciation with the acceptance of risk. Company characteristics may include: higher balance-sheet leverage, dynamic business environments, and higher levels of earnings and price volatility. **S - Speculative Risk** - High-growth situations appropriate only for investors willing to accept a high degree of volatility and risk. Company characteristics may include: unpredictable earnings, small capitalization, aggressive growth strategies, rapidly changing market dynamics, high leverage, extreme price volatility and unknown competitive challenges.

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Analyst compensation is derived from all revenue sources of the firm, including revenues from investment banking. Baird does not

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# Aqua America, Inc. (WTR)

## 2017 Guidance Call Highlights

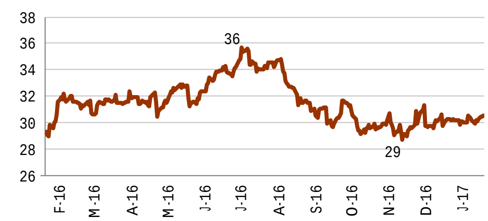
**Reiterate Neutral rating after WTR's 2017 guidance call**. EPS guidance for 2017 exceeded our estimate, but was lower than consensus (at the midpoint). WTR may see some rate relief in 2H:17 after filing for a infrastructure investment charge in Pennsylvania, and a strong acquisition environment may enable WTR to achieve customer growth targets. That said, we remain on the sidelines as WTR is overearning in several states, and we are waiting for a clearer path to EPS growth or better entry point before becoming more constructive.

- **WTR reaffirmed 2016 guidance and announced 2017 guidance which was above our estimates but below consensus, at the midpoint.** The company guided to 2017 EPS of $1.34-$1.39 which was above our estimate of $1.33 (consensus was $1.39). This represents a ~3% CAGR over 2016 guidance at the midpoints, although WTR reiterated 2016 EPS would come in at the mid-to-low end of the guided range.
- **Management expects to file for an infrastructure investment charge in Pennsylvania in 2017, which may provide some rate relief in 2H:17.** Management confirmed its plan to file to recover revenue in 2017 (once the company is able to demonstrate it is no longer overearning), and reiterated its intention to file a full rate case in Pennsylvania in 2018. We believe this may provide a positive catalyst for the stock when the company begins to recover revenue, which is not expected until 2H:17.
- **Management indicated the municipal acquisition market remains robust, which should help WTR to achieve its 1.5%-2.0% y/y customer growth target.** The company added 6,558 customers through 19 acquisitions in 2016, which contributed to a total customer growth rate of 1.6%. Additionally, WTR has four municipal deals pending in 2017, totaling nearly 9,000 customers, and has identified 70 additional acquisition prospects representing a total of ~390,000 customers. We expect the acquisition environment to remain favorable following positive legislative changes in key states (such as fair market value legislation), and WTR should benefit from its strategy emphasizing municipal water/wastewater acquisitions.
- **WTR plans to divest from three additional market-based businesses in 2017, which will reduce revenue but should ultimately be beneficial for net income.** WTR has already exited three of its market-based businesses and plans to divest three more in 2017. While the company will continue to evaluate market-based opportunities, WTR expects to focus more on its regulated segment, which provides greater growth opportunities.
- **WTR will hold its Q4:16 earnings conference call on February 23.** The call can be accessed at http://ir.aquaamerica.com/ .

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### ESTIMATE CHANGE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (1/17/17): | $30.49 |
| Market Cap (mil): | $5,421 |
| Shares Out (mil): | 177.8 |
| Average Daily Vol (mil): | 0.78 |
| Dividend Yield: | 2.5% |

**Estimates**

| FY Dec | 2015A | 2016E | 2017E |
|---|---|---|---|
| Q1 | 0.27 A | 0.29 A | |
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| Previous Est | | | 1.33 E |
| Fiscal P/E | 24.2x | 23.5x | 22.8x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

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# Details

**Revising estimates to reflect increased acquisition activity.** We now estimate 2017 revenue of $851.8M and EPS of $1.34, vs. our previous estimates of $847.8M/$1.33, respectively. Additionally, we now anticipate 2018 revenue will be $908.1M and EPS $1.46 vs. our prior estimate of $904.1M/$1.45, respectively.

# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

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# Company Description

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# Aqua America

## (WTR - NYSE)

| Income Statement (in millions) | 2012 | 2013 | 2014 | 2015 | 1Q16 | 2Q16 | 3Q16 | 4Q16E | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenue** | 770.5 | 768.6 | 779.9 | 814.2 | 192.6 | 203.9 | 226.6 | 205.6 | 828.6 | 851.8 | 908.1 |
| *Growth (%)* | *6%* | *0%* | *1%* | *4%* | *1%* | *-1%* | *3%* | *4%* | *2%* | *3%* | *7%* |
| **Expenses** | | | | | | | | | | | |
| O&M | 278.7 | 285.3 | 288.6 | 309.3 | 73.5 | 74.0 | 79.8 | 85.1 | 312.4 | 315.5 | 325.0 |
| Depreciation | 113.6 | 119.3 | 123.1 | 125.3 | 32.1 | 31.6 | 33.9 | 32.7 | 130.3 | 131.6 | 138.2 |
| Amortization | 5.5 | 5.5 | 3.5 | 3.4 | 0.5 | 0.5 | 0.4 | 2.1 | 3.4 | 3.4 | 3.4 |
| Taxes other than income tax | 48.6 | 53.3 | 50.5 | 55.1 | 14.1 | 14.2 | 14.7 | 12.5 | 55.6 | 56.2 | 58.4 |
| **Total Expense** | 446.4 | 463.4 | 465.5 | 493.1 | 120.3 | 120.4 | 128.8 | 132.3 | 501.8 | 506.7 | 525.0 |
| ***Operating Ratio*** | ***57.9%*** | ***60.3%*** | ***59.7%*** | ***60.6%*** | ***62.4%*** | ***59.0%*** | ***56.8%*** | ***64.4%*** | ***60.6%*** | ***59.5%*** | ***57.8%*** |
| *Expense Growth (%)* | *1%* | *4%* | *0%* | *6%* | *1%* | *-4%* | *2%* | *8%* | *8%* | *9%* | *6%* |
| **EBITDA** | 443.2 | 430.0 | 440.9 | 449.8 | 104.9 | 115.6 | 132.1 | 108.0 | 460.6 | 480.2 | 524.7 |
| **EBIT** | 324.1 | 305.2 | 314.4 | 321.1 | 72.3 | 83.5 | 97.8 | 73.2 | 326.9 | 345.1 | 383.1 |
| *EBIT Margin* | *42.1%* | *39.7%* | *40.3%* | *39.4%* | *37.6%* | *41.0%* | *43.2%* | *35.6%* | *39.4%* | *40.5%* | *42.2%* |
| *Growth (%)* | *13%* | *-6%* | *3%* | *2%* | *2%* | *4%* | *3%* | *-2%* | *2%* | *6%* | *11%* |
| Other expense (income) | 72.5 | 74.9 | 71.3 | 69.8 | 17.3 | 18.1 | 17.8 | 21.6 | 74.9 | 78.8 | 88.7 |
| Shale JV | 1.7 | (1.0) | (4.0) | (2.2) | (0.2) | (0.2) | 1.6 | 0.1 | 1.2 | 2.0 | 5.0 |
| Pretax Income | 253.3 | 229.4 | 239.1 | 249.1 | 54.7 | 65.1 | 81.6 | 51.8 | 253.2 | 268.3 | 299.4 |
| *PT Margin* | *32.9%* | *29.8%* | *30.7%* | *30.6%* | *28.4%* | *32.0%* | *36.0%* | *25.2%* | *30.6%* | *31.5%* | *33.0%* |
| Income Tax Expense | 67.9 | 24.8 | 25.2 | 26.0 | 3.0 | 5.5 | 8.4 | 5.4 | 22.4 | 29.5 | 38.9 |
| **Net Income** | 184.5 | 204.6 | 213.9 | 223.1 | 51.7 | 59.6 | 73.2 | 46.3 | 230.8 | 238.8 | 260.4 |
| Shares Outstanding, Diluted | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 178.1 | 177.8 | 177.8 | 177.9 | 177.8 | 177.8 |
| **EPS** | $1.05 | $1.16 | $1.20 | $1.26 | $0.29 | $0.33 | $0.41 | $0.26 | $1.30 | $1.34 | $1.46 |
| *Growth (%)* | *22%* | *10%* | *4%* | *4%* | *7%* | *4%* | *8%* | *-8%* | *3%* | *3%* | *9%* |
| **EPS including Disc Ops** | $1.05 | $1.05 | $1.31 | $1.26 | $0.29 | $0.33 | $0.41 | $0.26 | $1.30 | $1.34 | $1.46 |
| **Expense Ratios (% Total Rev)** | | | | | | | | | | | |
| O&M | 36.2% | 37.1% | 37.0% | 38.0% | 38.2% | 36.3% | 35.2% | 41.4% | 37.7% | 37.0% | 35.8% |
| Depreciation | 14.7% | 15.5% | 15.8% | 15.4% | 16.7% | 15.5% | 15.0% | 15.9% | 16.0% | 15.4% | 15.2% |
| Amortization | 0.7% | 0.7% | 0.4% | 0.4% | 0.2% | 0.3% | 0.2% | 1.0% | 0.4% | 0.4% | 0.4% |
| Taxes other than income tax | 6.3% | 6.9% | 6.5% | 6.8% | 7.3% | 7.0% | 6.5% | 6.1% | 6.7% | 6.6% | 6.4% |

Source: Company Reports & Baird estimates

**Research disclosures can be accessed at http://www.rwbaird.com/research-insights/research/coverage/research-disclosure.aspx**

**1/18/17**

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# Aqua America
## (WTR - NYSE)

BAIRD

| Balance Sheet (Millions) | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | 1Q16 | 2Q16 | 3Q16 |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | | | | |
| Cash and Cash Equivalents | 6 | 6 | 4 | 9 | 5 | 4 | 3 | 4 | 5 | 4 |
| Accounts Receivable, net | 93 | 95 | 97 | 95 | 109 | 111 | 99 | 92 | 100 | 110 |
| Materials and Supplies | 12 | 11 | 13 | 13 | 14 | 28 | 12 | 12 | 12 | 12 |
| Other Current Assets | 151 | 60 | 39 | 47 | 48 | 25 | 14 | 14 | 16 | 15 |
| **Total Current** | **261** | **172** | **153** | **164** | **175** | **168** | **128** | **123** | **132** | **141** |
| Gross PPE | 5,050 | 5,388 | 5,707 | 5,764 | 5,879 | 5,985 | 6,088 | 6,184 | 6,282 | 6,386 |
| Accumulated Depreciation | 1,114 | 1,221 | 1,305 | 1,331 | 1,357 | 1,380 | 1,399 | 1,431 | 1,459 | 1,485 |
| Net Property & Equipment | 3,936 | 4,167 | 4,402 | 4,433 | 4,522 | 4,606 | 4,689 | 4,753 | 4,823 | 4,901 |
| Regulatory Assets | 521 | 586 | 726 | 749 | 772 | 800 | 830 | 860 | 887 | 911 |
| Funds Restricted for Construction | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Goodwill | 28 | 28 | 31 | 34 | 34 | 34 | 34 | 42 | 42 | 42 |
| Investment in Joint Venture | 39 | 49 | 43 | 43 | 43 | 41 | 8 | 7 | 7 | 9 |
| Other Assets | 50 | 50 | 52 | 55 | 55 | 52 | 52 | 30 | 30 | 31 |
| **Total Assets** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** | **6,036** |
| | | | | | | | | | | |
| **LIABILITIES & EQUITIES** | | | | | | | | | | |
| Accounts Payable | 56 | 64 | 63 | 35 | 48 | 45 | 56 | 34 | 41 | 44 |
| Short-term Borrowing | 80 | 144 | 18 | 33 | 36 | 28 | 17 | 28 | 26 | 48 |
| Long-term Debt Due Within One Year | 45 | 123 | 59 | 47 | 39 | 48 | 36 | 29 | 38 | 84 |
| Accrued Liabilities | 93 | (64) | 85 | 90 | 81 | 95 | 84 | 83 | 74 | 76 |
| **Total Current** | **274** | **267** | **225** | **205** | **203** | **216** | **193** | **174** | **179** | **252** |
| Long-term Debt & Commercial Paper | 1,544 | 1,469 | 1,561 | 1,595 | 1,661 | 1,681 | 1,744 | 1,744 | 1,776 | 1,726 |
| Deferred Income Taxes & Inv. Tax Credits | 723 | 868 | 1,001 | 1,041 | 1,080 | 1,116 | 1,119 | 1,152 | 1,190 | 1,237 |
| Regulatory Liabilities | 241 | 281 | 278 | 274 | 269 | 264 | 260 | 255 | 254 | 250 |
| Customers' Advances for Construction | 72 | 74 | 78 | 76 | 84 | 87 | 87 | 87 | 88 | 93 |
| Contributions in Aid of Construction | 460 | 477 | 498 | 504 | 506 | 510 | 512 | 531 | 535 | 538 |
| Other Liabilities | 158 | 82 | 110 | 106 | 95 | 98 | 100 | 111 | 109 | 108 |
| Shareholder's Equity | 1,386 | 1,535 | 1,655 | 1,676 | 1,703 | 1,729 | 1,726 | 1,761 | 1,791 | 1,832 |
| **Total Liabilities and Equity** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** | **6,036** |

| Balance Sheet Analysis | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | 1Q16 | 2Q16 | 3Q16 |
|---|---|---|---|---|---|---|---|---|---|---|
| ROE | 13.6% | 13.8% | 13.6% | 13.5% | 13.7% | 13.6% | 13.7% | 13.1% | 13.2% | 13.5% |
| Rate Base | 2,902 | 3,022 | 3,100 | 3,259 | 3,259 | 3,259 | 3,259 | 3,476 | 3,476 | 3,476 |
| Current Ratio | 1.0 | 0.6 | 0.7 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.6 |
| Days Sales Outstanding (DSO) | 5.4 | 5.5 | 5.7 | 5.7 | 5.9 | 9.3 | 5.6 | 5.7 | 5.4 | 5.8 |
| EBIT/ Interest Expense | 4.2 | 3.9 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 | 4.1 |
| Debt / Total Cap | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% | 50% |
| Debt / Total Cap (incl Op Leases) | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% | 50% |
| Book Value/Share | $7.92 | $8.68 | $9.31 | $9.43 | $9.57 | $9.74 | $9.71 | $9.90 | $10.06 | $10.30 |

Source: Company Reports & Baird estimates

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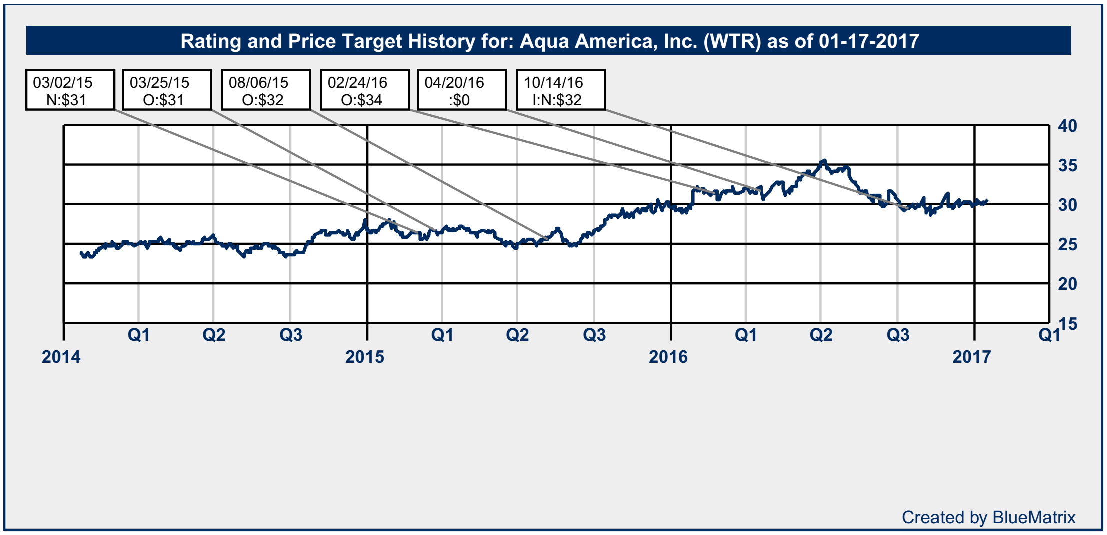
**David Katter 414.298.2463 Research Analyst**

# Appendix - Important Disclosures and Analyst Certification

Approved on 17 January 2017 20:08EST/ Published on 18 January 2017 01:00EST.




1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR.

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# Aqua America, Inc. (WTR)

## Q1 Conference Call Highlights

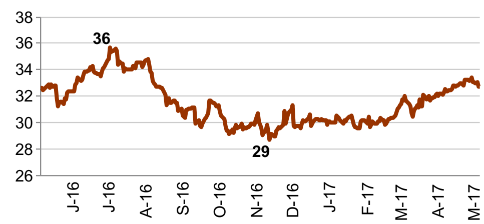
**Reiterate Neutral rating after WTR's Q1 conference call.** The exit of market-based business offset increases in regulated revenue in Q1, and one time benefits in Q1:16 led to challenging y/y EPS comps. That said, the company expects to close four acquisitions totaling almost 9,000 customers in 2017 (which should enable it to reach targeted customer growth of 1.5%-2%) and grow rate base by 6% to 7%. We remain Neutral-rated and look for execution on EPS growth before becoming more constructive.

- **The exit of market-based business segments continued to offset revenue increases in Q1, but management reiterated FY:17 guidance.** Favorable rate decisions and regulated customer growth increased revenue by ~$2.1M y/y, but was more than offset by $5.2M in reduced revenue from market-based activities. For more information, please see Q1 Results: First Look.
- **EPS decreased ~3% y/y year due to favorable one time benefits in Q1:16, and we believe Q2:17 may also face some difficult comps (we model Q2:17 EPS of $0.33, a ~2% decrease y/y).** Management indicated Q2:16 benefited from one-time expense decreases, which could again lead to challenging y/y comps. That said, WTR reiterated its 2017 guidance of $1.34 to $1.39.
- **WTR's strategy of focusing on larger municipal acquisitions may begin to pay off toward the end of the year.** WTR has four municipal deals it expects will close in 2017, totaling nearly 9,000 customers. We expect the acquisition environment to remain favorable following positive legislative changes in key states (such as fair market value legislation), and WTR should benefit from its strategy emphasizing municipal water/wastewater acquisitions.
- **Updating estimates to reflect Q1 results.** For 2017 we now estimate revenue of $847M and EPS of $1.34 vs. our prior estimates of $852M/$1.34. For 2018, we now estimate revenue of $898M and EPS of $1.46, vs our prior estimates of $908M/$1.46.
- **Reiterate $32 price target.** Our $32 price target is 22x our 2018 EPS estimate, below peers (~25x 2018E EPS), which we believe will expand as WTR executes on EPS growth.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### ESTIMATE CHANGE

**1-Year Price Chart**




**Stock Data**

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (5/4/17): | $31.73 |
| Market Cap (mil): | $5,648 |
| Shares Out (mil): | 178.0 |
| Average Daily Vol (mil): | 0.62 |
| Dividend Yield: | 2.4% |

**Estimates**

| FY Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| Q1 | 0.29 A | 0.28 A | |
| Q2 | 0.33 A | 0.33 E | |
| Q3 | 0.41 A | 0.43 E | |
| Q4 | 0.28 A | 0.31 E | |
| **Fiscal EPS** | **1.32 A** | **1.34 E** | **1.46 E** |
| Fiscal P/E | 24.0x | 23.7x | 21.7x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

Please refer to Appendix - Important Disclosures and Analyst Certification

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $450+ million annual capex investment. $1.2B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 19 acquisitions in 2016, contributing to WTR's overall customer growth of 1.6%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, below peers (~25x 2018E EPS), which we believe will expand as WTR executes on EPS growth.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Aqua America

## (WTR - NYSE)

| Income Statement (in millions) | 2012 | 2013 | 2014 | 2015 | Q1:16A | Q2:16A | Q3:16A | Q4:16A | 2016 | Q1:17A | Q2:17E | Q3:17E | Q4:17E | 2017E | 2018E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenue** | 770.5 | 768.6 | 779.9 | 814.2 | 192.6 | 203.9 | 226.6 | 196.8 | 819.9 | 187.8 | 208.9 | 239.6 | 210.8 | 847.1 | 898.3 |
| *Growth (%)* | *6%* | *0%* | *1%* | *4%* | *1%* | *-1%* | *3%* | *0%* | *1%* | *-2%* | *2%* | *6%* | *7%* | *3%* | *6%* |
| **Expenses** | | | | | | | | | | | | | | | |
| O&M | 278.7 | 285.3 | 288.6 | 309.3 | 73.5 | 74.0 | 79.8 | 77.6 | 304.9 | 69.1 | 75.5 | 81.4 | 79.1 | 305.1 | 314.3 |
| Depreciation | 113.6 | 119.3 | 123.1 | 125.3 | 32.1 | 31.6 | 33.9 | 33.3 | 131.0 | 33.8 | 32.3 | 34.6 | 34.0 | 134.7 | 141.4 |
| Amortization | 5.5 | 5.5 | 3.5 | 3.4 | 0.5 | 0.5 | 0.4 | 0.7 | 2.0 | 0.2 | 0.5 | 0.4 | 0.7 | 1.8 | 1.9 |
| Taxes other than income tax | 48.6 | 53.3 | 50.5 | 55.1 | 14.1 | 14.2 | 14.7 | 13.3 | 56.4 | 14.7 | 14.5 | 15.0 | 13.6 | 57.8 | 60.1 |
| **Total Expense** | 446.4 | 463.4 | 465.5 | 493.1 | 120.3 | 120.4 | 128.8 | 124.8 | 494.3 | 117.9 | 122.8 | 131.4 | 127.3 | 499.4 | 517.7 |
| *Expense Growth (%)* | *1%* | *4%* | *0%* | *6%* | *1%* | *-4%* | *2%* | *2%* | *7%* | *-2%* | *2%* | *2%* | *2%* | *7%* | *5%* |
| **EBITDA** | 443.2 | 430.0 | 440.9 | 449.8 | 104.9 | 115.6 | 132.1 | 106.0 | 458.6 | 103.9 | 118.9 | 143.2 | 118.1 | 484.1 | 523.9 |
| **EBIT** | 324.1 | 305.2 | 314.4 | 321.1 | 72.3 | 83.5 | 97.8 | 72.0 | 325.6 | 69.9 | 86.1 | 108.2 | 83.5 | 347.7 | 380.6 |
| *EBIT Margin* | *42.1%* | *39.7%* | *40.3%* | *39.4%* | *37.6%* | *41.0%* | *43.2%* | *36.6%* | *39.7%* | *37.2%* | *41.2%* | *45.2%* | *39.6%* | *41.0%* | *42.4%* |
| *Growth (%)* | *13%* | *-6%* | *3%* | *2%* | *2%* | *4%* | *3%* | *-4%* | *1%* | *-3%* | *3%* | *11%* | *16%* | *7%* | *9%* |
| Other expense (income) | 72.5 | 74.9 | 71.3 | 69.8 | 17.3 | 18.1 | 17.8 | 18.1 | 71.4 | 17.9 | 21.0 | 22.0 | 22.5 | 83.4 | 86.0 |
| Shale JV | 1.7 | (1.0) | (4.0) | (2.2) | (0.2) | (0.2) | 1.6 | (0.2) | 1.0 | (0.0) | 0.5 | 0.5 | 0.5 | 1.5 | 5.0 |
| Pretax Income | 253.3 | 229.4 | 239.1 | 249.1 | 54.7 | 65.1 | 81.6 | 53.7 | 255.2 | 52.0 | 65.6 | 86.7 | 61.5 | 265.8 | 299.6 |
| *PT Margin* | *32.9%* | *29.8%* | *30.7%* | *30.6%* | *28.4%* | *32.0%* | *36.0%* | *27.3%* | *31.1%* | *27.7%* | *31.4%* | *36.2%* | *29.2%* | *31.4%* | *33.4%* |
| Income Tax Expense | 67.9 | 24.8 | 25.2 | 26.0 | 3.0 | 5.5 | 8.4 | 4.0 | 21.0 | 2.9 | 7.2 | 9.5 | 6.8 | 26.4 | 39.0 |
| **Net Income** | 184.5 | 204.6 | 213.9 | 223.1 | 51.7 | 59.6 | 73.2 | 49.6 | 234.2 | 49.1 | 58.4 | 77.2 | 54.7 | 239.3 | 260.7 |
| Shares Outstanding, Diluted | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 178.1 | 177.8 | 177.9 | 177.9 | 178.0 | 178.0 | 178.0 | 178.0 | 178.0 | 178.0 |
| **EPS** | $1.05 | $1.16 | $1.20 | $1.26 | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 | $0.28 | $0.33 | $0.43 | $0.31 | $1.34 | $1.46 |
| *Growth (%)* | *22%* | *10%* | *4%* | *4%* | *7%* | *4%* | *8%* | *-2%* | *5%* | *-5%* | *-2%* | *5%* | *10%* | *2%* | *9%* |
| **EPS including Disc Ops** | $1.05 | $1.05 | $1.31 | $1.26 | $0.29 | $0.33 | $0.41 | $0.28 | $1.32 | $0.28 | $0.33 | $0.43 | $0.31 | $1.34 | $1.46 |
| **Expense Ratios (% Total Rev)** | | | | | | | | | | | | | | | |
| O&M | 36.2% | 37.1% | 37.0% | 38.0% | 38.2% | 36.3% | 35.2% | 39.4% | 37.2% | 36.8% | 36.1% | 34.0% | 37.5% | 36.0% | 35.0% |
| Depreciation | 14.7% | 15.5% | 15.8% | 15.4% | 16.7% | 15.5% | 15.0% | 16.9% | 16.0% | 18.0% | 15.4% | 14.4% | 16.1% | 15.9% | 15.7% |
| Amortization | 0.7% | 0.7% | 0.4% | 0.4% | 0.2% | 0.3% | 0.2% | 0.3% | 0.2% | 0.1% | 0.3% | 0.2% | 0.3% | 0.2% | 0.2% |
| Taxes other than income tax | 6.3% | 6.9% | 6.5% | 6.8% | 7.3% | 7.0% | 6.5% | 6.8% | 6.9% | 7.8% | 7.0% | 6.3% | 6.4% | 6.8% | 6.7% |

Source: Company Reports & Baird estimates

**Research disclosures can be accessed at http://www.rwbaird.com/research-insights/research/coverage/research-disclosure.aspx**

**5/4/17**


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# Aqua America
## (WTR - NYSE)

BAIRD

| Balance Sheet (Millions) | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | Q1:16 | Q2:16 | Q3:16 | Q4:16 | 2016 | Q1:17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | | | | | | | |
| Cash and Cash Equivalents | 6 | 6 | 4 | 9 | 5 | 4 | 3 | 4 | 5 | 4 | 4 | 4 | 4 |
| Accounts Receivable, net | 93 | 95 | 97 | 95 | 109 | 111 | 99 | 92 | 100 | 110 | 97 | 97 | 89 |
| Materials and Supplies | 12 | 11 | 13 | 13 | 14 | 28 | 12 | 12 | 12 | 12 | 13 | 13 | 14 |
| Other Current Assets | 151 | 60 | 39 | 47 | 48 | 25 | 14 | 14 | 16 | 15 | 15 | 15 | 15 |
| **Total Current** | **261** | **172** | **153** | **164** | **175** | **168** | **128** | **123** | **132** | **141** | **129** | **129** | **122** |
| Gross PPE | 5,050 | 5,388 | 5,707 | 5,764 | 5,879 | 5,985 | 6,088 | 6,184 | 6,282 | 6,386 | 6,509 | 6,509 | 6,591 |
| Accumulated Depreciation | 1,114 | 1,221 | 1,305 | 1,331 | 1,357 | 1,380 | 1,399 | 1,431 | 1,459 | 1,485 | 1,508 | 1,508 | 1,533 |
| Net Property & Equipment | 3,936 | 4,167 | 4,402 | 4,433 | 4,522 | 4,606 | 4,689 | 4,753 | 4,823 | 4,901 | 5,002 | 5,002 | 5,058 |
| Regulatory Assets | 521 | 586 | 726 | 749 | 772 | 800 | 830 | 860 | 887 | 911 | 949 | 949 | 975 |
| Funds Restricted for Construction | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | 0 | |
| Goodwill | 28 | 28 | 31 | 34 | 34 | 34 | 34 | 42 | 42 | 42 | 42 | 42 | 42 |
| Investment in Joint Venture | 39 | 49 | 43 | 43 | 43 | 41 | 8 | 7 | 7 | 9 | 7 | 7 | 7 |
| Other Assets | 50 | 50 | 52 | 55 | 55 | 52 | 52 | 30 | 30 | 31 | 31 | 31 | 31 |
| **Total Assets** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** | **6,036** | **6,159** | **6,159** | **6,236** |
| | | | | | | | | | | | | | |
| **LIABILITIES & EQUITIES** | | | | | | | | | | | | | |
| Accounts Payable | 56 | 64 | 63 | 35 | 48 | 45 | 56 | 34 | 41 | 44 | 60 | 60 | 50 |
| Short-term Borrowing | 80 | 144 | 18 | 33 | 36 | 28 | 17 | 28 | 26 | 48 | 7 | 7 | 28 |
| Long-term Debt Due Within One Year | 45 | 123 | 59 | 47 | 39 | 48 | 36 | 29 | 38 | 84 | 151 | 151 | 119 |
| Accrued Liabilities | 93 | (64) | 85 | 90 | 81 | 95 | 84 | 83 | 74 | 76 | 84 | 84 | 80 |
| **Total Current** | **274** | **267** | **225** | **205** | **203** | **216** | **193** | **174** | **179** | **252** | **302** | **302** | **278** |
| Long-term Debt & Commercial Paper | 1,544 | 1,469 | 1,561 | 1,595 | 1,661 | 1,681 | 1,744 | 1,744 | 1,776 | 1,726 | 1,738 | 1,738 | 1,798 |
| Deferred Income Taxes & Inv. Tax Credits | 723 | 868 | 1,001 | 1,041 | 1,080 | 1,116 | 1,119 | 1,152 | 1,190 | 1,237 | 1,269 | 1,269 | 1,301 |
| Regulatory Liabilities | 241 | 281 | 278 | 274 | 269 | 264 | 260 | 255 | 254 | 250 | 251 | 251 | 245 |
| Customers' Advances for Construction | 72 | 74 | 78 | 76 | 84 | 87 | 87 | 87 | 88 | 93 | 92 | 92 | 90 |
| Contributions in Aid of Construction | 460 | 477 | 498 | 504 | 506 | 510 | 512 | 531 | 535 | 538 | 542 | 542 | 546 |
| Other Liabilities | 158 | 82 | 110 | 106 | 95 | 98 | 100 | 111 | 109 | 108 | 116 | 116 | 110 |
| Shareholder's Equity | 1,386 | 1,535 | 1,655 | 1,676 | 1,703 | 1,729 | 1,726 | 1,761 | 1,791 | 1,832 | 1,850 | 1,850 | 1,867 |
| **Total Liabilities and Equity** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** | **6,036** | **6,159** | **6,159** | **6,236** |

| Balance Sheet Analysis | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | Q1:16 | Q2:16 | Q3:16 | Q4:16 | 2016 | Q1:17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Current Ratio | 1.0 | 0.6 | 0.7 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.6 | 0.4 | 0.4 | 0.4 |
| Days Sales Outstanding (DSO) | 5.4 | 5.5 | 5.7 | 5.7 | 5.9 | 9.3 | 5.6 | 5.7 | 5.4 | 5.8 | 5.6 | 5.6 | 5.9 |
| EBIT/ Interest Expense | 4.2 | 3.9 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 | 4.1 | 4.0 | 4.0 | 3.9 |
| Debt / Total Cap | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% | 50% | 51% | 51% | 51% |
| Debt / Total Cap (incl Op Leases) | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% | 50% | 51% | 51% | 51% |
| Book Value/Share | $7.92 | $8.68 | $9.31 | $9.43 | $9.57 | $9.74 | $9.71 | $9.90 | $10.06 | $10.30 | $10.40 | $10.40 | $10.49 |

Source: Company Reports & Baird estimates

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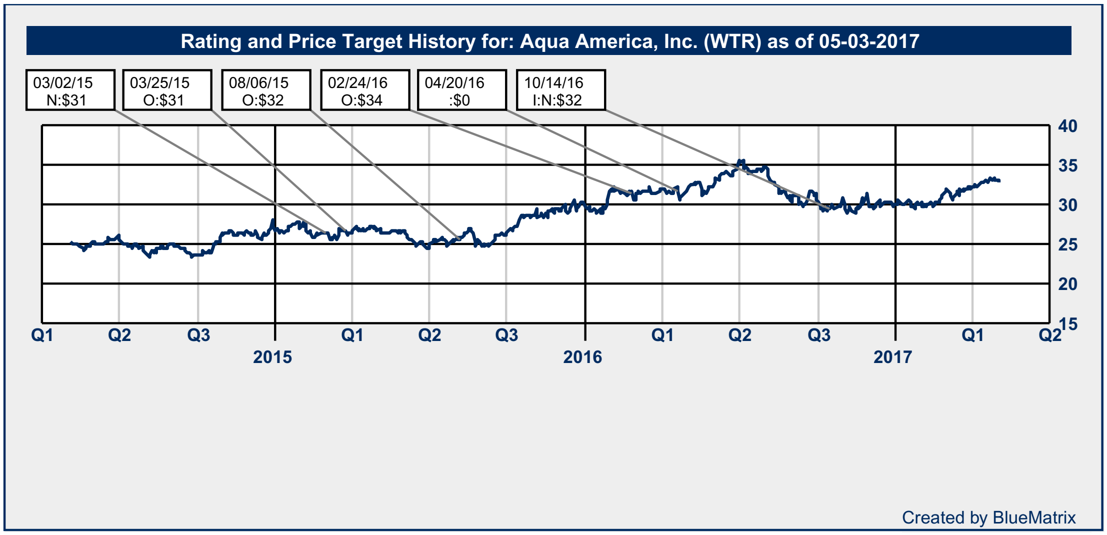
# Appendix - Important Disclosures and Analyst Certification

Approved on 4 May 2017 17:15EDT/ Published on 4 May 2017 17:15EDT.




1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR.

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# Aqua America, Inc. (WTR)

## Q3 Conference Call Highlights

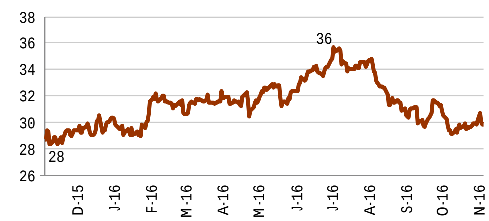
**Reiterate Neutral rating after WTR's Q3 conference call.** Q3 beat estimates as favorable weather led to increased consumption, although WTR expects to be at the mid-to-low point of its EPS guidance range for 2016. Additionally, management indicated higher-than-expected organic growth and a strong acquisition pipeline should ensure customer growth going forward. WTR tentatively plans to file for DSIC in 2017 and a full rate case in 2018, which should help EPS growth. We continue to wait for a clearer path to earnings growth before becoming more constructive.

- **Management expects to be at the mid to low point of EPS guidance range for FY:16.** Q3 was stronger than expected due to increased consumption, larger-than-expected organic growth, and fee recognition in its JV. Despite the strong Q3, Management expects to be at the mid to low point of its FY:16 EPS guidance as the one-time fee benefits in Q3 will not continue in Q4, and we have adjusted our model accordingly. For additional details about Q3 performance see: Q3 First Look Note.
- **Acquisition opportunities remain robust and competing bidders are acting rationally.** WTR completed 13 acquisitions through November 1, adding ~5,707 total customers. WTR also has 6 pending acquisitions for an additional 4,700 customers. The company has achieved 1.3% customer growth YTD (~12,900 customers), and continues to expect y/y customer growth of 1.5%-2.0%. Management is optimistic about future acquisitions and municipals seeking to sell their water businesses are at an all-time high.
- **WTR tentatively plans to file for a rate case in Pennsylvania in 2018 (2019 effective date), and potentially DSIC in 2017.** WTR expects to file to recover some revenue in 2017, with a full rate case in 2018. Under this timeline, new rates from a 2018 rate case filing would likely come into effect in 2019. WTR currently has pending rate cases in IN, VA, and OH with requested annualized revenue increase of $8.1M.
- **Warmer weather in Pennsylvania, Virginia, and Ohio, drove increased consumption during Q3.** Warmer-than-expected weather in several service territories led to increased consumption y/y. Given unfavorable weather conditions in Q2 and expectations for a typical Q4, however, management expects the effect of weather to be neutral overall in FY:16.
- **$32 price target.** Our price target is based on a ~22x P/E multiple of our 2018 EPS estimate. This is in line with comps which are currently trading at a ~22x average multiple.

**Aqua America is a holding company for numerous regulated water/waste water utilities serving almost 3.0 million people in the eastern half of the U.S.**

### ESTIMATE CHANGE

### 1-Year Price Chart




### Stock Data

| | |
|---|---|
| Rating: | Neutral |
| Suitability: | Lower Risk |
| Price Target: | $32 |
| Price (11/2/16): | $29.79 |
| Market Cap (mil): | $5,297 |
| Shares Out (mil): | 177.8 |
| Average Daily Vol (mil): | 0.77 |
| Dividend Yield: | 2.6% |

### Estimates

| FY Dec | 2015A | 2016E | 2017E |
|---|---|---|---|
| Q1 | 0.27 A | 0.29 A | |
| Q2 | 0.32 A | 0.33 A | |
| Q3 | 0.38 A | 0.41 A | |
| Q4 | 0.28 A | 0.26 E | |
| **Fiscal EPS** | **1.26 A** | **1.30 E** | **1.33 E** |
| Previous Est | | 1.35 E | 1.37 E |
| Fiscal P/E | 23.6x | 22.9x | 22.4x |

Chart/Table Sources: FactSet and Baird Data. Price chart reflects most recent closing price.

**Please refer to Appendix - Important Disclosures and Analyst Certification**

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# Investment Thesis

**Aqua America (WTR) is the second-largest investor-owned water utility in the US.** WTR operates in eight states largely in the eastern half of the U.S. and serves ~3 million people. WTR maintains over 12,500 miles of pipe, of which almost half are located in PA. WTR has completed over 75 acquisitions in the past five years. Known as Philadelphia Suburban Corporation until 2004, Aqua America is headquartered in a Philadelphia suburb where its corporate roots date back to 1886 for providing water/wastewater services to the suburbs of Philadelphia.

**US water infrastructure needs should drive long-term earnings growth.** The water infrastructure in the United States is in significant need of upgrade and expansion between 2013 and 2033. We believe a significant long-term earnings growth driver for WTR comes from substantial capital investment opportunities, which contribute to rate base growth, and in turn, drives earnings.

**Planned capital investment should expand rate base and generate growth for the company in the long run.** We expect Aqua America's long-term EPS growth to be fueled in part by the company's $350-$360 million annual capex investment, (~2.6x depreciation). $1.1B is expected to be invested into system upgrades (main, pipes, hydrants, etc.) over the next three years, which provides direct value to customers. Discretionary system investments are typically targeted for states with enhanced recovery mechanisms which help stabilize margin and earnings consistencies despite accelerated investment.

**The majority of WTR's regulatory operations are located in states that maintain enhanced regulatory recovery mechanisms.** Approximately 70% of WTR's current operating system employs infrastructure mechanisms, which allow a return on investment outside of a full rate case, substantially reducing regulatory lag time and minimizing rate case activity. These regulatory mechanisms include infrastructure investment riders, statewide rates and incentive mechanisms for acquisitions of troubled water systems. We believe such mechanisms provide a constructive regulatory environment in which to make capital investments, enabling improved and more consistent earned returns, which should lead to a premium peer valuation.

**Continued acquisitions should help customer growth.** The company targets 1.5-2.0% customer growth going forward, 0.5% from organic growth and 1% through acquisitions. Aqua has successfully acquired hundreds of water and waste water systems in the past decade to supplement its internal growth. Acquisitions also provide significant follow-on investment opportunities as WTR improves the quality of an acquired water system. The company is expected to be a key player in consolidating some of the 53,000 private water systems in the U.S., and rehabilitating those systems to improve water quality and drive investment growth

**M&A opportunities expand with focused growth strategy.** WTR completed 16 acquisitions in 2015, providing 1.1% to WTR's overall customer growth of 1.9%. We expect M&A to remain at heightened levels reflecting recent legislative changes in key states and WTR's realigned corporate organization and expanded executive team tasked with executing a focused growth strategy that emphasizes larger (mainly municipal) water/wastewater acquisitions

**Potential expansion into non-regulated water space could drive growth in the long run.** The company has recently divested from many of its market-based businesses that it considers too risky and hard to grow. WTR is actively evaluating other market-based activity, and believes that it will contribute to growth in the long run, but does not foresee non-regulated business becoming more than 15%-20% of Aqua America. WTR has also indicated that it would consider moving into other regulated utility space, believing the core competencies of the regulated water utility market would be profitable in other utility spaces.

**Valuation.** Our $32 price target is 22x our 2018 EPS estimate, in line with peers when fully valued (20x-22x 2018E EPS), reflecting average EPS growth opportunities and generally more constructive regulatory mechanisms.

# Risks & Caveats

Our suitability rating on Aqua America is Lower Risk. Key risks include the following.

**Regulation.** Regulated operations are subject to local, state and federal regulations. Changes in the regulatory environment can affect WTR's near-term and long-term performance.

**Weather.** WTR's businesses are sensitive to fluctuations in the weather. Particularly wet or dry weather can impact near-term financial results.

**Acquisition risk.** WTR may have the opportunity to purchase assets or companies in the near future. Acquisitions carry risks related to personnel, expected-versus-actual growth and a myriad of unforeseen hurdles, all of which can negatively affect earnings.

**Product quality.** Unique among its sister regulated utility sectors, water utilities provide a product that is ingested. Despite robust mandated service quality standards that lower risk, a quality failure could materially impact the earnings and stock of WTR.

# Company Description

Aqua America is a holding company for regulated utilities providing water and waste water services to nearly 3 million people located in the eastern half of the U.S. Over 50% of operating revenues and net income are derived from Pennsylvania.

# Aqua America

## (WTR - NYSE)

| Income Statement (in millions) | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 4Q15 | 2015 | 1Q16 | 2Q16 | 3Q16 | 4Q16E | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenue** | 770.5 | 768.6 | 779.9 | 190.3 | 205.8 | 221.1 | 197.1 | 814.2 | 192.6 | 203.9 | 226.6 | 205.6 | 828.6 | 847.8 | 904.1 |
| *Growth (%)* | *6%* | *0%* | *1%* | *4%* | *5%* | *5%* | *3%* | *4%* | *1%* | *-1%* | *3%* | *4%* | *2%* | *2%* | *7%* |
| **Expenses** | | | | | | | | | | | | | | | |
| O&M | 278.7 | 285.3 | 288.6 | 73.2 | 79.7 | 78.5 | 77.9 | 309.3 | 73.5 | 74.0 | 79.8 | 85.1 | 312.4 | 314.0 | 323.4 |
| Depreciation | 113.6 | 119.3 | 123.1 | 30.5 | 31.0 | 32.0 | 31.8 | 125.3 | 32.1 | 31.6 | 33.9 | 32.7 | 130.3 | 131.6 | 138.2 |
| Amortization | 5.5 | 5.5 | 3.5 | 0.8 | 0.9 | 0.8 | 0.9 | 3.4 | 0.5 | 0.5 | 0.4 | 2.1 | 3.4 | 3.4 | 3.4 |
| Taxes other than income tax | 48.6 | 53.3 | 50.5 | 14.6 | 13.8 | 14.7 | 12.0 | 55.1 | 14.1 | 14.2 | 14.7 | 12.5 | 55.6 | 56.2 | 58.4 |
| **Total Expense** | 446.4 | 463.4 | 465.5 | 119.2 | 125.5 | 126.0 | 122.5 | 493.1 | 120.3 | 120.4 | 128.8 | 132.3 | 501.8 | 505.2 | 523.4 |
| ***Operating Ratio*** | ***57.9%*** | ***60.3%*** | ***59.7%*** | ***62.6%*** | ***61.0%*** | ***57.0%*** | ***62.1%*** | ***60.6%*** | ***62.4%*** | ***59.0%*** | ***56.8%*** | ***64.4%*** | ***60.6%*** | ***59.6%*** | ***57.9%*** |
| *Expense Growth (%)* | *1%* | *4%* | *0%* | *3%* | *9%* | *9%* | *3%* | *6%* | *1%* | *-4%* | *2%* | *8%* | *8%* | *9%* | *6%* |
| **EBITDA** | 443.2 | 430.0 | 440.9 | 102.5 | 112.2 | 127.9 | 107.2 | 449.8 | 104.9 | 115.6 | 132.1 | 108.0 | 460.6 | 477.7 | 522.3 |
| **EBIT** | 324.1 | 305.2 | 314.4 | 71.2 | 80.2 | 95.1 | 74.6 | 321.1 | 72.3 | 83.5 | 97.8 | 73.2 | 326.9 | 342.7 | 380.7 |
| *EBIT Margin* | *42.1%* | *39.7%* | *40.3%* | *37%* | *39%* | *43%* | *38%* | *39.4%* | *37.6%* | *41.0%* | *43.2%* | *35.6%* | *39.4%* | *40.4%* | *42.1%* |
| *Growth (%)* | *13%* | *-6%* | *3%* | *7%* | *0%* | *0%* | *3%* | *2%* | *2%* | *4%* | *3%* | *-2%* | *2%* | *5%* | *11%* |
| Other expense (income) | 72.5 | 74.9 | 71.3 | 17.3 | 17.9 | 17.4 | 16.6 | 69.8 | 17.3 | 18.1 | 17.8 | 21.6 | 74.9 | 78.8 | 88.7 |
| Shale JV | 1.7 | (1.0) | (4.0) | (0.7) | (0.1) | (0.7) | (0.7) | (2.2) | (0.2) | (0.2) | 1.6 | 0.1 | 1.2 | 2.0 | 5.0 |
| Pretax Income | 253.3 | 229.4 | 239.1 | 53.1 | 62.3 | 77.0 | 57.3 | 249.1 | 54.7 | 65.1 | 81.6 | 51.8 | 253.2 | 265.8 | 296.9 |
| *PT Margin* | *32.9%* | *29.8%* | *30.7%* | *27.9%* | *30.3%* | *34.8%* | *29.1%* | *30.6%* | *28.4%* | *32.0%* | *36.0%* | *25.2%* | *30.6%* | *31.4%* | *32.8%* |
| Income Tax Expense | 67.9 | 24.8 | 25.2 | 4.6 | 4.9 | 9.6 | 6.9 | 26.0 | 3.0 | 5.5 | 8.4 | 5.4 | 22.4 | 29.2 | 38.6 |
| **Net Income** | 184.5 | 204.6 | 213.9 | 48.5 | 57.4 | 67.4 | 50.4 | 223.1 | 51.7 | 59.6 | 73.2 | 46.3 | 230.8 | 236.6 | 258.3 |
| Shares Outstanding, Diluted | 174.9 | 176.8 | 177.8 | 177.8 | 177.9 | 177.5 | 177.3 | 177.8 | 177.8 | 178.1 | 177.8 | 177.8 | 177.9 | 177.8 | 177.8 |
| **EPS** | $1.05 | $1.16 | $1.20 | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 | $0.29 | $0.33 | $0.41 | $0.26 | $1.30 | $1.33 | $1.45 |
| *Growth (%)* | *22%* | *10%* | *4%* | *15%* | *5%* | *0%* | *3%* | *4%* | *7%* | *4%* | *8%* | *-8%* | *3%* | *3%* | *9%* |
| **EPS including Disc Ops** | $1.05 | $1.05 | $1.31 | $0.27 | $0.32 | $0.38 | $0.28 | $1.26 | $0.29 | $0.33 | $0.41 | $0.26 | $1.30 | $1.33 | $1.45 |
| **Expense Ratios (% Total Rev)** | | | | | | | | | | | | | | | |
| O&M | 36.2% | 37.1% | 37.0% | 38.5% | 38.8% | 35.5% | 39.5% | 38.0% | 38.2% | 36.3% | 35.2% | 41.4% | 37.7% | 37.0% | 35.8% |
| Depreciation | 14.7% | 15.5% | 15.8% | 16.0% | 15.1% | 14.5% | 16.1% | 15.4% | 16.7% | 15.5% | 15.0% | 15.9% | 16.0% | 15.5% | 15.3% |
| Amortization | 0.7% | 0.7% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.2% | 0.3% | 0.2% | 1.0% | 0.4% | 0.4% | 0.4% |
| Taxes other than income tax | 6.3% | 6.9% | 6.5% | 7.7% | 6.7% | 6.6% | 6.1% | 6.8% | 7.3% | 7.0% | 6.5% | 6.1% | 6.7% | 6.6% | 6.5% |

Source: Company Reports & Baird estimates

**Research disclosures can be accessed at http://www.rwbaird.com/research-insights/research/coverage/research-disclosure.aspx**

**11/2/16**

**Ben Kallo 916.203.6269 Sr. Research Analyst**
**Tyler Frank 415.364.3342 Sr. Research Associate**

# Aqua America
## (WTR - NYSE)

| Balance Sheet (Millions) | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | 1Q16 | 2Q16 | 3Q16 |
|---|---|---|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | | | | |
| Cash and Cash Equivalents | 6 | 6 | 4 | 9 | 5 | 4 | 3 | 4 | 5 | 4 |
| Accounts Receivable, net | 93 | 95 | 97 | 95 | 109 | 111 | 99 | 92 | 100 | 110 |
| Materials and Supplies | 12 | 11 | 13 | 13 | 14 | 28 | 12 | 12 | 12 | 12 |
| Other Current Assets | 151 | 60 | 39 | 47 | 48 | 25 | 14 | 14 | 16 | 15 |
| **Total Current** | **261** | **172** | **153** | **164** | **175** | **168** | **128** | **123** | **132** | **141** |
| Gross PPE | 5,050 | 5,388 | 5,707 | 5,764 | 5,879 | 5,985 | 6,088 | 6,184 | 6,282 | 6,386 |
| Accumulated Depreciation | 1,114 | 1,221 | 1,305 | 1,331 | 1,357 | 1,380 | 1,399 | 1,431 | 1,459 | 1,485 |
| Net Property & Equipment | 3,936 | 4,167 | 4,402 | 4,433 | 4,522 | 4,606 | 4,689 | 4,753 | 4,823 | 4,901 |
| Regulatory Assets | 521 | 586 | 726 | 749 | 772 | 800 | 830 | 860 | 887 | 911 |
| Funds Restricted for Construction | 24 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Goodwill | 28 | 28 | 31 | 34 | 34 | 34 | 34 | 42 | 42 | 42 |
| Investment in Joint Venture | 39 | 49 | 43 | 43 | 43 | 41 | 8 | 7 | 7 | 9 |
| Other Assets | 50 | 50 | 52 | 55 | 55 | 52 | 52 | 30 | 30 | 31 |
| **Total Assets** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** | **6,036** |
| | | | | | | | | | | |
| **LIABILITIES & EQUITIES** | | | | | | | | | | |
| Accounts Payable | 56 | 64 | 63 | 35 | 48 | 45 | 56 | 34 | 41 | 44 |
| Short-term Borrowing | 80 | 144 | 18 | 33 | 36 | 28 | 17 | 28 | 26 | 48 |
| Long-term Debt Due Within One Year | 45 | 123 | 59 | 47 | 39 | 48 | 36 | 29 | 38 | 84 |
| Accrued Liabilities | 93 | (64) | 85 | 90 | 81 | 95 | 84 | 83 | 74 | 76 |
| **Total Current** | **274** | **267** | **225** | **205** | **203** | **216** | **193** | **174** | **179** | **252** |
| Long-term Debt & Commercial Paper | 1,544 | 1,469 | 1,561 | 1,595 | 1,661 | 1,681 | 1,744 | 1,744 | 1,776 | 1,726 |
| Deferred Income Taxes & Inv. Tax Credits | 723 | 868 | 1,001 | 1,041 | 1,080 | 1,116 | 1,119 | 1,152 | 1,190 | 1,237 |
| Regulatory Liabilities | 241 | 281 | 278 | 274 | 269 | 264 | 260 | 255 | 254 | 250 |
| Customers' Advances for Construction | 72 | 74 | 78 | 76 | 84 | 87 | 87 | 87 | 88 | 93 |
| Contributions in Aid of Construction | 460 | 477 | 498 | 504 | 506 | 510 | 512 | 531 | 535 | 538 |
| Other Liabilities | 158 | 82 | 110 | 106 | 95 | 98 | 100 | 111 | 109 | 108 |
| Shareholder's Equity | 1,386 | 1,535 | 1,655 | 1,676 | 1,703 | 1,729 | 1,726 | 1,761 | 1,791 | 1,832 |
| **Total Liabilities and Equity** | **4,859** | **5,052** | **5,407** | **5,478** | **5,600** | **5,701** | **5,741** | **5,815** | **5,923** | **6,036** |

| Balance Sheet Analysis | 2012 | 2013 | 2014 | 1Q15 | 2Q15 | 3Q15 | 2015 | 1Q16 | 2Q16 | 3Q16 |
|---|---|---|---|---|---|---|---|---|---|---|
| ROE | 13.6% | 13.8% | 13.6% | 13.5% | 13.7% | 13.6% | 13.7% | 13.1% | 13.2% | 13.5% |
| Rate Base | 2,902 | 3,022 | 3,100 | 3,259 | 3,259 | 3,259 | 3,259 | 3,476 | 3,476 | 3,476 |
| Current Ratio | 1.0 | 0.6 | 0.7 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.6 |
| Days Sales Outstanding (DSO) | 5.4 | 5.5 | 5.7 | 5.7 | 5.9 | 9.3 | 5.6 | 5.7 | 5.4 | 5.8 |
| EBIT/ Interest Expense | 4.2 | 3.9 | 4.1 | 4.2 | 4.2 | 4.2 | 4.2 | 4.1 | 4.1 | 4.1 |
| Debt / Total Cap | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% | 50% |
| Debt / Total Cap (incl Op Leases) | 53% | 51% | 49% | 49% | 50% | 50% | 51% | 50% | 50% | 50% |
| Book Value/Share | $7.92 | $8.68 | $9.31 | $9.43 | $9.57 | $9.74 | $9.71 | $9.90 | $10.06 | $10.30 |

Source: Company Reports & Baird estimates

**Ben Kallo 916.203.6269 Sr. Research Analyst**
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# Appendix - Important Disclosures and Analyst Certification

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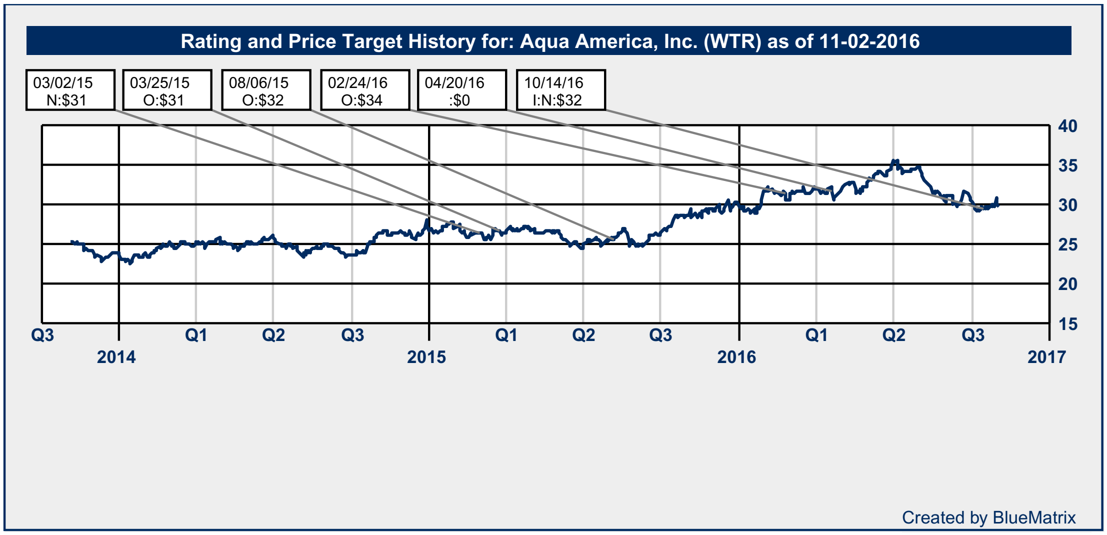


1 Robert W. Baird & Co. Incorporated makes a market in the securities of WTR.

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23 February 2017

# Aqua America

## 4Q Takeaways

**4Q and Full-year Results in Line with Expectations.** WTR reported operating earnings of $0.28 in 4Q16 and $1.32 in 2016. These results were in line with consensus of $0.29 and $1.33. The company recorded a record level of investment in the system in 2016 ($400MM) and is forecast to set a new record investment of approximately $450MM in 2017. Customer growth was 1.6% in 2016, with roughly 57% of the growth generated organically and the remainder acquired.

**2017 EPS Guidance Remains Intact at $1.34–1.39.** Guidance drivers include: customer growth of 1.5–2.0%, revenue increases ($5.6MM annualized revenue approved in 2016, $3.7MM annualized revenue approved so far in 2017, $5.6MM annualized revenue increase pending in OH, and PA DSIC filing with rates effective ~4Q17), 1–2% same-system O&M increase, 6–7% rate base growth, and $450MM capex.

**Acquisitions May Impact Future O&M Efficiency Ratio.** WTR recorded a 33.4% O&M efficiency ratio (adjusted for purchased water) in 2016. WTR's rock-solid ratio may come under pressure in future periods as a result of the impact of municipal acquisitions. The acquisitions typically have delayed rate case impacts, so recovery may lag expenses briefly. It is also reasonable to assume that the efficiency ratios of the acquisition targets are somewhat worse than WTR's.

**We are maintaining our EPS estimates of $1.38 in 2017, $1.46 in 2018, and $1.55 in 2019. Our price target also remains unchanged at $33.**

WTR: Quarterly and Annual EPS (USD)

| | 2016 | 2017 | | | 2018 | | | Change y/y | |
|---|---|---|---|---|---|---|---|---|---|
| FY Dec | Actual | Old | New | Cons | Old | New | Cons | 2017 | 2018 |
| Q1 | 0.29A | N/A | N/A | 0.28E | N/A | N/A | 0.30E | N/A | N/A |
| Q2 | 0.33A | N/A | N/A | 0.35E | N/A | N/A | 0.37E | N/A | N/A |
| Q3 | 0.41A | N/A | N/A | 0.45E | N/A | N/A | 0.48E | N/A | N/A |
| Q4 | 0.28A | N/A | N/A | 0.31E | N/A | N/A | 0.32E | N/A | N/A |
| Year | 1.32A | 1.38E | 1.38E | 1.38E | N/A | 1.46E | 1.45E | 5% | 6% |
| P/E | 23.3 | | 22.3 | | | 21.1 | | | |

Source: Barclays Research.
Consensus numbers are from Thomson Reuters

| | |
|---|---|
| Stock Rating | EQUAL WEIGHT<br>Unchanged |
| Industry View | NEUTRAL<br>Unchanged |
| Price Target | USD 33.00<br>Unchanged |

| | |
|---|---|
| Price (23-Feb-2017) | USD 30.73 |
| Potential Upside/Downside | +7.4% |
| Tickers | WTR |

| | |
|---|---|
| Market Cap (USD mn) | 5450 |
| Shares Outstanding (mn) | 177.36 |
| Free Float (%) | 99.76 |
| 52 Wk Avg Daily Volume (mn) | 0.7 |
| 52 Wk Avg Daily Value (USD mn) | N/A |
| Dividend Yield (%) | 2.5 |
| Return on Equity TTM (%) | 13.10 |
| Current BVPS (USD) | 10.43 |

Source: Thomson Reuters

| | |
|---|---|
| Price Performance | Exchange-NYSE |
| 52 Week range | USD 35.83-28.03 |


*Link to Barclays Live for interactive charting*

North America Power & Utilities

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**North America Power & Utilities** — **Industry View: NEUTRAL**

## Aqua America (WTR)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 820 | 852 | 892 | 916 | 3.8% |
| EBITDA (adj) | 457 | 497 | 530 | 584 | 8.5% |
| EBIT (adj) | 326 | 352 | 371 | 410 | 8.0% |
| Pre-tax income (adj) | 255 | 268 | 287 | 323 | 8.2% |
| Net income (adj) | 234 | 244 | 258 | 275 | 5.5% |
| EPS (adj) ($) | 1.32 | 1.38 | 1.46 | 1.55 | 5.5% |
| Diluted shares (mn) | 177.5 | 177.5 | 177.5 | 177.5 | 0.0% |
| DPS ($) | 0.74 | 0.80 | 0.86 | 0.93 | 8.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 55.7 | 58.3 | 59.5 | 63.7 | 59.3 |
| EBIT (adj) margin (%) | 39.7 | 41.3 | 41.6 | 44.8 | 41.9 |
| Pre-tax (adj) margin (%) | 31.1 | 31.5 | 32.2 | 35.3 | 32.5 |
| Net (adj) margin (%) | 28.6 | 28.7 | 29.0 | 30.0 | 29.1 |
| ROIC (%) | 8.9 | 9.2 | 9.3 | 10.0 | 9.4 |
| ROA (%) | 4.0 | 4.0 | 4.1 | 4.2 | 4.1 |
| ROE (%) | 12.8 | 12.5 | 12.5 | 12.5 | 12.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 4,922 | 5,142 | 5,354 | 5,553 | 4.1% |
| Total net assets | 5,997 | 6,196 | 6,373 | 6,574 | 3.1% |
| Capital employed | 3,654 | 3,831 | 3,976 | 4,110 | 4.0% |
| Shareholders' equity | 1,897 | 2,015 | 2,135 | 2,259 | 6.0% |
| Net debt/(funds) | 1,762 | 1,844 | 1,903 | 1,910 | 2.7% |
| Cash flow from operations | 422 | 446 | 464 | 495 | 5.5% |
| Capital expenditure | -365 | -365 | -370 | -373 | N/A |
| Free cash flow | -59 | -46 | -39 | -20 | N/A |
| Pre-dividend FCF | 72 | 96 | 114 | 145 | 26.2% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 23.3 | 22.3 | 21.1 | 19.9 | 21.6 |
| EV/EBITDA (adj) (x) | 15.8 | 14.7 | 13.9 | 12.6 | 14.3 |
| EV/EBIT (adj) (x) | 22.2 | 20.7 | 19.8 | 18.0 | 20.2 |
| P/BV (x) | 2.9 | 2.7 | 2.6 | 2.4 | 2.6 |
| Dividend yield (%) | 2.4 | 2.6 | 2.8 | 3.0 | 2.7 |
| Total debt/capital (%) | 48.1 | 47.4 | 46.3 | 45.0 | 46.7 |
| Net debt/EBITDA (adj) (x) | 3.9 | 3.7 | 3.6 | 3.3 | 3.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 56.1 | 58.0 | 59.2 | 60.2 | 58.4 |
| Interest cover (x) | 4.0 | 4.1 | 4.2 | 4.5 | 4.2 |
| Regulated (%) | 98.0 | 198.0 | 298.0 | 398.0 | 248.0 |

| | |
|---|---|
| **Price (23-Feb-2017)** | **USD 30.73** |
| **Price Target** | **USD 33.00** |

**Why Equal Weight?** While we believe WTR is a well-run utility and appreciate the relatively high earned ROE, the uncertainty associated with overearning in two of their largest jurisdictions keeps us at an Equal Weight rating.

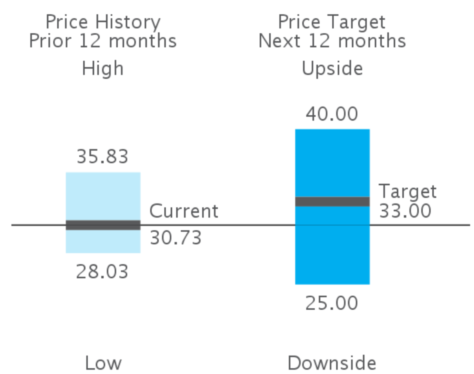
**Upside case** — **USD 40.00**

If results improve at a faster rate than we expect or if the market-based opportunities develop at a faster pace, a 15% premium to the group average multiple would be warranted.

**Downside case** — **USD 25.00**

If regulatory issues impact earnings negatively or cost pressures occur, the stock trading at a group average multiple would be a reasonable assumption.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

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**Primary Stocks (Ticker, Date, Price)**

**Aqua America** (WTR, 23-Feb-2017, USD 30.73), Equal Weight/Neutral, CE/J

Prices are sourced from Thomson Reuters as of the last available closing price in the relevant trading market.

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| | | |
|---|---|---|
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| American Electric Power (AEP) | American States Water Company (AWR) | American Water Works (AWK) |
| Aqua America (WTR) | Brookfield Infrastructure Partners LP (BIP) | Brookfield Infrastructure Partners LP (BIP_u.TO) |
| Brookfield Renewable Energy Partners LP (BEP) | Brookfield Renewable Energy Partners LP (BEP_u.TO) | California Water Service Group (CWT) |
| Calpine Corp. (CPN) | Canadian Utilities Ltd. (CU.TO) | CenterPoint Energy Inc. (CNP) |
| CMS Energy (CMS) | Connecticut Water Service Inc. (CTWS) | Consolidated Edison (ED) |
| Dominion Resources (D) | DTE Energy (DTE) | Duke Energy (DUK) |
| Dynegy Inc. (DYN) | Edison International (EIX) | Emera Inc. (EMA.TO) |

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| | | |
|---|---|---|
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| Public Service Enterprise Gp (PEG) | SCANA Corp. (SCG) | Sempra Energy (SRE) |
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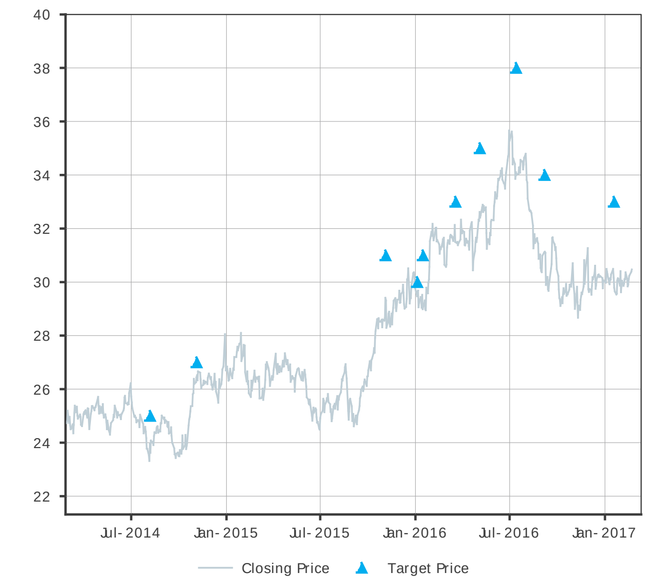
## Aqua America (WTR / WTR)

**USD 30.73 (23-Feb-2017)**

Stock Rating: **EQUAL WEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 23-Feb-2017)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating* | Adjusted Price Target |
|---|---|---|---|
| 18-Jan-2017 | 30.16 | | 33.00 |
| 06-Sep-2016 | 31.11 | | 34.00 |
| 13-Jul-2016 | 34.10 | | 38.00 |
| 04-May-2016 | 32.62 | | 35.00 |
| 18-Mar-2016 | 31.50 | | 33.00 |
| 15-Jan-2016 | 28.99 | | 31.00 |
| 04-Jan-2016 | 29.47 | | 30.00 |
| 04-Nov-2015 | 29.41 | | 31.00 |
| 04-Nov-2014 | 26.44 | | 27.00 |
| 06-Aug-2014 | 23.96 | | 25.00 |

Source: Thomson Reuters, Barclays Research

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*The rating for this security remained Equal Weight during the relevant period.

*Link to Barclays Live for interactive charting*

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Equity Research
21 July 2017

# North America Power & Utilities
# Q2 2017 Quarterly Earnings Preview

INDUSTRY UPDATE

North America Alternative Energy & Environmental Services
NEUTRAL
Unchanged

North America Power & Utilities
NEUTRAL
Unchanged

For a full list of our ratings, price target and earnings changes in this report, please see table on page 2.

**Regulated Utilities:** On average, we are in line with consensus, looking for a flat comparison of 2Q earnings to the year-ago period; however, there are some company-specific estimates where we differ from consensus. Positive variances to consensus include AEE, NEE, PCG, SCG and SRE. Negative variances to consensus include AEP, DUK, EMA-T, and POR. Companies that could raise EPS guidance or point to the upper-end of a range are DTE, EIX, NI, and PPL. We don't expect any companies to lower guidance. We are looking for updates from CNP (ENBL ownership options), SO and SCG (nuclear construction and Toshiba), FE (exiting merchant generation and asset sales), and project updates from D (Cove Point), ES (Northern Pass) and SRE (Cameron). We also expect companies to discuss prospects for baseload generation subsidies, grid modernization investment opportunities and cyber security.

**Power:** For power we see weather worse year over year in the south central region, which might be muted as we don't see a similar strong wind resource in ERCOT this June versus June 2016. Weather was significantly better in California, however the positive impact is likely to be muted due to markedly better hydro year on year. Overall we see adjusted EBITDA ~7% below current consensus estimates and down ~15% year over year, for both NRG Energy due to the GenOn deconsolidation and for Vistra Energy using a not directly comparable predecessor TCEH adjusted EBITDA for Q2 '16. We don't anticipate management will need to update 2017 guidance ranges, save for NRG providing an update for achievable portions of the transformation plan announced on July 12. Calpine is likely to have the most interesting conference call (July 28), given it is reportedly in a sale exploration process with a second round auction to end by August (see *CPN: Reports: To Finish Next Auction in Sale Exploration Process by August*, June 9 2017).

**Alternative Energy**: We expect 2Q17E gross margin for the module manufacturers to increase by 20bps sequentially, following a 20bps increase in manufacturing entitlement as a percentage of the average wholesale module price. We expect 2Q17 gross margin of 10.0% on average for FSLR, SPWR, and CSIQ. During the quarter, module prices continued a steady downward trend. The pace of project sales activity slowed considerably in 2Q17, with only the 13 July announcement that FSLR had sold its 179MW Switch Station project to EDF Renewable Energy in late June.

**Environmental Services**: We expect 2Q17 adj. EBITDA per share growth of 6.2% y/y on average for the MSW names. Most of the key indicators we track for the Environmental Services space are pointing toward continued positive momentum. 2Q17 is typically when management teams provide revised guidance, and we currently expect a guidance increase for WCN and upward bias to guidance for WM, ADSW, and CWST. We take a wait-and-see approach on RSG given the implied ramp in 2Q-4Q EBITDA margin based on somewhat weaker 1Q17 performance. In specialty waste, we generally expect maintained guidance ranges with potential positive commentary on 2H17 momentum following continued strong reading in the ISM industrial index.

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**Summary of our Ratings, Price Targets and Earnings Changes in this Report (all changes are shown in bold)**

| Company | Rating | | | Price Target | | | | EPS FY1 (E) | | | EPS FY2 (E) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Old | New | Date | Price | Old | New | %Chg | Old | New | %Chg | Old | New | %Chg |
| **North America Alternative Energy & Environmental Services** | Neu | Neu | | | | | | | | | | | |
| **North America Power & Utilities** | Neu | Neu | | | | | | | | | | | |
| American States Water Company (AWR) | UW | UW | 19-Jul-2017 | 48.09 | 41.00 | **43.00** | 5 | 1.69 | 1.69 | - | 1.77 | 1.77 | - |
| Brookfield Infrastructure Partners LP (BIP-U CT / BIP_u.TO) | EW | EW | 19-Jul-2017 | 50.16 | 57.00 | **52.00** | -9 | 2.22 | **2.04** | -8 | 2.83 | **2.60** | -8 |
| Brookfield Renewable Energy Partners LP (BEP-U CT / BEP_u.TO) | EW | EW | 19-Jul-2017 | 42.30 | 42.00 | **45.00** | 7 | 0.16 | **0.18** | 12 | 0.31 | **0.36** | 16 |
| Brookfield Renewable Energy Partners LP (BEP) | EW | EW | 19-Jul-2017 | 33.57 | 32.00 | **34.00** | 6 | 0.12 | **0.14** | 17 | 0.24 | **0.28** | 17 |
| Calpine Corp. (CPN) | OW | OW | 19-Jul-2017 | 14.16 | 18.00 | **17.00** | -6 | 0.69 | **0.88** | 28 | 0.88 | **1.18** | 34 |
| Dynegy Inc. (DYN) | OW | OW | 19-Jul-2017 | 9.04 | 14.00 | **13.00** | -7 | -0.54 | **-0.67** | -24 | 0.48 | 0.48 | - |
| FORTIS INC (FTS) | OW | OW | 19-Jul-2017 | 35.16 | 37.00 | **40.00** | 8 | 1.90 | **1.92** | 1 | 2.00 | **2.12** | 6 |
| Fortis Inc. (FTS CN / FTS.TO) | OW | OW | 19-Jul-2017 | 44.28 | 49.00 | **50.00** | 2 | 2.49 | **2.41** | -3 | 2.62 | **2.67** | 2 |
| SCANA Corp. (SCG) | EW | EW | 19-Jul-2017 | 64.30 | 67.00 | **65.00** | -3 | 4.11 | 4.11 | - | 4.43 | 4.43 | - |
| Southern Co. (SO) | OW | OW | 19-Jul-2017 | 47.23 | 55.00 | **54.00** | -2 | 2.98 | **2.94** | -1 | 3.17 | **3.09** | -3 |
| Vistra Energy Corp. (VST) | EW | EW | 19-Jul-2017 | 15.96 | 16.00 | **17.00** | 6 | 0.73 | 0.73 | - | 0.57 | **0.63** | 11 |

Source: Barclays Research. Share prices and target prices are shown in the primary listing currency and EPS estimates are shown in the reporting currency.
FY1(E): Current fiscal year estimates by Barclays Research. FY2(E): Next fiscal year estimates by Barclays Research.
Stock Rating: OW: Overweight; EW: Equal Weight; UW: Underweight; RS: Rating Suspended
Industry View: Pos: Positive; Neu: Neutral; Neg: Negative

FIGURE 1

## Second Quarter 2017 Earnings Expectations – Power and Utilities

| US Companies in US$ Canadian Companies in CAD | | | Quarterly | | | | Annual | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Company | Ticker Symbol | Scheduled Reporting Date | 2017 Second Quarter Barclays Estimate[1] | 2017 Second Quarter Consensus Estimate | 2016 Second Quarter Operating Earnings | $ Change | 2017 Annual Barclays Estimate[1] | 2017 Annual Consensus Estimate | 2017 Annual Company Guidance | Trailing 12 Month Result | 2016 Annual Operating Earnings |
| **REGULATED UTILITIES** | | | | | | | | | | | |
| Alliant Energy | LNT | 4-Aug | $0.37E | $0.36 | $0.37 A | $0.00 | $1.99 | $2.00 | $1.92-$2.06 | $1.89 | $1.88 A |
| Ameren Corp. | AEE | 4-Aug | $0.73E | $0.66 | $0.61 A | $0.12 | $2.74 | $2.77 | $2.65-$2.85 | $2.79 | $2.68 A |
| American Electric Power | AEP | 27-Jul | $0.82E | $0.89 | $0.95 A | ($0.13) | $3.69 | $3.66 | $3.55-$3.75 | $3.75 | $3.94 A |
| AES Corp. | AES | 8-Aug | $0.21E | $0.20 | $0.15 A | $0.06 | $1.04 | $1.05 | $1.00-$1.10 | $1.05 | $0.98 A |
| CenterPoint Energy | CNP | 3-Aug | $0.23E | $0.22 | $0.17 A | $0.06 | $1.28 | $1.31 | $1.25-$1.33 | $1.30 | $1.16 A |
| CMS Energy | CMS | 28-Jul | $0.37E | $0.39 | $0.45 A | ($0.08) | $2.17 | $2.17 | $2.14-$2.18 | $2.07 | $2.02 A |
| Canadian Utilities | CU-T | 27-Jul | $0.51E | $0.48 | $0.49 A | $0.02 | $2.26 | $2.35 | | $2.29 | $2.21 A |
| Caribbean Utilities | CUP'U-T | 28-Jul | $0.23E | $0.22 | $0.23 A | $0.00 | $0.82 | $0.79 | | $0.73 | $0.75 A |
| Dominion Energy | D | 2-Aug | $0.67E | $0.68 | $0.71 A | ($0.04) | $3.66 | $3.65 | $3.40-$3.90 | $3.77 | $3.80 A |
| DTE Energy | DTE | 26-Jul | $1.03E | $1.01 | $0.98 A | $0.05 | $5.29 | $5.33 | $5.12-$5.38 | $5.59 | $5.28 A |
| Duke Energy | DUK | 3-Aug | $0.98E | $1.04 | $1.07 A | ($0.09) | $4.58 | $4.60 | $4.50-$4.70 | $4.51 | $4.69 A |
| Consolidated Edison | ED | 3-Aug | $0.65E | $0.63 | $0.60 A | $0.05 | $4.10 | $4.09 | $3.95-$4.15 | $4.12 | $3.99 A |
| Edison International | EIX | 27-Jul | $0.97E | $0.94 | $0.85 A | $0.12 | $4.14 | $4.21 | $4.04-$4.24 | $4.39 | $3.97 A |
| Emera Inc. | EMA-T | 11-Aug | $0.47E | $0.53 | $0.33 A | $0.14 | $2.65 | $2.68 | | $2.54 | $2.61 A |
| Entergy[2] | ETR | 2-Aug | $1.05E | $1.20 | $1.77 A | ($0.72) | $4.26 | $4.86 | $4.25-$4.55[2] | $4.14 | $5.10 A |
| Eversource Energy | ES | 27-Jul | $0.68E | $0.67 | $0.64 A | $0.04 | $3.08 | $3.15 | $3.05-$3.20 | $3.06 | $2.96 A |
| FirstEnergy | FE | 28-Jul | $0.57E | $0.60 | $0.56 A | $0.01 | $2.82 | $2.80 | $2.70-$3.00 | $2.63 | $2.63 A |
| Fortis Inc. | FTS-T | 28-Jul | $0.53E | $0.55 | $0.46 A | $0.07 | $2.49 | $2.48 | | $2.42 | $2.33 A |
| Great Plains Energy | GXP | 9-Aug | | | $0.42 A | | | | | | $1.85 A |
| Hawaiian Electric Industries | HE | 3-Aug | $0.40E | $0.39 | $0.43 A | ($0.03) | $1.62 | $1.64 | $1.55-$1.70 | $1.70 | $1.75 A |
| Hydro One Ltd | H-T | 8-Aug | | | $0.25 A | | | | | | $1.21 A |
| NextEra Energy | NEE | 26-Jul | $1.80E | $1.70 | $1.67 A | $0.13 | $6.68 | $6.70 | $6.35-$6.85 | $6.50 | $6.19 A |
| NiSource Inc. | NI | 2-Aug | $0.09E | $0.10 | $0.08 A | $0.01 | $1.15 | $1.18 | $1.12-$1.18 | $1.19 | $1.09 A |
| OGE Energy Corp. | OGE | 3-Aug | $0.43E | $0.44 | $0.35 A | $0.08 | $1.93 | $1.95 | $1.93-$2.09 | $1.79 | $1.69 A |
| PG&E Corp. | PCG | 27-Jul | $0.80E | $0.77 | $0.88 A | ($0.08) | $3.65 | $3.67 | $3.55-$3.75 | $4.13 | $3.68 A |
| PNM Resources | PNM | 28-Jul | $0.45E | $0.44 | $0.40 A | $0.05 | $1.84 | $1.82 | $1.77-$1.87 | $1.85 | $1.65 A |
| Pinnacle West Capital Corp. | PNW | 3-Aug | $1.12E | $1.13 | $1.08 A | $0.04 | $4.19 | $4.24 | N/A | $4.15 | $3.95 A |
| Portland General Electric | POR | 28-Jul | $0.42E | $0.46 | $0.42 A | $0.00 | $2.24 | $2.25 | $2.20-$2.35 | $2.32 | $2.16 A |
| PPL Corp | PPL | 3-Aug | $0.50E | $0.49 | $0.56 A | ($0.06) | $2.15 | $2.16 | $2.05-$2.25 | $2.35 | $2.45 A |
| SCANA Corp. | SCG | 3-Aug | $0.79E | $0.65 | $0.74 A | $0.05 | $4.11 | $4.19 | $4.15-$4.35 | $3.98 | $3.97 A |
| Sempra Energy | SRE Est | 4-Aug | $0.97E | $0.86 | $0.79 A | $0.18 | $5.12 | $5.10 | $4.85-$5.25 | $5.25 | $5.05 A |
| Southern Company | SO | 2-Aug | $0.70E | $0.71 | $0.74 A | ($0.04) | $2.98 | $2.96 | $2.90-$3.02 | $2.88 | $2.89 A |
| Westar Energy[3] | WR | 8-Aug | | | $0.49 A | | | | | | $2.33 A |
| WEC Energy Group | WEC | 26-Jul | $0.60E | $0.58 | $0.57 A | $0.03 | $3.13 | $3.10 | $3.06-$3.12 | $3.02 | $2.97 A |
| Xcel Energy | XEL | 27-Jul | $0.43E | $0.41 | $0.39 A | $0.04 | $2.33 | $2.31 | $2.25-$2.35 | $2.27 | $2.21 A |
| **Average** | | | **$0.64** | **$0.64** | **$0.64** | **$0.00** | **$3.01** | **$3.04** | | **$3.01** | **$2.96** |
| **% Change** | | | **0.4%** | **-0.6%** | | | **1.6%** | **2.7%** | | | |
| **IPPS AND INTEGRATED UTILITIES** | | | | | | | | | | | |
| Calpine Corp. | CPN | 28-Jul | $0.02E | $0.02 | $0.06 A | ($0.04) | $0.69 | $0.50 | | ($0.43) | ($0.08)A |
| Dynegy Inc. | DYN | 4-Aug | -$0.48E | ($0.72) | ($1.35)A | $0.87 | ($0.54) | ($0.62) | | ($2.31) | ($9.78)A |
| Exelon | EXC | 2-Aug | $0.53E | $0.54 | $0.65 A | ($0.12) | $2.68 | $2.67 | $2.50-$2.80 | $2.53 | $2.68 A |
| NRG Energy | NRG | 3-Aug | -$0.33E | $0.04 | ($0.61)A | $0.28 | $0.02 | $0.60 | | ($2.52) | ($1.76)A |
| Public Svc. Ent. Group | PEG | 28-Jul | $0.58E | $0.58 | $0.57 A | $0.01 | $2.91 | $2.90 | $2.80-$3.00 | $2.92 | $2.90 A |
| Vistra Energy Corp | VST | 4-Aug | $0.14E | $0.04 | N/A | N/A | $0.73 | $0.60 | | N/A | ($0.38)A |
| **Average** | | | **$0.06** | **$0.08** | **-$0.14** | **$0.20** | **$1.15** | **$1.21** | | **$0.04** | **-$1.21** |
| **WATER** | | | | | | | | | | | |
| American States Water | AWR | 2-Aug | $0.44E | $0.44 | $0.45 A | ($0.01) | $1.69 | $1.69 | | $1.65 | $1.62 A |
| American Water Works | AWK | 3-Aug | $0.80E | $0.80 | $0.77 A | $0.03 | $3.06 | $3.03 | | $2.94 | $2.84 A |
| Aqua America | WTR | 3-Aug | $0.34E | $0.34 | $0.33 A | $0.01 | $1.38 | $1.36 | | $1.31 | $1.32 A |
| California Water Service Group | CWT | 27-Jul | $0.31E | $0.33 | $0.24 A | $0.07 | $1.21 | $1.30 | | $1.12 | $1.01 A |
| Connecticut Water Service Corp | CTWS Est | 9-Aug | $0.80E | $0.74 | $0.89 A | ($0.09) | $2.22 | $2.22 | | $2.07 | $2.08 A |
| **Average** | | | **$0.54** | **$0.53** | **$0.54** | **$0.00** | **$1.91** | **$1.92** | | | **$1.77** |
| **% Change** | | | **0.4%** | **-1.2%** | | | **7.8%** | **8.1%** | | | |

(1) Estimates exclude discontinued and unusual operations
(2) Estimates reflect Utility, Parent & Other only; exclude EWC
(3) Estimates exclude Corporate Owned Life Insurance Benefits
Note: "A" Indicates actual result. "E" indicates estimate

Source: Thomson Eikon and Barclays Research

FIGURE 2

## Second Quarter 2017 Earnings Schedule

| Date | Time | Company Name | U.S. Call Info | U.S.Replay Info |
|---|---|---|---|---|
| 26-Jul | 9:00 AM | DTE Energy | 888-505-4377/719-325-2390 PWD: 9327084 | Webcast |
| 26-Jul | 9:00 AM | NextEra Energy/NextEra Energy Partners LP | 888-500-6973 PWD: 7450511 | 888-203-1112 PWD: 7450511 PIN: 9876 |
| 26-Jul | 2:00 PM | WEC Energy Group | 844-840-1623 PWD: 43642520 | 855-859-2056 PWD: 43642520 |
| 27-Jul | 7:00 AM | Canadian Utilities Ltd | No Call | No Call |
| 27-Jul | 9:00 AM | American Electric Power | 800-553-0349 PWD: 426838 | Webcast |
| 27-Jul | 10:00 AM | Xcel Energy | 877-874-1563 PWD: 5168028 | 866-375-1919 PWD: 516808 |
| 27-Jul | 11:00 AM | California Water Service Group | 877-397-0272 PWD: 7248995 | 888-203-1112 PWD: 7248995 |
| 27-Jul | 11:00 AM | PG&E Corp. | 800-971-1685/850-429-1140 PWD: 3250 | 866-415-9493/205-289-3247 PWD: 3250 |
| 27-Jul | 4:30 PM | Edison International | 888-673-9780 PWD: Edison | Webcast |
| 28-Jul | 8:30 AM | CMS Energy | 412-317-6061 PWD: 0219408 | 877-344-7529/412-317-0088 PWD: 10109086 |
| 28-Jul | 9:00 AM | Eversource Energy | 800-588-4973 PWD: 45189630 | 888-843-7419 PWD: 45189630 |
| 28-Jul | 10:00 AM | Calpine Corp. | 800-446-1671 PWD: 45310747 | 888-843-7419 PWD: 45310747 |
| 28-Jul | 10:00 AM | FirstEnergy Corp. | 877-269-7756 PWD: 105131 | 877-660-6853 PWD: 13665736 |
| 28-Jul | 10:00 AM | Fortis Inc. | 877-223-4471 | 800-585-8367 PWD: 37869181 |
| 28-Jul | 11:00 AM | PNM Resources | Webcast | Webcast |
| 28-Jul | 11:00 AM | Portland General | 844-831-4021/920-663-6284 PWD: 36350829 | 855-859-2056/404-537-3406 PWD: 36350829 |
| 28-Jul | 11:00 AM | Public Service Enterprise Group | 877-370-7635 PWD: 73230853 | 855-859-2056 PWD: 73230853 |
| 28-Jul | 5:00 PM | Caribbean Utilities Corporation Ltd | No Call | No Call |
| 2-Aug | 8:30 AM | NiSource Inc. | 855-219-9570/920-663-6270 PWD: 53169642 | 855-859-2056 PWD: 53169642 |
| 2-Aug | 9:00 AM | Dominion Energy | 877-410-5657 PWD: Dominion | 877-919-4059 PWD: 89026239 |
| 2-Aug | 10:00 AM | Entergy Corp | 844-309-6569 PWD: 56948204 | 855-859-2056 PWD: 56948204 |
| 2-Aug | 11:00 AM | Exelon Corp. | 800-690-3108 PWD: 44816529 | 855-859-2056 PWD: 44816529 |
| 2-Aug | 1:00 PM | Southern Company | 800-667-1520 | 800-633-8284 PWD: 21816812 |
| 3-Aug | 8:00 AM | NRG Energy | 877-359-9508 PWD: 51535305 | Webcast |
| 3-Aug | 8:30 AM | PPL Corporation | 888-346-8683/412-902-4270 PWD: 9277539 | Webcast |
| 3-Aug | 9:00 AM | American Water Works | Webcast | Webcast |
| 3-Aug | 9:00 AM | Brookfield Infrastructure Partners LP | 800-319-4610 | 855-669-9658 PWD: 1493 |
| 3-Aug | 9:00 AM | OGE Energy Corp. | 855-459-5945/330-863-3385 PWD: 51607930 | Webcast |
| 3-Aug | 9:15 AM | NRG Yield Inc | 877-402-8188 PWD: 51565404 | Webcast |
| 3-Aug | 10:00 AM | Duke Energy | 877-856-1958 PWD: 7921662 | 888-203-1112 PWD: 721662 |
| 3-Aug | 11:00 AM | Aqua America Inc. | 877-545-1407 PWD: 3938978 | 888-203-1112 PWD: 3938978 |
| 3-Aug | 11:00 AM | CenterPoint Energy Inc. | 800-653-1761/706-645-9680 PWD: 18331704 | 855-859-2056/404-537-3406 PWD: 18331704 |
| 3-Aug | 12:00 PM | Pinnacle West Capital Corporation | 877-407-8035 | 877-481-4010 PWD: 15960 |
| 3-Aug | 2:00 PM | American States Water | Webcast | Webcast |
| 3-Aug | 3:00 PM | Hawaiian Electric Industries | 844-834-0652 | 877-344-7529 PWD: 10108918 |
| 3-Aug | 3:00 PM | SCANA Corp. | 888-347-3258 | 877-344-7529 PWD: 10107619 |
| 4-Aug | 9:00 AM | Brookfield Renewable Partners LP | 800-319-4610 | 800-319-6413 PWD: 1494 |
| 4-Aug | 9:00 AM | Dynegy Inc. | 800-857-5215 PWD: Dynegy | Webcast |
| 4-Aug | 10:00 AM | Alliant Energy | 888-394-8218/719-457-1036 PWD: 4175543 | 888-203-1112/719-457-0820 PWD: 4175543 |
| 4-Aug | 10:00 AM | Ameren Corp. | 877-407-8037/201-689-8037 | Webcast |
| 4-Aug | 11:00 AM | Vistra Energy Corp. | 877-201-0168 PWD: 46784984 | Webcast |
| 8-Aug | 8:30 AM | Hydro One Ltd | 855-716-2690 PWD: 23370954 | Webcast |
| 8-Aug | 9:00 AM | AES Corp. | 888-317-6003 PWD: 3418177 | Webcast |
| 11-Aug | 10:00 AM | Emera Inc. | 866-521-4909 | 800-585-8367 PWD: 53138266 |

Source: Company Releases, Thomson Eikon

## Q2 Degree Days

FIGURE 3

**Q2 Degree Days**

| | Cooling | % Change vs. | |
|---|---|---|---|
| Region | Degree Days | Normal | Q2 2016 |
| New England | 142 | 106% | 31% |
| Mid-Atlantic | 188 | 34% | -8% |
| E N Central (IL, IN, OH, MI, WI) | 210 | 7% | -13% |
| W N Central (IA, KS, MN, ND, NE, SD) | 267 | 2% | -19% |
| South Atlantic | 706 | 25% | 3% |
| E S Central | 535 | 17% | -7% |
| W S Central (AR, LA, TX, OK) | 848 | 9% | -1% |
| Mountain | 427 | 19% | 1% |
| Pacific | 206 | 37% | 4% |
| United States | 404 | 19% | -2% |

Source: S&P Global Market Intelligence, Barclays Research

## Regulated Update

### Southern Company

We believe Southern Company will have one of the more important conference calls on the regulated side this quarter. We have revised our numbers to account for the Kemper County impacts, but also we are interested in any update management can provide around ultimate equity need and likely parameters regarding any potential settlement in Mississippi. Further, we would look for any color management can provide on the ongoing construction, financial, and regulatory process around the Vogtle new nuclear project. We continue to see the "go-zone" of cost increases for moving forward with the project as the Toshiba financial guarantee, which we presume is viable ($3,680 million) plus the layup costs of abandonment ($750mln), and the cost of a new CCGT fired gas plant to replace needed capacity within the context of the current integrated resource plan ($1,000 million), or roughly $5.4 billion.

Key to this "go-zone" is assurance of the financial guarantee from Toshiba which, while an agreement is signed with Southern Company to begin monthly payments this fall the resolution of the Westinghouse bankruptcy process and the sale of Toshiba's memory chip business remain critical factors in the surety of the guarantee. Toshiba remains in a legal battle with Western Digital over joint-venture rights and the sale of the chip business and faces an extended deadline of August 10, 2017, to file certified financials or face risk of delisting from the Nikkei. We believe the August 2 conference call for Southern will come at a critical time in the process and are hopeful that management can provide more color on the path, or potential paths forward.

### SCANA Corp

SCANA Corp's conference call on August 3 will also be interesting from a timing perspective related to the new nuclear construction project at the V.C. Summer site. SCANA's interim agreement with Westinghouse is set to expire on August 10, the same date, as indicated above that Toshiba faces to file financials or risk potential delisting from the Nikkei. Unlike Southern, SCANA has no set payment agreement with Toshiba for its ~$1.6-$1.7 billion financial guarantee, and we see a smaller "go-zone" than for Southern contextualized by the lower financial guarantee, and the lack of a need for as much replacement capacity should the project be abandoned.

### DTE Energy

When DTE reports earnings on July 26 we expect the company to acknowledge a delay in NEXUS start-up to 2018, but the company could still raise 2017 EPS guidance. Our forecasts assume a mid-2018 start-up for NEXUS. Barring additional contracted capacity (60% currently), DTE expects the project to earn around its cost of capital initially. DTE reported strong Q1'17 earnings ($1.70 versus $1.43 for the growth segments) and the trailing 12 month EPS is above guidance. We expect at least a small beat versus consensus at $1.03 versus $1.01 in Q2'16.

### NiSource

Following NI's refinancing and tender for debt, the company could be more bullish on its EPS guidance when it reports earnings on August 2. On the Q1'17 conference call the company already stated that it expected to be in the top-half of its $1.12-$1.18 2017 EPS guidance. Over the longer term NI sees 5-7% EPS growth and Barclays and consensus is at 7% to $1.39 for 2019. In Q2'17 the company issued $2B of debt at 3.93% and tendered for $1B in a range of 5.45-6.8%.

### Centerpoint Energy

We expect an update on the company's 54.1% stake in ENBL when the company reports on August 3. On July 18 the company took the technical steps to keep its options open to sell stock if that is the path it pursues. We believe the preferred path is a swap or spin of their interest to a c-corp.

### FirstEnergy

We believe weather and low power prices could push FE to the lower half of its $0.55-$0.65 EPS range when it reports on July 28 although this is relatively unimportant. We don't think investors expect much progress on their plan to exit merchant generation as the next meaningful steps are private (potentially engaging FES creditors) or out of their control (progress on nuclear subsidies). However, an agreement to move forward with the Allegheny Energy Supply asset sale or announcement of other potential asset sales at FES would add value. FE continues to work with LS Power and Dominion to move forward on the asset sale which was $925M gross for 1,572 MW including a 713 MW stake in the Bath County pumped storage plant. Please see "*Time to Buy*" (6/19/17) for more details.

## Power Update and Mark to Market

For power we are marking our estimates and valuations to market on the forward curve as of July 11, 2017. Further, we see several drivers for the IPPs in particular and also believe the market is anticipating commentary from management on several strategic processes currently underway. Overall, quarter on quarter we see spreads higher in ERCOT and New England and spreads lower in California and PJM. While natural gas prices have recovered year over year from the lower $2.00 range to the $3.00 range, power prices, and therefore spark spreads have not moved in kind in the coal-heavier markets of MISO and PJM. This results from coal fired generation switching back into the dispatch stack and limiting upside in spark spreads while dark spreads expand. This is less of a prominent phenomenon in less coal heavy markets like New England and New York. Further ERCOT also has higher spreads on less coal switch as well as a non-recurrence of the significant wind resource dispatched in June of 2016. Lastly, California, while not susceptible to coal switch, experienced a significantly more abundant hydro resource year on year, which kept spread expansion limited.

Overall we anticipate EBITDA for the quarter to be down 15% year on year, although that is inclusive of a prior quarter number for Vistra Energy Corp that is from the prior TCEH financials and not necessarily a fair direct comparison. Further, it is also inclusive of an estimated Q2 2016 number for NRG Energy, which removes the GenOn results so that our estimate for Q2 2017 in which NRG will deconsolidate GenOn can be compared more directly. Consensus estimates are approximately 7.5% lower than last year's reported numbers inclusive of the adjustments noted, and our estimates are approximately 7% below consensus numbers. Overall, however, we do not anticipate managements will need to update 2017 Adjusted EBITDA guidance ranges beyond NRG, where it will need to be updated for the elements of the transformation plan achievable in the current year.

For NRG we expect guidance to be lowered to $2,300 - $2,500 million in Adjusted EBITDA for the full year from their prior guidance level of $2,700 - $2,900 million. This accounts for our estimate of the transformation plan changes achievable in 2017 including $65 million in achievable costs cuts, and the deconsolidation of the GenOn subsidiary. Dynegy may walk to the lower half of its range as its original guidance in November 2016 for 2017 did not contemplate the sale of Troy and Armstrong at the half year, nor did it contemplate closing the ENGIE asset acquisition six weeks into 2017 rather than at the start of the year.

FIGURE 4

**Estimated Adjusted EBITDA vs. Consensus and Guidance**

| US$m | Q2 2017 | | 2017 | | |
|---|---|---|---|---|---|
| | Barclays | | Barclays | | |
| | Est. EBITDA | Consensus | Est. EBITDA | Consensus | Guidance |
| CPN | 375 | 420 | 1,866 | 1,858 | 1,800 - 1,950 |
| DYN | 220 | 211 | 1,240 | 1,253 | 1,200 - 1,400 |
| NRG | 575 | 613 | 2,376 | 2,671 | 2,300 - 2,500 |
| VST | 290 | 342 | 1,446 | 1,389 | 1,350 - 1,500 |

Source: Company Presentations & Filings, ThomsonOne, Barclays Research Estimates

We also don't believe Street estimates for 2018, which is our current valuation year will come under significant pressure for downside revisions, as 2018 forward spreads are slightly lower in PJM, New England and New York while being slightly higher in MISO. Spreads are markedly lower in California, which potentially prices in too much of this year's better hydro environment, while forward spreads in ERCOT are markedly higher.

FIGURE 5

**Forward Spreads End of Q2 2017 vs. End of Q1 2017**

| US$ | 2018 Forwards BOP | | | 2018 Forwards EOP | | | 2018 Forwards % Change | | |
|---|---|---|---|---|---|---|---|---|---|
| | On Peak | Natural Gas | Spark Spread | On Peak | Natural Gas | Spark Spread | On Peak | Natural Gas | Spark Spread |
| ERCOT Houston | $34.13 | $2.78 | $14.13 | $37.76 | $2.86 | $17.20 | 11% | 3% | 22% |
| Internal Hub | $45.60 | $4.25 | $15.02 | $45.33 | $4.33 | $14.16 | -1% | 2% | -6% |
| Hudson Valley - G | $43.74 | $3.73 | $16.89 | $42.46 | $3.65 | $16.17 | -3% | -2% | -4% |
| Alberta | $35.38 | $1.82 | $22.26 | $44.39 | $1.89 | $30.75 | 25% | 4% | 38% |
| Illinois Hub | $33.43 | $2.81 | $13.23 | $34.14 | $2.81 | $13.90 | 2% | 0% | 5% |
| NP15 | $35.37 | $2.98 | $13.91 | $34.60 | $3.07 | $12.49 | -2% | 3% | -10% |
| Eastern Hub | $37.74 | $3.07 | $15.61 | $37.17 | $3.08 | $14.98 | -2% | 0% | -4% |
| Western Hub | $34.85 | $2.81 | $14.60 | $34.26 | $2.89 | $13.48 | -2% | 3% | -8% |

Source: S&P Global Market Intelligence, Barclays Research Estimates

## Calpine Corp.

For Calpine we see lower adjusted EBITDA year on year to $375 million from $452 million, resulting from offsetting spark spreads, which moved up in ERCOT and New England but down in California and PJM. The Delta plant, which was offline for one month of 1Q '17 was out for the entire quarter and will impact year-on-year results. Further, there was a $40 million non-recurring gain from a gas transportation contract in Q2 '16, and we estimate there will be an annualized $45 million impact from asset sales and closures in 2017 versus 2016 that will also impact year-on-year results in the quarter. Lastly, we expect lower overall volumes due to markedly better hydro conditions in California and coal switching in PJM as dark spreads expanded year on year.

Calpine is also likely to have the most interesting conference call this quarter among the power names as they are purportedly in a process to potentially sell the company with the auction process reportedly ending by August. (see our note: *CPN: Reports: To Finish Next Auction in Sale Exploration Process by August*, published June 9 2017).

### Dynegy Inc.

For Dynegy our Adjusted EBITDA estimate increases year on year to $220 million from $187 million last year driven by a majority of the Q2 '16 outage expenses of $50 million not recurring this year, some proportion of the $30 million impact of burning coal out of merit order not recurring (although this impact was mostly in Q3 '16), and higher projected coal volumes year on year resulting from increasing dark spreads. Further, the ENGIE assets are now added to the portfolio. Offsetting these positive drivers is the sale of the Elwood plant, the retirement of Moss Landing 6 & 7, lower capacity payments, and lower gas volumes from tightening spark spreads due to coal switching.

### NRG Energy

For NRG our Adjusted EBITDA estimate reflects the deconsolidation of GenOn, and we also estimate a prior year comparable number of $749 million as GenOn reported $30 million of EBITDA in Q2 '16, net of $59 million of impairment losses. Results are down year on year related to GenOn as well as advisory fee impacts, and accounting for the GenOn shared services payment which eliminated on NRG consolidation. We estimated that management would have to adjust 2017 guidance for the portions of the transformation plan achievable in 2017 as well as the full impact of advisory fees around the strategic transformation plan. We estimated the updated guidance range to be $2,300 - $2,500 million, in line with our updated annual Adjusted EBITDA estimate of $2,376 million.

### Vistra Energy Corp.

For Vistra Energy, estimating the current quarter is made more difficult by not having a clean prior quarter number to start from given the company's emergence from bankruptcy in Q4 2016. However, at least a mark for a starting point is the $330 million in non-adjusted EBITDA reported in prior entity TCEH's financials for 2Q 2016. One major difference between the TCEH number and the Vistra number will be treatment of major maintenance expense. Further, we believe market consensus estimates for Vistra are high as, despite better spreads in ERCOT, the annual guidance of $1,350 - $1,500 million should be weighted to 3Q given the company is an ERCOT-only generator and only 17% - 23% should be allocated to a shoulder quarter like 2Q. This puts a reasonable range around results between $240 - $320 million and is roughly in line with our estimate of $290 million.

## Alternative energy 2Q17 preview

### Solar developers

*Gross margin trends*

In our view, gross margins are a key indicator of the overall health of the module manufacturing business and are a key driver of the direction of stock prices. We expect 2Q17E gross margin for the module manufacturers to increase by 20bps sequentially, following a 20bps increase in manufacturing entitlement as a percentage of the average wholesale module price. We define entitlement as module price minus the cost of polysilicon, which provides an approximate indication of the amount of money left for the module manufacturer after buying the raw materials.

We expect 2Q17 gross margin of 10.0% on average for FSLR, SPWR, and CSIQ. Despite the 20bps sequential improvement, we expect gross margins will remain depressed relative to 2Q16 average gross margin of 16.9%, driven by overcapacity and a persistently weak demand environment in the U.S. However, we note that margins can be volatile due to cost of inventory and realized prices booked in each quarter.

FIGURE 6

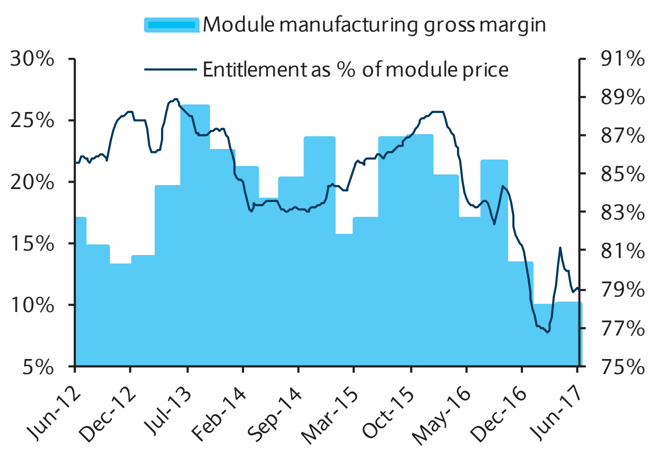
**Solar developer gross margins**

| Gross margin | 2Q16 | 1Q17 | 2Q17E |
|---|---|---|---|
| FSLR | 20.5% | 9.4% | 13.5% |
| SPWR | 13.0% | 6.5% | 2.0% |
| CSIQ | 17.2% | 13.5% | 14.5% |
| Average | 16.9% | 9.8% | 10.0% |

Source: Company reports, Barclays Research estimates

FIGURE 7

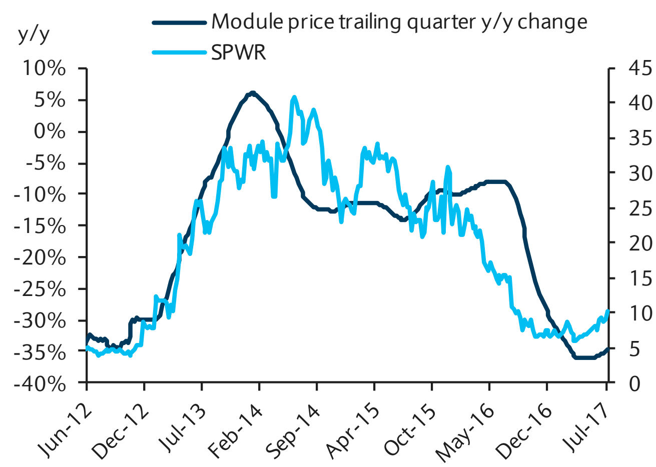
**Module manufacturing gross margin y/y entitlement change**




Source:PV insights, company reports, Barclays Research estimates
Note: Includes FSLR, SPWR, and CSIQ. 2Q17 gross margin is Barclays estimate

FIGURE 8

**Module wholesale price and SPWR stock**



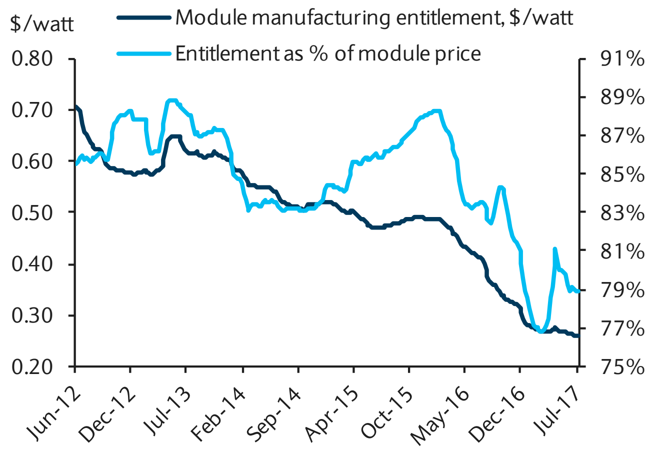

Source: PV insights, Thomson Reuters, Barclays Research

*Pricing*

Polysilicon costs were down 14% sequentially in 2Q17, while module prices were down 5% sequentially. During the quarter, module prices continued their steady decline, showing no impact of a potential increase in prices due to pull-forward demand in the U.S. caused by the pending Suniva 201 trade case, in our view.

FIGURE 9

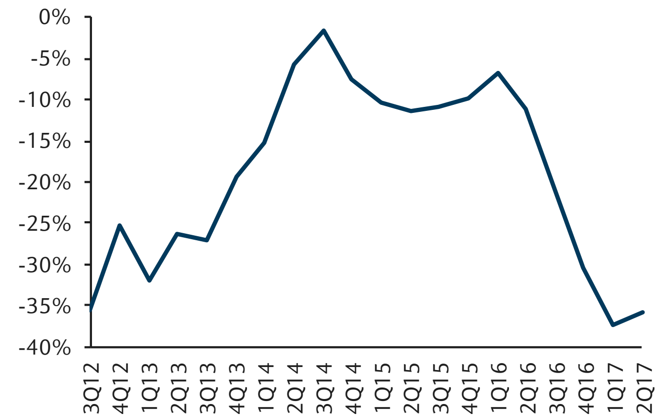
**Module manufacturing entitlement**




Source:PV Insights, Barclays Research estimates

FIGURE 10

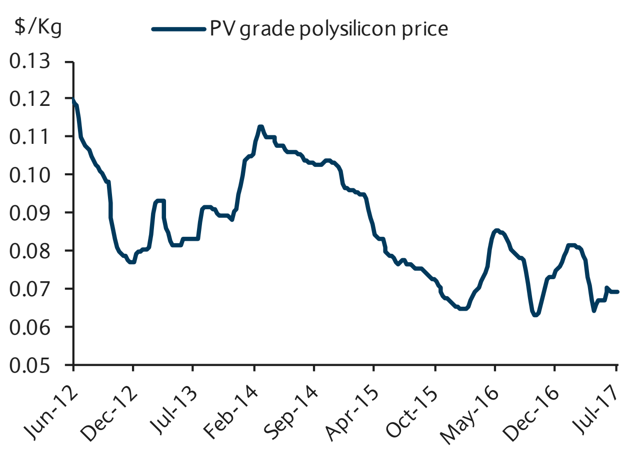
**Average module price decline, y/y**




Source: PV Insights, Barclays Research

FIGURE 11

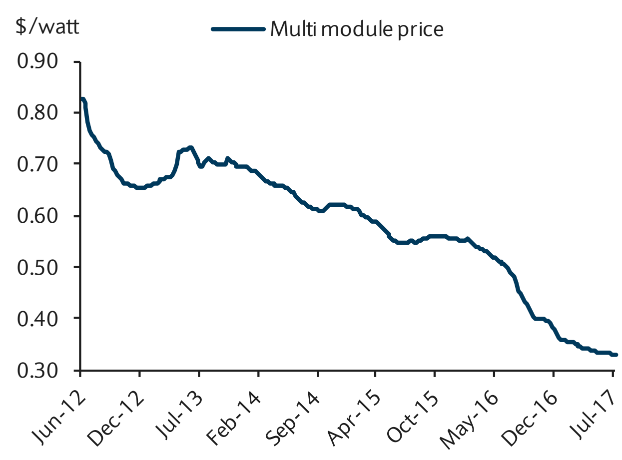
**PV grade polysilicon price, $/watt**




Source: PV Insights, Barclays Research

FIGURE 12

**Multisilicon module price, $/watt**




Source: PV Insights, Barclays Research

*Project sales*

The pace of project sales activity slowed considerably in 2Q17, with only the 13 July announcement that FSLR had sold its 179MW Switch Station project to EDF Renewable Energy in late June (no financial details were disclosed). We had previously expected the pace of project sales by FSLR and SPWR to slow in 2017 following the announcement of the strategic alternatives process for 8point3 Energy Partners (CAFD).

- For further detail on the strategic alternative announcement, please see our 6 April 2017 note: *CAFD: Sponsor files for divorce*

FIGURE 13

**Alternative Energy forecasts and company guidance**

| | | Barclays forecast | | I/B/E/S consensus | | Company guidance | |
|---|---|---|---|---|---|---|---|
| **Company** | **Metric** | **2Q17E** | **2017E** | **2Q17E** | **2017E** | **2Q17E** | **2017E** |
| **FSLR** | | | | | | | |
| | Net sales ($mn) | 618 | 2,822 | 526 | 2,901 | | 2,850-2,950 |
| | Gross margin | 13.5% | 12.6% | 14.8% | 13.5% | | 12.5%-14.5% |
| | EPS* | 0.05 | 0.61 | 0 | 0.56 | | 0.25-0.75 |
| | Net cash ($mn) | | 1,505 | 1,460 | 1,257 | | 1,500-1,700 |
| | Capex ($mn) | | 600 | 160 | 582 | | 525-625 |
| | MW shipped | 706 | 2,878 | | | | 2,400-2,600 |
| **SPWR** | | | | | | | |
| | Revenue ($mn)* | 318 | 1,914 | 313 | 2,170 | 275-325 | 2,100-2,600 |
| | Gross margin* | 2.0% | 4.8% | 2.3% | 8.2% | 2%-4% | |
| | Adj. EBITDA ($mn)* | (1) | 55 | -9 | 92 | (25)-0 | |
| | MW deployed | 337 | 1,433 | | | 330-360 | 1,300-1,600 |
| **CSIQ** | | | | | | | |
| | MW shipped | 1,178 | 5,972 | | | 1,530-1,580 | 6,000-6,500 |
| | Revenue ($mn) | 613 | 3,442 | 631 | 3,765 | 620-640 | 4,000-4,200 |
| | Gross margin | 13.5% | 13.7% | 14.1% | 14.0% | 13%-15% | |
| **AZRE** | | | | | | | |
| | MW operational | 803 | 993 | | | | 1,000-1,200** |
| | Revenue ($mn) | 30 | 119 | 28 | 108 | | |
| | Gross margin | 61.0% | 58.1% | | | | |
| **RUN** | | | | | | | |
| | MW deployed | | 324 | | | 72 | 325 |
| **SEDG** | | | | | | | |
| | Revenue ($mn) | 124 | 476 | 125 | 491 | 120-130 | |
| | Gross margin | 34.4% | 33.7% | 32.8% | 33.0% | 32%-34% | |
| **CAFD** | | | | | | | |
| | Revenue ($mn) | | 74 | | 67 | 25-26 | 63.3-66.7 |
| | Adj. EBITDA ($mn) | | 115 | | 108 | 44-47.5 | 106.5-113.1 |
| | CAFD ($mn) | | 114 | | | 28-30 | 91.5-101 |
| | DPS | | 1.07 | | 1.06 | 0.27 | 12% growth |
| **HASI** | | | | | | | |
| | Core EPS | 0.31 | 1.32 | 0.32 | 1.31 | | 1.31-1.36 |
| **TPIC** | | | | | | | |
| | Billings (revenue) ($mn) | 221 | 933 | 227 | 938 | | 930-950 |
| | Adj. EBITDA ($mn) | 18 | 76 | 18 | 78 | | |
| | Capex ($mn) | 15 | 79 | 24 | 80 | | 75-85 |
| **ORA** | | | | | | | |
| | Revenue ($mn) | 171 | 465 | 170 | 692 | | 680-700 |
| | Adj. EBITDA ($mn) | 84 | 343 | 84 | 345 | | 340-350 |

*non-GAAP measure; **AZRE guidance is for operational projects as of CY1Q18 end

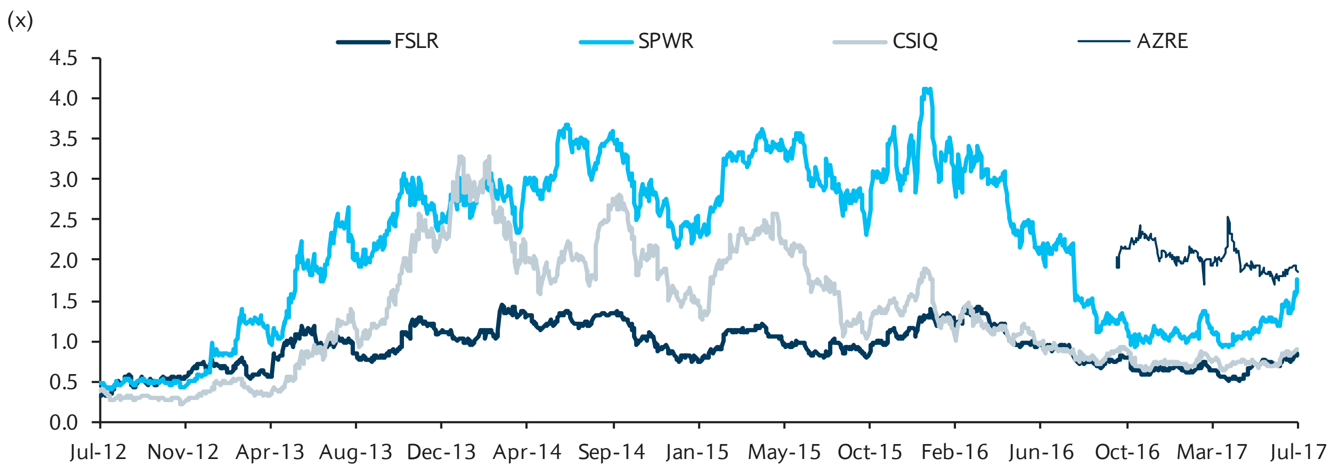
Source: Company reports, Thomson One, Barclays Research estimates

Notes: CAFD has already reported 2Q17 results

## Alternative Energy valuation

FIGURE 1

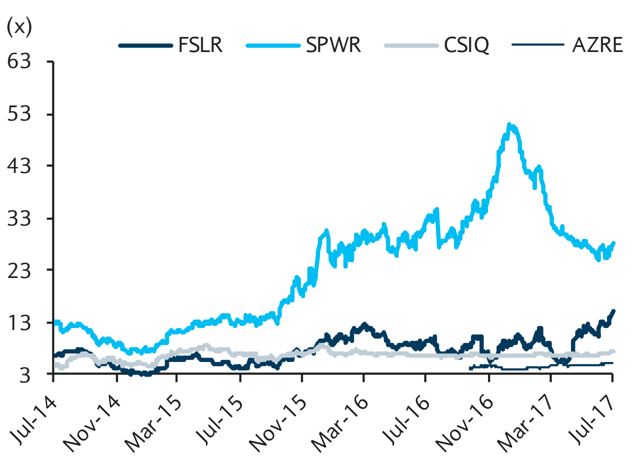
**Solar developer 12-month forward P/BV**




Source: Thomson One, company reports, Barclays Research estimates

FIGURE 2

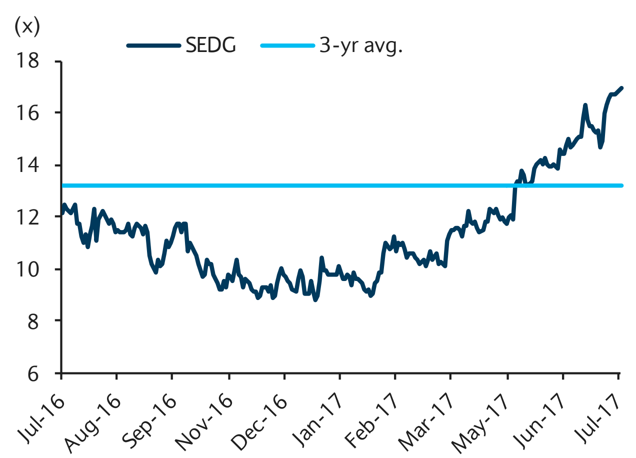
**Developer forward EV/EBITDA**




Source: Thomson One, company reports, Barclays Research estimates

FIGURE 3

**SEDG forward P/E**

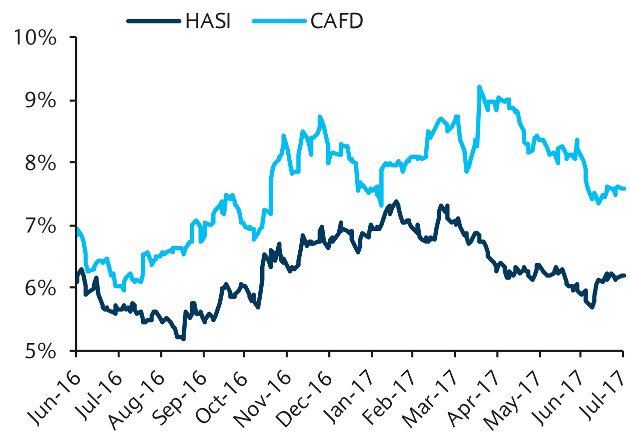



Source: Thomson One, company reports, Barclays Research estimates

FIGURE 4
**RUN forward P/retained value**


Source: Thomson One, company reports, Barclays Research estimates

FIGURE 5
**Yield co forward dividend yield**




Source: Thomson One, company reports, Barclays Research estimates

## Environmental services 2Q17 preview

### Municipal solid waste

We expect 2Q17 adj. EBITDA per share growth of 6.2% y/y on average for the MSW names. Most of the key indicators we track for the Environmental Services space are pointing toward continued positive momentum. Housing starts were the key exception, being relatively weak in April and May. However, the recently released June number was strong, with June starts increasing by 2.4% y/y, the fastest pace since March 2017. The ISM industrial continues to trend above 50, indicating increased economic activity and averaged 55.83 during 2Q17 compared to 51.5 in 2Q16 and 57.0 in 1Q17.

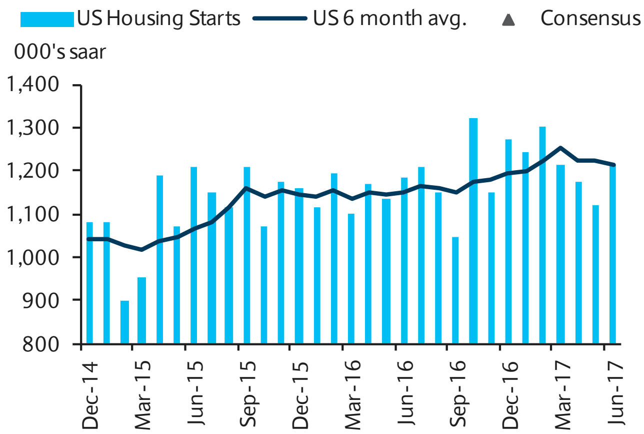
- **WM**: Recycled commodity prices as indicated by recycled waste paper are up ~5% q/q and 7.3% y/y, and we would expect this increase to disproportionately benefit WM, which has the largest exposure to recycled commodity prices in the group at 8% of revenue.

- **RSG**: We expect RSG to be facing a relatively high bar for 2Q17 results given previously maintained full-year guidance suggests adj. EBITDA margins ramping to 29.1% on average 2Q-4Q following a relatively low 27.4% reported for 1Q17. We currently model RSG adj. EBITDA margin of 28.5% for the full-year, in-line with the low-end of company guidance.

- **WCN**: We see upside risk to consensus and guidance as the positive recovery in onshore drilling continues. We expect positive commentary from management on this business on the 2Q results calls. WCN has the largest exposure to E&P and the most room for an increase in 2017 guidance, in our view. However, E&P was only 3% of WCN revenue in 1Q17. On fully recovered annualized basis we estimate E&P could represent ~6% of revenues. In our view, expectations for WCN are at all time highs given management's well-telegraphed positive outlook on pricing in the Northeast disposal market and continued tuck-in opportunities around the legacy BIN footprint. While we expect a strong 2Q17 guidance beat, we note that we believe valuation already reflects above-consensus expectations.

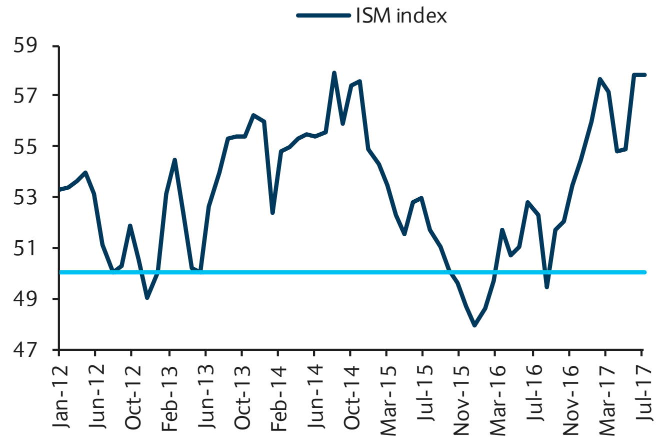
- **ADSW**: We expect continued volume headwinds as management nears the end of its process to shed low-margin routes. We model 2Q17 volumes of -2.0%, the lowest among the MSW group. Recall that ADSW will be starting a new municipal contract in Polk County, FL in October 2017, and we expect volume headwinds to abate in 4Q17.

FIGURE 6
**Housing starts**



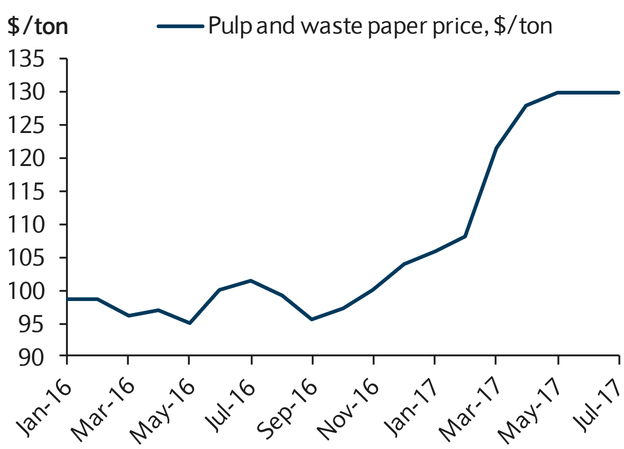

Source: Bloomberg, Barclays Research

FIGURE 20
**ISM industrial index**



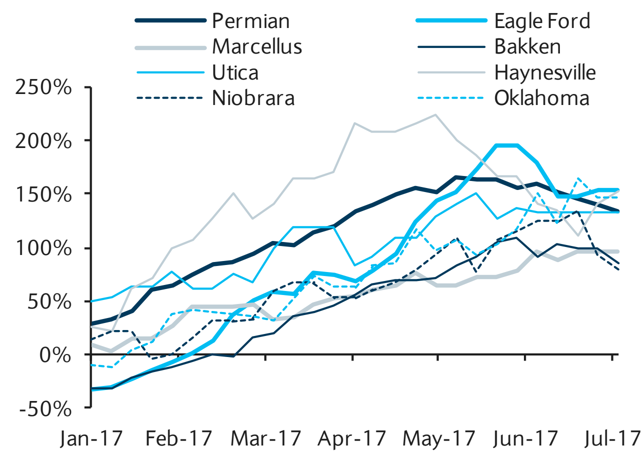

Source: Bloomberg, Barclays Research

FIGURE 21
**Waste paper price, $/ton**




Source: Bloomberg, Barclays Research

FIGURE 22
**North America rig count**




Source:Baker Hughes, Barclays Research

FIGURE 23

## MSW revenue growth metrics

| Revenue Growth Metrics | 1Q15 | 2Q15 | 3Q15 | 4Q15 | 1Q16 | 2Q16 | 3Q16 | 4Q16 | 1Q17 | 2Q17E | 3Q17E | 4Q17E | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volume** | | | | | | | | | | | | | | | |
| WM | -3.0% | -1.3% | -1.4% | -0.9% | 1.9% | 0.4% | 1.6% | 2.0% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.0% | 1.0% |
| RSG | 1.9% | 1.1% | 0.6% | 0.9% | 2.5% | 0.5% | 0.6% | 0.5% | 1.3% | 1.3% | 1.3% | 1.3% | 1.3% | 1.5% | 1.5% |
| WCN | 1.3% | 2.7% | 2.4% | 2.4% | 3.8% | 2.4% | 1.1% | 2.4% | 2.3% | 2.3% | 2.0% | 2.0% | 2.4% | 2.0% | 2.0% |
| ADSW | 2.1% | -1.3% | -2.2% | -1.2% | 0.4% | -0.9% | -3.2% | -3.0% | -2.5% | -2.0% | 0.5% | 2.0% | -0.5% | 1.6% | 1.6% |
| CWST | 2.6% | 3.7% | 2.2% | 3.7% | 4.5% | -4.2% | -1.1% | -2.6% | -1.1% | -1.5% | -1.5% | -1.5% | -1.4% | 0.4% | 2.0% |
| MSW avg. | 1.0% | 1.0% | 0.3% | 1.0% | 2.6% | -0.4% | -0.2% | -0.1% | 0.3% | 0.3% | 0.7% | 1.0% | 0.6% | 1.3% | 1.6% |
| **Price** | | | | | | | | | | | | | | | |
| WM | -0.7% | -1.1% | -0.6% | -0.7% | -0.5% | 1.7% | 2.2% | 3.2% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% |
| RSG | 1.4% | 0.9% | 1.0% | 0.5% | 0.6% | 2.0% | 2.1% | 2.2% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 1.0% | 1.0% |
| WCN | 1.5% | 1.4% | 1.5% | 1.5% | 2.4% | 2.9% | 2.3% | 2.6% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% |
| ADSW | 1.5% | 2.5% | 2.6% | 2.2% | 1.9% | 1.7% | 2.3% | 2.7% | 2.5% | 2.5% | 2.0% | 1.8% | 2.2% | 1.5% | 1.8% |
| CWST | 1.2% | 1.9% | 2.1% | 2.6% | 3.4% | 2.6% | 2.3% | 2.0% | 1.8% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% |
| MSW avg. | 1.0% | 1.1% | 1.3% | 1.2% | 1.6% | 2.2% | 2.2% | 2.5% | 2.1% | 2.1% | 2.0% | 2.0% | 2.0% | 1.7% | 1.8% |
| **Net Acquisitions** | | | | | | | | | | | | | | | |
| WM | 0.2% | 1.6% | 1.6% | 1.8% | 3.0% | 1.9% | 1.8% | 1.4% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% | 1.2% |
| RSG | 2.1% | 2.7% | 2.4% | 1.8% | 1.2% | 0.4% | 0.3% | 0.3% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% | 0.5% |
| WCN | 2.0% | 0.0% | 0.2% | 1.7% | 2.0% | 32.7% | 94.2% | 92.6% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% | 3.0% |
| ADSW | 0.9% | -0.2% | -0.6% | -0.4% | 0.0% | 0.8% | 1.1% | 1.0% | 1.2% | 2.5% | 2.8% | 3.3% | 2.4% | 2.3% | 3.3% |
| CWST | 0.3% | 0.3% | -0.1% | -0.2% | -0.2% | 0.4% | 0.4% | 0.2% | 0.2% | 0.2% | 0.3% | 0.4% | 0.3% | 1.2% | 2.0% |
| MSW avg. | 1.1% | 0.9% | 0.7% | 0.9% | 1.2% | 7.2% | 19.6% | 19.1% | 1.2% | 1.5% | 1.6% | 1.7% | 1.5% | 1.6% | 2.0% |

Source: Barclays Research estimates

Note: WCN net acquisition estimates are normalized for impact of merger with Progressive Waste

FIGURE 7

**MSW forecasts and company guidance**

| | | Barclays forecast | | I/B/E/S consensus | | Company guidance |
|---|---|---|---|---|---|---|
| Company | Metric | 2Q17E | 2017E | 2Q17E | 2017E | 2017 |
| WM | | | | | | |
| | Revenue growth (y/y) | 4.7% | 5.4% | 5.6% | 5.3% | |
| | Price | 2.0% | 3.0% | | | 2.0% |
| | Volume | 1.3% | 1.5% | | | 1.2%-1.6% |
| | Net acquisitions | 1.5% | 1.2% | | | $100-$200mn spend |
| | Adj. EBITDA ($mn) | 1,027 | 3,959 | 1017 | 3,974 | 3,950-4,000 |
| | Adj. EPS | 0.81 | 3.17 | 0.81 | 3.18 | 3.14-3.18 |
| | FCF ($mn) | 403 | 1,584 | 379 | 1,604 | 1,500-1,600 |
| RSG | | | | | | |
| | Revenue growth (y/y) | 5.2% | 5.2% | 5.2% | 5.1% | |
| | Price | 2.2% | 2.2% | | | 2.0% |
| | Volume | 1.3% | 1.2% | | | 1.0%-1.25% |
| | Net acquisitions | 0.5% | 0.4% | | | 0.50% |
| | Adj. EBITDA ($mn) | 721 | 2,816 | 701 | 2,796 | |
| | Adj. EPS | 0.63 | 2.44 | 0.60 | 2.39 | 2.32-2.36 |
| | FCF ($mn) | 209 | 896 | 208 | 888 | 875-900 |
| WCN | | | | | | |
| | Revenue growth (y/y) | 7.0% | 7.0% | | | 4.3% |
| | Price | 2.0% | 2.0% | | | |
| | Volume | 2.3% | 2.4% | | | |
| | Net acquisitions | 3.0% | 3.0% | | | |
| | Adj. EBITDA ($mn) | 369 | 1,424 | 364 | 1,431 | 1,410 |
| | Adj. EPS | 0.55 | 2.11 | 0.53 | 2.09 | |
| | FCF ($mn) | 174 | 758 | 163 | 648 | 725 |
| ADSW | | | | | | |
| | Revenue growth (y/y) | 4.7% | 6.2% | 2.1% | 5.0% | 3.2%-5.0% |
| | Price | 2.5% | 2.2% | | | |
| | Volume | -0.2% | -0.3% | | | |
| | Net acquisitions | 3.7% | 3.5% | | | |
| | Adj. EBITDA ($mn) | 111 | 431 | 111 | 425 | 423-433 |
| | Adj. EPS | 0.08 | 0.30 | 0.12 | 0.46 | |
| | FCF ($mn) | 32 | 162 | | 145 | 121-141 |
| CWST | | | | | | |
| | Revenue growth (y/y) | 2.9% | 3.8% | 3.6% | 3.6% | 2.1%-3.9% |
| | Price | 2.0% | 2.0% | | | |
| | Volume | -1.5% | -1.4% | | | |
| | Net acquisitions | 0.2% | 0.3% | | | |
| | Adj. EBITDA ($mn) | 36 | 128 | 36 | 128 | 124-128 |
| | Adj. EPS | 0.22 | 0.59 | 0.23 | 0.61 | |
| | FCF ($mn) | 14 | 36 | 18 | 38 | 32-36 |

Source: Company reports, Thomson One, Barclays Research estimates

## Specialty waste 2Q expectations

### *Hazardous waste*

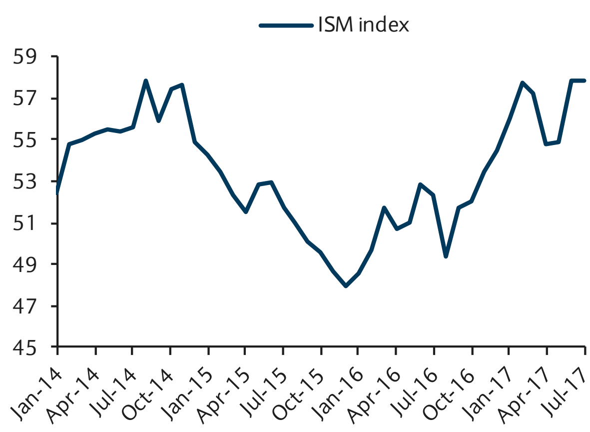
We continue to expect earnings for CLH and ECOL to be 2H17 loaded, however, we look for more clarity from management on the pipeline build for cleanup projects. With the continued strength in industrial activity through 2Q17 we would expect managements to re-affirm full year 2017 guidance with potential bias to the higher-end of the range if early indications in 3Q17 and improving pipeline visibility point to a stronger than expected 2H17. Additionally, following CLH's 12 July announcement that it was increasing its used oil collection and stop fees, we see possible upside to consensus estimates in the second half given continued strong performance from CLH's Safety Kleen segment.

### *Waste to energy*

We recently upgraded CVA following weakness in shares due to negative headlines around a chemical leak at CVA's Dublin incineration facility, which forced the plant to halt test burns. See our 12 July 2017 note: *Another buying opportunity*. Broadly we expect an in-line 2Q result and look for management commentary reiterating that the Dublin plant remains on-track for full operation in 4Q17.

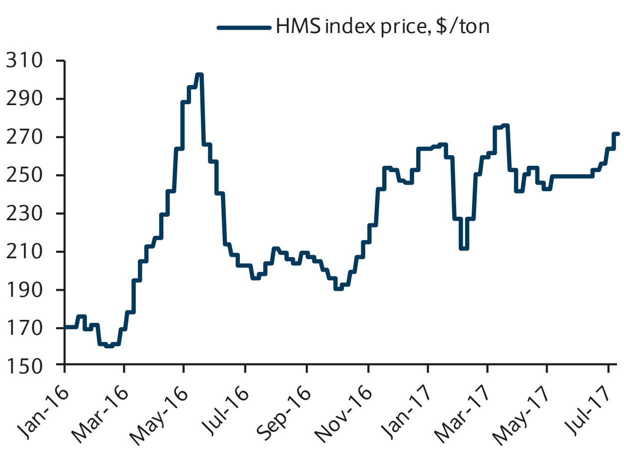
We do not expect a change to the guidance range, but would highlight that we forecast adj. EBITDA to be depressed in 2Q as the Fairfax incineration facility remains offline following a fire in late-2016. However, we believe this impact is reflected in sell-side estimates, so do not view it as a downside risk heading into the quarter. We expect an update on the timeline for restarting operations at the Fairfax facility on the 2Q17 call. As a reminder, CVA expects to receive business interruption insurance proceeds for any lost revenue (net of any forgone expenses) as a result of the incident. We currently forecast \$10-\$12mn of insurance recovery proceeds in 2H18.

FIGURE 8
**U.S. ISM index**




Source: Bloomberg, Barclays Research

FIGURE 9
**HMS index metal price, $/ton**




Source: Bloomberg, Barclays Research

FIGURE 10

**Specialty waste forecasts and company guidance**

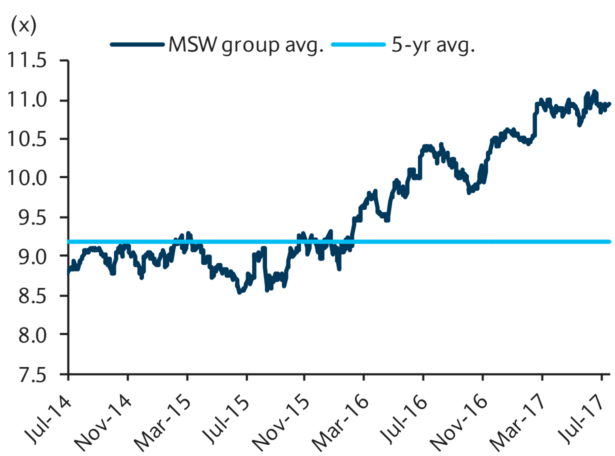
| | | Barclays forecast | | I/B/E/S consensus | | Company guidance |
|---|---|---|---|---|---|---|
| **Company** | **Metric** | **2Q17E** | **2017E** | **2Q17E** | **2017E** | **2017** |
| **SRCL** | | | | | | |
| | Revenue growth (y/y) | 1.4% | 1.3% | 1.4% | 1.3% | -1.5%-2.2% |
| | Adj. EBITDA ($mn) | 226 | 891 | 217 | 884 | |
| | Adj. EPS | 1.14 | 4.58 | 1.13 | 4.62 | 4.54-4.74 |
| **CVA** | | | | | | |
| | Revenue growth (y/y) | 1.3% | 0.5% | -0.5% | 0.7% | |
| | Adj. EPS | (0.13) | 0.01 | (0.15) | (0.10) | |
| | FCF ($mn) | (6) | 110 | -32 | 96 | 100-150 |
| | Dividend ($/sh) | 0.25 | 1.00 | 0.25 | 1.00 | |
| **CLH** | | | | | | |
| | Revenue growth (y/y) | 10.0% | 9.0% | 5.5% | 5.9% | |
| | Adj. EBITDA ($mn) | 125 | 453 | 122 | 456 | 435-475 |
| | Adj. EPS | 0.32 | 0.73 | 0.26 | 0.70 | 0.42-0.84 |
| **ECOL** | | | | | | |
| | Revenue growth (y/y) | 3.4% | 2.3% | 4.9% | 5.7% | 3.6%-11.6% |
| | Adj. EBITDA ($mn) | 31 | 119 | 30 | 122 | 120-130 |
| | Adj. EPS | 0.47 | 1.69 | 0.37 | 1.73 | 1.69-1.93 |

Source: Company reports, Thomson One, Barclays Research estimates

## Environmental Services Valuation

FIGURE 11

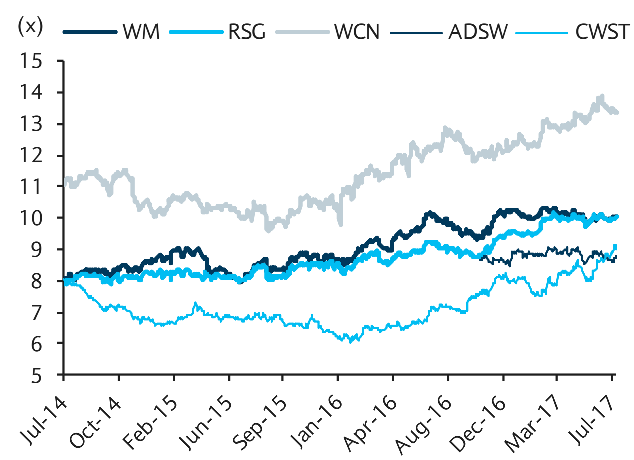
**Environmental Services group forward EV/EBITDA**




Source: Thomson One, Company reports, Barclays Research estimates

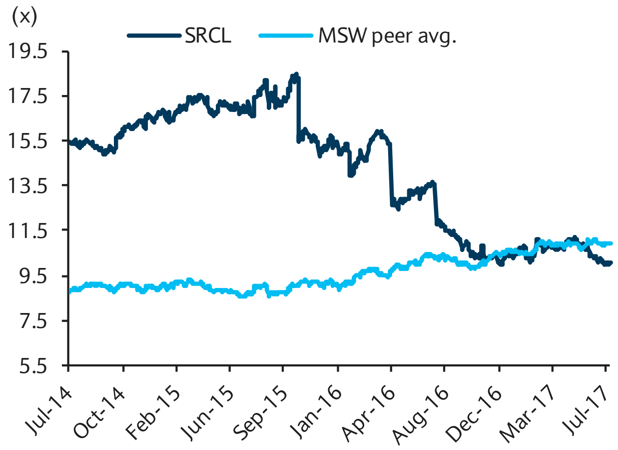
FIGURE 12

**Environmental Services forward EV/EBITDA**



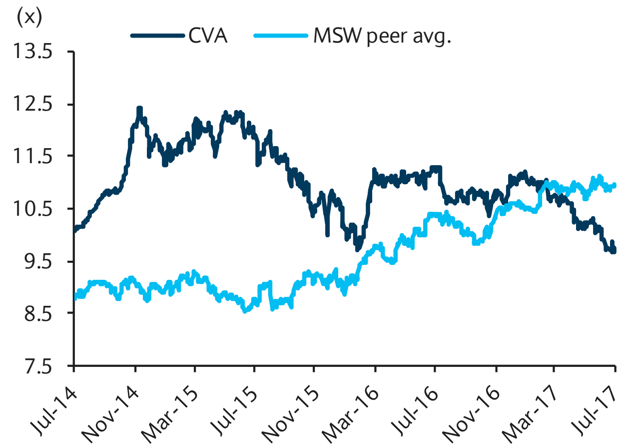

Source: Thomson One, Company reports, Barclays Research estimates

FIGURE 30
**SRCL 12-month forward EV/EBITDA**



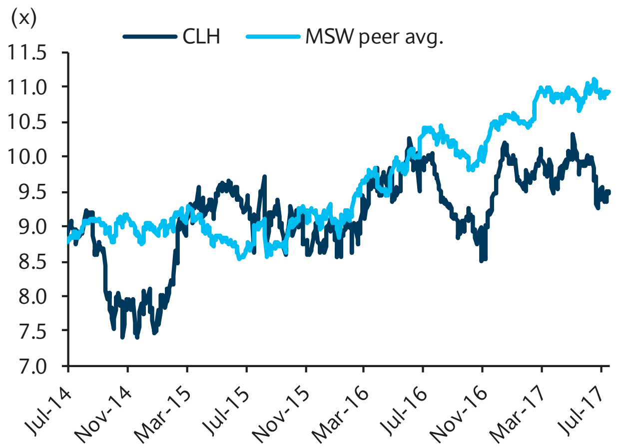

Source: Company reports, Thomson One, Barclays Research estimates

FIGURE 31
**CVA 12-month forward EV/EBITDA**



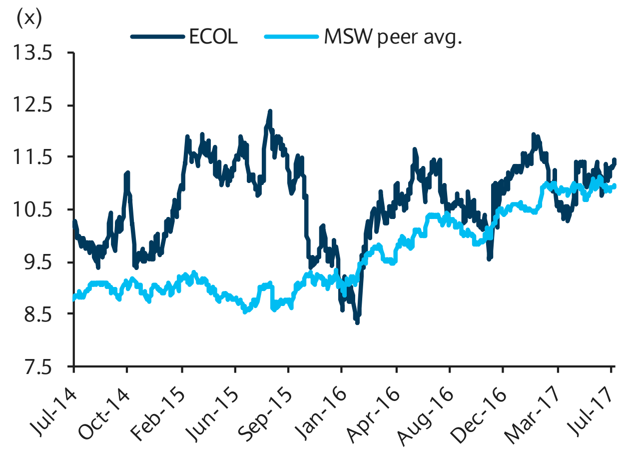

Source: Company reports, Thomson One, Barclays Research estimates

FIGURE 32
**CLH 12-month forward EV/EBITDA**




Source: Thomson One, Company reports, Barclays Research estimates

FIGURE 33
**ECOL 12-month forward EV/EBITDA**




Source: Thomson One, Company reports, Barclays Research estimates

FIGURE 13

**Environmental Services 12-month forward EV/EBITDA**

| Sector | MSW | MSW | MSW | MSW | MSW | MSW | Business services | Waste-to-energy | Specialty waste | Specialty waste |
|---|---|---|---|---|---|---|---|---|---|---|
| (x) | WM | RSG | WCN | ADSW | CWST | Average | SRCL | CVA | CLH | ECOL |
| **Current** | 10.1 | 10.0 | 13.4 | 8.8 | 9.0 | 10.0 | 10.0 | 9.7 | 9.5 | 11.4 |
| **1-yr range** | | | | | | | | | | |
| Max | 10.3 | 10.2 | 13.9 | n/a | 9.1 | 10.6 | 13.6 | 11.3 | 10.3 | 12.0 |
| Avg. | 10.0 | 9.5 | 12.7 | n/a | 7.8 | 9.7 | 10.7 | 10.6 | 9.6 | 10.9 |
| Min | 9.3 | 8.7 | 11.8 | n/a | 7.0 | 8.9 | 9.9 | 9.7 | 8.5 | 9.5 |
| **3-yr range** | | | | | | | | | | |
| Max | 10.3 | 10.2 | 13.9 | n/a | 9.1 | 10.6 | 18.5 | 12.4 | 10.3 | 12.4 |
| Avg. | 9.1 | 8.7 | 11.3 | n/a | 7.1 | 8.8 | 13.6 | 11.0 | 9.1 | 10.6 |
| Min | 7.9 | 7.9 | 9.6 | n/a | 6.0 | 7.6 | 9.9 | 9.7 | 7.4 | 8.3 |

Source: Thomson One, Company reports, Barclays Research estimates

FIGURE 14

## Alternative Energy & Environmental Services 2Q 2017 earnings call details

| 2Q 2017 earnings call details | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Date** | **Day** | **Time** | **A/E** | **Company Name** | **Rating** | **U.S. Call Info** | **U.S.Replay Info** |
| **Alternative Energy** | | | | | | | |
| Reported | | | | 8Point3 Energy Partners | EW | | |
| 27-Jul | Thu | 4:30 PM | A | First Solar | OW | Webcast | 888.203.1112 Pwd: 6484224 |
| 1-Aug | Tue | 4:30 PM | A | SunPower | EW | 517.623.4618 | Webcast |
| 2-Aug | Wed | 4:30 PM | A | Solaredge | OW | 888.778.9065 Pwd: 6182964 | Webcast |
| 2-Aug | Wed | | E | Hannon Armstrong | OW | | |
| 8-Aug | Tue | 5:00 PM | A | TPI Composites | OW | 877.407.9208 Pwd: 13666568 | 844.512.2921 Pwd: 13666568 |
| 7-Aug | Mon | 5:00 PM | A | SunRun | OW | 877-470-1078 Pwd: 56202038 | Webcast |
| 15-Aug | Tue | | E | Azure Power | OW | | |
| 17-Aug | Thu | | E | Canadian Solar | EW | | |
| TBD | | | | Terraform Global | RS | | |
| **Environmental Services** | | | | | | | |
| 26-Jul | Wed | 10:00 AM | A | Waste Management | EW | 877.710.6139 Pwd: 51149867 | 855.859.2056 Pwd: 51149867 |
| 26-Jul | Wed | 10:00 AM | A | Waste Connections | OW | 888.223.5128 | 800.633.8284 Pwd: 21855415 |
| 27-Jul | Thu | 5:00 PM | A | Republic Services | EW | 844.890.1789 | Webcast |
| 28-Jul | Fri | 8:30 AM | A | Covanta Holdings | OW | 877.201.0168 | Webcast |
| 28-Jul | Fri | 9:00 AM | E | Casella Waste | OW | | |
| 28-Jul | Fri | 10:00 AM | A | US Ecology | UW | 877.512.5138 | 877.344.7529 Pwd: 10110319 |
| 2-Aug | Wed | 9:00 AM | A | Clean Harbors | UW | 877.709.8155 | Webcast |
| 3-Aug | Thu | 10:00 AM | A | Advanced Disposal | OW | 866.478.7805 Pwd: 36123484 | 855.859.2056 |
| 3-Aug | Thu | 5:00 PM | A | Stericycle | OW | 866.516.6872 Pwd: 92841882 | 855.859.2056 |

Note: A/E = Actual or Estimated call date; TBD = to be determined
Source: Company reports, Barclays Research

FIGURE 15

North America Alternative Energy & Environmental Services comps

| | | | | Price | U/D | Mkt Cap | Adj. P/E | | | Adj. EV/EBITDA | | | Div. Yield | Net debt/ EBITDA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company | Ticker | Rating | Price | Target | % | $bn | 2017E | 2018E | 2019E | 2017E | 2018E | 2019E | 2017E | 2017E |
| **Alternative energy** | | | | | | | | | | | | | | |
| First Solar Inc. | FSLR | OW | 44.02 | 40 | -9 | 4.5 | - | - | 24.1 | 11.6 | 11.3 | 6.4 | - | - |
| SunPower Corp | SPWR | EW | 11.07 | 8 | -28 | 1.5 | - | - | 5.1 | 50.4 | 20.5 | 5.5 | - | 22.5 |
| Canadian Solar Inc. | CSIQ | EW | 16.75 | 12 | -28 | 1.0 | 11.0 | 6.8 | 4.0 | 9.1 | 8.0 | 6.0 | - | 5.6 |
| Azure Power | AZRE | OW | 16.75 | 21 | 25 | 0.4 | - | 35.3 | 23.5 | 15.7 | 8.0 | 7.6 | - | 7.4 |
| Sunrun Inc. | RUN | OW | 7.14 | 6 | -16 | 0.7 | 9.7 | 7.8 | 6.4 | - | - | - | - | - |
| Solaredge | SEDG | OW | 22.10 | 21 | -5 | 1.0 | 16.0 | 17.9 | 16.9 | 10.0 | 9.0 | 7.6 | - | - |
| 8point3 Energy Partners LP | CAFD | EW | 14.72 | 14 | -5 | 1.0 | 28.8 | 20.3 | 19.2 | 16.9 | 14.2 | 14.7 | 7.3 | 3.8 |
| Hannon Armstrong | HASI | OW | 22.63 | 25 | 10 | 0.9 | 17.2 | 15.0 | 13.8 | 30.4 | 28.2 | 26.4 | 6.0 | 18.9 |
| TPI Composites | TPIC | OW | 19.12 | 23 | 20 | 0.6 | 31.4 | 27.0 | 10.9 | 8.9 | 7.3 | 4.4 | - | 0.4 |
| Ormat Technologies | ORA | EW | 58.06 | 59 | 2 | 2.9 | 25.2 | 23.1 | 20.2 | 10.6 | 10.0 | 9.1 | 0.6 | 2.1 |
| **Environmental Services** | | | | | | | | | | | | | | |
| Waste Management Inc. | WM | EW | 74.79 | 73 | -2 | 33.2 | 23.6 | 21.0 | 19.2 | 10.3 | 9.4 | 8.7 | 2.3 | 2.2 |
| Republic Services Inc. | RSG | EW | 64.83 | 59 | -9 | 22.0 | 26.6 | 23.5 | 21.1 | 10.0 | 9.3 | 8.5 | 2.0 | 2.7 |
| Waste Connections | WCN | OW | 64.57 | 68 | 5 | 16.8 | 30.6 | 25.1 | 22.1 | 14.5 | 12.9 | 12.0 | 0.8 | 2.7 |
| Waste Connections | WCN.TO | OW | 81.52 | 96 | 18 | 21.2 | 28.6 | 23.5 | 20.7 | 14.5 | 12.8 | 12.0 | 0.8 | 2.7 |
| Advanced Disposal | ADSW | OW | 23.40 | 26 | 11 | 2.1 | 77.7 | 63.8 | 33.6 | 9.1 | 8.3 | 7.5 | - | 4.3 |
| Casella Waste Systems | CWST | OW | 17.23 | 19 | 10 | 0.7 | 29.2 | 22.8 | 16.7 | 9.3 | 8.3 | 7.2 | - | 3.7 |
| Stericycle | SRCL | OW | 75.89 | 100 | 32 | 6.5 | 16.6 | 15.4 | 14.4 | 10.3 | 9.5 | 9.0 | - | 3.0 |
| Covanta Holding Corp. | CVA | OW | 13.25 | 15 | 13 | 1.7 | - | - | - | 10.6 | 9.2 | 9.0 | 7.5 | 6.5 |
| Clean Harbors | CLH | UW | 55.90 | 50 | -11 | 3.2 | 76.2 | 40.7 | 32.1 | 9.9 | 9.0 | 8.2 | - | 2.9 |
| US Ecology | ECOL | UW | 52.45 | 41 | -22 | 1.1 | 31.0 | 27.7 | 25.2 | 11.6 | 10.8 | 10.4 | 1.4 | 2.0 |

Source: Thomson Reuters and Barclays Research.

Share prices and target prices are shown in the primary listing currency. Prices as of July 18

Stock Rating: OW: Overweight; EW: Equal Weight; UW: Underweight; RS: Rating Suspended.

Industry View: Pos: Positive; Neu: Neutral; Neg: Negative.

## Price Target Methodologies and Estimate Updates

### American States Water

Our new $43 price target is premised upon an average water multiple of 23.2x our 2019E EPS of $1.87. Our previous price target of $41 was premised upon an average water multiple of 22.1x our 2019E of $1.87.

### Brookfield Renewable Partners LP

We are updating our estimates and valuation for Brookfield Renewable Partners LP to account for the recent C$550mln equity issuance. We anticipate that earnings will be higher year on year in the quarter related to production levels closer to long term averages for both hydro and wind assets likely offset by lower prices in Colombia. We are updating our EBITDA estimates to $1,770/$1,795/$1,915 million from $1,766/$1,791/$1,918 million for ‘17/18/19, respectively. We are updating our valuation to $34 from $32 as a result of lower net debt and a higher valuation multiple. We are updating our EBITDA estimates for the Canadian ticker BEP.UN-T to C$2,318/C$2,350/C$2,507 million from C$2,313 /C$2,345/C$2,511 million and our price target to C$45 from C$42 consistent with our estimates for BEP and an exchange rate of 1.26.

*Current Price Target*

Our current $34 price target is premised upon the average of two methodologies: (1) the yield co group multiple of 11.5x our 2019 estimated EBITDA of $1,915 million, $11,042 million in net debt, and 322.1 million projected shares outstanding to fund the growth through 2019 which yields $34; (2) a one year forward look at a 5.5% dividend yield which also yields $34.

*Prior Price Target*

Our prior price target of $32 was premised upon the average of two methodologies: (1) the yield co group multiple of 12.0x our 2019 estimated EBITDA of $1,918 million, $13,200 million in net debt, and 307.5 million projected shares outstanding to fund the growth through 2019 which yielded $32; (2) a one year forward look at a 5.8% dividend yield which yielded $33.

## Brookfield Infrastructure Partners LP

We are updating our estimates and valuation for the Canadian ticker of Brookfield Infrastructure Partners LP on currency movements. Our price target and estimates for Brookfield Infrastructure Partners in US$ remain unchanged. For the quarter we expect that FFO same store growth will show continued strength and the UK distribution business will be a leading contributor year on year. However, these items are likely to be offset by movements in FX and lower regulated returns at the Australian coal export terminal.

For BIP we reiterate our price target of $42 and our EBITDA estimates of $1,710 /$1,893/$2,025 million for ‘17/18/19 respectively. For BIP.UN-T we are updating our price target to C$52 from C$57 and our EBITDA estimates to C$2,155/C$2,385/C$2,552 million from C$2,239/$2,479/C$2,652 million to be consistent with an exchange rate of 1.26.

## Calpine Inc.

We are updating our estimates and valuation on a mark to market to the forward curve as of July 11, 2017. We anticipate EBITDA for the quarter will be lower year on year at $375 million driven by lower volumes due to higher natural gas prices driving coal switching and better hydro conditions in California, lower spreads in California and PJM, the non-recurring natural gas transportation contract with PG&E, portfolio changes, and Delta being offline for the full quarter. These negative drivers will be partially offset by higher spreads in Texas and New England, and retail acquisitions. We are updating our price target to $17 from $18 and our EBITDA estimates to $1,866/$1,928/$1,913 million from $1,895/$2,000/$1,987 million for ‘17/18/19 respectively.

*Current Price Target*

Our current price target of $17 is premised upon a half turn discount to the mid-cycle multiple, or 7.1x our 2018 estimated EBITDA of $1,928 million, net debt of $9,821million and an NPV of NOLs of $1.1 billion on 359 million shares outstanding.

*Prior Price Target*

Our prior target of $18 was premised upon a half turn discount to the mid-cycle multiple, or 7.1x our 2018 estimated EBITDA of $2,000 million, net debt of $9,821million and an NPV of NOLs of $1.1 billion on 359 million shares outstanding.

## Dynegy Inc.

We are updating our valuation and estimates on a mark to market to the forward curve as of July 11 2017. We have fully accounted for the closing of the sale of the Troy and Armstrong plants in our updated numbers as well as the announced mitigation and Lee plant sale in our updated forecasts. We anticipate that EBITDA for the quarter will be up year on year at $220 million due to higher than normal outage costs in 2Q ’16, 200MWs of uprates year on year, the ENGIE assets acquisition, and increased coal fleet volumes due to higher year on year natural gas prices. These factors will be offset by the closure of Moss Landing 6 & 7, the sale of the Elwood plant, lower capacity revenues, and lower gas fleet volumes due to lower spark spreads in PJM. We expect management to maintain the 2017 EBITDA guidance range of $1,200 - $1,400 million, which was issued in November 2016. We do not believe the range given in November contemplated the Troy and Armstrong sale at mid-year, nor did it contemplate not closing the ENGIE asset acquisition until six weeks into 2017. Given these factors we now see 2017 EBITDA in the lower half of the company's guidance range at $1,240 million. We are updating our price target to $13 from $14 and our EBITDA estimates to $1,240/$1,415/$1,352 million from $1,298/$1,415/ $1,352 million for '17/18/19 respectively.

*Current Price Target*

Our $13 price target is premised upon a half turn discount to the mid-cycle multiple or 7.1x our 2018 EBITDA estimate of $1,415 million, net debt of $7,951 million, environmental capex and NPV of NOLs that offset and 151 million shares outstanding.

*Prior Price Target*

Our $14 price target was premised upon a half turn discount to the mid-cycle multiple or 7.1x our 2018 EBITDA estimate of $1,532 million, net debt of $8,521 million, environmental capex and NPV of NOLs that roughly offset and 161 million shares outstanding.

## Fortis Inc.

We are updating our estimates and valuation for the Waneta expansion acquisition, updated exchange rates of 1.26, and updated valuation multiples. We anticipate year on year earnings per share will be higher at C$0.53 driven by accretion from ITC net of financing charges and increased shares, stronger results from UNS driven by the rate increase year on year, as well as contributions from Aiken storage. These positive drivers will be offset by lower exchange rates (1.26 vs. 1.32), a lower equity ratio in Alberta, lower equity income from Belize and higher overall corporate expenses.

We are updating our price target to C$50 from C$49 on multiple expansion and higher probability of the Wantakaneyap transmission project going forward in Ontario. We are also updating our earnings per share estimates to C$2.41/C$2.67/C$2.72 from C$2.49/C$2.62/C$2.67 for '17/18/19, respectively. For US ticker FTS we are updating our price target to $40 from $37 and our earnings estimates $1.92/$2.12/$2.16 from $1.9/$2.00/$2.04 for '17/18/19, respectively, consistent with an updated exchange rate of 1.26.

*Current Price Target*

We derive a C$50 price target using an SOTP methodology. We use a 15% premium to the US regulated utility multiple of 16.5x 16.5x our '19E Canadian regulated eps of C$1.08 and a flat 16.5x multiple to our '19E US regulated utility eps of C$1.76. We used a multiple for Caribbean utilities of 14.9x our '19E Caribbean Utilities eps of C$0.12 and an IPP multiple of 18.4x our '19E Generation eps of C$0.18. We used a flat 16.5x multiple on our '19E corporate and other epx of (C$0.41). To this we added C$1.85/share of value for the estimated incremental capital growth projects of Tilbury 1B, Woodfibre LNG pipeline, and Ontario transmission at 30%, 60%, and 90% probabilities, respectively.

*Prior Price Target*

We derived our prior C$49 price target using an SOTP methodology. We used a 15% premium to the US regulated utility multiple of 16.5x our '19E Canadian regulated EPS of C$1.08 and a flat 16.5x multiple to our '19E US regulated utility eps of C$1.84. We used a multiple for Caribbean utilities of 15.4x our '19E Caribbean Utilities eps of C$0.12 and an IPP multiple of 16.7x our '19E Generation EPS of C$0.06. We used a flat 16.5x multiple on our '19E corporate and other epx of (C$0.43). To this we added C$1.90/share of value for the estimated incremental capital growth projects of Tilbury 1B, Woodfibre LNG pipeline, and Ontario transmission at 50%, 75%, and 50% probabilities, respectively.

### NRG Energy

We are reiterating our valuation at $27/share but are updating our EBITDA estimates to fully account for the portions of the transformation plan, announced on July 12, that will take effect by the end of 2017. Our updated EBITDA estimates are $2,376/$1,765/$1,768 million versus our prior EBITDA estimates of $2,711/$1,765/$1,768 million for '17/18/19 respectively.

### Southern Company

We are updating our estimates and valuation for the Kemper County equity need, which we estimate at approximately $750 million and a proportion of the lost rate base related to the plant. We are updating our earnings per share estimates to $2.94/$3.09/$3.25 from $2.98/ $3.17/$3.32 for '17/18/19, respectively. We are updating our price target to $54 from $55 as a result of our lower earnings per share estimates.

#### *Current Price Target*

Our current price target of $54 is premised upon our 2019 EPS estimate of $3.25 at a group average multiple of 16.5x, which incorporates a 15% discount from the historical 15% premium at which Southern has traded for overhang risks related to the Vogtle and Kemper construction projects.

#### *Prior Price Target*

Our prior price target of $55 was premised upon our 2019 EPS estimate of $3.32 at a group average multiple of 16.5x, which incorporates a 15% discount from the historical 15% premium at which Southern has traded for overhang risks related to the Vogtle and Kemper construction projects.

### SCANA Corp

We are updating our valuation to $65 from $67 on multiple compression. Our earnings per share forecast remains unchanged at $4.11/$4.43/$4.68 for '17/18/19, respectively.

#### *Current Price Target*

Our current price target of $65 is premised upon the regulated average multiple of 16.5x our 2019E earnings per share of $4.68.

#### *Prior Price Target*

Our prior price target of $67 was premised upon the regulated average multiple of 17.0x our 2019E earnings per share of $4.68.

### Vistra Energy

We are updating our estimates and valuation for a mark to market on the power curve as of July 11 2017. We are increasing our price target to $17 from $16 and our EBITDA estimates to $1,446/$1,374/$1,513 million from $1,546/$1,428/$1,523 million for '17/18/19 respectively.

#### *Current Price Target*

Our current price target of $17 is premised upon a half turn discount to the mid-cycle multiple or 7.1x our 2018E EBITDA of $1,374 million, $3,130 million in net debt and 427.56 million shares outstanding.

*Prior Price Target*

Our prior price target of $16 was premised upon a 7.6x mid-cycle multiple on our ‘18E EBITDA of $1,428 million, net debt of $3,340 million and shares outstanding of 427.56 million.

**North America Power & Utilities** — **Industry View: NEUTRAL**

## American States Water Company (AWR)

**Stock Rating: UNDERWEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 436 | 448 | 460 | 471 | 2.6% |
| EBITDA (adj) | 154 | 162 | 170 | 177 | 4.9% |
| EBIT (adj) | 115 | 121 | 126 | 131 | 4.6% |
| Pre-tax income (adj) | 94 | 101 | 106 | 112 | 5.8% |
| Net income (adj) | 60 | 63 | 66 | 70 | 5.4% |
| EPS (adj) ($) | 1.62 | 1.69 | 1.77 | 1.87 | 4.9% |
| Diluted shares (mn) | 36.8 | 37.4 | 37.4 | 37.4 | 0.6% |
| DPS ($) | 0.92 | 0.97 | 1.02 | 1.08 | 5.4% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 35.2 | 36.2 | 36.9 | 37.7 | 36.5 |
| EBIT (adj) margin (%) | 26.3 | 27.0 | 27.4 | 27.9 | 27.1 |
| Pre-tax (adj) margin (%) | 21.7 | 22.6 | 23.0 | 23.8 | 22.8 |
| Net (adj) margin (%) | 13.7 | 14.1 | 14.4 | 14.9 | 14.3 |
| ROIC (%) | 14.1 | 14.3 | 15.0 | 14.3 | 14.4 |
| ROA (%) | 4.2 | 4.2 | 4.3 | 4.4 | 4.3 |
| ROE (%) | 12.4 | 12.5 | 12.4 | 12.4 | 12.4 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 1,151 | 1,202 | 1,254 | 1,314 | 4.5% |
| Total net assets | 1,470 | 1,522 | 1,575 | 1,635 | 3.6% |
| Capital employed | 815 | 847 | 840 | 919 | 4.1% |
| Shareholders' equity | 494 | 521 | 550 | 579 | 5.4% |
| Net debt/(funds) | 321 | 325 | 288 | 338 | 1.8% |
| Cash flow from operations | 97 | 125 | 130 | 136 | 12.0% |
| Capital expenditure | -130 | -92 | -95 | -106 | N/A |
| Free cash flow | -66 | -4 | -3 | -10 | N/A |
| Pre-dividend FCF | -33 | 32 | 35 | 30 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 29.7 | 28.4 | 27.1 | 25.7 | 27.7 |
| EV/EBITDA (adj) (x) | 13.6 | 12.9 | 12.1 | 11.9 | 12.6 |
| EV/EBIT (adj) (x) | 18.2 | 17.4 | 16.3 | 16.1 | 17.0 |
| P/BV (x) | 3.6 | 3.5 | 3.3 | 3.1 | 3.4 |
| Dividend yield (%) | 1.9 | 2.0 | 2.1 | 2.2 | 2.1 |
| Total debt/capital (%) | 39.4 | 38.5 | 34.6 | 37.0 | 37.4 |
| Net debt/EBITDA (adj) (x) | 2.1 | 2.0 | 1.7 | 1.9 | 1.9 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 56.8 | 57.3 | 57.5 | 57.6 | 57.3 |
| Interest cover (x) | 5.4 | 5.8 | 6.0 | 6.4 | 5.9 |
| Regulated (%) | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |

| | |
|---|---|
| **Price (19-Jul-2017)** | **USD 48.09** |
| **Price Target** | **USD 43.00** |

**Why Underweight?** AWR is a solid well-run utility with average-to-below average growth compared to its peers. The single state regulatory jurisdiction argues for a premium valuation. The ASUS business is a great asset light business but has more risk than the regulated water business. As such, at current levels we feel the name is overvalued compared to peer companies.

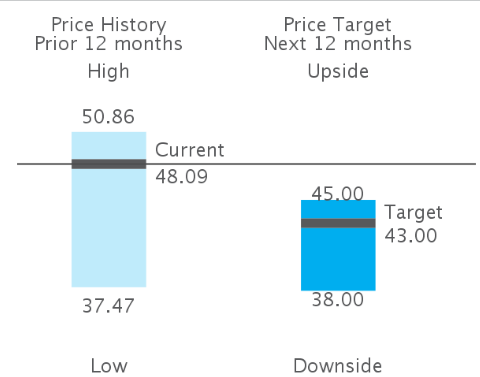
**Upside case** — **USD 45.00**

Our upside case assumes that regulatory issues and ASUS growth are at the top end of expectations, driving a further premium valuation to the group.

**Downside case** — **USD 38.00**

Our downside case assumes a reduction to ROE at the utility combined with slowed growth from bonus depreciation and lack of other investment from CPUC restrictions as well as low contract win rates from ASUS driving AWR to a group average multiple.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Brookfield Infrastructure Partners LP (BIP)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,115 | 2,576 | 2,713 | 2,804 | 9.9% |
| EBITDA (adj) | 963 | 1,710 | 1,893 | 2,025 | 28.1% |
| EBIT (adj) | 428 | 1,166 | 1,341 | 1,464 | 50.7% |
| Pre-tax income (adj) | 729 | 1,043 | 1,305 | 1,564 | 29.0% |
| Net income (adj) | 474 | 678 | 848 | 1,017 | 29.0% |
| EPS (adj) ($) | 1.13 | 1.62 | 2.06 | 2.50 | 30.5% |
| Diluted shares (mn) | 369.5 | 383.8 | 383.8 | 383.8 | 1.3% |
| DPS ($) | 1.37 | 1.51 | 1.66 | 1.82 | 9.8% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 45.5 | 66.4 | 69.8 | 72.2 | 63.5 |
| EBIT (adj) margin (%) | 20.2 | 45.3 | 49.4 | 52.2 | 41.8 |
| Pre-tax (adj) margin (%) | 34.5 | 40.5 | 48.1 | 55.8 | 44.7 |
| Net (adj) margin (%) | 22.4 | 26.3 | 31.3 | 36.3 | 29.1 |
| ROIC (%) | 2.3 | 6.1 | 6.6 | 6.8 | 5.5 |
| ROA (%) | 2.2 | 3.1 | 3.7 | 4.1 | 3.3 |
| ROE (%) | 5.1 | 6.7 | 7.6 | 8.2 | 6.9 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 8,656 | 8,259 | 7,858 | 7,463 | -4.8% |
| Total net assets | 21,275 | 22,092 | 23,190 | 24,537 | 4.9% |
| Capital employed | 18,351 | 19,150 | 20,216 | 21,538 | 5.5% |
| Shareholders' equity | 9,269 | 10,068 | 11,134 | 12,456 | 10.4% |
| Net debt/(funds) | 8,296 | 7,327 | 6,050 | 4,506 | -18.4% |
| Cash flow from operations | 753 | 1,975 | 2,364 | 2,711 | 53.3% |
| Capital expenditure | -1,201 | -341 | -348 | -348 | N/A |
| Free cash flow | 316 | 505 | 545 | 568 | 21.6% |
| Pre-dividend FCF | 944 | 1,170 | 1,284 | 1,387 | 13.7% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 35.4 | 24.6 | 19.3 | 15.9 | 23.8 |
| EV/EBITDA (adj) (x) | 23.9 | 12.9 | 11.0 | 9.5 | 14.3 |
| EV/EBIT (adj) (x) | 53.7 | 18.9 | 15.5 | 13.1 | 25.3 |
| P/BV (x) | 1.6 | 1.5 | 1.4 | 1.2 | 1.4 |
| Dividend yield (%) | 3.4 | 3.8 | 4.2 | 4.6 | 4.0 |
| Total debt/capital (%) | 49.5 | 47.4 | 44.9 | 42.2 | 46.0 |
| Net debt/EBITDA (adj) (x) | 8.6 | 4.3 | 3.2 | 2.2 | 4.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 66.5 | 56.8 | 57.5 | 59.1 | 60.0 |
| Interest cover (x) | 2.5 | 3.4 | 3.7 | 4.3 | 3.5 |
| Regulated (%) | 70.5 | 58.6 | 55.8 | 52.7 | 59.4 |

| | |
|---|---|
| **Price (19-Jul-2017)** | **USD 39.79** |
| **Price Target** | **USD 42.00** |

**Why Equal Weight?** While we do see growth opportunities begining to percolate we view the shares as fairly valued with near term headwinds related to trade rhetoric becoming tariff reality for the ports business, FX headwinds, and potentially riskier investment opportunities in more developing economies.

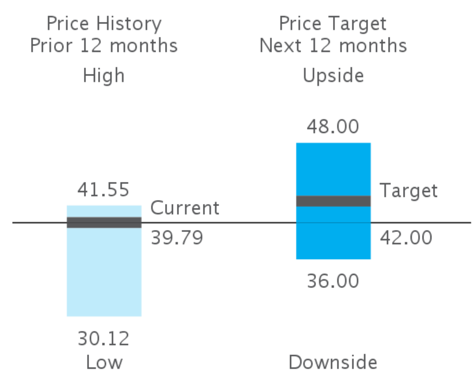
**Upside case** — **USD 48.00**

Our upside case is premised upon a 2020 valuation year and 11% per annum distribution per unit growth at a constant yeild. This yields an indicative valuation of $48/unit.

**Downside case** — **USD 36.00**

Our downside case assumes a 2019 valuation year on a SOTP valuation of the subsequent businesses versus various appropriate comp groups. This yields a valuation of $36/unit.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** | **Industry View: NEUTRAL**

## Brookfield Renewable Energy Partners LP (BEP)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,516 | 2,983 | 3,053 | 3,173 | 8.0% |
| EBITDA (adj) | 1,478 | 1,770 | 1,795 | 1,915 | 9.0% |
| EBIT (adj) | 697 | 948 | 942 | 1,029 | 13.9% |
| Pre-tax income (adj) | -486 | -318 | -379 | -275 | N/A |
| Net income (adj) | -65 | 41 | 86 | 114 | N/A |
| EPS (adj) ($) | -0.23 | 0.14 | 0.28 | 0.35 | N/A |
| Diluted shares (mn) | 283.8 | 302.3 | 309.9 | 322.1 | 4.3% |
| DPS ($) | 1.73 | 1.80 | 1.89 | 2.00 | 5.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 58.7 | 59.4 | 58.8 | 60.3 | 59.3 |
| EBIT (adj) margin (%) | 27.7 | 31.8 | 30.8 | 32.4 | 30.7 |
| Pre-tax (adj) margin (%) | -19.3 | -10.6 | -12.4 | -8.7 | -12.8 |
| Net (adj) margin (%) | -12.6 | -6.9 | -8.1 | -5.6 | -8.3 |
| ROIC (%) | 3.0 | 3.9 | 3.9 | 4.1 | 3.7 |
| ROA (%) | -1.1 | -0.7 | -0.8 | -0.6 | -0.8 |
| ROE (%) | -2.7 | -1.7 | -2.1 | -1.5 | -2.0 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 25,257 | 26,304 | 26,826 | 27,409 | 2.8% |
| Total net assets | 27,737 | 28,804 | 29,151 | 28,758 | 1.2% |
| Capital employed | 23,158 | 24,112 | 24,447 | 24,929 | 2.5% |
| Shareholders' equity | 11,772 | 11,951 | 11,536 | 11,918 | 0.4% |
| Net debt/(funds) | 11,042 | 11,797 | 12,733 | 12,931 | 5.4% |
| Cash flow from operations | 632 | 1,104 | 1,059 | 1,160 | 22.4% |
| Capital expenditure | -369 | -649 | -535 | -568 | N/A |
| Free cash flow | -268 | -46 | -110 | -80 | N/A |
| Pre-dividend FCF | 410 | 519 | 510 | 610 | 14.1% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | N/A | N/A | N/A | 94.8 | 94.8 |
| EV/EBITDA (adj) (x) | 14.4 | 12.5 | 12.8 | 12.1 | 13.0 |
| EV/EBIT (adj) (x) | 30.6 | 23.3 | 24.5 | 22.6 | 25.3 |
| P/BV (x) | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 |
| Dividend yield (%) | 5.2 | 5.4 | 5.6 | 6.0 | 5.5 |
| Total debt/capital (%) | 49.2 | 50.4 | 52.8 | 52.2 | 51.2 |
| Net debt/EBITDA (adj) (x) | 7.5 | 6.7 | 7.1 | 6.8 | 7.0 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 65.9 | 58.3 | 64.5 | 65.0 | 63.4 |
| Interest cover (x) | 1.9 | 2.1 | 2.0 | 2.1 | 2.0 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Price (19-Jul-2017) | USD 33.57 |
|---|---|
| Price Target | USD 34.00 |

**Why Equal Weight?** We see good distribution per unit growth of 5%-7% and a solid dividend yield of 4.5% balanced off by risks related to re-contracting and/or uncontracted risks at lower power prices, and risks of being a more pure developer on wind with economic drop downs to TERP should that transaction close, that coalesce inot a view of the shares as fairly valued.

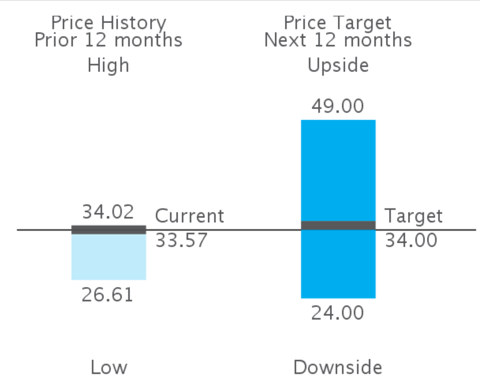
**Upside case** USD 49.00

Using forward power curves and contracted pricing a DCF valuation out to 2035 with an 8% discount rate results in a valuation of $39. In this analysis, post 2021, we assume a 3%/yr uptake in volumes sold and a 3%/yr decline in the proportion of sales under long-term contracts.

**Downside case** USD 24.00

We run the current asset base at contracted pricing for the portion under long-term contracts and take market pricing down $5/MWh from current levels for the un-contracted portion with no new acquistions or new development. We also continue the impact of the Brazilian drought.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Calpine Corp. (CPN)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 6,961 | 5,302 | 5,084 | 4,854 | -11.3% |
| EBITDA (adj) | 1,815 | 1,866 | 1,928 | 1,913 | 1.8% |
| EBIT (adj) | 1,153 | 1,182 | 1,228 | 1,197 | 1.3% |
| Pre-tax income (adj) | 39 | 270 | 354 | 368 | 111.4% |
| Net income (adj) | -28 | 314 | 418 | 436 | N/A |
| EPS (adj) ($) | -0.08 | 0.88 | 1.18 | 1.22 | N/A |
| Diluted shares (mn) | 356.0 | 356.0 | 356.0 | 356.0 | 0.0% |
| DPS ($) | 0.00 | 0.00 | 0.00 | 0.00 | N/A |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 26.1 | 35.2 | 37.9 | 39.4 | 34.6 |
| EBIT (adj) margin (%) | 16.6 | 22.3 | 24.2 | 24.7 | 21.9 |
| Pre-tax (adj) margin (%) | 0.6 | 5.1 | 7.0 | 7.6 | 5.0 |
| Net (adj) margin (%) | -0.4 | 5.9 | 8.2 | 9.0 | 5.7 |
| ROIC (%) | 7.4 | 7.5 | 7.6 | 8.2 | 7.7 |
| ROA (%) | -4.7 | 7.1 | 7.5 | 7.2 | 4.3 |
| ROE (%) | -0.9 | 9.4 | 11.7 | 11.1 | 7.8 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 13,013 | 12,984 | 12,769 | 12,538 | -1.2% |
| Total net assets | 19,317 | 19,239 | 19,598 | 18,084 | -2.2% |
| Capital employed | 15,518 | 15,764 | 16,114 | 14,623 | -2.0% |
| Shareholders' equity | 3,339 | 3,585 | 3,935 | 4,304 | 8.8% |
| Net debt/(funds) | 11,761 | 11,367 | 10,734 | 10,095 | -5.0% |
| Cash flow from operations | 1,030 | 1,117 | 1,186 | 1,192 | 5.0% |
| Capital expenditure | 1,919 | 655 | 485 | 485 | -36.8% |
| Free cash flow | -889 | 462 | 701 | 707 | N/A |
| Pre-dividend FCF | -889 | 462 | 701 | 707 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | N/A | 16.1 | 12.1 | 11.6 | 13.3 |
| EV/EBITDA (adj) (x) | 9.3 | 8.8 | 8.2 | 7.9 | 8.6 |
| EV/EBIT (adj) (x) | 14.6 | 13.9 | 12.9 | 12.7 | 13.5 |
| P/BV (x) | 1.5 | 1.4 | 1.3 | 1.2 | 1.3 |
| Dividend yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total debt/capital (%) | 78.5 | 77.3 | 75.6 | 70.6 | 75.5 |
| Net debt/EBITDA (adj) (x) | 6.5 | 6.1 | 5.6 | 5.3 | 5.9 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest cover (x) | 1.8 | 2.0 | 2.2 | 2.3 | 2.1 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Price (19-Jul-2017) | USD 14.16 |
|---|---|
| Price Target | USD 17.00 |

**Why Overweight?** We like CPN for: 1) its 11-15% FCF yield 2016E-18E; 2) cash allocation toward deleveraging through 2019; 3) a clean and geographically diverse asset mix, and 4) its leverage to lower natural gas prices with a pure spark spread fleet.

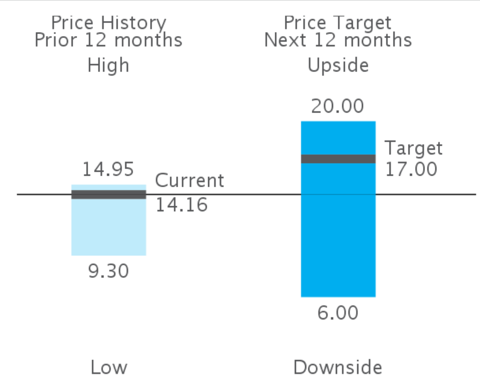
**Upside case** — **USD 20.00**

Our upside case is reflective of current 2018 strip natural gas, capacity prices moving back to $200/MW-day, a 7.6x mid-cycle EV/EBITDA multiple

**Downside case** — **USD 6.00**

Our downside case is reflective of $2.50/MMBtu perpetual natural gas, no upside to capacity prices, a discounted 7.1x EV/EBITDA multiple, and no credit for indicated deleveraging.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Dynegy Inc. (DYN)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 4,318 | 5,412 | 5,339 | 5,120 | 5.8% |
| EBITDA (adj) | 1,007 | 1,240 | 1,415 | 1,352 | 10.3% |
| EBIT (adj) | 318 | 543 | 709 | 637 | 26.1% |
| Pre-tax income (adj) | -355 | -156 | 138 | 87 | N/A |
| Net income (adj) | -328 | -129 | 72 | 39 | N/A |
| EPS (adj) ($) | -9.78 | -0.67 | 0.48 | 0.26 | N/A |
| Diluted shares (mn) | 129.0 | 151.1 | 151.1 | 151.1 | 5.4% |
| DPS ($) | 0.00 | 0.00 | 0.00 | 0.00 | N/A |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 1.7 | 23.4 | 26.5 | 26.4 | 19.5 |
| EBIT (adj) margin (%) | -14.3 | 10.6 | 13.3 | 12.4 | 5.5 |
| Pre-tax (adj) margin (%) | -29.9 | -2.4 | 2.6 | 1.7 | -7.0 |
| Net (adj) margin (%) | -29.2 | -1.9 | 1.3 | 0.8 | -7.2 |
| ROIC (%) | -5.7 | 5.3 | 6.9 | 6.6 | 3.3 |
| ROA (%) | -5.2 | 3.5 | 2.8 | 2.3 | 0.8 |
| ROE (%) | -11.2 | -6.3 | 3.5 | 1.8 | -3.1 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 7,121 | 9,955 | 9,258 | 8,793 | 7.3% |
| Total net assets | 13,053 | 13,102 | 12,424 | 11,838 | -3.2% |
| Capital employed | 10,838 | 10,887 | 10,209 | 9,623 | -3.9% |
| Shareholders' equity | 2,039 | 2,068 | 2,140 | 2,179 | 2.2% |
| Net debt/(funds) | 7,023 | 8,736 | 7,951 | 7,398 | 1.7% |
| Cash flow from operations | 676 | 347 | 795 | 803 | 5.9% |
| Capital expenditure | -326 | -220 | -310 | -250 | N/A |
| Free cash flow | 263 | 348 | 270 | 202 | -8.4% |
| Pre-dividend FCF | 263 | 348 | 270 | 202 | -8.4% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | N/A | N/A | 19.0 | 35.3 | 27.1 |
| EV/EBITDA (adj) (x) | 8.2 | 8.0 | 6.5 | 6.3 | 7.2 |
| EV/EBIT (adj) (x) | 25.8 | 18.3 | 12.9 | 13.5 | 17.6 |
| P/BV (x) | 0.6 | 0.7 | 0.6 | 0.6 | 0.6 |
| Dividend yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total debt/capital (%) | 81.2 | 81.0 | 79.0 | 77.4 | 79.6 |
| Net debt/EBITDA (adj) (x) | 7.0 | 7.0 | 5.6 | 5.5 | 6.3 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest cover (x) | 0.5 | 1.0 | 1.4 | 1.3 | 1.1 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | |
|---|---|
| **Price (19-Jul-2017)** | **USD 9.04** |
| **Price Target** | **USD 13.00** |

**Why Overweight?** With the recent acquisitions of the ENGIE assets, and the rationalization of IPH and MISO Zone 4 Dynegy continues to move further toward a spark spread fleet, with assets in PJM, ERCOT and New England and MISO. This will also leave the fleet less exposed to natural gas prices, and no longer exposed to MISO capacity auctions.

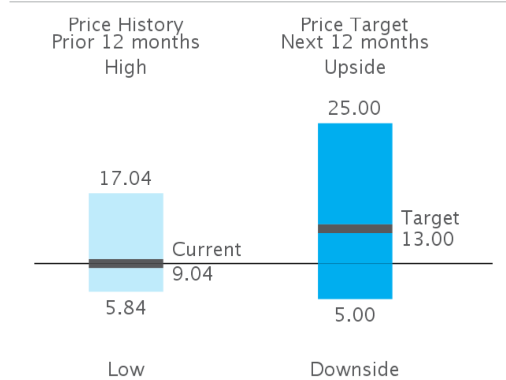
**Upside case** — **USD 25.00**

The upside case is based on a $2.50/MWh expansion in spark and dark spreads.

**Downside case** — **USD 5.00**

The downside case is based on a 7.1x EV/EBITDA valuation off of 2017 estimates and no credit for incremental deleveraging

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Fortis Inc. (FTS.TO)

**Stock Rating: OVERWEIGHT**

| Income statement (CADmn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 6,838 | 7,802 | 8,173 | 8,372 | 7.0% |
| EBITDA (adj) | 2,466 | 3,147 | 3,435 | 3,584 | 13.3% |
| EBIT (adj) | 1,483 | 1,965 | 2,157 | 2,221 | 14.4% |
| Pre-tax income (adj) | 866 | 1,216 | 1,368 | 1,413 | 17.7% |
| Net income (adj) | 721 | 1,015 | 1,142 | 1,181 | 17.9% |
| EPS (adj) (CAD) | 2.33 | 2.41 | 2.67 | 2.72 | 5.2% |
| Diluted shares (mn) | 309 | 420 | 428 | 434 | 12.0% |
| DPS (CAD) | 1.53 | 1.63 | 1.73 | 1.84 | 6.3% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 36.1 | 40.3 | 42.0 | 42.8 | 40.3 |
| EBIT (adj) margin (%) | 21.7 | 25.2 | 26.4 | 26.5 | 24.9 |
| Pre-tax (adj) margin (%) | 12.5 | 15.3 | 16.4 | 16.4 | 15.1 |
| Net (adj) margin (%) | 10.5 | 13.0 | 14.0 | 14.1 | 12.9 |
| ROIC (%) | 3.8 | 4.8 | 5.1 | 5.1 | 4.7 |
| ROA (%) | 1.5 | 2.0 | 2.2 | 2.3 | 2.0 |
| ROE (%) | 4.9 | 6.4 | 6.9 | 6.9 | 6.2 |

| Balance sheet and cash flow (CADmn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 29,337 | 31,023 | 32,528 | 33,521 | 4.5% |
| Total net assets | 47,904 | 49,830 | 51,383 | 52,449 | 3.1% |
| Capital employed | 39,209 | 40,858 | 42,303 | 43,311 | 3.4% |
| Shareholders' equity | 14,827 | 15,903 | 16,572 | 17,221 | 5.1% |
| Net debt/(funds) | 22,490 | 23,033 | 23,844 | 24,174 | 2.4% |
| Cash flow from operations | 1,884 | 2,239 | 2,416 | 2,517 | 10.1% |
| Capital expenditure | -2,061 | -2,945 | -2,858 | -2,419 | N/A |
| Free cash flow | -673 | -1,433 | -1,179 | -676 | N/A |
| Pre-dividend FCF | -357 | -748 | -438 | 124 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 19.0 | 18.3 | 16.6 | 16.3 | 17.6 |
| EV/EBITDA (adj) (x) | 16.6 | 13.2 | 12.3 | 11.9 | 13.5 |
| EV/EBIT (adj) (x) | 27.6 | 21.1 | 19.6 | 19.2 | 21.9 |
| P/BV (x) | 0.9 | 1.2 | 1.1 | 1.1 | 1.1 |
| Dividend yield (%) | 3.5 | 3.7 | 3.9 | 4.2 | 3.8 |
| Total debt/capital (%) | 58.0 | 57.1 | 57.0 | 56.5 | 57.2 |
| Net debt/EBITDA (adj) (x) | 9.1 | 7.3 | 6.9 | 6.7 | 7.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 65.6 | 67.5 | 64.9 | 67.7 | 66.4 |
| Interest cover (x) | 3.9 | 4.1 | 4.2 | 4.2 | 4.1 |
| Regulated (%) | 97.7 | 97.9 | 94.4 | 94.4 | 96.1 |

| | |
|---|---|
| Price (19-Jul-2017) | CAD 44.28 |
| Price Target | CAD 50.00 |

**Why Overweight?** We see shares as undervalued. Upside can come from higher sales growth and potential JV transmission projects in Ontario, and LNG related projects in BC. This is offset by growth and execution risk related to completion of large construction projects, and economic and regulatory headwinds in Alberta and election risk in BC.

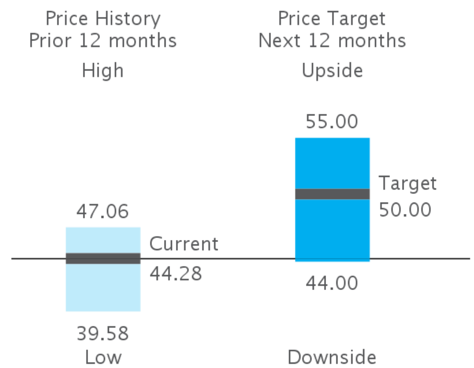
**Upside case** — **CAD 55.00**

We increase sales growth by 1%, include the value of incremental capital opportunities in full, and value Canadian utility operations at a 20% premium. This leads to an indicative valuation of C$55.

**Downside case** — **CAD 44.00**

We decrease sales growth by 1%, do not include any incremental capital opportunities, and value Canadian utility operations at a 10% premium. This leads to an indicative valuation of C$44.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## NRG Energy (NRG)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 12,351 | 13,267 | 8,315 | 8,311 | -12.4% |
| EBITDA (adj) | 3,257 | 2,711 | 1,765 | 1,768 | -18.4% |
| EBIT (adj) | 1,890 | 673 | 661 | 509 | -35.4% |
| Pre-tax income (adj) | -680 | -71 | 279 | 207 | N/A |
| Net income (adj) | -579 | 7 | 181 | 134 | N/A |
| EPS (adj) ($) | -1.76 | 0.02 | 0.57 | 0.43 | N/A |
| Diluted shares (mn) | 320.5 | 318.2 | 316.0 | 316.0 | -0.5% |
| DPS ($) | 0.24 | 0.12 | 0.12 | 0.12 | -20.1% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 26.4 | 17.9 | 21.2 | 21.3 | 21.7 |
| EBIT (adj) margin (%) | 15.3 | 5.1 | 8.0 | 6.1 | 8.6 |
| Pre-tax (adj) margin (%) | -4.7 | 0.0 | 2.2 | 1.6 | -0.2 |
| Net (adj) margin (%) | -4.7 | 0.0 | 2.2 | 1.6 | -0.2 |
| ROIC (%) | 8.4 | 2.4 | 4.6 | 3.9 | 4.8 |
| ROA (%) | -0.8 | 4.0 | -0.2 | 1.1 | 1.0 |
| ROE (%) | -13.0 | 0.1 | 2.8 | 2.3 | -2.0 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 17,912 | 20,400 | 8,133 | 5,607 | -32.1% |
| Total net assets | 30,355 | 38,329 | 24,078 | 21,441 | -10.9% |
| Capital employed | 22,452 | 28,589 | 14,260 | 12,885 | -16.9% |
| Shareholders' equity | 4,446 | 10,248 | 6,578 | 5,936 | 10.1% |
| Net debt/(funds) | 16,033 | 16,065 | 3,927 | 2,074 | -49.4% |
| Cash flow from operations | 2,072 | 1,793 | 1,024 | 1,223 | -16.1% |
| Capital expenditure | 1,244 | 550 | 502 | 502 | -26.1% |
| Free cash flow | 753 | 1,204 | 484 | 683 | -3.2% |
| Pre-dividend FCF | 828 | 1,243 | 522 | 721 | -4.5% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | N/A | N/A | 41.9 | 56.5 | 49.2 |
| EV/EBITDA (adj) (x) | 7.3 | 8.7 | 6.5 | 5.5 | 7.0 |
| EV/EBIT (adj) (x) | 12.5 | 35.1 | 17.4 | 19.0 | 21.0 |
| P/BV (x) | 1.7 | 0.7 | 1.2 | 1.3 | 1.2 |
| Dividend yield (%) | 1.0 | 0.5 | 0.5 | 0.5 | 0.6 |
| Total debt/capital (%) | 80.2 | 64.2 | 53.9 | 53.9 | 63.0 |
| Net debt/EBITDA (adj) (x) | 4.9 | 5.9 | 2.2 | 1.2 | 3.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | N/A | N/A | N/A | N/A | N/A |
| Interest cover (x) | 1.8 | 0.5 | 0.8 | 0.7 | 1.0 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | |
|---|---|
| Price (19-Jul-2017) | USD 24.00 |
| Price Target | USD 27.00 |

**Why Overweight?** We like NRG for the accretive transformation plan through 2020 that simplifies the business, acheives $1.0Bln+ in cost savings, raises $2-$4.5Bln in asset sale proceeds, delverages the balance sheet by $13Bln, and generates allocable cash of $4.8-$6.3Bln.

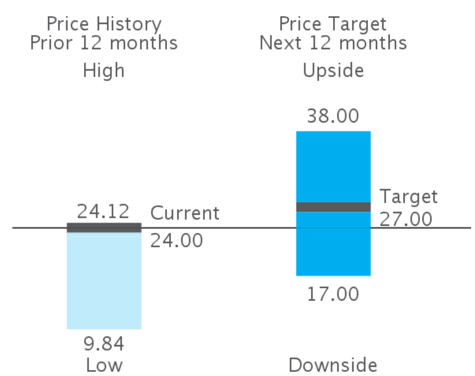
**Upside case** USD 38.00

Our upside case uses our base valuation for NRG excluding allocable cash of $18 and adds $20/share for cash as the high end at $6.3Bln with no haircut for execution risk.

**Downside case** USD 17.00

Our downside case assumes assumes a $0 value for allocable cash either from significant execution issues, or from deployment of allcoable cash into poor return projects

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## SCANA Corp. (SCG)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 4,380 | 4,613 | 4,726 | 4,800 | 3.1% |
| EBITDA (adj) | 1,432 | 1,424 | 1,508 | 1,569 | 3.1% |
| EBIT (adj) | 1,074 | 1,051 | 1,120 | 1,170 | 2.9% |
| Pre-tax income (adj) | 905 | 923 | 991 | 1,052 | 5.1% |
| Net income (adj) | 593 | 648 | 689 | 720 | 6.7% |
| EPS (adj) ($) | 3.97 | 4.11 | 4.43 | 4.68 | 5.6% |
| Diluted shares (mn) | 143.7 | 145.4 | 146.5 | 147.2 | 0.8% |
| DPS ($) | 2.30 | 2.45 | 2.57 | 2.70 | 5.5% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| EBIT (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| Pre-tax (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| Net (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| ROIC (%) | 8.6 | 7.6 | 7.9 | 8.1 | 8.1 |
| ROA (%) | 3.1 | 3.1 | 3.2 | 3.3 | 3.2 |
| ROE (%) | 10.3 | 10.8 | 10.9 | 10.8 | 10.7 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 15,304 | 16,735 | 17,782 | 17,950 | 5.5% |
| Total net assets | 18,962 | 20,681 | 21,815 | 21,973 | 5.0% |
| Capital employed | 12,531 | 13,741 | 14,100 | 14,495 | 5.0% |
| Shareholders' equity | 5,763 | 5,980 | 6,345 | 6,680 | 5.0% |
| Net debt/(funds) | 6,768 | 7,761 | 7,755 | 7,814 | 4.9% |
| Cash flow from operations | 1,692 | 1,285 | 1,450 | 1,202 | -10.8% |
| Capital expenditure | -2,040 | -2,018 | -1,548 | -1,002 | N/A |
| Free cash flow | -772 | -1,183 | -568 | -292 | N/A |
| Pre-dividend FCF | -442 | -827 | -192 | 106 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 16.2 | 15.7 | 14.5 | 13.7 | 15.0 |
| EV/EBITDA (adj) (x) | 11.1 | 11.9 | 11.2 | 10.8 | 11.3 |
| EV/EBIT (adj) (x) | 14.9 | 16.1 | 15.1 | 14.5 | 15.2 |
| P/BV (x) | 1.6 | 1.6 | 1.5 | 1.4 | 1.5 |
| Dividend yield (%) | 3.6 | 3.8 | 4.0 | 4.2 | 3.9 |
| Total debt/capital (%) | 56.0 | 58.5 | 57.8 | 56.2 | 57.1 |
| Net debt/EBITDA (adj) (x) | N/A | N/A | N/A | N/A | N/A |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 57.9 | 59.6 | 58.1 | 57.7 | 58.3 |
| Interest cover (x) | 4.2 | 3.7 | 3.6 | 3.8 | 3.8 |
| Regulated (%) | 97.0 | 97.0 | 97.1 | 97.2 | 97.1 |

| | |
|---|---|
| **Price (19-Jul-2017)** | **USD 64.30** |
| **Price Target** | **USD 65.00** |

**Why Equal Weight?** We have an EW rating on SCG because while the company is meaningfully growing rate base and earnings through the construction of V.C. Summer, construction risk, Toshiba risks, and potential regulatory risk as rate fatigue mounts over time keep us on the sidelines.

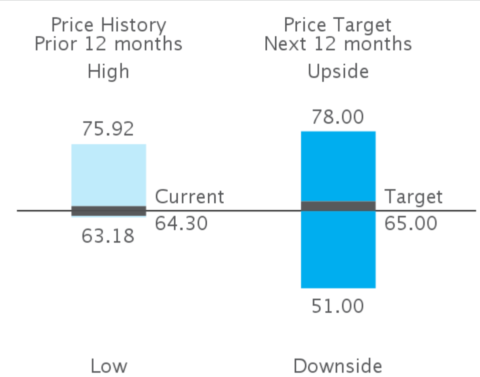
**Upside case** **USD 78.00**

Our upside case assumes that SCG completes the Summer project and trades at a group average multiple.

**Downside case** **USD 51.00**

Our downside case assumes that SCG trades at a 10% discount to the regulated group excluding $1.22/share of earnings power and growth in an abandonment scenario for Summer.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Southern Co. (SO)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 19,986 | 22,597 | 23,362 | 23,984 | 6.3% |
| EBITDA (adj) | 7,085 | 8,758 | 9,362 | 9,863 | 11.7% |
| EBIT (adj) | 4,755 | 5,781 | 6,175 | 6,481 | 10.9% |
| Pre-tax income (adj) | 4,014 | 4,402 | 4,713 | 4,970 | 7.4% |
| Net income (adj) | 2,448 | 2,915 | 3,122 | 3,295 | 10.4% |
| EPS (adj) ($) | 2.89 | 2.94 | 3.09 | 3.25 | 4.0% |
| Diluted shares (mn) | 928.0 | 990.3 | 1,009.0 | 1,015.5 | 3.0% |
| DPS ($) | 2.22 | 2.30 | 2.38 | 2.46 | 3.5% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| EBIT (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| Pre-tax (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| Net (adj) margin (%) | N/A | N/A | N/A | N/A | N/A |
| ROIC (%) | 8.2 | 9.5 | 9.6 | 9.3 | 9.1 |
| ROA (%) | 2.6 | 2.9 | 3.0 | 3.0 | 2.9 |
| ROE (%) | 8.7 | 9.9 | 10.1 | 10.1 | 9.7 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 70,640 | 75,120 | 79,155 | 82,365 | 5.3% |
| Total net assets | 94,188 | 99,869 | 105,085 | 110,254 | 5.4% |
| Capital employed | 57,833 | 61,083 | 64,632 | 69,633 | 6.4% |
| Shareholders' equity | 28,033 | 29,418 | 30,947 | 32,650 | 5.2% |
| Net debt/(funds) | 29,029 | 30,278 | 32,569 | 35,654 | 7.1% |
| Cash flow from operations | 6,110 | 7,243 | 7,410 | 7,779 | 8.4% |
| Capital expenditure | -8,000 | -7,200 | -7,000 | -6,400 | N/A |
| Free cash flow | -3,980 | -2,264 | -2,022 | -1,149 | N/A |
| Pre-dividend FCF | -1,920 | 13 | 380 | 1,349 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 16.4 | 16.0 | 15.3 | 14.6 | 15.6 |
| EV/EBITDA (adj) (x) | 10.6 | 8.7 | 8.4 | 8.3 | 9.0 |
| EV/EBIT (adj) (x) | 15.8 | 13.2 | 12.8 | 12.6 | 13.6 |
| P/BV (x) | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 |
| Dividend yield (%) | 4.7 | 4.9 | 5.0 | 5.2 | 5.0 |
| Total debt/capital (%) | 51.5 | 51.8 | 52.1 | 53.1 | 52.1 |
| Net debt/EBITDA (adj) (x) | N/A | N/A | N/A | N/A | N/A |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 76.9 | 78.1 | 76.9 | 75.8 | 76.9 |
| Interest cover (x) | 7.2 | 5.7 | 5.7 | 5.8 | 6.1 |
| Regulated (%) | 94.0 | 94.0 | 94.0 | 94.0 | 94.0 |

| | |
|---|---|
| **Price (19-Jul-2017)** | **USD 47.23** |
| **Price Target** | **USD 54.00** |

**Why Overweight?** Southern is a quality company with an above average dividend, which deserves a group valuation despite new nuclear and Kemper construction risks, based upon consistency in regulatory outcomes and visibility for earnings growth.

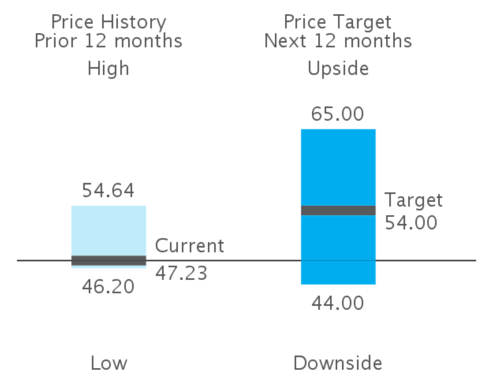
**Upside case** — **USD 65.00**

We apply a 20% premium to the group average P/E for 2019 and use our 2019 estimate

**Downside case** — **USD 44.00**

We apply a 10% discount to the group average P/E for 2019, combined with $0.27/share of earnings power related to a proportion of non-recovery of Vogtle and Kemper constructon projects.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Vistra Energy Corp. (VST)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2016A | 2017E | 2018E | 2019E | CAGR |
|---|---|---|---|---|---|
| Revenue | 5,164 | 5,566 | 5,538 | 5,397 | 1.5% |
| EBITDA (adj) | 1,601 | 1,446 | 1,374 | 1,513 | -1.9% |
| EBIT (adj) | 926 | 761 | 677 | 806 | -4.5% |
| Pre-tax income (adj) | -756 | 576 | 498 | 633 | N/A |
| Net income (adj) | -197 | 375 | 324 | 411 | N/A |
| EPS (adj) ($) | -0.38 | 0.73 | 0.63 | 0.80 | N/A |
| Diluted shares (mn) | 427.6 | 427.6 | 427.6 | 427.6 | 0.0% |
| DPS ($) | 0.00 | 0.00 | 0.00 | 0.00 | N/A |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 21.0 | 27.8 | 26.6 | 29.9 | 26.3 |
| EBIT (adj) margin (%) | 7.9 | 15.5 | 14.0 | 16.8 | 13.5 |
| Pre-tax (adj) margin (%) | -14.6 | 10.4 | 9.0 | 11.7 | 4.1 |
| Net (adj) margin (%) | -40.5 | 6.7 | 5.9 | 7.6 | -5.1 |
| ROIC (%) | 3.6 | 7.6 | 6.7 | 7.6 | 6.4 |
| ROA (%) | 7.4 | 3.6 | 3.2 | 3.7 | 4.5 |
| ROE (%) | -3.0 | 6.0 | 4.9 | 5.9 | 3.5 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 4,443 | 4,059 | 3,718 | 3,324 | -9.2% |
| Total net assets | 15,167 | 15,451 | 15,667 | 15,924 | 1.6% |
| Capital employed | 11,174 | 11,367 | 11,577 | 11,874 | 2.0% |
| Shareholders' equity | 6,597 | 6,235 | 6,559 | 6,970 | 1.8% |
| Net debt/(funds) | 3,734 | 3,707 | 3,030 | 2,235 | -15.7% |
| Cash flow from operations | -157 | 997 | 1,033 | 1,108 | N/A |
| Capital expenditure | 371 | 301 | 356 | 313 | -5.5% |
| Free cash flow | -528 | 696 | 677 | 795 | N/A |
| Pre-dividend FCF | -528 | 696 | 677 | 795 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | N/A | 21.9 | 25.3 | 19.9 | 22.4 |
| EV/EBITDA (adj) (x) | 6.6 | 7.3 | 7.2 | 6.0 | 6.8 |
| EV/EBIT (adj) (x) | 11.4 | 13.8 | 14.6 | 11.2 | 12.8 |
| P/BV (x) | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 |
| Dividend yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total debt/capital (%) | 41.0 | 45.1 | 43.3 | 41.3 | 42.7 |
| Net debt/EBITDA (adj) (x) | 2.3 | 2.6 | 2.2 | 1.5 | 2.1 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | -604.2 | 0.0 | 0.0 | 0.0 | -151.1 |
| Interest cover (x) | 0.8 | 3.2 | 3.0 | 3.6 | 2.7 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Price (19-Jul-2017) | USD 15.96 |
|---|---|
| Price Target | USD 17.00 |

**Why Equal Weight?** We are Equal Weight on valuation, while conceding there could be upside as our '18E EBITDA is likely the trough year. We see headwinds to near term performance as large holders are likely to be incremental sellers over time and speculation on strategic deployment of the under-levered balance sheet may include an equity issuance.

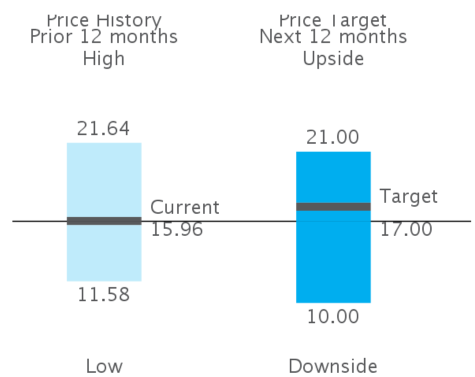
**Upside case** — **USD 21.00**

Our upside case incorporates the forward curve for natural gas, a $5/MWh expansion of retail margins and a 7.6x EV/EBITDA mid-cycle multiple.

**Downside case** — **USD 10.00**

Our downside case incorporates $2.50/MMBtu natural gas, a $5/MWh compression in natural gas prices, and a 0.5x discount to the 7.6x EV/EBITDA mid-cycle multiple.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

## Valuation Methodology and Risks

### North America Alternative Energy & Environmental Services

### North America Power & Utilities

**AES Corp. (AES)**

**Valuation Methodology:** Our valuation is the average of $16 for a global average P/E of 13.1x in 2018E applied to $1.23 and $9.50 for our sum of the parts, which includes $18 for the businesses using regional EBITDA and P/E multiples less $6 for recourse debt and $2 for tax policy exposure. As comps we use Caribbean Utilities (CUP'U-T), EDP Energia (ENBR3-BR), Emera (EMA-T), Enel Americas (ENELAM-SA), E'on (EOAN-XE), Kansai Electric (9503-TO) and U.S. Regulated Utilities.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** As a global power company and electric utility, AES is exposed to merchant power risk, country risk, currency risk (particularly in South America), regulatory risk, and counterparty risk.

**Alliant Energy (LNT)**

**Valuation Methodology:** Our $43 price target is premised on a 9.85% premium to the 2019 regulated group average P/E multiple of 17.4x applied to our 2019 earnings estimate of $2.28.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include utility regulation; execution of its renewable generation expansion program; commodity prices; and interest rates.

**Ameren Corp. (AEE)**

**Valuation Methodology:** Our $58 target is a 5% premium to the 17.2x Regulated Utility group applied to our $3.20 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the Ameren outlook are interest rates, regulation (Missouri, Illinois and the Federal Energy Regulatory Commission), outlook for Missouri legislation and the capital markets.

**American Electric Power (AEP)**

**Valuation Methodology:** Our $76 price target is a 8% premium to the group including -0.6% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 17.0x and our $4.08 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks include wholesale commodity prices, state and federal regulation, interest rates, and asset sale execution.

**American States Water Company (AWR)**

**Valuation Methodology:** Our price target is premised upon the 2019 water group average multiple of 23.2x applied to our 2019 estimate of $1.87.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory issues resulting in lower ability to spend capital or a lower ROE, ability to obtain additional military contracts and perform on the current contracts are all risks.

**American Water Works (AWK)**

**Valuation Methodology:** Our $86 price target is derived from applying a 10% high-quality premium to a water group average of 22.2x P/E multiple to our $3.51 2019 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to AWK include an inability to achieve tighter cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential.

**Aqua America (WTR)**

**Valuation Methodology:** Our price target is based on applying a 5% premium the water group average 2019 P/E multiple of 22.1x to our 2019 EPS estimate of $1.55.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include a potential acquisition of a gas ldc or non water utility, an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential, and potential tax reform.

**Brookfield Infrastructure Partners LP (BIP)**

**Valuation Methodology:** Our valuation is the average of two methodologies: First, a YieldCo comparable multiple of 11.6x our 2019E EBITDA of $2,025 million, net debt of $7.9 billion, and 382.2 million units outstanding, which yields $41/share. Second, a one year forward dividend yield method which yields $44/share. The average yields $42/share.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Global growth will impact activity at several of the company's infrastructure assets over time. Ability of management team to find investment opportunities above hurdle rates to continue to fuel growth, ability to recycle capital over time, foreign exchange risk, political risk in the countries the company operates in, in particular Brazil, Chile, and Colombia.

**Brookfield Infrastructure Partners LP (BIP-U CT / BIP_u.TO)**

**Valuation Methodology:** We use a US$/C$ exchange rate of $1.26 to convert our price target for BIP into C$, which yields a price target of C$52.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Global growth will impact activity at several of the company's infrastructure assets over time. Ability of management team to find investment opportunities above hurdle rates to continue to fuel growth, ability to recycle capital over time, foreign exchange risk, political risk in the countries the company operates in, in particular Brazil, Chile, and Colombia.

## Valuation Methodology and Risks

**Brookfield Renewable Energy Partners LP (BEP-U CT / BEP_u.TO)**

**Valuation Methodology:** We use a US$/C$ exchange rate of $1.26 to convert our price target for BEP into C$, which yields a price target of C$45.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks included rising interest rates, dilution from sale of Brookfield Asset Management's ownership position in the LP units, hydrology and water conditions/weather for their hydroelectric dams, foreign exchange risk especially to the Brazilian Real, Brazilian political risk, lack of acquisition or new build opportunities to continue to meet growth targets.

**Brookfield Renewable Energy Partners LP (BEP)**

**Valuation Methodology:** Our current $34 price target is premised upon the average of two methodologies: (1) the yield co group multiple of 11.5x our 2019 estimated EBITDA of $1,915 million, $11,042 million in net debt, and 322.1 million projected shares outstanding to fund the growth through 2019 which yields $34; (2) a one year forward look at a 5.5% dividend yield which also yields $34.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks included rising interest rates, dilution from sale of Brookfield Asset Management's ownership position in the LP units, hydrology and water conditions/weather for their hydroelectric dams, foreign exchange risk especially to the Brazilian Real, Brazilian political risk, and lack of acquisition or new build opportunities to continue to meet growth targets.

**California Water Service Group (CWT)**

**Valuation Methodology:** Our price target is premised upon applying the 2019 water group average multiple of 22.2x to our 2019 estimate of $1.34.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Main risks are regulatory given the significant impact the outcome and timing of the California general rate case can have. Also the California drought and associated recovery has impacted results in the past several years. Interest rates impact commission granted return on equity levels as well as impacting the rate paid on short term debt. National policy such as bonus depreciation and EPA actions will also impact spending levels and financing for the utility.

**Calpine Corp. (CPN)**

**Valuation Methodology:** Our current price target of $17 is premised upon a half turn discount to the mid-cycle multiple, or 7.1x our 2018 estimated EBITDA of $1,928 million, net debt of $9,821million and an NPV of NOLs of $1.1 billion on 359 million shares outstanding.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks for Calpine are the higher reserve margins, recession, wholesale market regulatory risk; risk of environmental mandates, and the gas price.

**Canadian Utilities Ltd. (CU CN / CU.TO)**

**Valuation Methodology:** Our current price target of C$40 was premised upon a sum-of-the-parts valuation. This valuation uses the 2019 US regulated utility multiple of 16.6x our Canadian utility operations 2019E EPS of C$2.46. The 5% premium is premised upon the 15% premium for Canadian vs. US operations less a discount for exposure to Alberta's economy and regulatory environment. We use a 15% premium to our estimate for the Australian utility operations 2019E EPS of C$0.13. We value the Mexican investments at a 10% discount to the regulated utility multiple of 16.6x our estimated 2019 eps contribution of C$0.09. We value the midstream operations using a comparable group 2019E multiple of 17.5x our 2019E midstream EPS of C$0.12. For power, we use the US comparable IPP 2019E EPS multiple of 16.7x on our 2019E EPS of (C$0.18). Lastly we value other segment EPS of (C$0.21) at a 16.6x multiple. We also add a 5% discount for the closely held nature of the company.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include economic growth in Alberta and Western Australia, execution risks related to capital deployment, levels of the demand for power in the UK and Alberta and their impact on spark spreads, and the Alberta regulatory environment.

**Caribbean Utilities Ltd. (CUP / CUPu.TO)**

**Valuation Methodology:** Our $13 price target is premised upon using a 5% liquidity/closely held discount and a 2.5% small cap/single regulator discount to the US regulated utility comp multiple of 16.6x.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Tourism to Grand Cayman, Regulatory and Governmental relationships on the island, Grand Cayman economy, overall global financial regulations impact on financial services on Grand Cayman, Fortis' majority ownership of 60% of the shares, and hurricanes.

**CenterPoint Energy Inc. (CNP)**

**Valuation Methodology:** Our $29 price target reflects $20 for the utility based on a 14% premium (include 5% for tax) to the '19 Regulated Utility average of 16.6x and $1.08 EPS and $9/share for mark-to-market of CNP's stake in ENBL.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include regulatory lag and changes in demand growth at the utility. For the company's Enable stake, risks include pipeline contract renewal risk, and potential for weaker production in the natural gas basins in which Enable's gather and processing assets operate and potential distribution reduction.

**CMS Energy (CMS)**

**Valuation Methodology:** Our price target of $49 is premised upon a 15% premium to the current 2019E regulated utility multiple of 17.0x our 2019E EPS of $2.53.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** CMS Energy faces risk from Michigan utility regulation, commodity prices, and interest rates.

## Valuation Methodology and Risks

**Connecticut Water Service Inc. (CTWS)**

**Valuation Methodology:** Our $53 price target is premised upon applying the 2018 water group average PE multiple of 22.2x to our 2019 estimate of $2.40.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risk are the main issues even with positive regulatory mechanisms in both CT and ME, the eventual true up or consideration surrounding repair tax flow through accounting could cause a potential larger than expected rate increase to customers limiting capital recovery in that year.

**Consolidated Edison (ED)**

**Valuation Methodology:** Our $82 price target is a 6% premium to the group including +0.8% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 17.0x and our $4.57 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include rating agency actions, regulatory risk, interest rates, and access to the capital markets.

**Dominion Energy (D)**

**Valuation Methodology:** We use a sum of the parts methodology on 2019 estimates to derive the valuation for Dominion Resources. We value VEPCO, the regulated electric utility subsidiary at a 15% premium to to the average regulated utility P/E multiple. We value D Energy at a 5% premium to the average midstream P/E multiple.We value Corp & Other at a regulated utility average multiple. We value the merchant generation at 7.6x EBITDA and deduct allocated debt. We value Atlantic Coast Pipeline at a 14.2x MLP multiple to EBITDA, discounted back one year to 2019. We add $2 value for D's LP ownership stake in DM.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Changes to the regulatory landscape could change D's earnings potential. In addition, D has an extensive capital expenditure forecast driving its growth strategy. Changes to availability of capital could impede its growth objectives. Project delays could push out projected earnings growth. A decline in the forward power curves could reduce earnings coming from Millstone's unhedged production. There is also uncertainty with regard to potential tax reform.

**DTE Energy (DTE)**

**Valuation Methodology:** Our $115 price target is a 12% premium to the group including 1.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 17.0x and our $6.07 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include wholesale commodity prices, generation development market conditions, the outcome of regulatory proceedings, rating agency actions, interest rates, IRS tax regulations, the outlook for energy technology, and access to the capital markets.

**Duke Energy (DUK)**

**Valuation Methodology:** Our valuation for DUK is based upon a 0.6% premium to the industry average P/E on our 2019E earnings. The premium reflects the net of a 5% premium offset by a 4.4% discount for potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to regulated utilities, and DUK specifically, include weakening demand, higher than expected inflationary pressures, interest rates, regulatory lag and greater scrutiny from regulators and politicians around investment and operating decisions. Lingering political effects and regulatory recovery of the coal ash spill in NC remains an outstanding risk specific to DUK. There is also uncertainty with regard to potential tax reform.

**Dynegy Inc. (DYN)**

**Valuation Methodology:** Our $13 price target is premised upon a half turn discount to the mid-cycle multiple or 7.1x our 2018 EBITDA estimate of $1,415 million, net debt of $7,951 million, environmental capex and NPV of NOLs that offset and 151 million shares outstanding.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Dynegy Inc. is an independent power company with a 50% natural gas 50% coal fired fleet diversified across MISO, PJM, New England, and New York. Risks to performance include natural gas, coal, and power prices, as well as annually set capacity prices in PJM and MISO. Risks to our valuation also include the ENGIE asset acquisition not closing as expected.

**Edison International (EIX)**

**Valuation Methodology:** Our $84 price target is a 4% premium to the group including -0.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 17.0x and our $4.76 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include wholesale commodity prices, generation development market conditions, the outcome of regulatory proceedings, rating agency actions, interest rates, and access to the capital markets.

**Emera Inc. (EMA CN / EMA.TO)**

**Valuation Methodology:** Our current C$53 price target is premised upon a sum of the parts approach. We value Canadian utility operations at a 15% premium to the '19E US regulated utility multiple of 16.5x our '19E earnings per share of C$1.40. US regulated utility operations use a multiple of 16.5x our '19E eps of C$0.45. For Caribbean operations we use a '19E multiple of 15.1x based upon the current multiple of publically traded Caribbean Utilities Corporation Ltd. We apply this to our '19E Caribbean eps of C$0.30. We use '19E pipeline comp multiple of 17.8x our '19E pipeline eps of C$0.32. For other operations, mainly energy trading and the US power plants we use a power comparable multiple of 16.3x our '19E eps of C$0.63. For corporate and other earnings of (C$0.50) in '19E we use the straight US regulated multiple of 16.5x. To this we add C$9/share related to the Teco acquisition accretion of C$0.54/share at a 16.5x multiple. We also discount our entire valuation by 4% related to the overhang of potential non-interest deductibility in any US tax policy changes for the intermediate HoldCo leverage.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Economic growth and regulatory

## Valuation Methodology and Risks

environment in Nova Scotia. Execution of large scale capital projects. Government environmental policy in Nova Scotia. Regulation by the Federal Energy Regulatory Commission and state regulators in Maine. Execution on capital deployment projects in joint ventures to achieve appropriate hurdle rates.

**Entergy Corp. (ETR)**

**Valuation Methodology:** Our price target is derived by applying the industry average multiple of 17.0x to our 2019E of $4.85 for UPO. Our price target also reflects a 5.6% discount for potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** EWC-related risks include: negative developments related to all operating and closed nuclear facilities, declining forward price curves, and unscheduled non-regulated plant outages. Utility-related risks include: regulatory lag, poor rate case outcomes, and ANO-related remediation expenses. There is also uncertainty regarding potential tax reform.

**Eversource Energy (ES)**

**Valuation Methodology:** Our price target reflects a 10% premium to the industry average multiple of 17.4x our 2019E estimate. We also apply a 0.75% discount to reflect uncertainty related to potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risk factors include regulatory approval and permitting of Access Northeast and Northern Pass projects, changes to prevailing local, state and federal governmental policies and regulatory actions with respect to allowed rates of return, rate structure, continued recovery of regulatory assets and energy costs, financing, changes in tax laws and policies, and changes in compliance with environmental and safety laws and policies among other risks. There is also uncertainty regarding potential tax reform.

**Exelon Corp. (EXC)**

**Valuation Methodology:** Our current $43 price target is premised upon a 2019 group average multiple of 16.8x applied to the utility net parent earnings of $1.81 resulting in $31 of utility value. Exgen is valued at 6.6x 2018 EBTIDA netted against debt resulting in $12 of value for Exgen, the combined value is $43.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The major risks for the utility are regulatory outcomes given the multiple regulatory districts combines with the expectation of reducing regulatory lag. For Exgen the major risks are commodity price, supply rationalization or lack thereof and unplanned outages.

**FirstEnergy Corp. (FE)**

**Valuation Methodology:** Our revised $37 target is a 5% discount to the Regulated Utility 2019 average P/E of 17.3x applied to UNOP EPS of $2.25. Our base case valuation subtracts ½ of the Ohio rider mechanism ($0.27/share) which is approved for 3 years and extendable to 5 years starting January 1, 2017. We also assume 25% equity funding for $1.5B of liabilities (-$0.14/share) and ongoing support services for FES (-$0.10/share).

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks are an interruption in the delevering strategy from failure to close/announce asset sales, nuclear plant performance, interest rates, and the economy.

**FORTIS INC (FTS)**

**Valuation Methodology:** Our price target of $40 is consistent with our price target on FTS.TO and a 1.26 US$/C$ exchange rate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulation across their 17 regulatory jurisdictions, weather variations, hurricanes effecting their Caribbean operations or Newfoundland, economic growth and capital needs in their jurisdictions in the US and Canada, and tax policy.

**Fortis Inc. (FTS CN / FTS.TO)**

**Valuation Methodology:** We derive a C$50 price target using an SOTP methodology. We use a 15% premium to the US regulated utility multiple of 16.5x 16.5x our '19E Canadian regulated eps of C$1.08 and a flat 16.5x multiple to our '19E US regulated utility eps of C$1.76. We used a multiple for Caribbean utilities of 14.9x our '19E Caribbean Utilities eps of C$0.12 and an IPP multiple of 18.4x our '19E Generation eps of C$0.18. We used a flat 16.5x multiple on our '19E corporate and other epx of (C$0.41). To this we added C$1.85/share of value for the estimated incremental capital growth projects of Tilbury 1B, Woodfibre LNG pipeline, and Ontario transmission at 30%, 60%, and 90% probabilities respectively.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulation across their 17 regulatory jurisdictions, weather variations, hurricanes effecting their Caribbean operations or Newfoundland, economic growth and capital needs in their jurisdictions in the US and Canada, and tax policy.

**Hawaiian Electric Inds (HE)**

**Valuation Methodology:** Our price target reflects a 5% discount to the Regulated Utility average P/E of 17.0x our 2019E utility earnings of $1.33, plus a 1.5% premium to 14.4x bank earnings of $0.50.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** HE has regulatory and political risk moving forward on a stand alone basis. Executing on the legislated goal of 100% renewable energy by 2045 also carries execution risk. HE has a robust capital expenditure plan to meet the state targets, but will require PUC support to successfully execute. Ultimately the dividend could be at risk in a more extreme scenario where HE's margins come under increased pressure or there is customer erosion. There is also uncertainty regarding potential tax reform.

**NextEra Energy (NEE)**

**Valuation Methodology:** Our price target is based on applying a 10% premium to the regulated utility multiple of 17.5x to our 2019 EPS estimate

## Valuation Methodology and Risks

of $7.74. We also assign a 1.25% premium to reflect opportunity related to potential tax reform. In addition, we add $8.50/share value for NEE's pro rata ownership of NEP.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** NextEra Energy Resources has merchant exposure to volatile gas and power prices, and risks associated with expansion in the size of its wind asset base. In addition, volatility around fuel prices and high levels of capital spending at its utility present regulatory risk. There is also uncertainty regarding potential tax reform.

**NextEra Energy Partners, LP. (NEP)**

**Valuation Methodology:** We value NEP at $39/share on the basis of the 2018E annualized LP distribution rate of $1.77 and a yield of 4.5%. The base case for NEP relies on a high quality, long-term contracted asset base, highly visible long-term growth rate in the range of 12-15% per year for the next several years, high level of operating competence by the management team, and continuing investor demand for yielding equity vehicles.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The risks to the business model and our thesis are diminished investor appetite for yielding equities; rising interest rates, and/or fluctuating wind resource impairs short-term cash generation abilities which could create problems funding and growing the distributions; operational issues surrounding the wind and solar assets; and the elimination of production tax credits as a result of political maneuvering.

**NiSource, Inc. (NI)**

**Valuation Methodology:** Our $26 price target is a 15% premium to the group including -0.6% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 17.4x and our $1.33 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include adverse regulatory outcomes, lower sales growth, higher cost of capital, and earlier than expected equity needs.

**NRG Energy (NRG)**

**Valuation Methodology:** Our $27 price target is premised upon a half turn discount to the mid-cycle multiple of 7.6x our run-rate post transformation execution EBITDA of $1,848 million, less net debt of $5,985 million, PV of NOLs of $655 million, with a 20% underachievement on cost and margin improvement, resulting in a value of $18/share. To this we add the value of allocable cash discounted to 2018 at 10% and haircut by 33% for execution risk, resulting in $9/share.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include commodity prices, regulation, capital markets, interest rates and environmental policy.

**NRG Yield Inc. (NYLD)**

**Valuation Methodology:** Our $24 price target uses the average of two methodologies – a yield co. average multiple of 11.1x '19E EBITDA of $1,099 million less net debt of $4.8 billion and 263 million shares projected by 2019 to fund the EBITDA growth, which is $28, and a one year forward yield at our forecast 15% growth rate, which is $20.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks are equipment reliability, sales demand, environmental regulation, taxes and political uncertainty.

**OGE Energy Corp. (OGE)**

**Valuation Methodology:** Our price target is $38. This comprises '19E EPS of $1.77 at OG&E (utility), using a 2.9% discount to the 16.9x utility group multiple equating to $29, plus $9 for OGE's 26.5% ownership of Enable Midstream Partners LP (ENBL), marked to current price.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Federal (FERC, EPA) and state (Oklahoma, Arkansas) regulation, costs of compliance with environmental laws and regulations, Operational risks associated with OGE's businesses, economic conditions, climate change, cyber security risks and increased reliance on automated processes. Enable share price may be impacted by volumes or commodity prices on their system as well as changes to the distribution.

**PG&E Corp. (PCG)**

**Valuation Methodology:** Our $69 price target is a 5% premium to the group applied to the 2019 Regulated Utility P/E of 16.5x and our $3.96 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are California and Federal regulation, rating agency actions, interest rates and access to capital markets.

**Pinnacle West Capital (PNW)**

**Valuation Methodology:** Our $87 price target is premised on a 4.9% premium to the 2019 group average P/E of 17.6x applied to our 2019 EPS estimate of $4.71.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are Arizona state and Federal (FERC and NRC) regulation. Demand and rooftop solar can impact earnings significantly under current regulatory construct.

**PNM Resources (PNM)**

**Valuation Methodology:** Our price target of $36 is premised upon a 5% premium to the industry average multiple of 16.9x our 2019E EPS of $2.06. We also assign a 1.9% discount to reflect uncertainty associated with potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are environmental regulation, regulatory environment in Texas and New Mexico, weather, and the New Mexico and Texas economies. There is modest risk that the NM commission adjusts or rejects PNM's rate case settlement. There is also uncertainty with regard to potential tax reform.

**Portland General Electric Co. (POR)**

## Valuation Methodology and Risks

**Valuation Methodology:** Our $44 price target reflects  the 2019 group average P/E multiple of 17.0x applied to our 2019 eps estimate of $2.59.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The main risks to our valuation are the commercial operation of the Carty Generating Station, regulatory filings and outcomes, as well as economic issues impacting demand growth and inflation.  In the event that demand growth accelerates given the local Portland economy, our estimates would prove to be conservative.

**PPL Corporation (PPL)**

**Valuation Methodology:** Our $42 target reflects a 2% discount for UK pound/US$ currency mark-to-market applied to the U.S. Regulated Utility average P/E of 17.5x applied to $2.44 in 2019 EPS.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include the outcome of regulatory proceedings, rating agency actions, foreign currency translation, interest rates, and access to the capital markets.

**Public Service Enterprise Gp (PEG)**

**Valuation Methodology:** Our $49 target reflects a sum of the parts including $42 for PSE&G at a 11% premium including +2% for exposure to tax reform applied to the 2019 Regulated Utility average of 17.4x and our $2.29E, $5 for PSEG Power at 7.4x '19 Open EBITDA of $0.8B less $3.66B of net debt.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are wholesale power prices, New Jersey and federal utility regulation, and interest rates.

**SCANA Corp. (SCG)**

**Valuation Methodology:** Our current price target of $65 is premised upon the regulated average multiple of 16.5x our 2019E earnings per share of $4.68.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Primary risk factors are construction risk associated with the V.C. Summer nuclear facilities, regulatory risk from frequent proceedings and rate fatigue in the company's service territory, financing risk from the frequent need to come to market for new equity, and economic risk connected to the South Carolina economy.

**Sempra Energy (SRE)**

**Valuation Methodology:** Our price target is premised upon a sum of the parts valuation, applying a 5% premium to the regulated utility group average multiple to our 2019 EPS estimate of $6.85 for the majority of SRE's regulated and contracted businesses, adding $23/share for trains 1-3 at Cameron, and $19/share for the value inherent in SRE's ownership interest in IEnova.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** SRE's long-term earnings growth is largely dependent on successful completion of Cameron trains 1-3. Construction delays present a risk to valuation. A portion of earnings are also exposed to international, political, and currency risk. Tail risk from the Aliso Canyon gas leak persists, as does ongoing regulatory risk in CA. There is also uncertainty with regard to potential tax reform.

**Southern Co. (SO)**

**Valuation Methodology:** Our current price target of $54 is premised upon our 2019 eps estimate of $3.25 at a group average multiple of 16.5x, which incorporates a 15% discount from the historical 15% premium at which Southern has traded for overhang risks related to the Vogtle and Kemper construction projects.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risks associated with closing the SNG pipeline venture with KMI, construction risk for Vogtle and Kemper, as well as standard regulatory risk associated with regulated assets.

**Vistra Energy Corp. (VST)**

**Valuation Methodology:** Our current price target of $17 is premised upon a half turn discount to the mid-cycle multiple or 7.1x our 2018E EBITDA of $1,374 million, $3,130 million in net debt and 427.56 million shares outstanding.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are Texas and Federal environmental regulations, Texas regulation or lack thereof in the retail market, power and natural gas prices, weather, interest rates, and credit ratings.

**WEC Energy Group (WEC)**

**Valuation Methodology:** Our price target for WEC is predicated on a 15% premium to the industry average P/E multiple of 17x our 2019E of $3.55. We also assign a 2.0% discount to reflect potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** FERC is currently reviewing a complaint filed against MISO transmission owners, of which WEC is an owner through its share in ATC. A revision in the allowed ROE by FERC to a base ROE that is significantly lower than FERC's recent order in MISO complaint #1 could negatively impact WEC. Also, continued cost escalation or execution delays to the pipeline replacement program (AMRP) in Illinois could create political and regulatory pressure. Regulatory risk is also a factor in WEC's various jurisdictions. There is also uncertainty with regard to potential tax reform.

**Xcel Energy (XEL)**

**Valuation Methodology:** Our XEL valuation is premised upon a 10% premium to the regulated utility average P/E multiple on our 2019 estimate of $2.59. We also assign a 2.4% discount to reflect uncertainty related to potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks are interest rates, state and federal utility regulation, and access to external capital to fund capital expenditures. XEL operates in multiple jurisdictions and often has multiple rate cases pending which carry knowable and unforseeable risks. There is also uncertainty with regard to potential tax reform.

Source: Barclays Research.

## ANALYST(S) CERTIFICATION(S):

We, Daniel Ford, CFA, Ross A. Fowler, CFA, Gregg Orrill and Jon Windham, CFA, hereby certify (1) that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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**Primary Stocks (Ticker, Date, Price)**

**AES Corp.** (AES, 19-Jul-2017, USD 11.32), Equal Weight/Neutral, CD/CE/D/J/K/L/M/N

**Alliant Energy** (LNT, 19-Jul-2017, USD 40.50), Equal Weight/Neutral, A/CE/D/J/K/L/M

**Ameren Corp.** (AEE, 19-Jul-2017, USD 55.66), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**American Electric Power** (AEP, 19-Jul-2017, USD 68.65), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**American States Water Company** (AWR, 19-Jul-2017, USD 48.09), Underweight/Neutral, CE/J

**American Water Works** (AWK, 19-Jul-2017, USD 80.02), Overweight/Neutral, CE/J

**Aqua America** (WTR, 19-Jul-2017, USD 32.98), Overweight/Neutral, CE/J

**Brookfield Infrastructure Partners LP** (BIP, 19-Jul-2017, USD 39.79), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N/R

**Brookfield Infrastructure Partners LP** (BIP_u.TO, 19-Jul-2017, CAD 50.16), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N/R

**Brookfield Renewable Energy Partners LP** (BEP, 19-Jul-2017, USD 33.57), Equal Weight/Neutral, A/CD/D/J/K/L/M/R

**Brookfield Renewable Energy Partners LP** (BEP_u.TO, 19-Jul-2017, CAD 42.30), Equal Weight/Neutral, A/CD/D/J/K/L/M/R

**California Water Service Group** (CWT, 19-Jul-2017, USD 38.15), Underweight/Neutral, J

**Calpine Corp.** (CPN, 19-Jul-2017, USD 14.16), Overweight/Neutral, CD/CE/D/J/K/L/M

**Canadian Utilities Ltd.** (CU.TO, 19-Jul-2017, CAD 41.48), Underweight/Neutral, CD/J

**Caribbean Utilities Ltd.** (CUPu.TO, 18-Jul-2017, USD 13.47), Underweight/Neutral, J

**CenterPoint Energy Inc.** (CNP, 19-Jul-2017, USD 27.63), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**CMS Energy** (CMS, 19-Jul-2017, USD 46.24), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Connecticut Water Service Inc.** (CTWS, 19-Jul-2017, USD 56.77), Equal Weight/Neutral, CD/J

**Consolidated Edison** (ED, 19-Jul-2017, USD 81.75), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Dominion Energy** (D, 19-Jul-2017, USD 76.98), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**DTE Energy** (DTE, 19-Jul-2017, USD 105.94), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**Duke Energy** (DUK, 19-Jul-2017, USD 84.35), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M

Other Material Conflicts: Barclays Bank and/or its affiliate is providing investment banking services to Duke Energy Corp (NYSE: DUK) in relation to its potential acquisition of Piedmont Natural Gas Company Inc.

**Dynegy Inc.** (DYN, 19-Jul-2017, USD 9.04), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M/N

## IMPORTANT DISCLOSURES CONTINUED

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**Edison International** (EIX, 19-Jul-2017, USD 78.07), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Emera Inc.** (EMA.TO, 19-Jul-2017, CAD 47.01), Overweight/Neutral, A/CD/D/J/L/R

**Entergy Corp.** (ETR, 19-Jul-2017, USD 75.90), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Eversource Energy** (ES, 19-Jul-2017, USD 60.67), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Exelon Corp.** (EXC, 19-Jul-2017, USD 37.39), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**FirstEnergy Corp.** (FE, 19-Jul-2017, USD 30.83), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**FORTIS INC** (FTS, 19-Jul-2017, USD 35.16), Overweight/Neutral, CD/J

**Fortis Inc.** (FTS.TO, 19-Jul-2017, CAD 44.28), Overweight/Neutral, CD/J

**Great Plains Energy Inc.** (GXP, 19-Jul-2017, USD 29.92), Rating Suspended/Neutral, A/CD/CE/D/FA/J/K/L/M

Other Material Conflicts: Barclays Bank PLC and/or its affiliate is acting as financial advisor to Great Plains Energy (NYSE: GXP) in its merger with Westar Energy (NSYE: WR). The rating, price target and estimates (as applicable) on Great Plains Energy (NYSE: GXP) and Westar Energy (NSYE: WR) previously issued by the Firm's Research department have been temporarily suspended due to this potential transaction.

**Hawaiian Electric Inds** (HE, 19-Jul-2017, USD 31.97), Underweight/Neutral, CD/CE/J/K/M

**NextEra Energy** (NEE, 19-Jul-2017, USD 141.80), Overweight/Neutral, CD/CE/D/J/K/L/M

**NextEra Energy Partners, LP.** (NEP, 19-Jul-2017, USD 38.16), Overweight/Neutral, CE/E/J/L

**NiSource, Inc.** (NI, 19-Jul-2017, USD 25.65), Equal Weight/Neutral, A/CE/D/J/K/L/M

**NRG Energy** (NRG, 19-Jul-2017, USD 24.00), Overweight/Neutral, A/CD/CE/D/FA/J/K/L/M

**NRG Yield Inc.** (NYLD, 19-Jul-2017, USD 17.89), Overweight/Neutral, CD/D/FA/FB/J/K/L/M

**OGE Energy Corp.** (OGE, 19-Jul-2017, USD 34.99), Equal Weight/Neutral, CD/CE/D/J/L

**Ormat Technologies** (ORA, 19-Jul-2017, USD 58.41), Equal Weight/Neutral, CD/CE/J

**PG&E Corp.** (PCG, 19-Jul-2017, USD 67.10), Overweight/Neutral, CD/CE/D/J/K/L/M

**Pinnacle West Capital** (PNW, 19-Jul-2017, USD 86.01), Equal Weight/Neutral, CE/D/J/K/L/M

**PNM Resources** (PNM, 19-Jul-2017, USD 37.80), Equal Weight/Neutral, CE/J

**Portland General Electric Co.** (POR, 19-Jul-2017, USD 45.05), Underweight/Neutral, CD/CE/D/J/K/L/M

**PPL Corporation** (PPL, 19-Jul-2017, USD 38.12), Equal Weight/Neutral, CE/D/E/J/K/L/M

**Public Service Enterprise Gp** (PEG, 19-Jul-2017, USD 44.21), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**SCANA Corp.** (SCG, 19-Jul-2017, USD 64.30), Equal Weight/Neutral, CD/CE/J

**Sempra Energy** (SRE, 19-Jul-2017, USD 112.94), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M

**Southern Co.** (SO, 19-Jul-2017, USD 47.23), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**Vistra Energy Corp.** (VST, 19-Jul-2017, USD 15.96), Equal Weight/Neutral, CE/J

**Waste Connections** (WCN, 19-Jul-2017, USD 64.41), Overweight/Neutral, CD/CE/J

**Waste Connections** (WCN.TO, 19-Jul-2017, CAD 81.17), Overweight/Neutral, CD/CE/J

**WEC Energy Group** (WEC, 19-Jul-2017, USD 62.70), Equal Weight/Neutral, CD/CE/E/J/K/L/M

**Westar Energy** (WR, 19-Jul-2017, USD 49.41), Rating Suspended/Neutral, A/CD/CE/D/J/K/L/M

Other Material Conflicts: Barclays Bank PLC and/or its affiliate is acting as financial advisor to Great Plains Energy (NYSE: GXP) in its merger with Westar Energy (NSYE: WR). The rating, price target and estimates (as applicable) on Great Plains Energy (NYSE: GXP) and Westar Energy (NSYE: WR) previously issued by the Firm's Research department have been temporarily suspended due to this potential transaction.

**Xcel Energy** (XEL, 19-Jul-2017, USD 46.62), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Materially Mentioned Stocks (Ticker, Date, Price)**

**8point3 Energy Partners LP** (CAFD, 19-Jul-2017, USD 14.67), Equal Weight/Neutral, D/E/J/K/L/M/N

**Canadian Solar Inc.** (CSIQ, 19-Jul-2017, USD 17.42), Equal Weight/Neutral, CD/CE/FA/J/K/M

**Clean Harbors** (CLH, 19-Jul-2017, USD 56.50), Underweight/Neutral, CD/CE/J

**Covanta Holding Corp.** (CVA, 19-Jul-2017, USD 13.35), Overweight/Neutral, CD/CE/J/K/M/N

**First Solar Inc.** (FSLR, 19-Jul-2017, USD 45.67), Overweight/Neutral, CE/J

**Republic Services** (RSG, 19-Jul-2017, USD 64.73), Equal Weight/Neutral, CD/CE/D/J/K/L/M

**SolarEdge Technologies Inc.** (SEDG, 19-Jul-2017, USD 22.05), Overweight/Neutral, FA/J

**SunPower Corp.** (SPWR, 19-Jul-2017, USD 11.15), Equal Weight/Neutral, CD/CE/D/E/J/K/L/M/N

## IMPORTANT DISCLOSURES CONTINUED

**Sunrun Inc.** (RUN, 19-Jul-2017, USD 7.27), Overweight/Neutral, J

**Terraform Global Inc.** (GLBL, 19-Jul-2017, USD 5.00), Rating Suspended/Neutral, CE/FA/J

**US Ecology, Inc.** (ECOL, 19-Jul-2017, USD 52.50), Underweight/Neutral, J

**Waste Management** (WM, 19-Jul-2017, USD 74.92), Equal Weight/Neutral, CD/CE/E/J/K/L/M

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All non-covered stocks prices are sourced from Thomson Reuters, Barclays as of the last available closing price in the relevant trading market.

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In addition to the stock rating, we provide industry views which rate the outlook for the industry coverage universe as Positive, Neutral or Negative (see definitions below). A rating system using terms such as buy, hold and sell is not the equivalent of our rating system. Investors should carefully read the entire research report including the definitions of all ratings and not infer its contents from ratings alone.

**Stock Rating**

**Overweight** - The stock is expected to outperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

**Equal Weight** - The stock is expected to perform in line with the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

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**Positive** - industry coverage universe fundamentals/valuations are improving.

**Neutral** - industry coverage universe fundamentals/valuations are steady, neither improving nor deteriorating.

**Negative** - industry coverage universe fundamentals/valuations are deteriorating.

Below is the list of companies that constitute the "industry coverage universe":

**North America Alternative Energy & Environmental Services**

| | | |
|---|---|---|
| 8point3 Energy Partners LP (CAFD) | Advanced Disposal Services, Inc. (ADSW) | Azure Power Global Ltd. (AZRE) |
| Canadian Solar Inc. (CSIQ) | Casella Waste Systems (CWST) | Clean Harbors (CLH) |
| Covanta Holding Corp. (CVA) | First Solar Inc. (FSLR) | Hannon Armstrong Sustainable Infrastructure Capital, Inc (HASI) |
| Ormat Technologies (ORA) | Republic Services (RSG) | SolarEdge Technologies Inc. (SEDG) |
| Stericycle Inc. (SRCL) | SunPower Corp. (SPWR) | Sunrun Inc. (RUN) |
| Terraform Global Inc. (GLBL) | TPI Composites, Inc. (TPIC) | US Ecology, Inc. (ECOL) |
| Waste Connections (WCN) | Waste Connections (WCN.TO) | Waste Management (WM) |

**North America Power & Utilities**

| | | |
|---|---|---|
| AES Corp. (AES) | Alliant Energy (LNT) | Ameren Corp. (AEE) |
| American Electric Power (AEP) | American States Water Company (AWR) | American Water Works (AWK) |
| Aqua America (WTR) | Brookfield Infrastructure Partners LP (BIP) | Brookfield Infrastructure Partners LP (BIP_u.TO) |
| Brookfield Renewable Energy Partners LP (BEP) | Brookfield Renewable Energy Partners LP (BEP_u.TO) | California Water Service Group (CWT) |
| Calpine Corp. (CPN) | Canadian Utilities Ltd. (CU.TO) | Caribbean Utilities Ltd. (CUPu.TO) |
| CenterPoint Energy Inc. (CNP) | CMS Energy (CMS) | Connecticut Water Service Inc. (CTWS) |
| Consolidated Edison (ED) | Dominion Energy (D) | DTE Energy (DTE) |
| Duke Energy (DUK) | Dynegy Inc. (DYN) | Edison International (EIX) |
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| Exelon Corp. (EXC) | FirstEnergy Corp. (FE) | FORTIS INC (FTS) |
| Fortis Inc. (FTS.TO) | Great Plains Energy Inc. (GXP) | Hawaiian Electric Inds (HE) |
| Hydro One Ltd. (H.TO) | National Grid Plc (NGG) | NextEra Energy (NEE) |
| NextEra Energy Partners, LP. (NEP) | NiSource, Inc. (NI) | NRG Energy (NRG) |
| NRG Yield Inc. (NYLD) | OGE Energy Corp. (OGE) | PG&E Corp. (PCG) |
| Pinnacle West Capital (PNW) | PNM Resources (PNM) | Portland General Electric Co. (POR) |
| PPL Corporation (PPL) | Public Service Enterprise Gp (PEG) | SCANA Corp. (SCG) |
| Sempra Energy (SRE) | Southern Co. (SO) | TerraForm Power, Inc. (TERP) |

## IMPORTANT DISCLOSURES CONTINUED

| | | |
|---|---|---|
| Vistra Energy Corp. (VST) | Vivint Solar Inc. (VSLR) | WEC Energy Group (WEC) |
| Westar Energy (WR) | Xcel Energy (XEL) | |

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To see a list of companies that comprise a particular industry coverage universe, please go to https://publicresearch.barclays.com.

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BARCLAYS

Equity Research
6 September 2016

# North America Power & Utilities

# Why Invest in Water Utilities?

**In this report, we are going to outline several compelling reasons to consider investing in water utilities. We are also initiating coverage of Connecticut Water Service Inc. (CTWS) with an Equal Weight rating and adjust price targets for AWK, AWR, CWT, and WTR.** First, water utilities provide above-average ratebase growth as compared to other utilities. Second, state regulatory and legislative initiatives have broadly acted to reduce regulatory lag and improve opportunity. Third, consolidation will likely continue and unlike corporate M&A, states are providing incentives for consolidation of water systems. Fourth, scarcity value, there is only $25B in market capitalization of water companies in the US. Finally, simply put we view the risk reward as favorable.

**Industry structure helps to support the first three reasons to invest in water.** As with electric utilities, water investment involves long-lived assets that fundamentally impact everyday necessities of modern life. Water utilities are mainly owned by municipalities. In fact, 85% of the water industry is under municipal ownership, with only 15% privately owned. This ownership profile has led to years of under spending putting the collective US water system in desperate need of upgrade. The fragmented nature means state regulators have an overload of water cases and as such look for ways to standardize rates and/or incentivize use of riders and surcharges. Finally, the fragmented nature allows for a significant number of acquisition targets.

**We are initiating coverage of Connecticut Water Service Inc. (CTWS) with an Equal Weight rating and $53 price target. Additionally we are adjusting our price targets premised upon a reduction of the 2018 group average multiple. As such, our price targets decrease by $6 for AWK, by $5 for AWR, by $4 for WTR, and by $2 for CWT. We are reiterating our ratings and earnings estimates for AWK, AWR, CWT and WTR. We continue to view our Overweight-rated AWK as the best way to invest in the water sector.**

INDUSTRY UPDATE

North America Power & Utilities
NEUTRAL
Unchanged

For a full list of our ratings, price target and earnings changes in this report, please see table on page 2.

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## Summary of our Ratings, Price Targets and Earnings Changes in this Report (all changes are shown in bold)

| Company | Rating | | Price | Price Target | | | EPS FY1 (E) | | | EPS FY2 (E) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Old | New | 01-Sep-16 | Old | New | %Chg | Old | New | %Chg | Old | New | %Chg |
| **North America Power & Utilities** | Neu | Neu | | | | | | | | | | |
| American States Water Company (AWR) | UW | UW | 38.85 | 44.00 | **39.00** | -11 | 1.67 | 1.67 | - | 1.75 | 1.75 | - |
| American Water Works (AWK) | OW | OW | 73.36 | 87.00 | **81.00** | -7 | 2.84 | 2.84 | - | 3.06 | 3.06 | - |
| Aqua America (WTR) | EW | EW | 30.37 | 38.00 | **34.00** | -11 | 1.33 | 1.33 | - | 1.41 | 1.41 | - |
| California Water Service Group (CWT) | EW | EW | 30.34 | 33.00 | **31.00** | -6 | 1.02 | 1.02 | - | 1.34 | 1.34 | - |
| Connecticut Water Service Inc. (CTWS) | N/A | **EW** | 45.70 | N/A | **52.00** | - | N/A | **2.12** | - | N/A | **2.22** | - |

Source: Barclays Research. Share prices and target prices are shown in the primary listing currency and EPS estimates are shown in the reporting currency.
FY1(E): Current fiscal year estimates by Barclays Research. FY2(E): Next fiscal year estimates by Barclays Research.
Stock Rating: OW: Overweight; EW: Equal Weight; UW: Underweight; RS: Rating Suspended
Industry View: Pos: Positive; Neu: Neutral; Neg: Negative

# Rate Base Growth

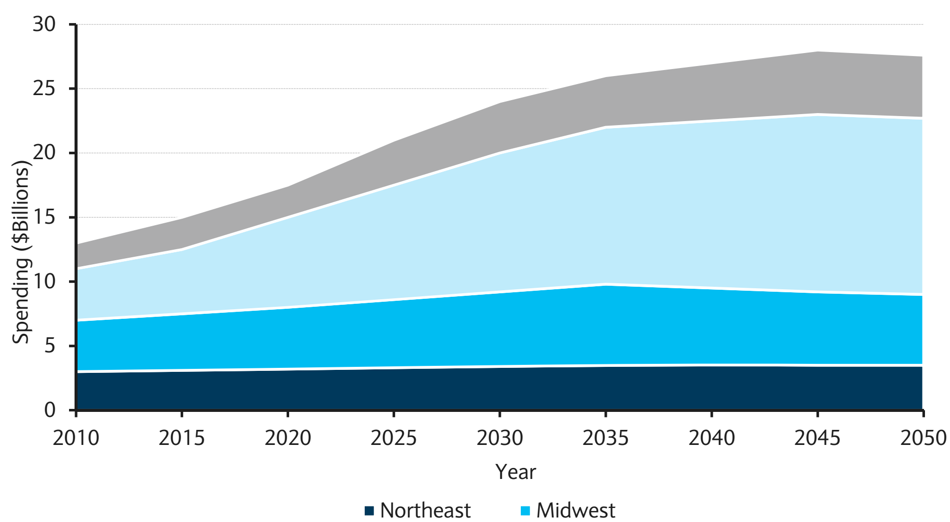
## The System Needs Updating

The single most compelling argument for why such large levels of investment are need in water infrastructure is how old and outdated the system is in general. Three numbers really highlight this need: 225 – the average pipe replacement cycles in years for the industry, 2.8% - the average depreciation rate for the industry (which is 3.8% for gas and 4.0% for electric), 25% - the percent of potable water lost as a result of system leakage.

Just to put some numbers around projected spending needs, the EPA estimates $384B of spending over the next 20 years excluding waste water systems simply to keep water systems operating. The ASCE estimates that replacing water infrastructure could cost $1 trillion over 25 years. The cost for water main replacement alone could approach $25B annually by 2030 (see Figure 1).

FIGURE 1

**Water Main Replacement Projected Annual Cost**




Source: NAWC, Barclays Research

## Past and Future Industry Regulations Drive Investments

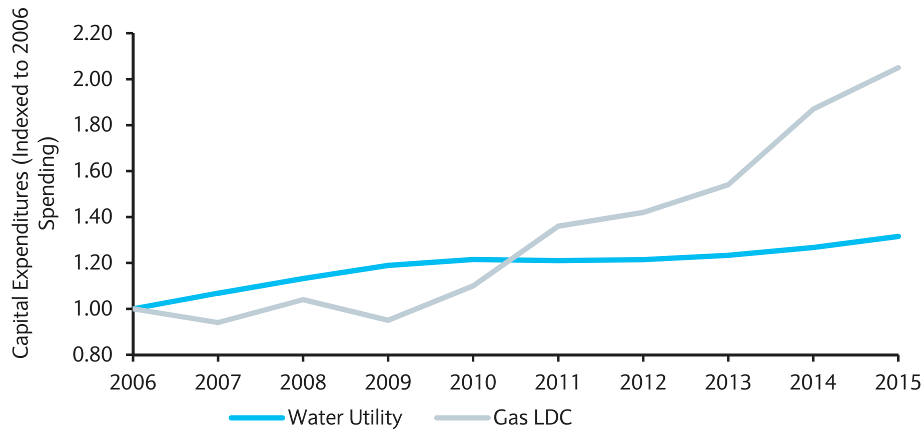
The tragic events in Flint, MI, combined with several pending regulatory requirement will likely drive an increase in spending much like the fatal pipeline explosion in San Bruno California drove a significant uptick in natural gas pipeline replacement spending (see Figure 2). An example of regulatory requirement driven costs was the Lead and Copper Rule (LCR), which cost $19B to implement. It should also be noted that a revision to that rule is expected next year, which is expected to address partial lead service replacement along with increased testing.

As we have pointed out in previous research, a parallel can be drawn between the events in Flint, its repercussions on regulatory policy and spending for water utilities and the impact of the San Bruno explosion for natural gas distribution systems. It is unfortunate that systematic improvements in US infrastructure are often reactionary in this way, but on the bright side, policy does catch up leading to improved safety and reliability in the end. In

Figure 2, we compare the spending pattern for gas distribution over the last decade with that of water. The San Bruno incident took place on September 9, 2010.

FIGURE 2

**Capital Spending Trend for LDC's Before and After San Bruno Explosion**




Source: Company Filings, Barclays Research

### Industry Structure

The fragmented industry lends itself to underspending as smaller systems can't raise the necessary funds through taxes, bonds and/or rate requests. This leads to significant leakage and water quality issues. As sad as that may be nationwide given 85% of systems are public, it provides an opportunity for investor owned utilities to take the lead on addressing industry issues and concerns through capital spending.

## Improving Regulatory/Legislative Constructs

### More Regulatory Mechanisms to Reduce Lag

With significant upgrades needed to the system, water companies have and will continue to file frequent rate cases. The investor owned utilities have tried to work with regulators to get rider and surcharge treatment in order to stay out of general rate cases for longer periods of time. This is evident by the increased number of states DSIC, non-DSIC riders, rate consolidation, forward test years, decoupling and CWIP (see Figure 3). However, as compared to electric utilities, there is still room for improvement (see Figure 4).

FIGURE 3

**Rate Mechanisms by State**

| State | Test Year | CWIP(3) | Rate Consolidation | Decoupling/ Declining Usage Rider | DSIC | Non-DSIC Riders |
|---|---|---|---|---|---|---|
| Alabama | Historic | | | | | ✓ |
| Alaska | Historic | | | | | |
| Arizona | Historic | ✓ | ✓ | | | ✓ |
| Arkansas | Hybrid(1) | ✓ | | | | ✓ |
| California | Forward | ✓ | ✓ | ✓ | ✓ | ✓ |
| Colorado | Hybrid(2) | ✓ | ✓ | | | ✓ |
| Connecticut | Historic | ✓ | ✓ | | ✓ | ✓ |
| Delaware | Historic | ✓ | ✓ | | ✓ | |
| District of Columbia | N/A | | | | | |
| Florida | Hybrid(2) | ✓ | ✓ | | | ✓ |
| Georgia | N/A | | | | | |
| Hawaii | Forward | ✓ | | | | ✓ |
| Idaho | Historic | | ✓ | | | |
| Illinois | Hybrid(2) | ✓ | ✓ | | ✓ | ✓ |
| Indiana | Historic | | ✓ | | ✓ | ✓ |
| Iowa | Historic | ✓ | | | | |
| Kansas | Hybrid(2) | | ✓ | | | |
| Kentucky | Hybrid(2) | ✓ | ✓ | | | ✓ |
| Louisiana | Historic | | ✓ | | | ✓ |
| Maine | Historic | ✓ | | | | ✓ |
| Maryland | Historic | ✓ | | | | ✓ |
| Massachusetts | Historic | | ✓ | | | ✓ |
| Michigan | N/A | | | | | |
| Minnesota | N/A | | | | | |
| Mississippi | Hybrid(2) | ✓ | | | | ✓ |
| Missouri | Historic | | ✓ | | ✓ | ✓ |
| Montana | Historic | | ✓ | | | ✓ |
| Nebraska | Hybrid(1) | | | | | |
| Nevada | Historic | | | | | ✓ |
| New Hampshire | Historic | | ✓ | | ✓ | ✓ |
| New Jersey | Historic | | ✓ | | | ✓ |
| New Mexico | Hybrid(2) | ✓ | ✓ | | | ✓ |
| New York | Hybrid(2) | ✓ | ✓ | ✓ | ✓ | ✓ |
| North Carolina | Historic | ✓ | ✓ | | | ✓ |
| North Dakota | N/A | | | | | |
| Ohio | Forward | ✓ | ✓ | | ✓ | ✓ |
| Oklahoma | Historic | ✓ | | | | ✓ |
| Oregon | Historic | ✓ | ✓ | | | ✓ |
| Pennsylvania | Hybrid(2) | ✓ | ✓ | | ✓ | ✓ |
| Rhode Island | Historic | | | | | |
| South Carolina | Historic | ✓ | ✓ | | | ✓ |
| South Dakota | N/A | | | | | |
| Tennessee | Hybrid(2) | ✓ | | | | |
| Texas | Historic | ✓ | ✓ | | | ✓ |
| Utah | Hybrid(2) | ✓ | | | | ✓ |
| Vermont | Historic | ✓ | | | | ✓ |
| Virginia | Forward | ✓ | | | | |
| Washington | Historic | ✓ | ✓ | | | ✓ |
| West Virginia | Historic | ✓ | ✓ | | | ✓ |
| Wisconsin | Hybrid(2) | ✓ | | | | ✓ |
| Wyoming | Historic | ✓ | | | | ✓ |

Source: RRA, Barclays Research

FIGURE 4

Comparison of Regulatory Mechanism by Electric, Gas and Water

| Regulatory Mechanism (number of states with each) | Electric | Gas | Water |
|---|---|---|---|
| Revenue Stabilization: Conservation adjustments, Decoupling | 26 | 30 | 5 |
| Alternative Ratemaking/Timely Recovery: Formula Rates, Multiyear rate deals | 34 | 18 | 4 |
| Alternative Ratemaking for Capital: DSIC and Capex riders | 17 | 25 | 15 |

Source: RRA, Company Filings, Barclays Research

### Legislation Enables Consolidation

Aside from providing direction to state regulators, the single biggest benefit legislation has provided the water industry is the fair value legislation. This legislation whether for any water system or for troubled systems facilitates acquisition of public and private water and waste water entities. The main benefit here is that it provides for the lower of purchase price or fair market value to be included as rate base. This is critical as many older systems may have little book value but still have debt and would sell the water system to financially benefit the community. Figure 5 shows the states with fair value legislation and the investor owned water companies that operate in those states.

FIGURE 5

Fair Value Legislation by State and Company

| State | IOU's Operating in the State |
|---|---|
| California | AWK, AWR, CWT |
| Illinois | AWK, WTR |
| Indiana | AWK, WTR |
| Kentucky | AWK |
| Missouri | AWK |
| New Jersey | AWK, WTR |
| Pennsylvania | AWK, WTR |
| Virginia | AWK, WTR |
| Arizona | None |

Source: RRA, Company Filings, Barclays Research

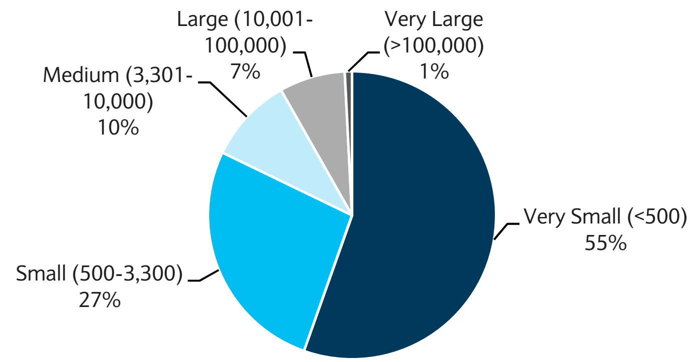
## Consolidation

### Going From Pull to Push

Historically water systems sold because they were approached and were offered the right amount of money. Going forward, while there still needs to be a willing seller, regulators (utility commissions, EPA, state environmental agencies, etc) are doing more to encourage troubled systems and/or poor operators to sell or outsource operations. As discussed previously the fair value legislation adopted in several states also helps to facilitate deals. Following the events in Flint, MI, system owners may no longer want to wear the legal responsibility that will increasingly be associated with owning a water utility. Taken all together we expect by late 2017 or early 2018 a meaningful acceleration of tuck in acquisitions for the water sector. As a reminder of how many of the over 52,000 systems belong to each size category please see Figure 6.

FIGURE 6

**Water Systems by Customer Count**




Source: EPA, Barclays Research

## Scarcity Value

### Few Companies, Thematic Investment

As shown in Figure 7, there are only a handful of investor owned water companies in the US, representing just under $25B in market cap. This is significant as there are infrastructure funds and social and environmentally conscious funds that have mandates to own water utilities. This underlying bid in the context of a relatively small market cap likely works to inflate multiples over time, not unlike what happens with Canadian pension investments.

FIGURE 7

**Investor Owned Water Companies**

| Company | Ticker | Market Capitalization ($ Millions) | Customers |
|---|---|---|---|
| American Water Works Inc. | AWK | $13,050 | 3,250,000 |
| Aqua America Inc. | WTR | $5,385 | 960,000 |
| American States Water Company | AWR | $1,420 | 260,000 |
| California Water Service Group | CWT | $1,455 | 509,000 |
| SJW Corp | SJW | $864 | 36,000 |
| Connecticut Water Service, Inc. | CTWS | $513 | 123,600 |
| Middlesex Water Company | MSEX | $539 | 60,000 |
| York Water Company | YORW | $365 | 65,000 |

Source: Company Filings, Thomson, Barclays Research
Note Market Capitalization data based on 9/1/16 pricing

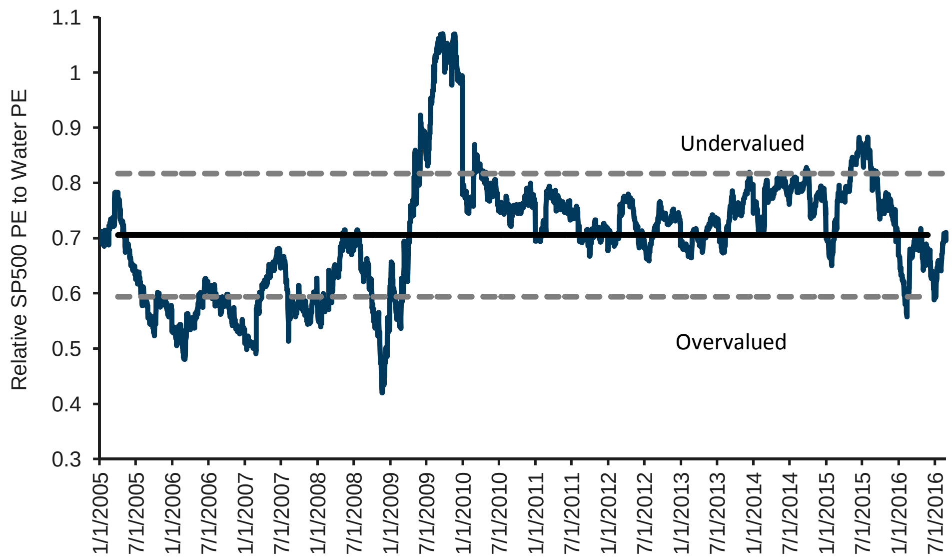
## Risk Reward

### Solid, Stable and Predictable Growth

The main takeaway for the water sector should be that growth will be stable to increasing given the significant capital investment needed. It is not common to find an investment thesis with such long-term visibility surrounding the capital spend, where in general the annual spend is more limited by customer bill impacts than financing or other concerns. Additionally, our view remains that consolidation of the public companies will begin to accelerate over the next 12-24 months as fair value legislation combined with the likelihood of enhanced oversight following the events in Flint, MI, encourage system owners to sell.

FIGURE 8

**Relative Value of Water Companies to the S&P 500**




Source: Thomson One, Barclays Research

As we see in figure 8, the water group has traded at a premium to the S&P 500 over the previous 15 years with the exception of part of 2009. On average the water group trades at a 43% premium to the S&P 500 resulting in an S&P500 P/E relative to the water group of 0.7x. The tolerance range of the S&P500 relative P/E to the water group has been 0.56x to 0.85x, representing an 80% premium down to a 17% premium, respectively. The group currently trades at a 43% premium to the S&P500 suggesting the group is fairly valued.

As a group the average annual EPS growth is approximately 7% with a projected annual dividend growth of 6% off of a current average yield of 2.2%. This results in a projected annual total shareholder return of 9.2% for the sector. Figure 9 shows the comparison for EPS growth, total return and dividend growth for water utilities, electric utilities, gas utilities and the S&P500.

FIGURE 9

**Projected Total Return by Sector**

| Sector | EPS Growth | Dividend Growth | Dividend Yield | Total Return | Beta |
|---|---|---|---|---|---|
| Water Utilities | 7.00% | 6.00% | 2.20% | 9.20% | 0.36 |
| Electric Utilities | 4.50% | 5.80% | 3.50% | 8.00% | 0.30 |
| Gas Utilities | 5.30% | 5.00% | 2.91% | 8.21% | 0.51 |
| S&P500 | 8.25% | | 2.01% | 10.26% | 1.00 |

Source: Thomson One, Barclays Research

### Rising Long-term Interest Rates Are the Biggest Risk for Water

The biggest risk we see for Water utilities is raising long-term interest rates. While we view relative valuation of the space in line with historic ratios to the market, and the annual total return potential of the group is competitive with alternatives, particularly when adjusting for relative volatility, all of the utility groups are viewed and behave as income substitutes. In a recent note *North America Power & Utilities: Still a Place for Utilities*; 13 July 2016, we calculate the equity duration of Water and Transmission companies at just over 24 years. As such, valuations can be quite sensitive to the long end of the yield curve.

## Initiating Coverage of CTWS at Equal Weight

We are initiating coverage of Connecticut Water Service Inc. (CTWS) with an Equal Weight rating and $53 price target. Our EPS estimates are $2.12/$2.21/$2.31 for 2016/2017/2018, respectively. Our price target of $53 is premised upon a 2018 group average P/E of 22.8 applied to our 2018 EPS estimate of $2.31.

**Earnings growth and stability are coming into focus:** The last several years have solid but driven more from a combination of capital investment, O&M efficiency and the benefit of repair tax expense usage. Although these items will all carry forward at least until the next major rate case in Connecticut, the increasing benefit from the repair tax expense accounting has likely peaked as CTWS experienced a negative income tax rate in 2015. As such earnings growth is more in line with capital spending through our forecast period.

**There are several main risks to consider for CWT:** First and foremost is regulatory risk, as approximately 95% of the company's earnings are regulated. The company operates in Connecticut and Maine, with the Connecticut jurisdiction being consolidated and Maine having multiple regulatory jurisdictions. Both Maine and Connecticut have decoupling in place as well as DSIC like trackers to allow for the contemporaneous return of certain capital investments.

CTWS

Stock Rating
EQUAL WEIGHT

Industry View
NEUTRAL

Price Target
USD 52.00

Price (01-Sep-2016)
USD 45.70

Potential Upside/Downside
+13.8%

**Connecticut Water Service Inc.(CTWS): Quarterly and Annual EPS (USD)**

| | 2015 | 2016 | | | 2017 | | | Change y/y | |
|---|---|---|---|---|---|---|---|---|---|
| FY Dec | Actual | Old | New | Cons | Old | New | Cons | 2016 | 2017 |
| Q1 | 0.28A | N/A | 0.28A | 0.28A | N/A | N/A | N/A | 0% | N/A |
| Q2 | 0.77A | N/A | 0.89A | 0.89A | N/A | N/A | N/A | 16% | N/A |
| Q3 | 0.79A | N/A | N/A | 0.84E | N/A | N/A | N/A | N/A | N/A |
| Q4 | 0.20A | N/A | N/A | 0.17E | N/A | N/A | N/A | N/A | N/A |
| Year | 2.04A | N/A | 2.12E | 2.16E | N/A | 2.22E | 2.24E | 4% | 5% |
| P/E | 22.5 | | 21.5 | | | 20.6 | | | |

Source: Barclays Research.
Consensus numbers are from Thomson Reuters

**North America Power & Utilities** | **Industry View: NEUTRAL**

## Connecticut Water Service Inc. (CTWS)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 96 | 101 | 106 | 111 | 4.8% |
| EBITDA (adj) | 39 | 42 | 45 | 47 | 7.0% |
| EBIT (adj) | 26 | 28 | 29 | 31 | 5.8% |
| Pre-tax income (adj) | 20 | 21 | 23 | 24 | 5.5% |
| Net income (adj) | 23 | 24 | 25 | 26 | 4.8% |
| EPS (adj) ($) | 2.04 | 2.12 | 2.22 | 2.31 | 4.3% |
| Diluted shares (mn) | 11.2 | 11.2 | 11.2 | 11.3 | 0.4% |
| DPS ($) | 1.05 | 1.13 | 1.17 | 1.21 | 4.8% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 40.3 | 41.2 | 42.3 | 42.9 | 41.7 |
| EBIT (adj) margin (%) | 26.9 | 27.3 | 27.5 | 27.7 | 27.3 |
| Pre-tax (adj) margin (%) | 21.0 | 21.0 | 21.2 | 21.5 | 21.2 |
| Net (adj) margin (%) | 23.7 | 23.4 | 23.5 | 23.7 | 23.6 |
| ROIC (%) | 6.4 | 6.6 | 6.7 | 6.6 | 6.6 |
| ROA (%) | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| ROE (%) | 10.5 | 10.2 | 10.1 | 10.0 | 10.2 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 554 | 588 | 619 | 649 | 5.4% |
| Total net assets | 718 | 740 | 761 | 807 | 4.0% |
| Capital employed | 404 | 417 | 433 | 465 | 4.8% |
| Shareholders' equity | 226 | 239 | 253 | 269 | 6.0% |
| Net debt/(funds) | 177 | 178 | 180 | 196 | 3.3% |
| Cash flow from operations | 0 | 0 | 0 | 0 | N/A |
| Capital expenditure | 48 | 66 | 45 | 45 | -2.1% |
| Free cash flow | -12 | -13 | -13 | -14 | N/A |
| Pre-dividend FCF | 0 | 0 | 0 | 0 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 22.5 | 21.5 | 20.6 | 19.8 | 21.1 |
| EV/EBITDA (adj) (x) | 17.8 | 16.5 | 15.4 | 14.9 | 16.2 |
| EV/EBIT (adj) (x) | 26.7 | 24.9 | 23.7 | 23.1 | 24.6 |
| P/BV (x) | 2.3 | 2.1 | 2.0 | 1.9 | 2.1 |
| Dividend yield (%) | 2.3 | 2.5 | 2.6 | 2.6 | 2.5 |
| Total debt/capital (%) | 44.0 | 42.7 | 41.5 | 42.2 | 42.6 |
| Net debt/EBITDA (adj) (x) | 4.6 | 4.3 | 4.0 | 4.1 | 4.2 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 51.6 | 53.2 | 52.7 | 52.3 | 52.5 |
| Interest cover (x) | 3.6 | 3.5 | 3.6 | 3.7 | 3.6 |
| Regulated (%) | 92.0 | 92.0 | 92.0 | 92.0 | 92.0 |

| | |
|---|---|
| **Price (01-Sep-2016)** | **USD 45.70** |
| **Price Target** | **USD 52.00** |

**Why Equal Weight?** Our Equal Weight rating is based on an earnings growth rate consistent with the water group average. We see potential upside growth from tuck in acquisitions and acceleration of main replacement. We see potential downside risks from regulatory outcomes and customer bill impacts if repair tax accounting does not continue.

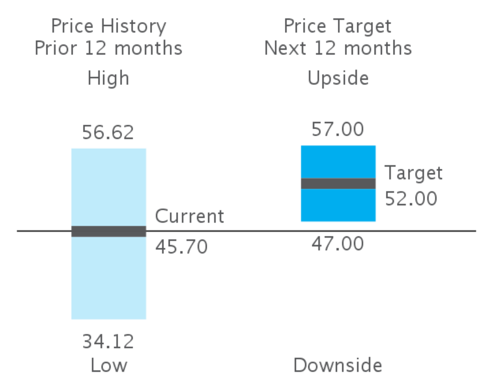
**Upside case** **USD 57.00**

We see the potential for a 10% upside based upon finding additional growth through either tuck in acquisitions or an accelerated water main replacement program, both of which could drive earnigns growth above the group average

**Downside case** **USD 47.00**

We see the potential for a 10% discount based upon poor regulatory outcomes, although this has not been the case, changes to regulatory commissions, and or external impacts to customer bills (repair tax flow through being discontinued) could provide adverse outcomes.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

## Water Group Comparables

Figure 10 shows the other investor owned water utilities and their valuation on a PE basis, using Barclays estimates for AWK, WTR, AWR, CWT and CTWS, while using consensus estimates from Thomson One for the names covered by Barclays Research. The current implied PE shows CTWS to be a modestly undervalued company as compared to peers.

FIGURE 10

**Comparables for Water Sector**

| Ticker | Company | Price | 2018 EPS | PE |
|---|---|---|---|---|
| AWK | American Water Works Co. | $73.36 | $3.28 | 22.4 |
| AWR | American States Water Co. | $38.85 | $1.84 | 21.1 |
| CWT | California Water Service Group | $30.34 | $1.38 | 22.0 |
| MSEX | Middlesex Water Co. | $33.11 | $1.47 | 22.5 |
| SJW | SJW Corp. | $42.26 | $1.80 | 23.5 |
| WTR | Aqua America Inc. | $30.37 | $1.50 | 20.2 |
| YORW | York Water Co. | $28.36 | $1.16 | 24.4 |
| CTWS | Connecticut Water Service | $45.70 | $2.31 | 19.8 |
| | Group Average | | | 22.4 |

Source: Thomson One, Barclays Research

Note: Prices reflect 9/1/16 closing prices, 2018 EPS is consensus from Thomson One for MSEX, SJW and YORW.

## Connecticut Water Service Inc.

Connecticut Water Service Inc is a non-operating holding company that earns over 90% of its revenue and income from regulated water operations. They operate in 2 regulatory jurisdictions: Connecticut and Maine. Additionally they have a business that provides contract water and sewer operations through a services and rentals company, and finally they have some modest real estate holdings.

### Regulatory Overview

As approximately 95% of revenues and earnings are derived from the regulated water companies, it is important to understand the regulatory constructs facing the company. In Connecticut, water utilities make general rate case (GRC) filings as needed. CTWS has not filed a general rate case since 2010. In the interim, there are three regulatory mechanisms that have provided CTWS the ability to offset regulatory lag. These mechanisms are the Water Infrastructure and Conservation Adjustment (WICA), the Water Revenue Adjustment mechanism (Repair Tax), and Decoupling. Also there is a 6 month regulatory timeline which better than many states is still not as beneficial as a forward test year. In Maine, CTWS has multiple regulatory jurisdictions the multiple mechanisms to help minimize regulatory lag: Water Infrastructure Surcharge (WISC), Water Revenue Adjustment (Repair Tax), Decoupling, a streamline rate approach resulting in virtually all cases being settled.

The Water Revenue Adjustment mechanisms are basically Repair Tax. The important facts for these mechanisms are as follows:

A vast majority of annual investment in infrastructure replacement is immediately deductible for tax purposes. The same investment continues to grow rate base as it always has. This is flow-through accounting, as such it benefits customers as well as shareholders as customers see lower bills without having to pay the flow through on income taxes, while the shareholders experience higher returns, better cash flow and lower regulatory lag.

### Connecticut General Rate Case

Based on approaching the 10% cumulative increase for WICA along with a large treatment addition, it is estimated that CTWS will file a general rate case in Connecticut in the 2018 time frame for new rates in 2019 if not earlier. The issues surrounding this case will be very important as CTWS has not had a general rate case in CT since 2011. Our overall expectation is for a 50bp reduction in ROE based on trends for other utilities in CT. perhaps just as big of issues are the equity layer and how repair expense tax treatment might be continued or discontinued going forward. The equity layer could theoretically go higher offsetting some of the projected 50bp decrease in allowed ROE. The repair expense tax has been helping earnings, but at the same time limiting customer bill increases given the amount of pipe replacement occurring. Without repair tax expensing, the company and customers will start having to pay for the income taxes that have been avoided in recent years, which could result in a larger than expected year 1 rate increase. Given the mutual benefit of the repair tax, it is unclear what happens to this treatment in the next general rate case.

## Price Target Changes

We are updating the price targets for our water coverage universe based upon a move in the group average multiple from 24.1x 2018 to 22.8x 2018 earnings. Additionally, for WTR, instead of using a 5% premium to the group average we now use the group average without a multiplier. For AWK we are moving to a 5% discount to the group average from the group average without a multiplier. As such our price targets are as follows: for AWK the price target decreases by $5 to $82, our AWR price target decreases by $4 to $40, our CWT price target decreases by $1 to $32 and our WTR price target decreases by $4 to $34. No estimates or ratings changes were made.

## Best Way to Play the Water Sector

We are reiterating our Overweight rating on AWK and view AWK as the best way to invest the water sector. The company has the highest earnings and dividend growth in the sector (7-10% and 10%, respectively). Also, we believe AWK has a strong management team with a solid track record or achieving and/or exceeding their targets since 2010. We see AWK as having the significant opportunity in the consolidation of public and privately owned water system, which could result in an increased growth rate.

## Valuation Methodology and Risks

**North America Power & Utilities**

**American States Water Company (AWR)**

**Valuation Methodology:** Our $39 price target is premised upon a 5% discount to the 2018 water group average multiple of 22.8x applied to our 2018 estimate of $1.84.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory issues resulting in lower ability to spend capital or a lower ROE, ability to obtain additional military contracts and perform on the current contracts are all risks.

**American Water Works (AWK)**

**Valuation Methodology:** Our $81 price target is derived from applying a 10% high-quality premium to a water group average of 22.8x P/E multiple to our $3.28 2018 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to AWK include an inability to achieve tighter cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential.

**Aqua America (WTR)**

**Valuation Methodology:** Our $34 price target is based on applying the water group average 2018 P/E multiple of 22.8x to our 2018 EPS estimate of $1.50.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, and a slowdown in acquisition activity that would impact sales growth potential.

**California Water Service Group (CWT)**

**Valuation Methodology:** Our $31 price target is premised upon applying the 2018 water group average multiple of 22.8x to our 2018 estimate of $1.38.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Main risks are regulatory given the significant impact the outcome and timing of the California general rate case can have. Also the California drought and associated recovery has impacted results in the past several years. Interest rates impact commission granted return on equity levels as well as impacting the rate paid on short term debt. National policy such as bonus depreciation and EPA actions will also impact spending levels and financing for the utility.

**Connecticut Water Service Inc. (CTWS)**

**Valuation Methodology:** Our $52 price target is premised upon applying the 2018 water group average PE multiple of 22.8x to our 2018 estimate of $2.31.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risk are the main issues even with positive regulatory mechanisms in both CT and ME, the eventual true up or consideration surrounding repair tax flow through accounting could cause a potential larger than expected rate increase to customers limiting capital recovery in that year.

Source: Barclays Research.

## ANALYST(S) CERTIFICATION(S):

I, Daniel Ford, CFA, hereby certify (1) that the views expressed in this research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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**Primary Stocks (Ticker, Date, Price)**

**American States Water Company** (AWR, 01-Sep-2016, USD 38.85), Underweight/Neutral, CE/J

**American Water Works** (AWK, 01-Sep-2016, USD 73.36), Overweight/Neutral, CE/J

**Aqua America** (WTR, 01-Sep-2016, USD 30.37), Equal Weight/Neutral, CE/J

**California Water Service Group** (CWT, 01-Sep-2016, USD 30.34), Equal Weight/Neutral, CD/J

**Connecticut Water Service Inc.** (CTWS, 01-Sep-2016, USD 45.70), Equal Weight/Neutral, CD/J

Prices are sourced from Thomson Reuters as of the last available closing price in the relevant trading market.

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**North America Power & Utilities**

| | | |
|---|---|---|
| AES Corp. (AES) | Alliant Energy (LNT) | Ameren Corp. (AEE) |
| American Electric Power (AEP) | American States Water Company (AWR) | American Water Works (AWK) |
| Aqua America (WTR) | Brookfield Infrastructure Partners LP (BIP) | Brookfield Infrastructure Partners LP (BIP_u.TO) |
| Brookfield Renewable Energy Partners LP (BEP) | Brookfield Renewable Energy Partners LP (BEP_u.TO) | California Water Service Group (CWT) |
| Calpine Corp. (CPN) | Canadian Utilities Ltd. (CU.TO) | CenterPoint Energy Inc. (CNP) |
| CMS Energy (CMS) | Connecticut Water Service Inc. (CTWS) | Consolidated Edison (ED) |

## IMPORTANT DISCLOSURES CONTINUED

| | | |
|---|---|---|
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| Entergy Corp. (ETR) | Eversource Energy (ES) | Exelon Corp. (EXC) |
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| Hawaiian Electric Inds (HE) | Hydro One Ltd. (H.TO) | ITC Holdings (ITC) |
| National Grid Plc (NG.L) | National Grid Plc (NGG) | NextEra Energy (NEE) |
| NextEra Energy Partners, LP. (NEP) | NiSource, Inc. (NI) | NRG Energy (NRG) |
| NRG Yield Inc. (NYLD) | OGE Energy Corp. (OGE) | Ormat Technologies (ORA) |
| PG&E Corp. (PCG) | Pinnacle West Capital (PNW) | PNM Resources (PNM) |
| Portland General Electric Co. (POR) | PPL Corporation (PPL) | Public Service Enterprise Gp (PEG) |
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## IMPORTANT DISCLOSURES CONTINUED

## American States Water Company (AWR / AWR)

**USD 38.85 (01-Sep-2016)**

| Stock Rating | Industry View |
|---|---|
| **UNDERWEIGHT** | **NEUTRAL** |

**Rating and Price Target Chart - USD (as of 01-Sep-2016)**


Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 13-Jul-2016 | 43.77 | | 44.00 |
| 17-Jun-2016 | 40.83 | | 42.00 |
| 20-May-2016 | 38.10 | | 40.00 |
| 25-Feb-2016 | 46.87 | | 42.00 |
| 04-Jan-2016 | 40.50 | Underweight | 40.00 |

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*Link to Barclays Live for interactive charting*

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**Valuation Methodology:** Our $39 price target is premised upon a 5% discount to the 2018 water group average multiple of 22.8x applied to our 2018 estimate of $1.84.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory issues resulting in lower ability to spend capital or a lower ROE, ability to obtain additional military contracts and perform on the current contracts are all risks.

## IMPORTANT DISCLOSURES CONTINUED

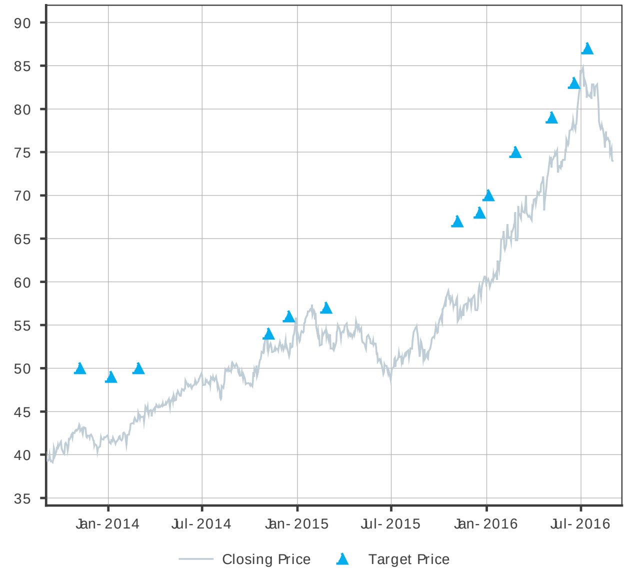
### American Water Works (AWK / AWK)

**USD 73.36 (01-Sep-2016)**

Stock Rating: **OVERWEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 01-Sep-2016)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating* | Adjusted Price Target |
|---|---|---|---|
| 13-Jul-2016 | 82.00 | | 87.00 |
| 17-Jun-2016 | 78.17 | | 83.00 |
| 05-May-2016 | 73.20 | | 79.00 |
| 25-Feb-2016 | 68.05 | | 75.00 |
| 04-Jan-2016 | 60.32 | | 70.00 |
| 18-Dec-2015 | 59.55 | | 68.00 |
| 05-Nov-2015 | 58.19 | | 67.00 |
| 25-Feb-2015 | 54.46 | | 57.00 |
| 15-Dec-2014 | 51.66 | | 56.00 |
| 06-Nov-2014 | 51.99 | | 54.00 |
| 28-Feb-2014 | 44.84 | | 50.00 |
| 06-Jan-2014 | 41.30 | | 49.00 |
| 07-Nov-2013 | 43.34 | | 50.00 |

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*The rating for this security remained Overweight during the relevant period.

*Link to Barclays Live for interactive charting*

**CE:** Barclays Bank PLC and/or an affiliate is a market-maker in equity securities issued by American Water Works.

**J:** Barclays Bank PLC and/or an affiliate is a liquidity provider and/or trades regularly in the securities by American Water Works and/or in any related derivatives.

**Valuation Methodology:** Our $81 price target is derived from applying a 10% high-quality premium to a water group average of 22.8x P/E multiple to our $3.28 2018 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to AWK include an inability to achieve tighter cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential.

## IMPORTANT DISCLOSURES CONTINUED

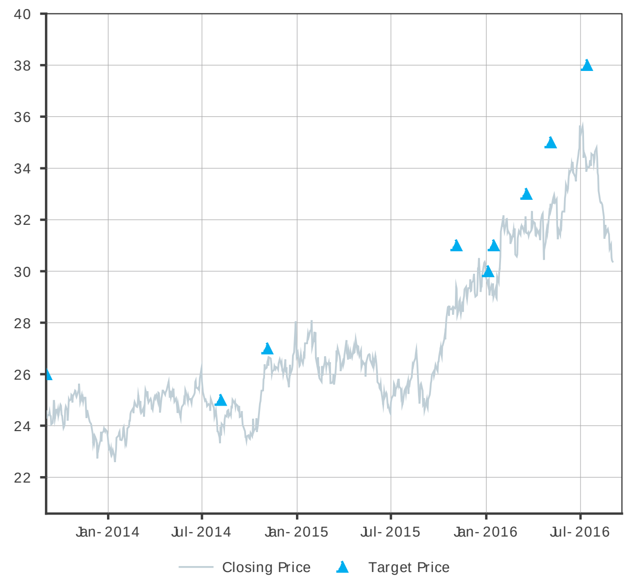
### Aqua America (WTR / WTR)

**USD 30.37 (01-Sep-2016)**

Stock Rating: **EQUAL WEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 01-Sep-2016)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating* | Adjusted Price Target |
|---|---|---|---|
| 13-Jul-2016 | 34.10 | | 38.00 |
| 04-May-2016 | 32.62 | | 35.00 |
| 18-Mar-2016 | 31.50 | | 33.00 |
| 15-Jan-2016 | 28.99 | | 31.00 |
| 04-Jan-2016 | 29.47 | | 30.00 |
| 04-Nov-2015 | 29.41 | | 31.00 |
| 04-Nov-2014 | 26.44 | | 27.00 |
| 06-Aug-2014 | 23.96 | | 25.00 |
| 03-Sep-2013 | 24.50 | | 26.00 |

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*The rating for this security remained Equal Weight during the relevant period.

*Link to Barclays Live for interactive charting*

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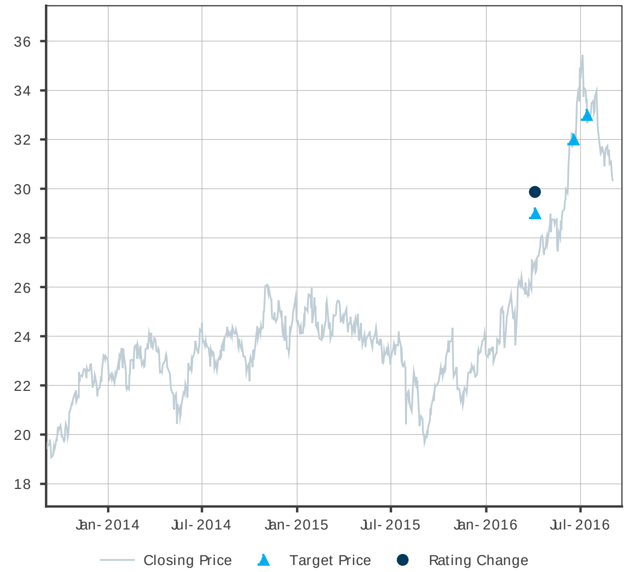
**Valuation Methodology:** Our $34 price target is based on applying the water group average 2018 P/E multiple of 22.8x to our 2018 EPS estimate of $1.50.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, and a slowdown in acquisition activity that would impact sales growth potential.

## IMPORTANT DISCLOSURES CONTINUED

| California Water Service Group (CWT / CWT) | Stock Rating | Industry View |
|---|---|---|
| USD 30.34 (01-Sep-2016) | EQUAL WEIGHT | NEUTRAL |

**Rating and Price Target Chart - USD (as of 01-Sep-2016)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 13-Jul-2016 | 33.65 | | 33.00 |
| 17-Jun-2016 | 31.90 | | 32.00 |
| 04-Apr-2016 | 27.01 | Equal Weight | 29.00 |

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*Link to Barclays Live for interactive charting*

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**Valuation Methodology:** Our $31 price target is premised upon applying the 2018 water group average multiple of 22.8x to our 2018 estimate of $1.38.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Main risks are regulatory given the significant impact the outcome and timing of the California general rate case can have. Also the California drought and associated recovery has impacted results in the past several years. Interest rates impact commission granted return on equity levels as well as impacting the rate paid on short term debt. National policy such as bonus depreciation and EPA actions will also impact spending levels and financing for the utility.

## IMPORTANT DISCLOSURES CONTINUED

| Connecticut Water Service Inc. (CTWS / CTWS) | Stock Rating | Industry View |
|---|---|---|
| **USD 45.70 (01-Sep-2016)** | **EQUAL WEIGHT** | **NEUTRAL** |

**Rating and Price Target Chart - USD (as of 01-Sep-2016)**


Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*Link to Barclays Live for interactive charting*

**CD:** Barclays Bank PLC and/or an affiliate is a market-maker in debt securities issued by Connecticut Water Service Inc..

**J:** Barclays Bank PLC and/or an affiliate is a liquidity provider and/or trades regularly in the securities by Connecticut Water Service Inc. and/or in any related derivatives.

**Valuation Methodology:** Our $52 price target is premised upon applying the 2018 water group average PE multiple of 22.8x to our 2018 estimate of $2.31.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risk are the main issues even with positive regulatory mechanisms in both CT and ME, the eventual true up or consideration surrounding repair tax flow through accounting could cause a potential larger than expected rate increase to customers limiting capital recovery in that year.

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02

Impact Series

# The water challenge: preserving a global resource

Barclays and the Columbia Water Center explore how energy companies and public utilities can help alleviate water shortages and improve water quality through new technologies and better practices

BARCLAYS

# Foreword

Welcome to the second report in our Impact Series, in which we shine a spotlight on how the energy industry – and, in particular, the oil and gas sector and public utilities – can improve the way it uses and recycles water.

March 22, 2017

Water is arguably the most important natural resource, essential both for human survival and for the effective functioning of many industries. As climate variability impacts the availability of freshwater, and economic growth puts pressure on global water supplies, households as well as industrial, energy and agriculture sectors are increasingly likely to experience supply disruptions in the near and long term.

The data point to some clear challenges. Only 2.5% of the world's water is fresh[*], yet the US depends on it for nearly 90% of withdrawals for public and industrial use[**]. At the same time, groundwater, which is present under the earth's surface and makes up 30% of all freshwater, is under wide-spread stress, with NASA reporting that a third of major water basins globally are being rapidly depleted by human consumption[***].

The human cost of water scarcity is likely to be high. The Organisation for Economic Cooperation and Development (OECD) estimates that about 1.5 billion people today live in areas seriously affected by shortages, predicting that it will rise to 4 billion by 2050, accompanied by a 50% increase in the demand on water resources.

While individuals, governments and other consumer and policy organisations are all instrumental to preserving this precious commodity, the energy industry in particular can have a positive impact on alleviating water shortages. Oil and gas companies, as well as power and water utilities, are ideally placed not only to be more efficient users of water but also to be pioneers in finding alternative water sources and introducing innovative technologies to counter wastage.

We believe this report makes a valuable contribution to the debate on the future of water.

Jes Staley, Chief Executive Officer of Barclays

"Only 2.5% of the world's water is fresh, yet in the US we depend on it for nearly 90% of our withdrawals for public and industrial use."

* Source: Food and Agriculture Organization of the United Nationsv

** Source: US Geological Survey (USGS)

*** Source: NASA http://www.nasa.gov/jpl/grace/study-third-of-big-groundwater-basins-in-distress

# What this report is about

Global water stresses are not only a serious challenge for society and the environment, but can also be viewed as a sustainable investment opportunity. This report is the result of a collaboration between Barclays Research and Columbia University to explore how investment in new technologies and infrastructure can help alleviate the social, environmental and development problems associated with water shortages and increased usage.

While the report focuses on the U.S., the issues discussed can be extended globally across industries - water risk and scarcity is a universal problem.

The U.S. energy industry uses substantial amounts of water in the course of its business operations and we think new technologies and practices present an opportunity to use water resources more efficiently. While water use in the energy industry is small relative to agriculture, usage is increasingly in the oil and gas industry, and underinvestment by public utilities presents infrastructure, environmental, and public health challenges.

In the U.S. oil and gas industry, for example, fracking operators have increased their use of freshwater from 5,600 barrels per oil well in 2008 to more than 128,000 barrels in 2014 and over 300,000 barrels in some areas today. Yet we are confident that oil and gas operators can substantially increase water reuse, learning from countries such as Canada, where regulations mandate water reuse and limit fresh water acquisition for oil sands operations.

Water scarcity could also pose a financial risk to both the utility and the oil and gas sectors, while shareholders and the general public are encouraging corporations to improve their transparency around water usage.

## The structure of the report

- In the first part of the report we highlight the extent of the water challenge, how the energy industry contributes to the problem and the different technologies companies can apply to reuse or recycle the wastewater they create in the course of their business.
- The second part is divided into three: the oil and gas sector, power companies, and water utilities. We investigate the issues that are particular to each industry, but also explore the commonalities. We identify opportunities for them to collaborate through shared learning and innovation, and also look at areas where more can be done to protect water resources, and how the sector can collaborate with other industries. Through several case studies, we look at examples of best practices where companies are utilizing new technologies and methodologies to lower water related costs, improve their freshwater footprint, and help the communities where they operate.

# The water mandate for energy companies and utilities

Worldwide, there is growing pressure on the availability of freshwater: the effects of climate variability are becoming clearer at a time when a growing global population is placing greater demands on resources and often has to compete with industry and agriculture for access to clean, safe water.

Water is a shared resource and all users and industries can help safeguard water supplies throughout the world. Lack of access to clean water is a global problem, but low income countries generally experience the burdens of water stress more acutely than developed countries. In the United States, too, inadequate water quantity and quality disproportionately impacts low income users. This has been exemplified by the lead contamination of drinking water in Flint, Michigan, where a combination of underinvestment, inadequate water treatment and poor regulation proved catastrophic for the community in 2014. The incident remains the focus of ongoing criminal investigations.

The challenge therefore is to ensure that there is enough water for humans to consume safely and sustainably, while also safeguarding policies and regulatory support for the reuse and recycling of industrial wastewater, as well as desalination programs.

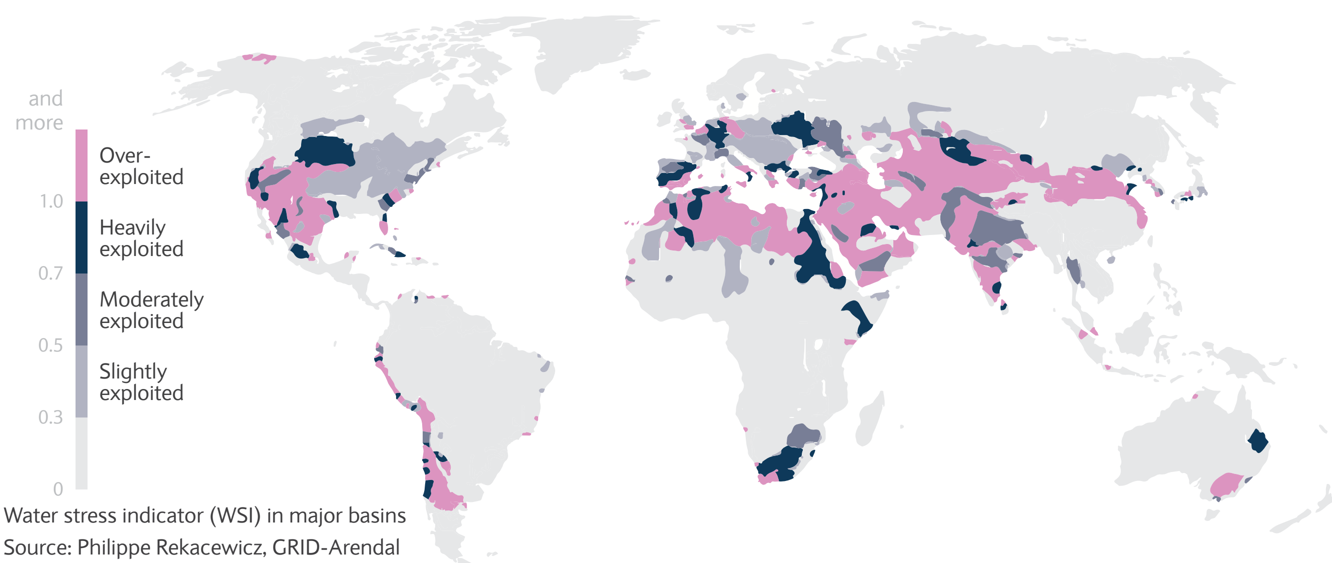
In this report we first turn to the oil and gas industry because water is crucial to its operations, and it has long been scrutinized over poor water management issues. While the industry has improved practices in recent years, more can be done to protect water supplies, and there is room for collaboration with other industries. In this report, we highlight two case studies of progressive practices by oil and gas companies.

Collective action is needed not only from oil and gas operators, but also the utility industry and government, to improve transparency around water usage, invest in innovative technologies, and to improve data collection and sharing across sectors. Robust water management, combined with innovative technologies and forward-looking practices, are not only good for the environment and society, but could also benefit companies' bottom line.

In essence, we believe the industry could consume less freshwater and do more to access alternative sources through recycling and reusing more of the waste water it produces as a by-product of its operations.

Figure 1

## Global pressure: water withdrawals have steadily increased in the past century




Water stress indicator (WSI) in major basins
Source: Philippe Rekacewicz, GRID-Arendal

# The importance of the water cycle

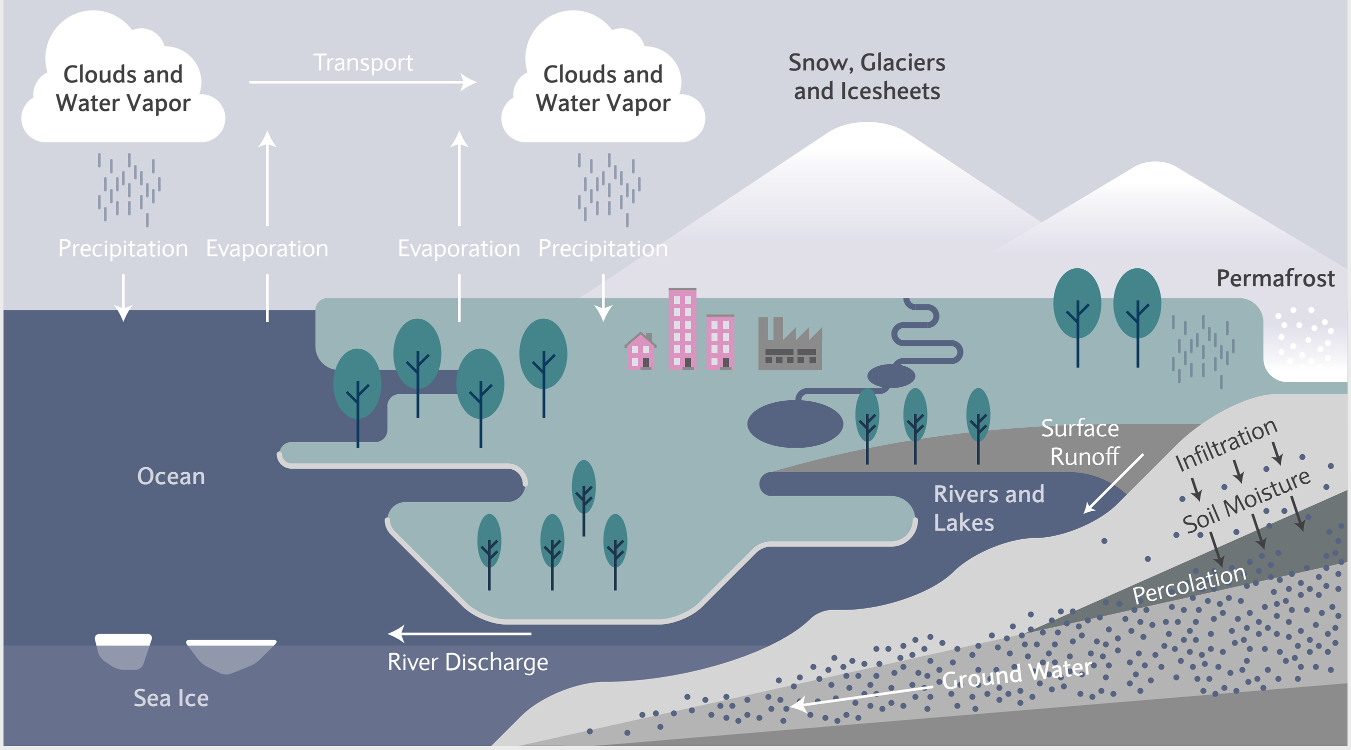
Freshwater undergoes a cycle of precipitation, evaporation and transpiration. Water evaporates from water sources, such as dams, rivers and the sea, into the atmosphere where it transforms into precipitation (rain and snow). Some of this water evaporates into clouds and returns to the atmosphere beginning the cycle again, while other precipitation is stored in reservoirs, aquifers or dams and rivers.

Subterranean water bodies, such as aquifers, are replenished at a slow rate because the water must pass through soil, gravel and other sediment. Physical water stress happens when water is depleted at rates faster than they can be recharged.

A large part of water shortages is due to inefficient use and losses from inadequate infrastructure to capture rain and snow. In urban areas, for example, between 10% and 50% of water is lost. Because rainfall is variable depending on the climate and time of year, some regions may have surplus water, while others may not have enough. “The greatest challenge is that water is not available when we need it,” according to Upmanu Lall, Director of the Columbia Water Center.

We define the main water constraints as:

- groundwater depletion
- poor water quality
- the potential for future scarcity because of droughts
- lack of storage




Source: NASA

## Ripple effect: a local problem with wider repercussions

Water scarcity has a direct effect on public health, availability of food and, ultimately, public safety. In an increasingly interlinked world, with ever-expanding trade routes, water stress in one geographic region not only affects local populations, it can also have a reverberating impact in other regions.

In agriculture, for example, a shock like a drought or blight (a fungal disease that spreads rapidly in wet weather) can have a high human cost through famine, but also have global implications for food supplies. Countries that import water are especially vulnerable to such shocks.

Other industries can be impacted too. For example, in the United States several regions import hydroelectricity from Washington State. When dry years or reduced snowmelt impact Washington's capacity to generate hydropower, it reduces its ability to export electricity to other states. Climate scientists predict that by 2040, lower snowmelt in the state could decrease hydro generation by between 18% and 21%.

## Taking responsibility: how the energy industry uses water, and what it can do better

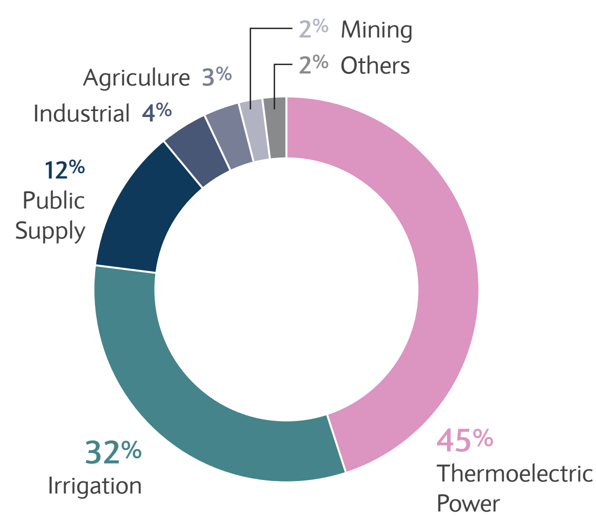
While oil and gas companies do not use as much water as other industries, including agriculture, in certain contexts their water usage may be significant. More importantly, although the industry is improving the way it deals with wastewater, in particular, it has been responsible for spillages and other problems. Companies that implement sustainable water practices, such as reusing water and building efficient infrastructure, could lessen the industry's contribution to water scarcity and quality issues, allowing them to act as water stewards.

The electric utility industry has large water withdrawals compared to other industries, but much of this water is returned to the water cycle. The problem lies not so much in contributing to water scarcity as protecting against it. However, in water-stressed regions, these withdrawals may contribute to supply and demand imbalances. We believe that when possible and economical, electric utilities could use alternative sources of water such as treated saline or recycled water for cooling purposes.

Policy and economics will be the biggest drivers of innovation for power and water utilities. In an uncertain regulatory future, we believe that utilities that incorporate water risk planning into their strategic planning and engage in integrated water resources management will be better positioned for unforeseen water shocks. Water utilities must prioritize infrastructure investments and maintenance before they can invest in new technologies and cooperate with power utilities for shared resources.

### Figure 2

Thirsty business: water withdrawal by industry




Source: US Geological Survey

# Practical steps to tackle water shortages

Many entities can make a difference – governments, individuals, non-governmental organizations (NGOs) and others - but crucially also the companies that are high-volume users of water.

## What individuals can do

Individuals and society can begin thinking about water constraints as part of an overarching climate variability problem. Because climate variability exacerbates water-related shortages through droughts, for example, efforts to mitigate global warming could help relieve future water stresses. Individuals and society should consider their energy and food choices as directly shaping future climate scenarios and indirectly influencing their future water resources.

## The role of government and water agencies

US government research and development is an important funding source for new water technologies. The government also oversees crucial accounting agencies like the United States Geological Survey, and could play a leading role in developing a national data repository that enables more shared learning and cross-industry collaboration. Enforcing and standardizing water reporting across industries can also help improve water management. Current regulation around reporting for the oil and gas industry is inconsistent and voluntary for some states, and data from the water and electric utility industries is fragmented. Because larger companies have research and development budgets for water technologies, smaller companies could receive support from government agencies to engage in more research and development. In addition, state and federal governments could standardize regulations.

## Companies can step up too

Companies could accurately measure and disclose their water usage. Steps have been taken to improve accountability for water supply chain operations, and to illustrate the connection between improved water management and reduced greenhouse gas emissions. Formerly known as the Carbon Disclosure Project, CDP has a water program aimed at motivating companies to disclose their water data. In the most recent CDP survey, only 34% of energy and utility companies disclosed their water use to CDP, suggesting room for improved transparency.

Energy companies should not only consider water as a shared resource, but invest in ways to reduce freshwater usage by collaborating with other industries like agriculture, municipalities and utilities for alternative water sources for drilling and cooling activities. Companies - particularly utilities - can also consider implementing simple measures such as demand management, energy efficiency and consumer education. These strategies have worked well in drought-prone California to promote water conservation.

## Collaboration, shared learning and innovation

Despite differences between the three industries we profile - the oil and gas sector, electricity providers, and water utilities - there are opportunities for them to collaborate through shared learning and innovation. The energy industry can also protect water resources by collaborating with other industries. For example, larger, well-capitalized companies in the oil and gas industry, as well as some utilities, can help finance upgrades for capital-constrained small public wastewater utilities in exchange for use of wastewater.

## Glossary

**Freshwater** is deemed safe for human consumption, occurring naturally through precipitation and in dams, river and some underground sources.

**Brackish** water is a naturally occurring mixture of fresh and salt water, also known as brine.

**Saline** occurs naturally in oceans, has a salt content higher than brackish water, and is not drinkable.

**Recycled water** is wastewater that has undergone a robust treatment in order to be used again.

**Reused water** is wastewater reused within an oil or gas well, requiring little or no treatment.

# The technologies that could make a difference

Water scarcity is a problem for all of the industries examined in this study, but there is a host of technologies and practices that can transform alternative sources of water for drinking and industrial use. Evidence shows that energy companies can be incentivized to put effort into research and development that can deliver technologies to benefit all. The following is a list of technologies that can help curb water wastage.

**Desalination:**
Widely used in the Middle East, desalination treats non-potable brackish (a naturally occurring mixture of fresh and salty water, also known as brine) as well as sea water to freshwater standards to be used for oil and gas drilling, irrigation, industrial use, power plant cooling and drinking water. The main technologies associated with desalination include the membrane method, whereby water is pushed through a membrane to remove the salt, and heat-based treatments. While costs and energy usage have declined, treating highly saline water remains energy-intensive and expensive. Renewable powered desalination and energy recovery technologies can reduce electricity costs.

**Recycled effluent water (municipal wastewater):**
Reusing wastewater is another method of reducing dependence on freshwater supplies. We look at examples of recycled municipal effluent in both the oil and gas sectors and the electric utility sector.

**Indirect potable reuse (IDPR) and direct potable reuse (DPR):**
These incorporate the practice of treating wastewater to drinkable standards and then either indirectly (through a natural buffer like a river or reservoir) or directly reintroducing the treated water into drinking water sources. Although the treatment technology for direct potable reuse is proven, regulatory hurdles and public acceptance are some of the largest obstacles, and only a handful of examples of potable reuse exist in the U.S.

**Advanced metering infrastructure (AMI):**
Also known as the smart grid, electronic metering and software is installed on customers' water or electric meters. The system utilizes automated meters (smart meters) to read energy usage in real time, and sends it back to the utilities. AMI not only shows customers how much water they consume, it also provides utilities with continuous data on water consumption through data analytics packages. Already widely practiced in the electric utility industry, water companies are beginning to adopt AMI to improve accuracy in billing and evaluate consumption. AMI systems can help utilities identify water leaks, reduce operating and maintenance costs, and communicate the value of water to customers.

**Leak detecting technologies:**
Technologies such as acoustic monitoring can help water utilities identify expensive pipe leakage and water loss. Acoustic monitoring uses devices to listen for leak "noise" or vibrations on a nightly basis when there is little background noise and low water usage. Usually paired with AMI, the acoustic monitors gather data and send the noise signals to the field office, where it is analyzed and the physical leak location is identified.

**Dry cooling:**
Thermoelectric power utilities withdraw large amounts of water for their cooling needs. Dry cooling can reduce water use significantly, but these savings may come with efficiency losses. Water-stressed regions may retrofit existing plants with dry or hybrid cooling systems or build new dry or hybrid cooling plants to reduce overall withdrawals.


# What does good water management mean?

**For energy companies:**

- Sustainable water practices will increasingly be a part of energy companies' social license to operate in a water-constrained world.
- The economics of adopting efficient water usage, through various improved technologies and innovative practices, are compelling and could drive further adoption.
- Despite a relatively more relaxed regulatory environment under the new U.S. Administration, we think the risks (reputational, legal, and financial) are increasing, particularly in water-conscious and -constrained communities.
- Public-private partnerships can lead to "win-win" outcomes for corporations and communities by saving costs, improving infrastructure, and reducing fresh water usage.

**For investors in energy companies:**

- Companies that are able to lower fresh water usage and costs will be better positioned for an uncertain water future.
- Oil and gas companies are able to lower costs and water usage by utilizing more efficient sourcing methods and technologies.
- As water becomes a growing input for oil and gas and energy companies, security of supply to support growth plans will be increasingly considered.
- Water and soil contamination related liabilities represent significant investor risks, particularly with the rise of public water awareness in the wake of the events in Flint, MI.
- Smart technologies including meters and monitors can boost returns by reducing water loss and identifying damaged infrastructure.

Figure 3

Where the salt flows: sources of brackish water in the US


Source: US Geological Survey

## Alternative sources of water

Recycled municipal water, as well as brackish and saline water create alternative sources of water for many industries, including the energy sector.

Developments in desalination have generated interest by the US Geological Survey and the Texas Water Development Board in better mapping brackish groundwater recharge and availability. The map above illustrates the amount of brackish water present in aquifers throughout the U.S., which are unsuitable for human consumption without treatment, and may even require additional treatment before use by some industries. However, new technologies mean brackish water can be used for power plant cooling and oil and gas operations, and could even be transformed into drinking water through desalination treatment.

## The water-climate nexus: the impact of climate change on water

While demographic and economic pressures are increasing the global demand for water, a major source of increasing stress on the supply side is climate variability. Over time, the climate could have an increasing impact on the availability and quality of water that industries can access.

Climate change and water are interconnected in several ways. The Intergovernmental Panel on Climate Change (IPCC) cites robust evidence in the scientific community that increasing greenhouse gas concentrations raise freshwater-related risks, and that climate change will reduce both renewable surface water (dams, rivers, reservoirs) and subterranean groundwater. In fact, the IPCC estimates that between 7% and 20% of the global population could be exposed to reduced freshwater supply for each degree of global warming.

The IPCC also shows some evidence of additional water-related risks caused by climate change including reduced water quality and increased frequency of droughts.

## Climate changes and the impact on global water supplies

In terms of the water risks expected to be exacerbated by climate change over time, the IPCC singles out in particular the following:

- Climate change is likely to lead to a significant reduction in renewable water in most dry sub-tropical regions
- Climate change is likely to negatively impact freshwater ecosystems by changing streamflow and raw water quality
- In dry areas, climate change is likely to increase the severity and frequency of droughts, both meteorological droughts (less rainfall) and agricultural droughts (less soil moisture)
- Climate-change projections imply increased flooding risk at a global level but especially in south, southeast, and northeast Asia, tropical Africa, and South America
- Climate change is likely to cause decreases in the extent of permafrost and glaciers, in turn releasing more greenhouse-gases with consequences not yet modeled by the IPCC

## The key regulations governing water use

**Drinking water:**
Safe Water Drinking Act

**Groundwater:**
Ground Water Rule, Source Water Protection

**Fracking:**
Underground Injection Control Program

## The connection with droughts

Columbia Water Center scholars have made pioneering connections between California's recent drought and climate change. In 2015, scientists argued that while precipitation acts as the primary driver of drought variability, human-driven warming has been a secondary driver of the California drought from 2012-2014. Scientists at the Lamont Doherty Earth Observatory say the evidence indicates that while droughts have cycles, over the past two centuries droughts in the American West have increasingly worsened due to climate change.

The map from Columbia Water Center illustrates water stress as a result of climate-driven drought. The red areas illustrate regions where demand exceeds average annual supply in the county.

## Paying attention to groundwater depletion

A commonly cited statistic is that 97.5% of earth's water is saline, while only 2.5% is fresh. Only 0.3% of all freshwater is stored on the surface in dams and rivers; 30.8% is groundwater and the vast majority of freshwater is frozen in glaciers, snow and icecaps. The main users of groundwater include agriculture (irrigation), industry, public supply, and thermoelectric power generation.

Both pollution and natural processes lead to variations in groundwater levels but there is little data on the effects of climate change. Nevertheless, the dearth of clean fresh groundwater is likely to become a concern in the future.

Groundwater is a form of subterranean water storage that naturally recharges through precipitation like rain and snowfall. However, because the precipitation enters into the water table through pores of soil and rocks, it takes time to replenish, especially if it is withdrawn at a faster rate than it is recharged. Improvements in water recycling and treatment technologies could be used to recharge aquifers artificially.

Recent mapping from NASA shows that groundwater stress is widespread, and in fact a third of major groundwater basins show depletion.

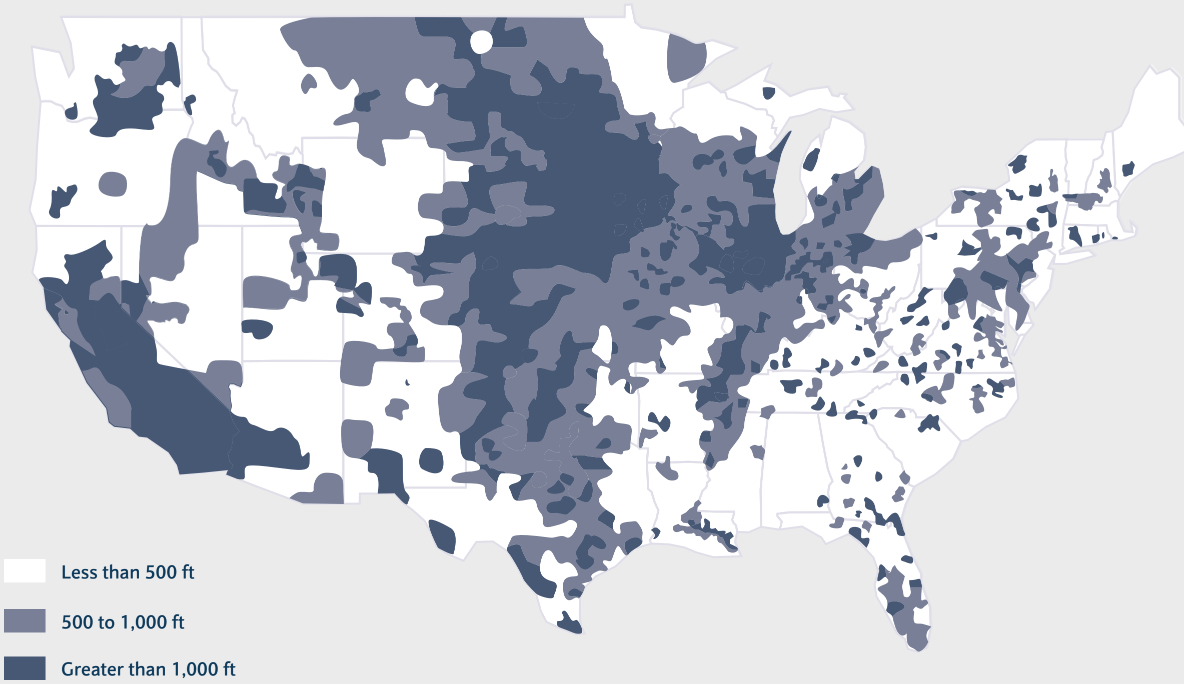
## Good quality water is essential

In addition to the quantity of fresh groundwater, quality is also important for humans, animals and other living organisms as well as industries. Groundwater contains dissolved chemicals, particulates and organic materials, some of which are natural while others are caused by human activity. Of particular concern to humans is groundwater with high levels of arsenic, chloride and nitrate. Only a portion of the available groundwater in the United States is fit for human consumption and industrial reuse without additional treatment.

Jiminez Cisneros, B.E., T. Oki, N.W. Arnell, G Benito, J.G. Cogley, P. Doll,T. Jaing, and SS Mwakalila, 2014; Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate change, pp. 229-269.

Figure 4

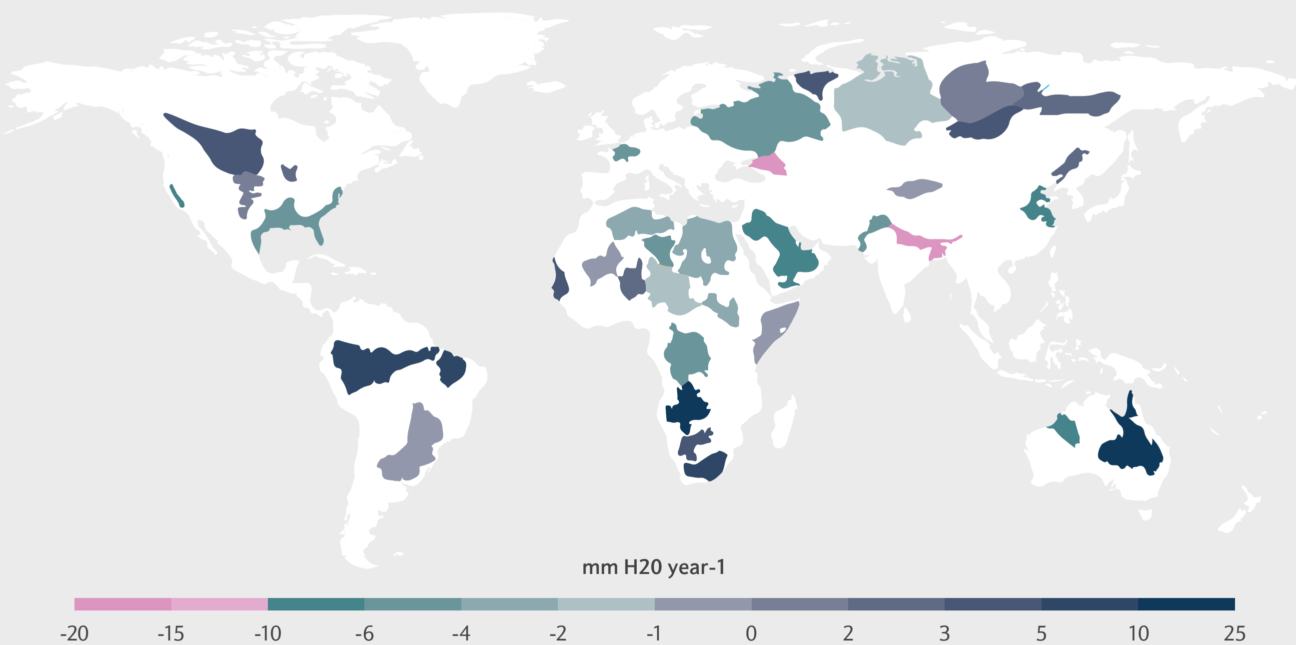
## Water stress based on magnitude of water deficits and drought risks in the US relative to demand patterns




Source: America's water risk: Current demand and climate variability, Geophys. Res. Lett., 42, doi:10.1002/ 2015GL063487 and the Columbia Water Center

Figure 5

## Human consumption: the depletion of groundwater basins around the world




Source: NASA

# Going with the flow: How energy companies and utilities use water

Energy companies need water for most aspects of their supply chain, from pumping to treatment and cooling. For its part, the water industry requires large amounts of electricity to treat water and convey it from source to destination. In this part of the report we look at just how interconnected these two industries are, and discuss some of the most efficient solutions to water shortages that can reduce both energy and water usage.

Our research shines a spotlight on how the energy sector – and, in particular, the oil and gas, and power industries – use water in the United States. We use our findings to forecast how water constraints can act as either a barrier or a driver of investment opportunities, and make recommendations for sustainable solutions to water-related shortages. By examining industry growth, and analyzing data on water consumption by industry, we compare water consumption data from Barclays Research, the Columbia Water Center, Digital H20*, as well as publicly available information.

Improved water management can help energy companies' supply chains, and could protect resources by using alternative water sources when possible. At the same time, water scarcity also poses a financial risk[1] to companies with shareholders and the general public demanding that they improve transparency. Reputational risk and regulatory actions are also important considerations.

* Digital H20 is a digital oilfield solution company focused on developing software-based insights and solutions for the end-to-end management of water in oil and gas production

## Acting together to avoid a crisis

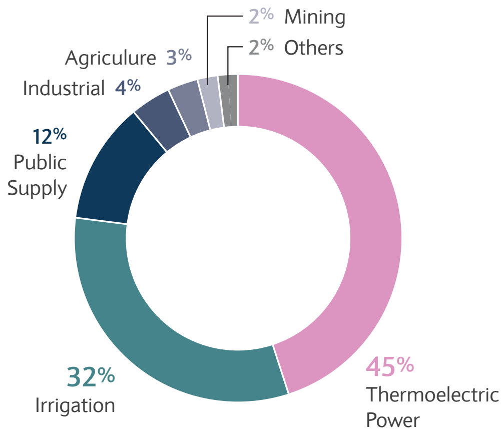
We first turn our gaze on the oil and gas sector because cost-effective water management is crucial in a low oil price environment, and is also important for companies' social license to operate. It is clear that both the oil and gas sector and the power industry can do more to find alternative forms of water and invest in new technologies. However, they also face common regulatory, logistical and economic challenges in sourcing adequate alternatives such as saline or municipal effluent water. We believe that with enabling regulations, and improvements in data management, these industries are well-placed to invest in infrastructure, enter into public-private partnerships and collaborate with other industries.

In the water utility industry, especially, the infrastructure crisis is so acute that it needs immediate attention both from a human rights and a business perspective. There is a significant opportunity for public-private partnerships and capital investment, and we believe that collective action is needed to improve transparency and encourage investment in innovative technologies. Robust water management can lead to lower operating costs and can also preserve resources for future operations.

Each industry has a unique set of challenges related to water scarcity, but some solutions can be applied across sectors. As climate variability and competition for resources put pressure on the availability of freshwater, some industries will be impacted more than others. For example, cooling for thermoelectricity - the name given to electricity that is generated by heat – has one of the highest withdrawals, while mining (including oil and gas extraction) requires far less water.

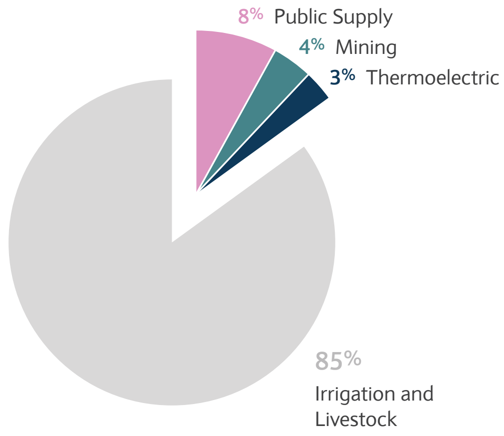
It is important to note that while withdrawals from the thermoelectric power industry are large, it is not regarded as a major water consumer. The US Geological Survey defined consumptive use as water that has been withdrawn and incorporated into a product or crop – and therefore not returned to the water cycle. By this definition, irrigation and livestock are by far the largest water consumer. This means that users with little consumptive use are not large contributors to water scarcity. However, water is essential to their functionality, and so competition with other industries like agriculture could have investment ramifications.

## Figure 6
### Water withdrawals by industry




Source: US Geological Survey

## Figure 7
### Water consumption usage by industry




Source: US Geological Survey

# The oil and gas industry

One of the most controversial methods for extracting oil and gas is hydraulic fracturing, known as fracking, in which water is injected at high pressure into subterranean rocks in order to open fissures and release oil or gas. Fracking has a reputation for being a highly water intensive industry compared to other industries, but it actually uses a fraction of the available freshwater in the U.S.,[2] according to the USGS. For example, water use by the mining industry (which comprises extraction of coal and iron, and liquids like petroleum, and natural gas) in 2010 was 1% to 2% of total U.S. freshwater withdrawals.

As a whole, the oil and gas industry uses less freshwater than the electric utility industry, but in some regions it may be substantial relative to the amount of available water.[3] In addition, the amount of consumptive water used by oil and gas producers varies by operating region and basin.

## What are the challenges?

Exploration and production companies in the oil and gas industry face two obstacles: 1) obtaining water for fracking (or "completing" oil and gas wells that have been drilled); and 2) finding a place to put the large volumes of wastewater produced by the fracking process.

Oil and gas operations are becoming more water intensive. While withdrawals are small compared to irrigation (32%), thermoelectric power (45%) and industrials (4%), according to USGS data, we think that future reductions in the quality and quantity of water as well as competition from other industries will create additional pressure points.

Another challenge is that increased amounts of produced water – the term used to describe water that is produced as a byproduct along with oil and gas - is problematic for surrounding communities and the environment due to its high salt content. In addition, water scarcity may drive up the price of freshwater, while disposal of produced water may increase costs and pose environmental and social stresses.

## Where there are risks, there are opportunities too

The use of water for fracking varies from location to location depending on the availability of water in a particular year and the type of well drilled. Regulatory challenges, wastewater disposal options, and competition between agriculture, energy and industrials, all impose geographically specific water constraints on U.S. oil and gas producers.[4] Due to uncertainty in water availability and quality, we forecast that competition between users will increase in the future, forcing some companies to pay more for water, increase investment in water management or even face curbed usage.

The low oil prices in recent years have forced producers to cut capital spending and operating expenses, which has encouraged more innovative and efficient water management, and we expect this trend to continue.[5] Public concern over the lack of sustainable water practices could lead to state regulations, potentially impacting water handling operations associated with oil and gas. Since regulation on water disposal and acquisition varies by state, shale exploration in particular could face unique regulatory water constraints.

Given the central role of water in oil and gas production, we believe the industry will rethink conventional water acquisition and disposal methods and invest in more efficient and sustainable water technologies and practices. We also believe that the industry can substantially increase water reuse, learning from countries such as Canada, which has brought in regulations mandating water reuse, monitoring and evaluation and limiting fresh water acquisition for oil sands operations.[6] Pennsylvania has also made strides reusing produced water (reusing 80-90%, versus the industry 10-20%) due to regulations and limited saltwater disposal options.

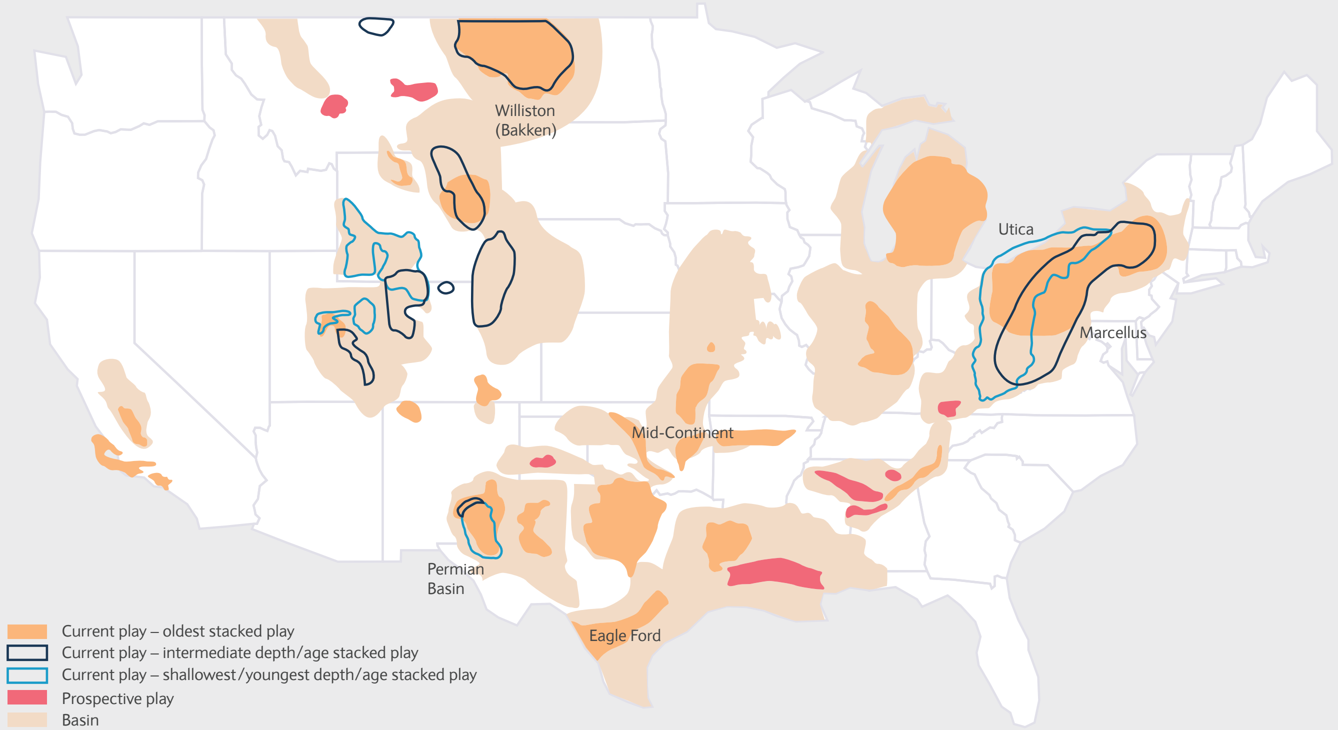
Although oil and gas market regulations under a Trump administration are uncertain, we project that the industry will show sustainable growth in parts of the United States. Based on its high oil and gas production despite lower oil prices, the Permian basin, which stretches across West Texas and New Mexico, is an example of overall water trends for shale production in the United States, and we look to the Permian for our analysis throughout this paper.

The companies that will be best positioned for an uncertain water future will be those that engage in sustainable water management practices by cutting down or eliminating freshwater usage, and treating wastewater as a resource. First, we estimate that reusing produced water in fracking operations could lower water costs by about 45% and save over 300,000 barrels of freshwater per well, improving company economics and the industry's environmental footprint, and enhancing security of supply.

The industry can help alleviate water shortages and create a new resource for other industries through the development of recycled water (which is more intensely treated than reused water and has a broader range of application). States could introduce regulations to incentivize smaller companies to finance and construct the necessary infrastructure and technologies. In addition, we believe that long-term water quality testing is important to ensure recycled water is safe for human and agriculture use.

Figure 8

## The main oil and gas basins in the US as of 2016 (current and future)




This map shows the oil and gas basins throughout the U.S. as of 2016 – regions where the oil and gas industry is drilling today and in the future.

Source: EIA and Barclays Research

## Rising pressure

While water use varies by play and region, overall, water use has been rising since 2008. The USGS found that between 2008 and 2014 median freshwater use for the injection stage in hydraulic fracturing increased from 5,618 barrels to nearly 128,102 barrels per oil well and 162,906 barrels per gas well, largely due to a shift to more water-intensive horizontal drilling.[7] The below chart by Digital H20, shows the increase in water use per well since 2013 broken down by the three main U.S. onshore oil plays, including the Permian Basin (up 434%), the Williston Basin (up 103%), and the Eagle Ford (up 64%).

Gradual supply constraints and regulations have also shaped how water is acquired and disposed of. In a business-as-usual scenario, operators will face gradual reductions in water supplies from both ground and surface water due to natural causes. In the context of extreme droughts or supply shocks, some local governments may prioritize the needs of agricultural producers over oil and gas operators. Each state has its own unique water rights, which determine water availability for producers in emergency situations.

## Water sources for the industry

The availability and quality of freshwater both pose constraints for the oil and gas industry. For example, highly saline water may require treatment before storage and reuse. Similarly, producers may be constrained by water availability through droughts, distance to water sources, regulation around water withdrawals from river basin commissions and state water boards, and public scrutiny.[8]

If operators have diversified water sources, little competition with other industries, water infrastructure and plentiful surface water, a drought itself may not curb production activity. In times of drought users often turn to groundwater pumping, which can put pressure on supplies.[9]

## The case for brackish water

The Permian Basin, which stretches underneath western Texas and southern New Mexico, is a large oil and natural gas producing region. However, a combination of multiyear droughts, low groundwater levels and competition with the agriculture industry also means it is highly water stressed.[10]

Oil and gas operators in the Permian depend on the High Plains aquifer (an underground rock formation that contains and enables the flow of groundwater) for its freshwater withdrawals. This aquifer is one of the most important yet highly depleted aquifers in the United States[11], which presents a challenge for operators.

Exploration and production companies have begun to think of brackish water (a naturally occurring mix of salty and freshwater) as a potential new source for their extractions.[12][13] In Texas, for example, almost 80% of water in many parts of Delaware side of the Permian Basin is sourced from brackish water, according to the Texas Railroad Commission, while the Midland side of the Permian uses about 30% brackish water.[14] Although brackish water can be used for drilling, it may require additional treatment and, because it is corrosive, may be subject to more transportation and storage restrictions, which will add to the costs.

In addition, pumping groundwater is energy intensive and expensive. Texas has plentiful brackish water aquifers, which can be thought of as an opportunity for future production. Recent developments in desalination have led the state of Texas to see brackish water as potential drinking and irrigation sources, which mean such aquifers may be better protected in the future.[15][16]

## The role of water in hydraulic fracturing

### Initial water

Water is involved in many stages of unconventional oil and gas production. At the beginning of the supply chain, a drilling company will typically acquire large volumes of freshwater to be transported to the well site, or alternatively source brackish, municipal or produced and flowback water. Producers will transport water from the source through truck or pipeline to the well, and store it in large impoundments. Once the well is ready for fracking, the water is mixed with proppants like sand and chemicals. The resulting fluid is injected into the well at high pressures with the intention of creating small cracks in the rock formation of the well. The fissures allow gas and oil to escape from the well and rise to the surface.

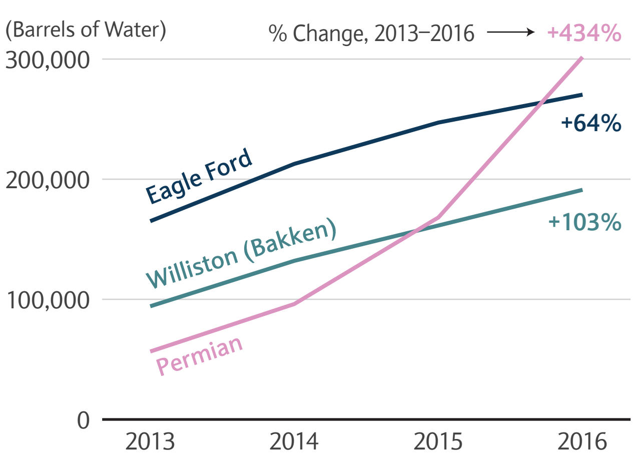
Once the pressurized fluid has been released, a combination of flowback and produced water will rise to the surface along with gas and oil. Flowback is fluid that was originally injected into the well, which flows to the surface after the frack is completed, whereas produced water is naturally occurring water in the shale formation, that typically has high salt content. Both flowback and produced water continue to rise to the surface throughout the life of the well. Because both contain oil, radioactive material, chemicals and dissolved solids such as salt, it must be handled and treated according to state regulations before disposal.[17]

### Coping with 'flowback' and 'produced water'

The amount of produced water and the water to oil ratio will influence water management costs and choices for the operator. The Marcellus formation is a bedrock in eastern North America that typically generates the lowest quantity of produced water of all the major shale regions in the United States.

Figure 9

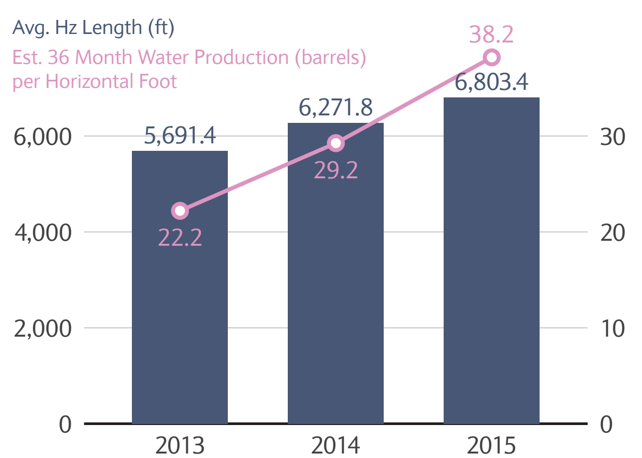
Average Water Used per Frack in the three major U.S. onshore oil plays




Source: Digital H20

Figure 10

Average Horizontal Length and 36 Month Water Production Per Horizontal Foot in the Permian Basin



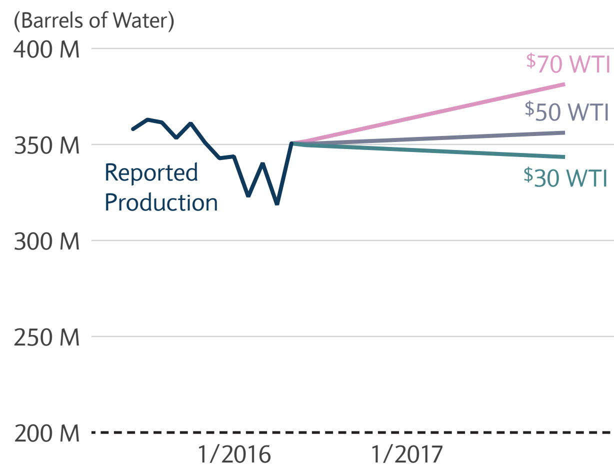

Source: Digital H20

By contrast, the Permian Basin has the highest amount of produced water among all of the U.S. oil and gas basins. On an absolute basis, produced water in the Permian Basin ranged from 358 million barrels to 286 million barrels between June 2015 and May 2016, compared with 14.8 million barrels to 11.8 million barrels in the Marcellus.[18]

The Permian Basin also has the highest water-to-oil ratio among the three major U.S. onshore oil basins. For every barrel of oil produced in the Permian Basin in 2016, over 6.5 barrels of water were produced. This compares with around 1.1 barrels of water produced for every barrel of oil in the Williston Basin (Bakken), and 0.9 barrels of water in the Eagle Ford. While Texas has hundreds of disposal wells in the state to accommodate the high volumes of produced water from the Permian Basin, disposal wells may not be sufficient and could reach capacity, and also overlooks the potential value of produced water.[19] As a result, reuse, and recycling could eventually become a necessary and attractive option.

Figure 11

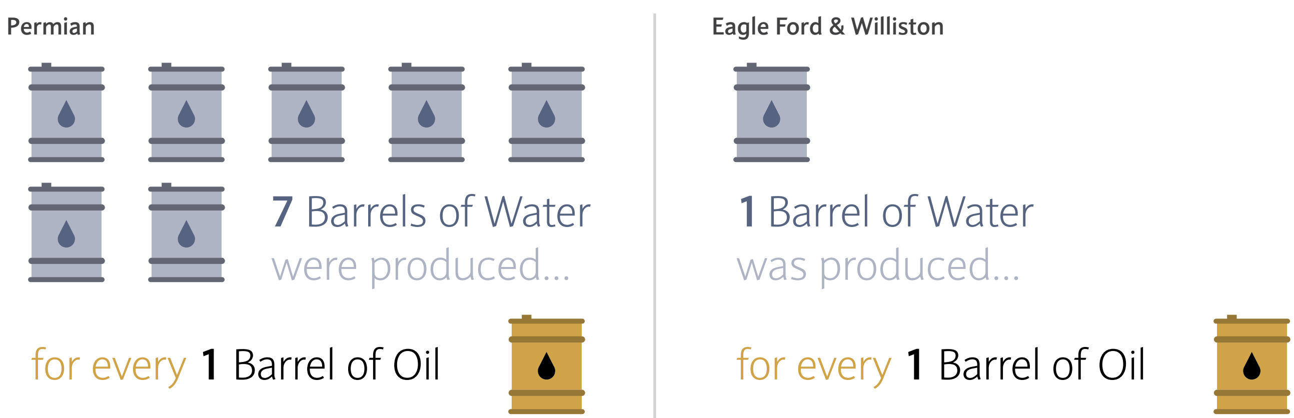
Permian Basin Total Produced Water Forecast Scenario Analysis




Source: Digital H20

Figure 12

Water-to-Oil Ratio for the three major U.S. onshore oil basins




Source: Digital H20

# Putting a price on water

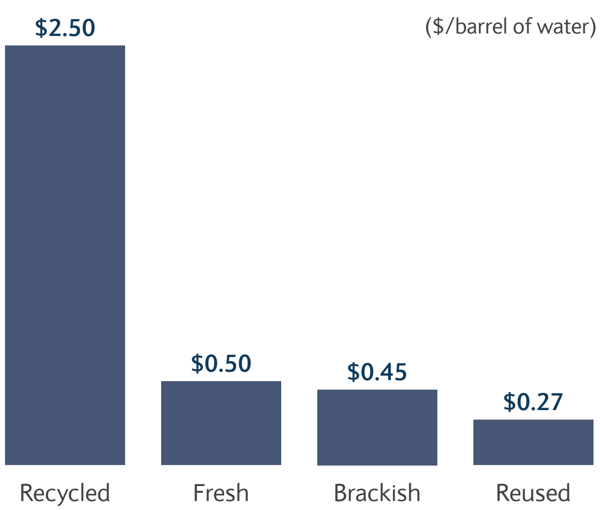
Approximately 10% to 30% of a well's capital expenditure is water related, while 40% to 55% of operating costs come from produced water management and disposal.[20] This percentage will vary considerably by basin due to factors including fresh water availability, competing uses, water quality and distance from water acquisition and disposal site, state and federal regulations and disposal and wastewater management selection.

While variable costs differ across basins, transportation of fresh and wastewater remains a universally high operating cost. According to the U.S. government's Energy Information Administration (EIA), water disposal including trucking and injection, ranges from $1 to $8 per barrel of water.[21]

The chart below illustrates water costs for fracking in the Permian Basin, excluding transportation costs for trucking, which generally ranges from $1 to $3 per barrel.

Figure 13

Average Water Costs for Oil and Gas Completions in the Permian




Source: Barclays Research

### Options for wastewater management

Depending on the quantity of produced water and the water-to-oil ratio it contains, oil and gas producers have several methods for managing wastewater, including injecting it into deep underground wells, recovering some of the oil it contains, and treating for reuse and recycling. Reusing wastewater does not only cut water acquisition costs but also disposal and trucking costs, and it is also crucially an opportunity for improved sustainability and cooperation with other industries.[22] There are currently studies underway to test the selling of treated produced water for agriculture.

### Water treatment

There are different levels of water treatment, and the quality of the wastewater determines to a large extent whether wastewater will be injected, reused or recycled for use in another industry. The basic level is direct reuse within a well, which requires little treatment, while recycling to fresh water standards will require several intensive steps of treatment.[23]

The next level of treatment is the most common and economic: simple filtration, which removes large organic particles, oil, and gas bubbles known as suspended solids. Another, more complex, treatment produces clean brine while a third level removes salts and naturally occurring minerals, particles and salts, collectively known as total dissolved solids (TDS).[24] Low-cost technologies exist to treat suspended solids and large particles, but removing salts is the most difficult and expensive.

The final stage of treating water to near-fresh standards is to remove bacteria, ammonia, heavy metals and other materials,[25] requiring technologies such as oxidation and biological treatment.[26] A last option is zero liquid discharge treatment, which converts wastewater into a dry solid, to be used for other purposes.[27]

Light treatment is sufficient to prepare water for injection into a saltwater disposal well, but more robust treatment methods are necessary for recycling for other purposes. Typically, producers transport their wastewater to a specialized treatment center specific to oil and gas production, which creates an additional transportation cost. However, larger companies are moving towards onsite water treatment to reduce transportation costs, discussed later in this report.

## Putting a lid on disposal

We believe that a useful mechanism for incentivizing recycling and reuse is to restrict the disposal of wastewater. Two factors will create such a constraint: on the one hand disposal wells (used for storing wastewater) are reaching capacity and, on the other hand, an increase in regulation governing wastewater. Both of these factors will drive up the price of oil and gas extraction. If the oil price recovery continues, and subsequently more wells are completed, produced water volumes will increase, putting more pressure on disposal wells.

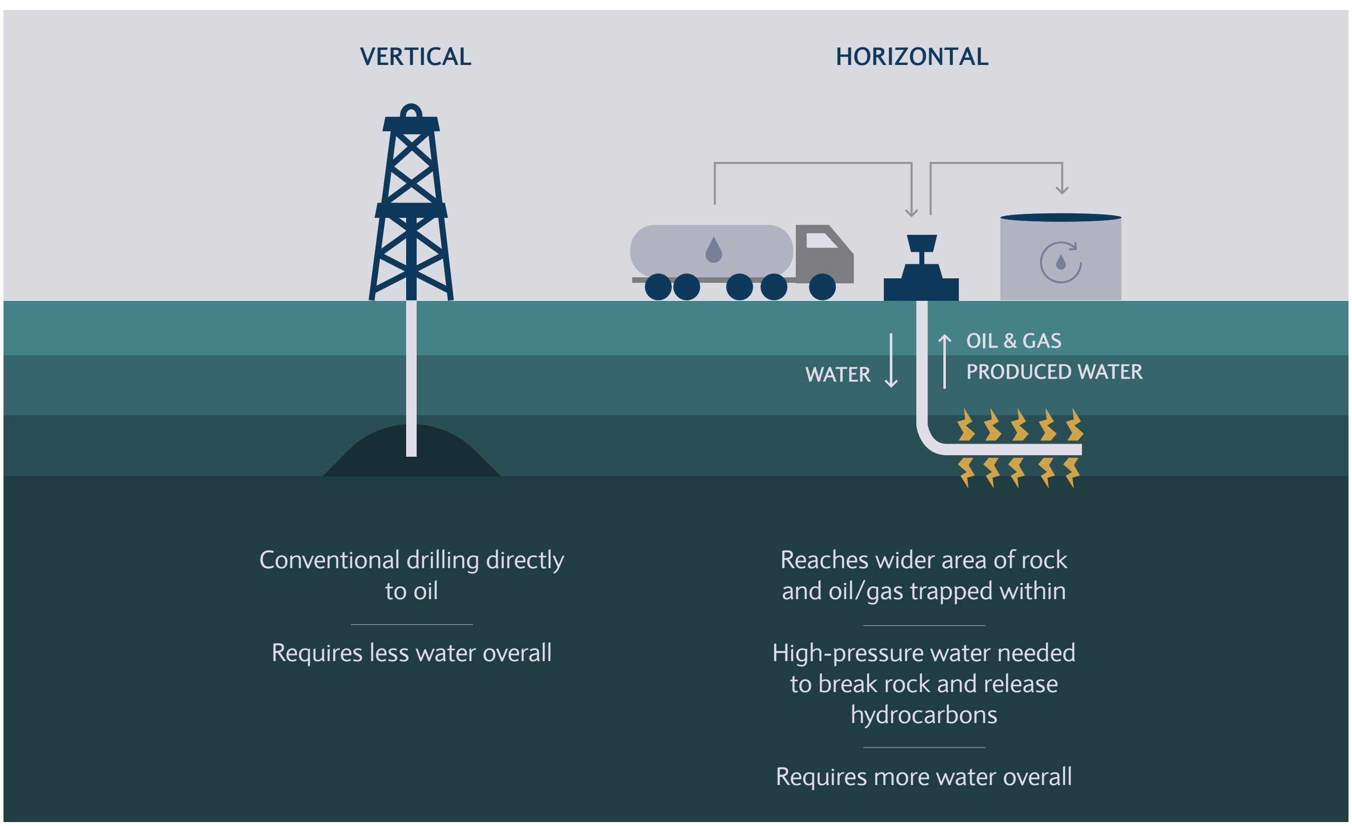
Regulations around earthquakes and new environmental rules, including potential protection of brackish groundwater, could also make disposal wells more expensive. In some parts of the United States deep-well injection has been connected with earthquakes, which could lead to regulatory limits. This could force exploration and production operators to look for other options for managing wastewater. In Oklahoma, for example, the Oklahoma Corporation Commission's oil and gas division recently issued restrictions on disposal wells in an area deemed susceptible to earthquakes, shutting down existing wells and reducing injection volumes in other ones.

Another factor that could influence the cost of disposal wells is research by the Texas Water Development Board on brackish water, which could see the Environmental Protection Agency give brackish aquifers the same protection as freshwater ones under the Safe Drinking Water Act.[28] The Texas Energy Alliance speculates that the cost of a disposal well could double, which could be a driver for reuse.

Favorable regulations such as the passage in 2015 of bill HB2767[29][30] could increase the price of wastewater injection wells by transferring the ownership and liability of wastewater from the producer to the person who takes possession of the wastewater.

Figure 14

New oil wells, new water demands




Source: EPA[31]

# The two Rs:

## Reuse…

While the terms recycling and reuse are used interchangeably, we define reuse as wastewater reused within a well, which requires very little additional treatment, while recycling is treating wastewater to acceptable standards through robust treatment. Economics, water availability, water quality logistics, and disposal options dictate whether an operator reuses or recycles, and so recycling and reuse rates vary across the country. Reusing water is logistically challenging for companies without enough connected land (known as contiguous acreage), because wastewater rises to the surface over variable periods (sometimes months), depending on the location and must be stored and later transported to a new well for reuse. The chance of spilling toxic wastewater increases when the water is moved and stored.

**Reuse:**
Wastewater reused within a well, which requires very little additional treatment

**Recycling:**
Treating wastewater to acceptable standards through robust treatment

## … and recycling

Over the past few years, new opportunities for collaboration with industries, such as agriculture, have created sustainable solutions for water management. The industry calls these collaborations “beneficial reuse”, though we refer to them as recycling.

There are many possible uses for recycled wastewater, especially for livestock watering, irrigation or industrial reuse for crops. For example, in Midland, Texas some farmers are experimenting with using recycled water from oil and gas for irrigation on non-food crops such as cotton.[32] In California, Chevron sells 21 million gallons per day of its treated wastewater to neighboring farmers for irrigation, according to the LA Times. However, such projects have not been tested long term and it is unclear whether radioactive material or metals in the recycled water has any harmful effects on soil and crops. For these reasons, many environmental groups and other public groups oppose the practice.[33]

Opportunities for the industrial use of wastewater include cooling power plants, process water and vehicle wash water. The National Energy Technology Laboratory has done several studies on using alternative sources of water for cooling including treated produced water, and we discuss their pros and cons in the chapter on power and utility companies. In addition, some states approve the use of solid wastewater for use on public roadways during winter weather. However, environmental groups are concerned that the salt and metal content could be hazardous to the ecology of roadside streams and farmlands.[34]

# Our recommendations for better water use in the oil and gas industry

Barclays Research shows how the oil and gas industry could implement the following steps:

**1) Operators can increase water reuse by:**

a. Increased regulatory clarity, further data transparency, and enhanced industry and company coordination.

b. Additional research and development and progressive pactices and partnerships to drive costs lower.

**2) Once operators substantially increase reuse the next steps for recycling include:**

a. Technologies including membranes and distillation must improve and become cheaper, and storage tanks and pits must be engineered to prevent spillage.

b. Greater investment is needed around water infrastructure, to facilitate safe transportation of wastewater to centralized treatment facilities and to other operators.

c. Operators, the Government, and policy groups can coordinate research and development on long-term health and environmental effects of using produced water for alternative uses including irrigation, drinking water and industrial purposes.

# Case Study

## Laredo production corridors: efficient water treatment and reuse

**Background:**
Laredo Petroleum is an independent oil and gas company. With the primary objective of building blocked-up acreage throughout the Permian Basin, it began acquiring land in 2008, ending up with about 149,000 acres in 2015.[35] Its position facilitates the ability to construct production corridors and drill long lateral wells. In 2014, it created a long-term plan for full-scale and cost-effective development of its acreage. It decided to build four production corridors, which would help develop horizontal wells and improve efficiency and reduce costs. In addition, Laredo hoped to improve sustainability by reducing freshwater through reuse of produced and flowback water in new fracking operations.

**Solution:**
Laredo aimed to change its water usage through production corridors and building centralized infrastructure. The production corridors are designed to efficiently move oil, gas and water on site, process water at a centralized water treatment center, and transfer oil and gas products to market.

The largest corridor, Reagan North, holds the centralized water recycling facility, while the three smaller corridors - JECox, Reagan South and Lacy Creek - have water service lines connecting to, or the ability to build-out lines that connect to the water recycling facility. Overall, these production corridors and the treatment facilities have connected storage capacity of more than 5 million barrels of water and would be able to recycle 30,000 barrels of water per day.[36] By the first quarter of 2015, the Reagan North production corridor was fully operational. Spanning 7 miles, it was designed to provide services to 450 or more horizontal wells.[37]

**Layout:**
The Reagan North corridor is unique because it has a water storage facility and three different water lines to transport fresh, produced and recycled water. The corridor also has three different gas lines and an oil gathering line. By using a combination of robust 16-inch steel pipes and 10-inch poly pipes, rather than smaller pipes, the water is transported at faster rates. The buried pipelines have a monitored cathodic protection system and robust maintenance procedures to mitigate spills and leaks. An advantage of the corridor and the installed infrastructure is the efficient delivery and takeaway of water in efficient manner, minimizing spills and trucking.

The water treatment facility uses filtering and oxidation to remove solid particles and kill bacteria from flowback water that is piped to the facility. The treated water is then piped to a series of on-site storage ponds with a total capacity of 1.4 million barrels of water. The water can then be used for completions and is transported to the well-site by pipe. To date the company is recycling almost 40% of its produced and flowback water.

**Cost Savings:**
Laredo has currently invested around $100 million in its production corridor infrastructure, including roughly $56 million in water infrastructure assets. Additionally, Laredo has invested approximately $50 million in additional infrastructure assets not associated with the four production corridors.

Overall, Laredo estimates the production corridors provide around $1.3 million in benefits per 10,000’ horizontal well, recognizing about 25% of savings in the first six months of the wells’ life. In 2016, Laredo estimates water infrastructure generated capital and operating cost savings of $12.7 million. Recycling produced water instead of sending it to a salt water disposal well saved $0.32 per barrel of water in 2016. Gathering and transporting produced water by pipe as opposed to truck displaced around 95,000 truckloads of water, at a savings of $0.85 per barrel of water. Finally, using recycled water in well completions as opposed to purchasing freshwater saved around $0.26 per barrel of water. In the fourth quarter of 2016, Laredo estimates its production corridors reduced its lease operating expense by approximately $0.51 per barrel of oil equivalent.

**Lessons:**
Laredo is unique in the Permian, because of its large, contiguous acreage, which means it can effectively and safely deploy infrastructure that facilitates the reuse of wastewater. Companies with as much land would benefit from following its lead, while ones that are more spread out would gain from enhanced inter-industry collaboration, consistent regulations around water storage, and pipeline integrity to encourage safe reuse.

# Case Study

## City of Midland, Texas, and Pioneer: working hand in hand in a public-private partnership

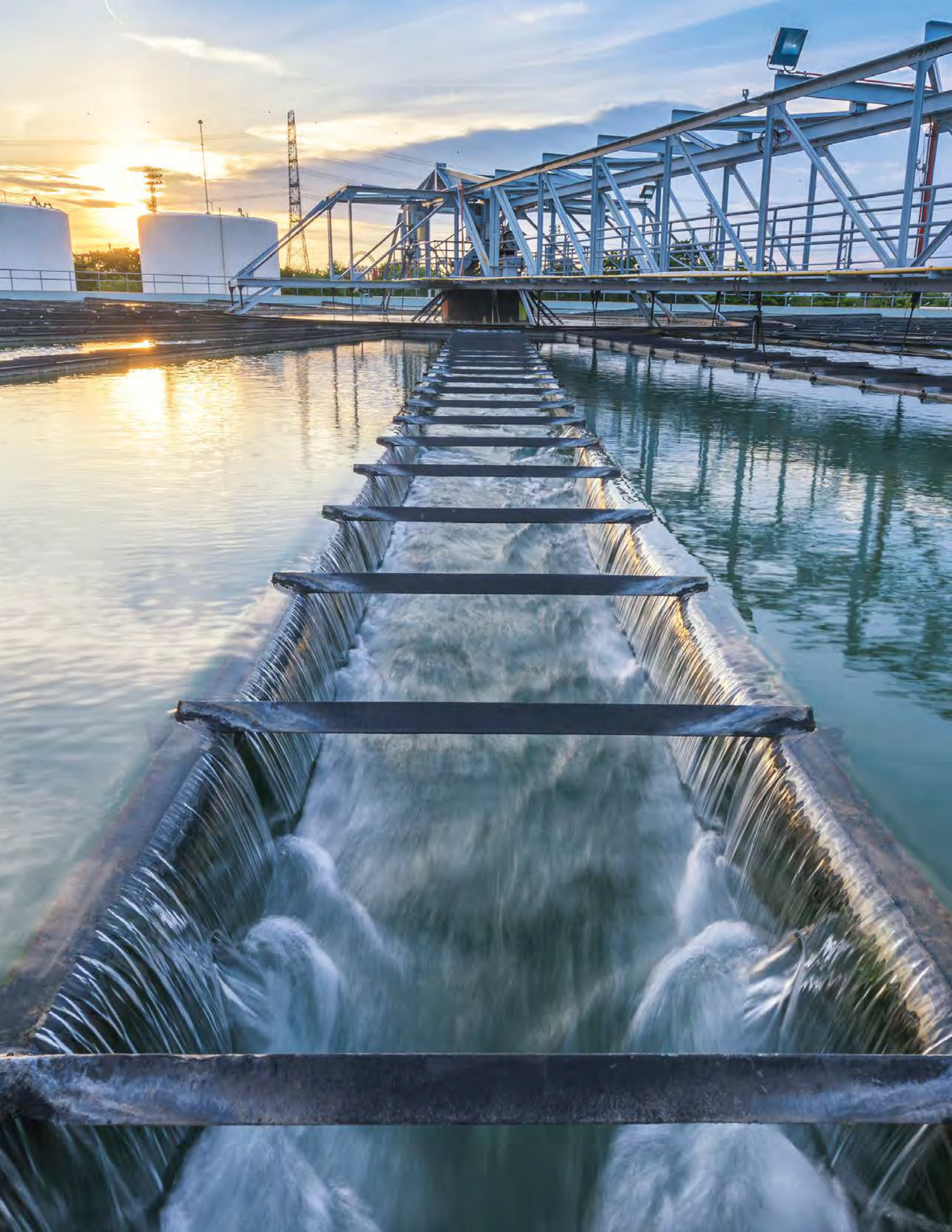
**Background:**
Midland County, Texas is one of the most drought-prone areas of the state. A large county in the Permian Basin, it has high oil field activity, economic growth and water scarcity. It relies on the Colorado River Municipal Water District and maintains 1,400 miles of sewage pipes serving a population of 161,077.[38] The City of Midland is part of the West Texas Water Partnership, whose mission is to "form partnerships, leverage financial capacity and knowledge, maximize existing water sources, minimize impacts to the environment and eliminate the adverse effects of competing for water."[39]

The city not only forecasts freshwater shortages in the near to long term but also anticipated environmental restrictions around municipal wastewater treatment. The City of Midland currently has a no-discharge permit, which means that wastewater cannot be moved from the collection site. It was therefore necessary to upgrade its wastewater treatment plant just to meet current standards, at a cost of $60 million to $80 million, a burden that would have been transferred to rate payers. In order to avoid raising rates, the city put out a Request for Proposal for a company to help finance the upgrades and benefit from the treated municipal water.

Pioneer Natural Resources, one of the largest exploration and production companies in the Permian Basin, also faces water-related challenges. In 2016, the company's Permian Basin operations used roughly 300,000 barrels per day on average for its 14 rigs, with plans for further growth. Considering the regional economic development, unfolding draught, and community and social considerations, Pioneer was looking for innovate solutions to achieve water security and lower its freshwater footprint.

**Opportunity:**
After reviewing several proposals, the City of Midland accepted Pioneer's proposal to upgrade the water system at a cost of $115 million. The city stated that what differentiated Pioneer's proposal was its use of pipelines rather than trucks to transport wastewater. The contract provides 2 billion barrels (or lasts 28 years) commencing in 2019, providing up to 240,000 barrels of water per day. In addition to paying for the capital upgrades, Pioneer will pay the city $0.029 per barrel, which equates to $2.5 million annually. The net cost to Pioneer will be $0.06-$0.10 barrel of water, or roughly 84% below the cost of freshwater in the region at $0.40-$0.60 per barrel of water.

By using municipal wastewater, Pioneer will reduce its freshwater usage, cuts water acquisition costs, save freshwater in a constrained environment, and reduce competing usage in the Texas Water Development Board Region F (West Texas), which the Texas Water Development Board predicts will have shortages of roughly 2.1 billion barrels of freshwater by 2040.[40]



# Public Utilities

## Coming clean on innovation in the utilities sector

This part of the report focuses on public utilities*, and in particular on electricity and water companies. It is notoriously one of the least innovative sectors in the United States when it comes to water.

While there are exceptions, such as research conducted by investor-owned utilities, the National Regulatory Research Institute has found that the industry spent only 0.1% of revenue on research and development in 2014. This is partially due to its highly regulated nature: both electric and water utilities have an obligation to provide reliable, safe, quality public goods at an affordable rate, while also complying with environmental regulations and standards. As a result, utilities tend to be more risk averse than oil and gas and other energy companies.

However, there are differences between power and water utilities. One key factor is that power companies are largely investor-owned, giving them access to a higher capital spend, while water utilities are mainly in public ownership. According to data from the Regulator Assistance Program (RAP), only 16% of water companies are owned by their investors in contrast to 75% of electric utilities.

The power industry is usually first to adopt new technologies, followed slowly by water companies. Advanced metering infrastructure, for example, has been widely used by power utilities, but is only now starting to find traction among water companies.

The Energy Information Administration (EIA) estimates that since 2015 electric utilities had installed almost 64.7 million advanced metering systems for residential, commercial, industrial and transportation use, largely driven by state policies. Exact numbers are unknown for the water sector, but we estimate the adoption rate is much lower. Because the water sector is so fragmented and also suffers from budget constraints, most public water utilities prioritize maintaining and repairing infrastructure in the short term rather than investing in new technologies.

As climate change causes increased temperatures and extreme weather events that affect the quantity and quality of freshwater, utilities could face increasing challenges to consistently deliver services and protect vulnerable infrastructure without driving up prices for ratepayers. Water and electricity companies will have to innovate and invest in new technologies and infrastructure. At the same time, a favorable regulatory environment and long-term planning through integrated water management would be beneficial.

* In this paper we focus on water consumption for power production (cooling) and not primary energy production (supply chain).

## Wired for change: electric utilities

In the coming decades, electric utilities across the U.S. will likely have to carefully manage their water demands and look to alternative technologies and water sources. They use a lot of water, and will therefore be especially susceptible to climate-induced stresses in water scarce regions.

In addition to installing hybrid cooling technologies in power plants and reducing freshwater usage through saline and recycled municipal water, power companies can deploy demand-side management and energy efficiency. Like the oil and gas sector, alternative water sources used with additional treatment can be an opportunity, but they also require additional infrastructure, and are costly and energy intensive.

Changes in how electricity is generated will indirectly impact water use. Although regulations will be the strongest propeller, low natural gas prices and aging coal power plants are all contributing to the demise of coal.[41] Natural gas is less water intensive than coal, while clean energy uses less water than fossil fuel power generation. This means that state level energy mixes will determine water usage by region.

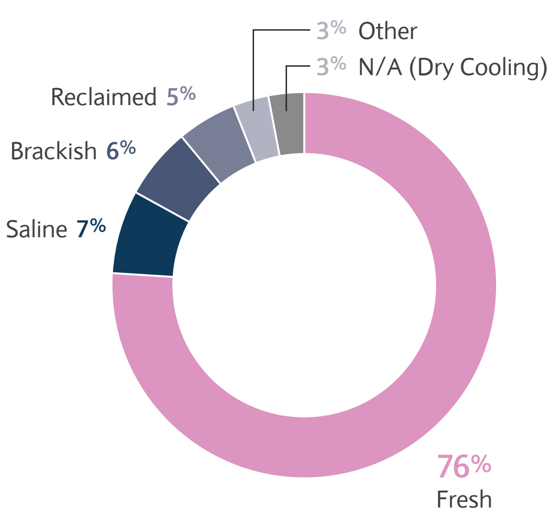
But with uncertain regulations, we believe that customer engagement, including demand-side management and energy efficiency, and careful planning and cooperation between water planning boards and other industries, could prevent long-term water stress. More importantly, there could be greater cooperation on a state and local level between water and electric utilities in managing water supplies and planning for future water scarcity, as advocated by the Department of Energy. Several utilities have already developed proposals to meet future water and energy needs through integrated resource plans in the face of supply and regulatory uncertainty.

## Types of electricity generation and their relationship to water

In 2015, the United States derived about 87% of its electricity from thermoelectric (heat-generating) sources such as coal, natural gas, petroleum and nuclear. Hydropower generated about 6% of the country's electricity needs, with the remainder coming from renewable energy sources, according to data from the US Energy Information Administration (EIA). Most of the hydroelectric power comes from the Northwest, while thermoelectric power generation in the form of coal dominates in the Northern Plains, Midwest, East Coast and Rockies. Each type of power generation withdraws different quantities of water.

Figure 15

Water sources for thermo-electric cooling




Source: Argonne National Lab, Department of Energy

### Thermoelectric power and water cooling

According to the United States Geological Survey (USGS), the thermoelectric power industry accounted for 45% of the nation's total water withdrawals, making it the largest water user. In its accounting, USGS does not include hydroelectric power for overall withdrawals because thermoelectric is classified as generating electricity with steam-driven turbine generators.

Unlike irrigation and mining, a large percentage of thermoelectric water withdrawals are not consumptive, so the water is returned to the water cycle. Nevertheless, water is still a crucial part of wet cooling systems for thermoelectric power generation. In water-poor environments, reduced supply will impact power plant production and efficiency. Because water use varies by electricity source, it is important that regional water groups work with transmission planning agencies, and local utilities engage in their planning discussions.

Nationally, groundwater makes up only 0.5% of the water needed for cooling at thermoelectric plants, while 99.5% comes from surface water.[42] Drought-prone states like Nevada and Arizona which depend heavily on groundwater, have introduced conservation measures, such as new dry cooling plants, encouraging the use of reclaimed water. Most of the water for power plants comes from rivers, streams, seawater and groundwater and reclaimed water.

### Hydroelectricity

Hydropower generation depends on water as much as thermoelectric power, and works in a very similar way. However, hydro harnesses energy from the natural flows of a body of water rather than withdrawing it from a source.[43] Nevertheless, hydroelectricity does have high evaporation rates, making it a high consumer of water.

### Renewable sources (wind and solar)

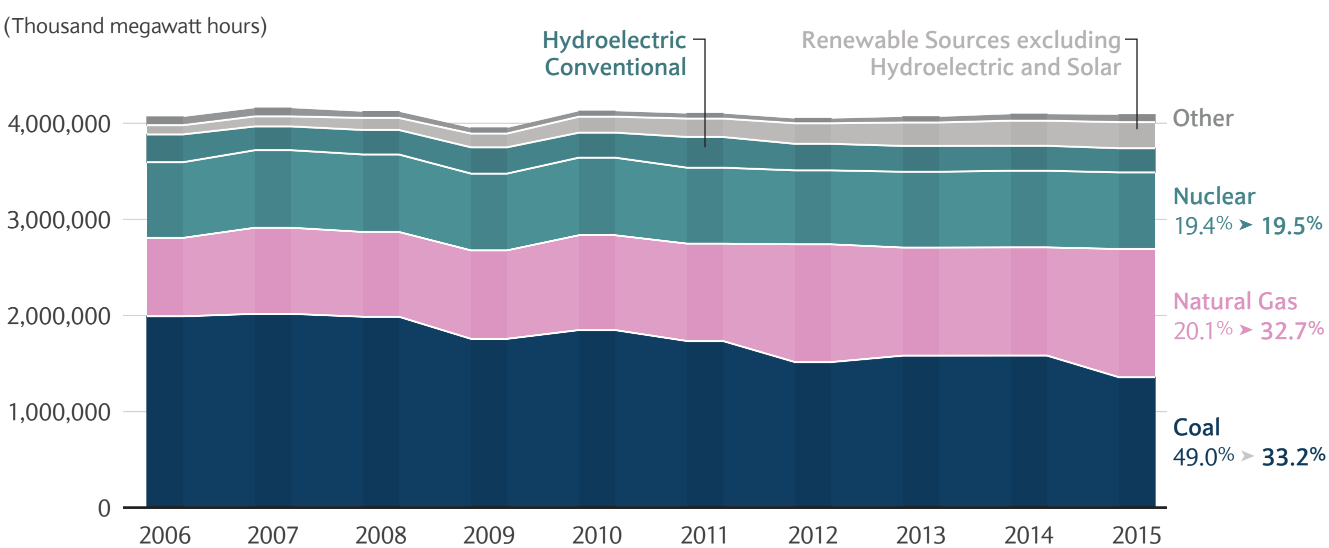
Neither wind power nor small scale rooftop solar uses large amounts of water, except for cleaning purposes. However concentrating solar, where lenses and mirrors are used to concentrate sunlight, does have high associated water use depending on the cooling technology. According to the National Climate Assessment, wet cooling on a concentrating solar plant can require between 750 and 900 gallons/MWh, which is almost as much as coal.

## Finding the right mix of power sources

In the decade between 2004 and 2014, coal-powered electricity generation decreased by 22% in the United States, while natural gas increased by 151%. Why does this matter from a water use standpoint? Water use for cooling varies by fuel source and cooling type.[44] Though estimates vary widely, NREL found that withdrawals using tower cooling for nuclear had the highest withdrawals, followed by coal. Withdrawals for a combined cycle natural gas plant were almost a quarter of those of coal.[45] Apart from concentrating solar, renewables like solar and wind use no water.[46] Because renewable energy and natural gas use less water than other generation sources, a shift to these sources can help decrease the amount of water needed, which is an important consideration for planning in water stressed regions like the Western United States.

Figure 16

U.S. Electricity Generation by Fuel Source




Source: EIA Electric Power Annual

We expect that water withdrawals will increase with population growth and resulting demand for electricity. Electricity planners in water-stressed regions should not only work with statewide regulators to determine the best fuel mix for individual states, but they could also consider the impact on water supplies.

## Water shortages reach boiling point

Water constraints include both shortages and regulatory restrictions from governing agencies such as water development boards, river basin commissions and state water rights. Nationally, water rights can influence how much water a permit holder can use and may result in restrictions for various users depending on the water right type in times of drought. However, the US Government Accountability Office found that even under normal conditions, 40 states anticipate fresh water shortages.

## Getting on-stream with technology-alternatives to fresh water

### Saline water

Treated saline water is suitable in conventional cooling towers while untreated saline or brackish water can be used in specially designed towers. Saline is therefore increasingly used for power plants' cooling needs. This practice in states like Georgia and Delaware has led to a reduced reliance on freshwater between 2005 and 2010,[47] with 97% of all saline withdrawals in the U.S. coming from the thermoelectric power industry.[48]

### Recycled and reclaimed water

Power utilities can also use waste products such as produced water from oil and gas operations, treated municipal effluent or reclaimed water from mining and natural gas extraction. Using alternative sources of water gives power companies more flexibility when choosing a site for a new plant, and also eliminates the needs for water permits. Given the high volumes of produced water from fracking, as well as municipal effluent water, many energy agencies have studied the feasibility of using wastewater.

Some states are taking steps to reduce freshwater usage for cooling purposes by requiring companies to source alternatives and to improve measuring and accounting of reclaimed water usage. The California Water Board, for example, evaluates permits for freshwater sources for power plant cooling based on future water needs and compares these with the potential for the plant to use alternative water sources. The Texas Water Development Board estimates that reuse could produce 4.7 billion barrels of water per year over the next several decades. The total reuse volumes for treated effluent water to cool power plants have doubled from just over 10 billion gallons in 2009 to 20 billion gallons in 2015.[4950]

### When sun and wind can alleviate water shortages

Water-scarce states and those dependent on hydropower could consider implementing Renewable Portfolio Standards (RPS) which make provision for the likes of solar, wind and storage as a form of long-term resiliency planning.[51] These recommendations will not only offer protection against water shortages, but also make provisions to smooth out the load as more solar and wind is added to the grid.

Though it will have a less dramatic impact on water use than coal shutdowns, we believe that renewables will alleviate water shortages in some regions. In order to diversify energy supplies, hydro dependent states like Washington should consider diversifying their energy mixes with more wind and solar.

However, solar and wind energy requires additional storage to smooth gaps between intermittent generation, caused by the fact that solar generation is limited to sunlight hours, while peak demand for electricity is in the evenings.

### Planning for supply and regulatory uncertainty

Electricity utilities can plan for regulatory uncertainty and water supply shortages through Integrated Resource Plans, which allow investor-owned utilities to evaluate supply and demand scenarios, and to work with stakeholders to minimize environmental impacts and diversify their energy portfolios.[53] Although Integrated Resource plans are long-term, labor-intensive processes, we consider them best-practices for investor-owned utilities because the process is collaborative, inclusive and plans for uncertainty.

### Low tech/cost effective solutions and policies

Reductions in electricity production result in reductions in water use for cooling, and vice versa. Like the water utility industry, the electricity industry and governments can facilitate these reductions through low-technical solutions, including demand-side management and energy conservation.

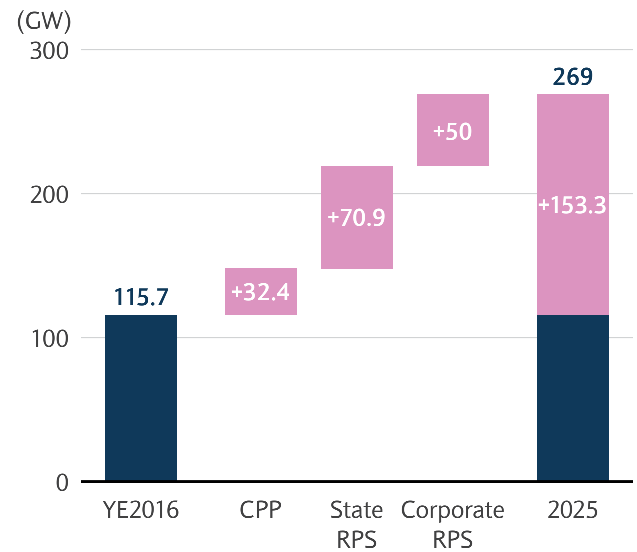
Other solutions include reducing load growth through energy efficiency, which is usually policy driven at both the state and federal level. Energy efficiency involves the deployment of technologies that reduce energy waste from transmission through building, appliance and automobile and power plant retrofits. In the United States, for example, weak economic growth and energy efficiency programs, such as low-energy light bulbs, have resulted in no electricity growth since the mid-2000s.

Energy efficiency projects have high upfront capital costs, but the availability of financing mechanisms can help offset costs through state and federal government programs.[54] Utilities can incentivize efficiency programs for residential customers through rebates.

However, while economic growth is showing signs of improvement, energy efficiency and meeting demand remain headwinds to electricity sales growth.

Figure 17

Drivers of renewable capacity demand through 2025




Source: Barclays Research[52]

# Case Study

## Wind-water desalination in Seminole

### Background:

In 2010 the city of Seminole, Texas, began exploring strategies to reduce dependence on the Ogallala aquifer. The aquifer is over-used by farmers in the region and many of Seminole's wells were below EPA drinking water standards.[55] Ideas included treating brackish water aquifers like the Santa Rosa and Dockum aquifers. Since neither aquifer had been drilled and the depth was unknown, city planners hoped to conduct a pilot project to explore their sustainability. Located in the Texas Panhandle, with abundant wind capacity, the city saw a wind-powered reverse osmosis plant as a viable option.

The city approached Texas Tech University National Wind Institute and Water Resources Center to create a pilot grid connected to a wind powered reverse osmosis desalination project. The goal was to reduce electricity costs related to reverse osmosis, boosting water savings for the town. After securing funds from the Texas Department of Agriculture (TDA), the State Energy Conservation Office and the Texas Water Development Board (TWDB), the project began the permitting and planning process and drilled the Dockum well. By 2011 the drilling and pump testing was completed and by 2012 the construction consultants finished installing the reverse osmosis system.[56]

### Costs:

The total project cost was $1.625 million sponsored by several agencies including the TWDB, the TDA and the city of Seminole. TWDB donated $300,000 to drill the Dockum well and the TDA $724,624 for other project components. Additional funding came from Texas Tech University. Although the city retained the infrastructure for the project and would manage the daily operations, the operational costs and monitoring would come from Texas Tech.

### Project Layout:

The pilot project consisted of a pump, and reverse osmosis system, powered by a grid-connected 50kW wind turbine provided and installed by Entegrity Wind Systems.[57] The project would operate over a one year and five month period.

### Challenges:

Although the turbine generated enough electricity to meet approximately 47% of the demand of the well pumping and the reverse osmosis system, the turbine operation and the desalination process were not timed to coincide. The project developers argue this could have been solved through long-term planning.[58]

Overall, the renewable technology was not an issue, and in fact, worked due to the grid back-up. Other short-term problems included a broken well pump and lighting strike.[59]

The biggest challenges had to do with characteristics and depth of the aquifer and problems with the membrane. The combination of the high TDS levels and challenges with pre-treatment caused the membrane to foul, a common occurrence in reverse osmosis systems.[60]

A second problem was that the Dockum aquifer produced too little water for the project to be a viable long-term water source for the city. The depth of the water decreased in the first year of drilling and ended up producing a mere 20-25 gallons per minute, short of an optimal rate of 50 gallons per minute. Although the wind power resulted in electricity cost reductions of $0.33/1,000 gallons, the town did not find the cost to be worthwhile for the amount of water the well generated.

### Solutions and Outlook:

The project participants concluded that regular maintenance of the reverse osmosis system and better characterization of brackish water aquifers would lend to future brackish water desalination systems powered by any type of energy system. Future studies of brackish water systems will help municipalities understand depths, salinity and limitations of brackish water resources. In general, wind power proves to be a viable source of electricity to power reverse osmosis plants, especially when it is grid connected or backed by batteries.

# Tapping into the water utilities

The biggest challenges for water utilities are forecasting demand from a growing population, planning for extreme weather events and updating aging infrastructure. At the same time, the industry has to deliver consistent and clean water to its users at an affordable rate.

Water companies tend to have more budget constraints than electric utilities and are therefore less able to invest in innovation. The industry is also highly fragmented, which means that in a disaster, responsibility is spread over many agencies and institutions.[61] Across the United States, investment in water-related solutions often comes about as a result of regulations introduced after a crisis event, and often far too long after the fact. While the lead contamination of the drinking water in Flint, Michigan, was caused by a combination of issues, budget constraints and mismanagement were primary drivers.

Many public water utilities prioritize infrastructure investments, including maintenance and upgrades, and few have sufficient funds for research and development. Investor-owned water utilities usually lead the way in the development of new technologies, such as leak detecting and advanced metering infrastructure (AMI). These technologies have high upfront capital costs but in the long term they save money and water, and also benefit public utilities.

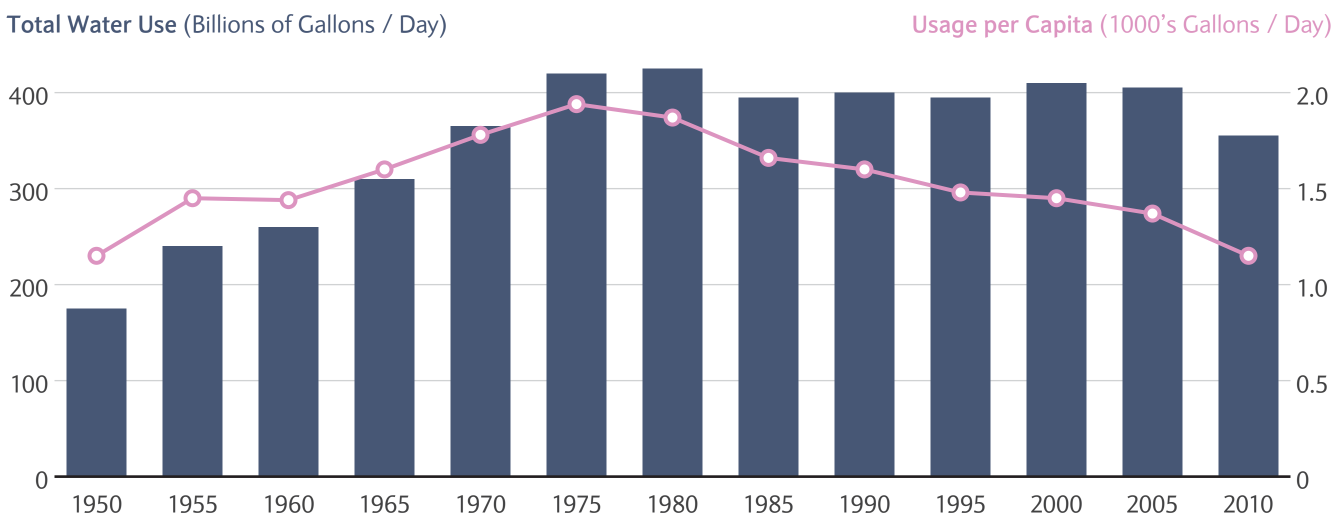
## How much water does the US public consume?

Public water supply in the United States in 2010 averaged 335 billion gallons per day, a decline from 2005 when the daily average was 409 billion gallons. Average per capita water usage has been declining steadily, mostly due to improved water metering and conservation measures, and we expect this trend to continue.

However, it is expected that competition with other industries, population growth and potential climate change induced shortages will make water use an increasing concern for the utility sector.

Figure 18

Changes in Aggregate water usage and consumption, 1950-2010




Source: US Geological Survey, US Census Bureau, Barclays Research[62]

# The challenges ahead

Given the integral role of water to their business, water utilities face challenges such as a decline in supply due to lower precipitation levels, reduced groundwater, and increased demand for freshwater. Other risks include extreme weather events and a rise in sea level, both of which can impact the quality of freshwater supplies and tax existing infrastructure.

### Water quality and quantity

Contaminated water is a great concern for freshwater utilities, because clean water is central to their function, and treatment to remove arsenic, chloride and nitrates is expensive. Besides naturally occurring changes in groundwater, and reductions in water quality due to human, agricultural and industrial activity, other natural occurrences can compromise groundwater quality. Flooding for example, is an important risk because it can cause storm water overflow and saltwater intrusion into freshwater sources.

Water scarcity is another challenge, especially in regions that face dramatic and unplanned increases in population. Water companies also have to manage supply and demand balances with adequate storage. For example, persistent drought has plagued Southern Nevada, which relies on the Colorado River Basin and sparse groundwater for much of its supply. However, communities in the area have continued to grow at unprecedented rates, creating uncertainty for water planners.[63]

Areas with supply constraints and under-developed infrastructure must transport water over distances, which not only requires additional power, but also makes infrastructure more susceptible to failure.[64] The Southern Nevada Water Authority has reacted by prioritizing conservation efforts and developing innovative solutions including water reuse, water-smart landscaping and building standards, and implementing conservation tools such as education, and conservation rate restructuring.[65,66,67]

# Where the water flows

### Drinking water

Drinking water undergoes several steps before it reaches the tap. A water utility will source its water from either surface or groundwater, or in some instances reclaimed water, though this is less common in the United States. Freshwater will be pumped or transported from its source to a facility, where it is treated and tested to EPA Drinking Water Act standards.[68] The water then enters a transmission main and is distributed to residents.[69]

### Wastewater utilities

There are two types of wastewater utilities: municipal and industrial, which have different standards for treatment depending on the effluent.[70] Wastewater from residential and industrial users is collected in a sewer system, along with rainwater and storm water runoff.[71] From the sewer, the water is transported to treatment plants where the water undergoes several steps before it is discharged to water sources or used for other purposes such as groundwater recharge.

## Our recommendations

Infrastructure requires the most funding in the water industry, which could be solved in the following ways:

- More consolidation of utilities
- Increased funding from the private sector and/or partnerships between private and public sectors to bridge funding gaps
- There are long-term opportunities in potable reuse to alleviate water scarcity, but it requires more consistent regulations.

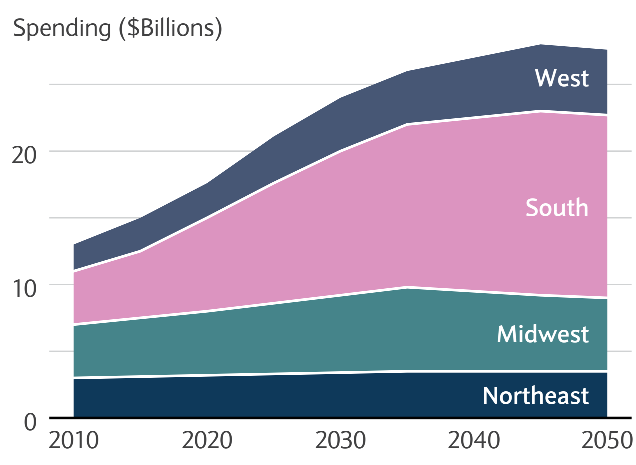
# How to value the cost of water

Many users are not aware of the significant infrastructure, treatment and maintenance costs that go into delivering clean, uninterrupted water to their homes and businesses. Unlike electricity or natural gas, customers rarely consider their water consumption or the reliability or their water and waste water systems. Maintaining infrastructure, while keeping affordable rates for customers, remains one of the biggest challenges for water utilities.

Drinking water utilities spend almost 40% of their operating costs on electricity used for pumping, conveyance and treatment, according to the Environmental Protection Agency (EPA).[72] The Pacific Institute found that using conservation and efficiency measures on the customer side like replacing residential showerheads and retrofitting appliances are more cost effective than investing in new technologies such as desalination and potable and non-potable reuse.[73] Other energy efficiency methods include introducing efficiency measures into pumping and conveyance systems. For example, the EPA recommends that wastewater utilities retrofit pumps with energy efficient motors and also replace large pumps that operate infrequently with smaller pumps that operate continuously. [74]

Figure 19

Water Main Replacement
Annual Cost Forecast – 2010 to 2050E




Source: ASCE[75]

### Liquid investment

Projected spending needs vary but the American Society of Civil Engineers (ASCE) estimates that drinking water investment will be more than $1 trillion in the next 25 years, while the EPA predicts that the infrastructure needs will reach $384.2 billion over the next 20 years, excluding waste water systems.

However, as water utilities are mainly owned by municipalities and publicly traded water companies have a combined market capitalization of only $18 billion to $20 billion, it is evident that investment will need to come from both the public and private sectors. The outdated water infrastructure is the main reason such large investments are needed.

The EPA estimates that the cost of replacing water mains alone could approach $25 billion annually by 2030.

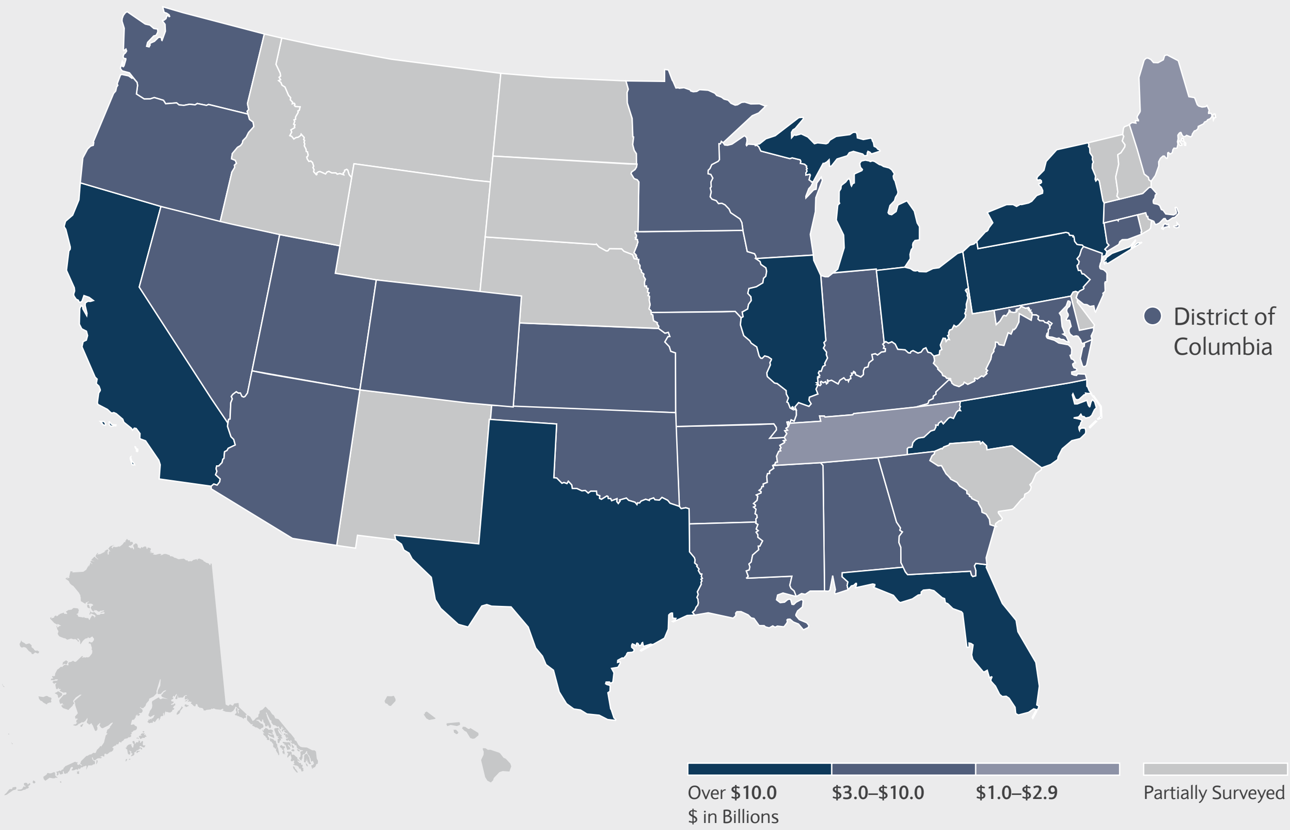
Different regions will need different levels of investment – some areas need infrastructure upgrades because they suffer from scarcity and population growth, while other states may not have had the budgets in the past to maintain their infrastructure.[76] As expected, drought prone states like California, Nevada and Texas, and states with growing populations like New York have the highest sourcing needs.[77]

### Counting the losses

According to the American Water Works Association, there are two types of water losses: “real losses” from leaks in mains and storage vessels, and “apparent losses” also known as non-physical losses caused by ineffective metering or theft.[79] In 2015, the Water Research Foundation assessed water losses in distribution systems across five regions in the United States and found that the median real losses for water mains was 785.54 gallons per mile of main per day.[80]

Figure 20

## Overview of 20-Year Need by State




Source: EPA[78]

## Current methods for treating water

### Drinking water utilities

Drinking water utilities must abide by the Safe Drinking Water Act Standards,[81] which regulate the allowable limits of microorganisms, disinfectants, organic chemicals and inorganic chemicals.[82] In addition, EPA also has secondary drinking water regulations or voluntary guidelines for contaminants that still render the water safe to drink but may have undesirable aesthetic effects.[83] Though the Safe Drinking Water Act is enacted on a federal level, states have individual standards for water quality.

Water utilities have access to several step-like treatment processes, including coagulation, flocculation, sedimentation, filtration, and disinfection.[84] In the first few steps - coagulation and flocculation - particles are suspended in the water, to later be removed through filters. The last step, disinfection, uses a disinfectant to remove bacteria and viruses.

### Wastewater

The primary treatment for wastewater is to remove suspended solids, and other large items like trash, while secondary treatment breaks down organic materials. Tertiary treatment, or disinfection, usually occurs through chlorine,[85] aimed at killing organisms and pathogens that could cause disease, though the level of treatment varies by water quality and local standards.[86] Treatment levels are regulated by the Environmental Protection Agency.

## New technologies and solutions as game changers

As water scarcity continues to limit existing freshwater supplies, water-scarce utilities are looking at alternatives to freshwater sources including treated brackish water, saline water and wastewater, all of which require expensive treatments. Other solutions to water shortages include managing existing supplies through conservation, smart water management and leak detection.

### Thinking smart: Smart meters and advanced metering infrastructure

Smart meters and grids are a crucial investment for utilities to properly gauge how much water their customer use, track unauthorized consumption and detect leaks. Automatic metering infrastructure was initiated by the electric utility industry, and not only allows for more accurate billing, but it can also help with detecting real water losses and reduce apparent losses – and reduce labor costs associated with meter readings.[87] Meters can also communicate the value of water to customers, by increasing awareness of actual water consumption.[88]

### Leak detection

Household leaks in the United States waste 1 trillion gallons of water each year, according to the EPA.[89] Much of this can be avoided by regular maintenance and leak-detecting technologies. Traditional leak detection is a slow and labor-intensive manual process conducted at night. New leak detection devices make the process faster and save money. These include satellite imagery to detect leaks, flow-sensitive meters and acoustic monitoring. Still in the pilot phase, satellite systems work by detecting unexplained puddles of subsurface water with an accuracy unavailable to acoustic monitoring.[90] They eliminate the need for metering infrastructure, but still provide comprehensive data. Flow meters detect leaks by monitoring high night flows – when users are normally inactive.[91] Lastly, acoustic monitoring detects noise or vibrations from leaks in the water pipe.[92] The most effective way to detect leaks is to use a toolbox of detecting methods, with acoustic monitoring, for example, usually paired with advanced metering infrastructure.

## Treatments

### Making wastewater drinkable again

Indirect potable reuse is the practice of treating wastewater to non-drinking standards and releasing into an environmental buffer, to further dilute.[93] After a period of time the water from the aquifer, lake, groundwater or reservoir is treated to drinking water standards and reintroduced as a drinking water source.

Direct potable reuse on the other hand, allows a utility to treat wastewater to potable standards and then directly introduce the treated wastewater into the drinking water system. Indirect potable reuse is successfully practiced throughout the United States, but the direct method has only had a few successful pilot projects to date. Although the treatment technology is proven, regulation, cost and public acceptance are some of the largest obstacles to wider adoption. Nevertheless, favorable regulation in some states has spurred pilot projects and small scale projects for utilities servicing small communities. California and Texas are two state leaders for such regulations, and Texas recently allowed the country's first direct potable reuse project.

### Desalination

In coastal areas or regions with brackish aquifers, desalination is an alternative treatment for providing freshwater. Desalination is deployed successfully, with 18,426 worldwide desalination plants worldwide and 1,300 in the U.S., according to the American Membrane Technology Association and the International Desalination Association.[94]

As discussed in the oil and gas chapter, desalination comes in two main types of technologies: thermal and membrane technology. The majority of American desalination systems are membrane based systems, mainly for brackish water.[95] While desalination has the potential to provide alternative water supplies to water-scarce regions, barriers include its high capital cost, and the high quantities of energy it consumes.

Costs for desalination depend on variables such as the costs of building the plant, and its operating and maintenance expenses, such as electricity and labor. Compared to other water sources it remains the most expensive form of treated water. For example, water at the Carlsbad desalination facility in San Diego costs between $2,131 and $2,367 per acre foot, compared to recycling potable water at $1,200-$1,800 per acre foot,[96] according to the California Energy Commission.[97] Seawater desalination is typically more expensive than brackish water because it has higher levels of dissolved solids.[98]

### Conserving water the non-technical way

In California, the cheapest form of water recycling is generally still hundreds of dollars more expensive than the cheapest water strategies like conservation, according to research by the Public Utilities Commission.[1003] The context matters of course, as well as the location. In areas with high priced water, recycling may indeed be less expensive.[1014]

The EPA has numerous recommendations for utilities to improve the value of water, including designing price structures like "time of day pricing" and "water surcharging" where any overuse would be charged a higher rate through smart water management.

Water trading is another form of conservation, and particularly transferring water from regions with abundant water supplies to arid regions. Some parts of the U.S. like California have instigated small-scale water trading markets. These could be used to transfer surplus water to users in need. However, water markets in the US are not as efficient as they could be, with obstacles including the difficulty of physically transporting water, patchwork infrastructure and bureaucracy of various agencies.[102]

# Case Study

## American Water- Acoustic monitoring

### Background:

In 2014, American Water in Charleston, West Virginia, was suffering non-revenue water loss estimated at $500 per million gallons. Leaks present a large cost to a drinking water utility, because for every leak, the company is throwing away water and the associated costs from chemicals and electricity to treat and convey the water. It is known as "non-revenue water loss" because it is water that the customer is not paying for. Contrary to public perception, a large percentage of water loss comes from small subsurface leaks rather than large noticeable main breaks.

### Solution:

After many years of piloting the software in other locations, American Water in 2015 deployed the first large-scale project of acoustic monitoring software by technology company Echologics, installing 386 sensors in Charleston.[103]

American Water, one of the few investor-owned water utilities, is a pioneer in pairing acoustic monitoring and advanced metering. In 2005 it developed continuous acoustic monitoring (CAM), a process that not only listens for vibrations, but transmits that information to a utility.[104] In 2009 the company helped to develop an acoustic monitoring software prototype through synergies between Echologics leak detecting equipment and Mueller Co's communication meter reading, which had previously been used on fire hydrants.

The result was Echologics Echo Shore DX, which works by installing sensors and communication devices in fire hydrant caps. On a nightly basis, the sensors listen for leaks and then transmit the reports remotely through the communication device to the utility. Most leak detection is conducted at night, when there is very little ambient noise from traffic, and when customer water use levels are at their lowest.

### Challenge:

The main challenge for the Charleston project was that some of the sensors were installed along the Kanawha River, which made the leaks easily hidden as they flowed directly into the river. Other obstacles included the fact that as leaks are repaired, pressure in pipeline mains increases, and new leaks develop. Although it was not the result of a flaw in the software, the new leaks required additional maintenance.

### Success:

Over the course of the first four months of operation, Echologics' monitors detected 45 leaks resulting in an overall reduction of non-revenue water loss of 2.3 million gallons per day for Charleston.[105] The system also found a large leak in a transmission main of 2 million gallons per day, which was identified through ground vibration.

### Costs and scalability:

The high capital cost of acoustic monitoring (approximately $1,200 per unit at seven units per mile) renders the system most attractive to utilities with expensive water supplies and those who suffer large amounts of real water loss, or those located in water-scarce areas. However, the technology makes the most sense from an investment perspective in areas where water mains are buried and leaks would be harder to detect without the technology. For systems with low water costs and system leaks that could rise to the surface quickly, it would be more cost effective to reactively identify the leak manually or use options like district metering, or manual leak surveys. Echologics monitoring systems work best with metallic pipes rather than plastic pipes because they best carry sound.

# Case Study

## San Diego: Potable reuse demonstration project

### Background:

To reduce consumption of imported water from Northern California and the Colorado River, 10909 San Diego embarked on a multi-phase project to turn wastewater into a drinking source. It aims to address water shortages caused by the drought, and planning for population growth. The project also hoped to minimize the amount of water treated and discharged to the ocean by the Point Loma Wastewater Treatment Plant, and eliminate the need for plant upgrades at an estimated cost of $1.8 billion.[107]

A multi-phase reuse project would not only contribute 83 million gallons of freshwater to the city by the year 2035, it would also divert a portion of the Ponta Loma's 240 million gallons/day of wastewater to a pure water facility and transform it into freshwater.[108,109]

### Process:

In 2004, the San Diego  City Council approved research on the feasibility of a water reuse project, its requirements for water recycling, and its health effects. The second step was a demonstration recycled water project from 2009 to 2013, which examined the feasibility of potable reuse in San Diego. The results showed that the technologies used to purify the municipal wastewater met all drinking water standards.[110,111]

Using a five-step toolkit of technologies including membrane filtration as pretreatment, reverse osmosis and ultraviolet light to purify the wastewater, the treated water was released into the San Vincente Reservoir, which is later used as one of the sources for a drinking water treatment plant. After a year of testing, the project proved the water met purification standards and was approved for a large-scale reuse project called Pure Water San Diego.[112]

Implemented over a 20-year period, the project will operate in two phases in two locations. The first phase is scheduled for completion in 2021 and will produce 30 million gallons per day, while the second phase, due to complete in 2035, aims to deliver 53 million gallons per day. In each project, wastewater from the Ponta Loma facility will be treated at a Pure Water facility, where it will then be released into a reservoir. After a period of time, the reservoir water will be blended with the city's imported water supplies and then treated at a drinking water plant. In total, the project will reduce Ponta Loma's wastewater discharges by 50%.

### Costs:

The cost of the demonstration project was approximately $11.3 million, including the advanced water purification facility and the public outreach component quality testing, and was funded through a temporary rate increase between 2008 and 2009.[113] Pure Water San Diego is budgeted to cost $3 billion, spread out over cost-sharing agreements for wastewater agencies.

Overall, the project will save rate payers money over time by reducing the amount of water imported from other parts of California. In addition, several studies illustrate that the cost of purified water at $5.2 to $5.8 per 1000 gallons is less expensive than seawater desalination water at $6.5 to $7.3 per 1000 gallons.[114]

### Challenges:

An objective of the project was garnering public support through education and public outreach. Public acceptance was the largest obstacle, which the city overcame by launching an education campaign consisting of tours at the demonstration facility, social media, and a speaker's bureau. The city said the combination of public education and awareness of water scarcity caused by the drought encouraged people to embrace the idea of wastewater recycling.[115] Opinion polls between 2004 and 2012 on the use of advanced treated recycled water found that public opposition decreased by 75%.

Challenges for the demonstration project included the many required permits and lack of standard regulations. A lack of federal regulations on direct potable reuse meant that in 2010 the California Legislature enacted Senate Bill 918, which requires the state Department of Public Health to conduct a feasibility study on developing uniform criteria for direct potable reuse.

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# Columbia Water Center

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The Columbia Water Center's mission is to creatively tackle water challenges of a rapidly changing world where water and climate interact with food, energy, ecosystems and urbanization. Combining the rigor of scientific research with the impact of effective policy, we aim to design reliable, sustainable models of water management and development that can be implemented on local, regional and global levels. The Columbia Water Center, in collaboration with other Earth Institute units and external partners, is leading intellectual inquiry into the assessment, understanding and resolution of the global crisis of freshwater scarcity.

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Barclays thanks **Professor Natasha Udensiva** at Columbia's School of International and Public Affairs for her leadership in the Barclays-Columbia workstudy program (Capstone).

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# North America Power & Utilities

# Q4 2016 Quarterly Earnings Preview

**Regulated Utilities:** We expect Q4 Regulated Utility EPS to rise 0.8% versus last year, but come in 1.1% below the consensus expectation. For the year we expect growth of 6.1% versus a consensus expectation of 5.5%. Heating degree days rose in all regions, with the East regions experiencing the biggest changes. Q4 is also a time where companies reinvest in O&M if they are ahead of plan. To the extent quarterly results matter to Regulated Utility stock performance, they matter the most to Q4 results likely because that is when companies give forward year guidance. Please see our "February Preview/January Review" published today for more analysis.

**Power:** For power, we expect results broadly in line with consensus estimates for the fourth quarter with CPN in line, DYN a slight beat, and NRG a slight miss. Our estimated EBITDA is also within each company's 2016 guidance range. Weather could be an upside driver as year on year the quarter was 17% colder than last year despite being 12% milder than normal. Further we are marking to market our EBITDA estimates through 2019 for the forward curves as of January 13, and are updating our valuations as well as shown in

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Equity Research

20 January 2017

Figure 6.

INDUSTRY UPDATE

North America Alternative Energy & Environmental Services

NEUTRAL

Unchanged

North America Power & Utilities

NEUTRAL

Unchanged

For a full list of our ratings, price target and earnings changes in this report, please see table on page 2.

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**Summary of our Ratings, Price Targets and Earnings Changes in this Report (all changes are shown in bold)**

| Company | Rating | | Price | Price Target | | | EPS FY1 (E) | | | EPS FY2 (E) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Old | New | 19-Jan-17 | Old | New | %Chg | Old | New | %Chg | Old | New | %Chg |
| **North America Alternative Energy & Environmental Services** | Neu | Neu | | | | | | | | | | |
| Waste Connections (WCN) | OW | OW | 79.73 | 86.00 | 86.00 | - | 2.15 | **2.10** | -2 | 3.22 | **3.03** | -6 |
| Waste Connections (WCN CT / WCN.TO) | OW | OW | 106.12 | 120.00 | 120.00 | - | 2.77 | **2.71** | -2 | 4.16 | **3.91** | -6 |
| **North America Power & Utilities** | Neu | Neu | | | | | | | | | | |
| AES Corp. (AES) | EW | EW | 11.73 | 12.00 | 12.00 | - | 0.99 | **0.95** | -4 | 1.10 | 1.10 | - |
| Ameren Corp. (AEE) | OW | OW | 51.81 | 53.00 | **56.00** | 6 | 2.70 | **2.74** | 1 | 2.77 | **2.75** | -1 |
| American States Water Company (AWR) | UW | UW | 42.39 | 43.00 | 43.00 | - | 1.67 | **1.64** | -2 | 1.75 | 1.75 | - |
| California Water Service Group (CWT) | UW | UW | 32.95 | 29.00 | 29.00 | - | 0.91 | **0.90** | -1 | 1.20 | 1.20 | - |
| Calpine Corp. (CPN) | OW | OW | 12.19 | 17.00 | **18.00** | 6 | 0.33 | **0.47** | 42 | 0.58 | **0.68** | 17 |
| Consolidated Edison (ED) | EW | EW | 73.49 | 74.00 | 74.00 | - | 3.97 | **3.94** | -1 | 4.13 | 4.13 | - |
| DTE Energy (DTE) | OW | OW | 98.14 | 101.00 | **106.00** | 5 | 5.32 | **5.33** | 0 | 5.35 | **5.29** | -1 |
| Duke Energy (DUK) | EW | EW | 77.12 | 78.00 | 78.00 | - | 4.78 | **4.75** | -1 | 4.58 | 4.58 | - |
| Dynegy Inc. (DYN) | OW | OW | 9.70 | 13.00 | **14.00** | 8 | -0.26 | **0.01** | 104 | -1.70 | **-1.34** | 21 |
| Edison International (EIX) | EW | EW | 71.72 | 73.00 | **77.00** | 5 | 3.95 | **3.93** | -1 | 4.28 | **4.11** | -4 |
| Entergy Corp. (ETR) | EW | EW | 71.08 | 73.00 | 73.00 | - | 6.93 | **7.05** | 2 | 4.72 | 4.72 | - |
| Great Plains Energy Inc. (GXP) | EW | EW | 27.05 | 27.00 | 27.00 | - | 1.80 | **1.83** | 2 | 1.64 | 1.64 | - |
| Hawaiian Electric Inds (HE) | UW | UW | 33.08 | 25.00 | **27.00** | 8 | 1.70 | **1.74** | 2 | 1.62 | 1.62 | - |
| NextEra Energy (NEE) | OW | OW | 119.28 | 133.00 | 133.00 | - | 6.15 | **6.23** | 1 | 6.60 | 6.60 | - |
| NextEra Energy Partners, LP. (NEP) | OW | OW | 27.64 | 34.00 | 34.00 | - | 1.36 | **1.33** | -2 | 1.58 | **1.59** | 1 |
| NRG Energy (NRG) | OW | OW | 15.56 | 16.00 | **18.00** | 13 | 0.94 | **1.08** | 15 | 0.11 | **0.14** | 27 |
| OGE Energy Corp. (OGE) | EW | EW | 33.22 | 34.00 | **36.00** | 6 | 1.79 | 1.79 | - | 1.91 | 1.91 | - |
| PNM Resources (PNM) | EW | EW | 33.45 | 33.00 | 33.00 | - | 1.60 | **1.62** | 1 | 1.84 | 1.84 | - |
| Portland General Electric Co. (POR) | UW | UW | 43.58 | 39.00 | **41.00** | 5 | 2.12 | 2.12 | - | 2.40 | 2.40 | - |
| PPL Corporation (PPL) | EW | EW | 34.23 | 35.00 | **37.00** | 6 | 2.37 | **2.38** | 0 | 2.14 | 2.14 | - |
| Public Service Enterprise Gp (PEG) | EW | EW | 43.68 | 46.00 | **48.00** | 4 | 2.86 | 2.86 | - | 2.99 | **2.92** | -2 |
| Sempra Energy (SRE) | OW | OW | 102.08 | 108.00 | 108.00 | - | 4.92 | **5.05** | 3 | 5.17 | 5.17 | - |

Source: Barclays Research. Share prices and target prices are shown in the primary listing currency and EPS estimates are shown in the reporting currency.
FY1(E): Current fiscal year estimates by Barclays Research. FY2(E): Next fiscal year estimates by Barclays Research.
Stock Rating: OW: Overweight; EW: Equal Weight; UW: Underweight; RS: Rating Suspended
Industry View: Pos: Positive; Neu: Neutral; Neg: Negative

FIGURE 1

## Fourth Quarter 2016 Earnings Expectations – Power and Utilities

| US Companies in US$<br>Canadian Companies in CAD | | | Quarterly | | | | Annual | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Company | Ticker Symbol | Scheduled Reporting Date | 2016 Fourth Quarter Barclays Estimate[1] | 2016 Fourth Quarter Consensus Estimate | 2015 Fourth Quarter Operating Earnings | $ Change | 2016 Annual Barclays Estimate[1] | 2016 Annual Consensus Estimate | 2016 Annual Company Guidance | 2015 Annual Operating Earnings |
| **REGULATED UTILITIES** | | | | | | | | | | |
| Alliant Energy | LNT | 24-Feb | $0.29E | $0.28 | $0.16 A | $0.13 | $1.88 | $1.88 | $1.84-$1.92 | $1.75 A |
| Ameren Corp. | AEE | 16-Feb | $0.18E | $0.16 | $0.12 A | $0.06 | $2.74 | $2.69 | $2.65-$2.75 | $2.56 A |
| American Electric Power | AEP | 26-Jan | $0.54E | $0.54 | $0.48 A | $0.06 | $3.81 | $3.80 | $3.75-$3.85 | $3.43 A |
| AES Corp. | AES | w/o 2/20 | $0.31E | $0.37 | $0.34 A | ($0.03) | $0.95 | $0.98 | $0.95-$1.05 | $1.22 A |
| CenterPoint Energy | CNP | 28-Feb | $0.29E | $0.28 | $0.27 A | $0.02 | $1.19 | $1.18 | $1.16-$1.20 | $1.10 A |
| CMS Energy | CMS | 2-Feb | $0.29E | $0.29 | $0.37 A | ($0.08) | $2.02 | $2.02 | $2.02 | $1.88 A |
| Canadian Utilities | CU-T | 3-Mar | $0.54E | $0.50 | $0.58 A | ($0.04) | $2.12 | $2.12 | n/a | $1.82 A |
| Dominion Resources | D | 1-Feb | $0.99E | $1.01 | $0.70 A | $0.29 | $3.80 | $3.80 | $3.60-4.00 | $3.44 A |
| DTE Energy | DTE | w/o 2/6 Est. | $0.85E | $0.87 | $1.01 A | ($0.16) | $5.33 | $5.28 | $5.09-$5.35 | $4.82 A |
| Duke Energy | DUK | 16-Feb | $0.87E | $0.82 | $0.87 A | $0.00 | $4.75 | $4.68 | $4.50-4.70 | $4.54 A |
| Consolidated Edison | ED | 16-Feb | $0.64E | $0.67 | $0.61 A | $0.03 | $3.94 | $3.96 | $3.90-$4.00 | $4.08 A |
| Edison International | EIX | 21-Feb | $0.98E | $0.95 | $0.88 A | $0.10 | $3.93 | $3.92 | $3.86-$3.96 | $4.10 A |
| Emera Inc. | EMA-T | 13-Feb | $0.56E | $0.56 | $0.80 A | ($0.24) | $2.55 | $2.35 | n/a | $2.43 A |
| Eversource Energy | ES | w/o 2/20 Est. | $0.73E | $0.75 | $0.60 A | $0.13 | $2.97 | $2.98 | $2.90-3.05 | $2.81 A |
| Entergy | ETR | 15-Feb | $0.28E | $0.15 | $1.58 A | ($1.30) | $7.05 | $6.89 | $6.60-7.40 | $6.00 A |
| FirstEnergy | FE | w/o 2/20 | $0.41E | $0.40 | $0.58 A | ($0.17) | $2.62 | $2.64 | $2.65-$2.70 | $2.71 A |
| Fortis Inc. | FTS-T | 16-Feb | RS | RS | RS | RS | RS | RS | n/a | RS |
| Great Plains Energy | GXP | 23-Feb | $0.11E | $0.10 | $0.15 A | ($0.04) | $1.83 | $1.78 | $1.75-$1.85 | $1.37 A |
| Hawaiian Electric Industries | HE | w/o 2/6 Est. | $0.42E | $0.41 | $0.41 A | $0.01 | $1.74 | $1.74 | $1.72-1.78 | $1.65 A |
| Hydro One Ltd | H-T | 10-Feb | $0.20E | $0.24 | $0.24 A | ($0.04) | $1.19 | $1.22 | n/a | $1.16 A |
| NextEra Energy | NEE | 27-Jan | $1.27E | $1.31 | $1.17 A | $0.10 | $6.23 | $6.22 | $5.85-6.35 | $5.71 A |
| NiSource Inc. | NI | 22-Feb | $0.31E | $0.34 | $0.31 A | $0.00 | $1.07 | $1.07 | $1.05-$1.10 | $0.94 A |
| OGE Energy Corp. | OGE | late Feb | $0.34E | $0.32 | $0.15 A | $0.19 | $1.74 | $1.74 | $1.72-$1.83 | $1.71 A |
| PG&E Corp. | PCG | 16-Feb | $1.33E | $1.29 | $0.50 A | $0.83 | $3.75 | $3.72 | $3.65-$3.85 | $3.12 A |
| PNM Resources | PNM | 28-Feb | $0.31E | $0.31 | $0.23 A | $0.08 | $1.62 | $1.61 | $1.60-1.65 | $1.64 A |
| Pinnacle West Capital Corp. | PNW | 24-Feb | $0.50E | $0.47 | $0.37 A | $0.13 | $3.97 | $3.96 | $3.90-$4.10 | $3.92 A |
| Portland General Electric | POR | 17-Feb | $0.59E | $0.64 | $0.57 A | $0.02 | $2.07 | $2.12 | $2.05-$2.20 | $2.04 A |
| PPL Corp | PPL | 1-Feb | $0.52E | $0.48 | $0.43 A | $0.09 | $2.38 | $2.37 | $2.30-$2.45 | $2.21 A |
| SCANA Corp. | SCG | 16-Feb | $0.70E | $0.92 | $0.69 A | $0.01 | $3.99 | $4.11 | $3.90-$4.10 | $3.81 A |
| Sempra Energy | SRE | w/o 2/20 Est. | $1.54E | $1.55 | $1.46 A | $0.08 | $5.05 | $4.82 | $4.60-5.00 | $5.17 A |
| Southern Company | SO | TBA | $0.28E | $0.35 | $0.44 A | ($0.16) | $2.88 | $2.90 | $2.76-$2.88 | $2.89 A |
| Westar Energy[2] | WR | 22-Feb | $0.35E | $0.40 | $0.28 A | $0.07 | $2.34 | $2.34 | $2.28-$2.43 | $2.11 A |
| WEC Energy Group | WEC | 1-Feb | $0.59E | $0.61 | $0.63 A | ($0.04) | $2.94 | $2.94 | $2.88-2.94 | $2.73 A |
| Xcel Energy | XEL | 2-Feb | $0.43E | $0.44 | $0.41 A | $0.02 | $2.19 | $2.20 | $2.17-2.22 | $2.09 A |
| **Average** | | | **$0.56** | **$0.57** | **$0.56** | **$0.00** | **$2.99** | **$2.97** | | **$2.82** |
| **% Change** | | | **0.8%** | **2.0%** | | | **6.1%** | **5.5%** | | |
| **IPPS AND INTEGRATED UTILITIES** | | | | | | | | | | |
| Calpine Corp. | CPN | TBA | -$0.26E | ($0.15) | ($0.13)A | ($0.13) | $0.47 | $0.29 | n/a | $0.64 A |
| Dynegy Inc. | DYN | TBA | $1.79E | ($0.07) | $2.15 A | ($0.36) | $0.01 | ($2.21) | n/a | $0.22 A |
| Exelon | EXC | 8-Feb | $0.43E | $0.46 | $0.38 A | $0.05 | $2.67 | $2.67 | $2.40-$2.70 | $2.50 A |
| NRG Energy | NRG | TBA | $0.18E | ($0.14) | $0.27 A | ($0.09) | $1.08 | $0.93 | n/a | $0.02 A |
| Ormat Technologies | ORA | TBA | $0.50E | $0.44 | $0.46 A | $0.04 | $2.14 | $1.86 | n/a | $1.44 A |
| Public Svc. Ent. Group | PEG | 24-Feb | $0.49E | $0.53 | $0.50 A | ($0.01) | $2.86 | $2.88 | $2.80-$2.95 | $2.91 A |
| **Average** | | | **$0.52** | **$0.18** | **$0.61** | **-$0.08** | **$1.54** | **$1.07** | | **$1.29** |
| **% Change** | | | **-13.9%** | **-70.5%** | | | **19.4%** | **-17.0%** | | |
| **WATER** | | | | | | | | | | |
| American States Water | AWR | w/o 2/20 Est. | $0.32E | $0.29 | $0.31 A | $0.01 | $1.64 | $1.63 | | $1.60 A |
| American Water Works | AWK | w/o 2/20 Est. | $0.56E | $0.58 | $0.55 A | $0.01 | $2.84 | $2.85 | $2.75-$2.85 | $2.64 A |
| Aqua America | WTR | 23-Feb | $0.30E | $0.29 | $0.28 A | $0.02 | $1.33 | $1.32 | $1.30-$1.35 | $1.26 A |
| California Water Service Group | CWT | w/o 2/20 Est. | $0.20E | $0.18 | $0.24 A | ($0.04) | $0.90 | $0.94 | | $0.94 A |
| Connecticut Water Service Corp | CTWS | w/o 3/13 Est. | $0.11E | $0.09 | $0.20 A | ($0.09) | $2.12 | $2.15 | | $2.04 A |
| **Average** | | | **$0.30** | **$0.29** | **$0.32** | **($0.02)** | **$1.77** | **$1.78** | | **$1.69** |
| **% Change** | | | **-5.7%** | **-9.2%** | | | **4.4%** | **5.0%** | | |

Source: Thomson and Barclays Research

FIGURE 2

## Fourth Quarter 2016 Earnings Expectations – Alternative Energy & Environmental Services

| US Companies in US$ / Canadian Companies in CAD | | | Quarterly | | | | Annual | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Company | Ticker Symbol | Scheduled Reporting Date | 2016 Fourth Quarter Barclays Estimate[(1)] | 2016 Fourth Quarter Consensus Estimate | 2015 Fourth Quarter Operating Earnings | $ Change | 2016 Annual Barclays Estimate[(1)] | 2016 Annual Consensus Estimate | 2016 Annual Company Guidance | 2015 Annual Operating Earnings |
| **ALTERNATIVE ENERGY AND YIELDCOS** | | | | | | | | | | |
| 8Point3 Energy Partners | CAFD | 26-Jan | n/a | ($0.01) | | | $0.50 | $1.10 | n/a | $0.26 A |
| Azure Power Global Ltd. | AZRE | TBA | -$0.10E | | | | | | | |
| Brookfield Renewable Energy Partners | BEP | 1-Feb | $0.40E | $0.21 | $0.19 A | $0.21 | $0.33 | $0.38 | n/a | $0.01 A |
| Brookfield Infrastructure Partners LP | BIP | 2-Feb | $0.42E | $0.29 | $0.03 A | $0.39 | $0.89 | $0.98 | n/a | $0.69 A |
| Canadian Solar | CSIQ | w/o 3/6 | $0.26E | $0.32 | $1.11 A | ($0.85) | $1.50 | $1.66 | n/a | $2.94 A |
| First Solar | FSLR | w/o 2/27 | $1.31E | $0.96 | $1.64 A | ($0.33) | $4.84 | $4.70 | $4.30-$4.50 | $5.37 A |
| Hannon Armstrong | HASI | w/o 2/20 | $0.27E | $0.30 | $0.25 A | $0.02 | $1.19 | $1.22 | $1.19-$1.24 | $1.04 A |
| NextEra Energy Partners LP | NEP | 27-Jan | $0.32E | $0.32 | $0.22 A | $0.10 | $1.33 | $1.43 | n/a | $0.46 A |
| NRG Yield | NYLD | TBA | $0.44E | $0.21 | $0.08 A | $0.36 | $1.14 | $0.89 | n/a | $0.29 A |
| SolarEdge | SEDG | w/o 1/30 | $0.36E | $0.33 | $0.31 A | $0.05 | $1.74 | $1.41 | n/a | $0.74 A |
| Sunpower | SPWR | w/o 2/20 | -$0.26E | ($0.45) | $1.98 A | ($2.24) | ($0.08) | ($0.31) | n/a | $2.63 A |
| SunRun | RUN | w/o 3/6 | n/a | $0.05 | ($0.71)A | | $0.89 | $0.62 | n/a | ($2.46)A |
| TerraForm Global | GLBL | TBA | RS | RS | RS | RS | RS | RS | n/a | RS |
| **Average** | | | **$0.34** | **$0.23** | **$0.51** | **-$0.25** | **$1.30** | **$1.28** | | **$1.09** |
| **% Change** | | | **-32.9%** | **-55.2%** | | | **19.4%** | **17.8%** | | |
| **ENVIRONMENTAL SERVICES** | | | | | | | | | | |
| Advanced Disposal Services | ADSW | 24-Feb | $0.08E | $0.06 | $0.01 A | $0.07 | ($0.03) | ($0.08) | n/a | ($0.01)A |
| Clean Harbors | CLH | w/o 2/20 | $0.18E | $0.05 | $0.01 A | $0.17 | $0.19 | $0.13 | n/a | $1.27 A |
| Covanta Holding Corp. | CVA | w/o 2/13 | $0.18E | $0.13 | $0.03 A | $0.15 | ($0.06) | ($0.10) | n/a | $0.07 A |
| Republic Services | RSG | 16-Feb | $0.55E | $0.55 | $0.51 A | $0.04 | $2.20 | $2.20 | $2.19-$2.20 | $2.06 A |
| US Ecology | ECOL | w/o 2/20 | $0.43E | $0.43 | $0.36 A | $0.07 | $1.60 | $1.60 | $1.54-$1.65 | $1.61 A |
| Waste Connections | WCN | w/o 2/13 | $0.66E | $0.65 | $0.48 A | $0.18 | $2.15 | $2.50 | n/a | $2.03 A |
| Waste Management | WM | 16-Feb | $0.75E | $0.77 | $0.71 A | $0.04 | $2.91 | $2.92 | $2.91 | $2.61 A |
| **Average** | | | **$0.40** | **$0.38** | **$0.30** | **$0.10** | **$1.28** | **$1.31** | | **$1.38** |
| **% Change** | | | **33.7%** | **24.2%** | | | **-7.1%** | **-5.1%** | | |

Source: Thomson and Barclays Research

FIGURE 3

## Fourth Quarter 2016 Earnings Schedule

| Date | Time | Company Name | U.S. Call Info | U.S.Replay Info |
|---|---|---|---|---|
| 26-Jan | 9:00 AM | American Electric Power | 866-254-5939 PW: 415052 | 800-475-6701 PW: 415052 |
| 26-Jan | 4:30 PM | 8point3 Energy Partners | 517-308-9098 PW: 8point3 | Webcast |
| 27-Jan | 9:00 AM | NextEra Energy/NextEra Energy Partners LP | 877-681-3378 PW: 4464074 | 888-203-1112 PW: 4464074 |
| 1-Feb | 9:00 AM | Brookfield Infrastructure Partners LP | 800-319-4610 PW: N/A | 604-674-8052 PW: 1007# |
| 1-Feb | 10:00 AM | Dominion Resources | 877-410-5657 PW: Dominion | 877-919-4059 PW: 61568881 |
| 1-Feb | 8:30 AM | PPL Corporation | 888-346-8683 PW: 3826126 | Webcast |
| 1-Feb | | WEC Energy Group | | |
| 2-Feb | 9:00 AM | Brookfield Renewable Partners LP | 800-319-4610 PW: N/A | 604-638-9010 PW: 1048# |
| 2-Feb | 9:00 AM | CMS Energy | 734-385-2616 PW: 47738582 | 855-859-2256 PW: 47738582 |
| 2-Feb | 10:00 AM | Xcel Energy | 888-490-2771 PW: 3999244 | 888-203-1112 PW: 3999244 |
| 8-Feb | 11:00AM | Exelon Corp. | 800-690-3108 PW: 44412052 | 855-859-2056 PW: 44412052 |
| 10-Feb | 8:00AM | Hydro One Ltd | 855-716-2690 PW: 48458662 | Webcast |
| 13-Feb | 10:00AM | Emera Inc. | 866-521-4909 PW: Emera Inc. | 855-859-2056 PW: 50895046 |
| 15-Feb | 11:00 AM | Entergy Corp | 844-309-6569 PW: 52887956 | |
| 16-Feb | 10:00 AM | Ameren Corp. | | |
| 16-Feb | 10:00 AM | Duke Energy | 888-487-0354 PW: 1359293 | 888-203-1112 PW: 1359293 |
| 16-Feb | 8:30AM | Fortis Inc. | 877-223-4471 PW: Fortis Inc. | 800-585-8367 PW: 50056693 |
| 16-Feb | 12:00 PM | PG&E Corp. | 800-971-1685 PW: 3237 | 866-415-9493 PW: 3237 |
| 16-Feb | 3:00PM | SCANA Corp. | 888-347-3258 PW: SCANA Corp. | 877-344-7529 PW: 10098305 |
| 16-Feb | | Waste Management | 877-710-6139 PW: 55317607 | 855-859-2056 PW: 55317607 |
| 16-Feb | | Republic Services | 844-890-1789 PW: Republic Services | 877-344-7529 PW: 10098061 |
| 17-Feb | 11:00 AM | Portland General Electric | 844-831-4021 PW: 51980570 | 855-859-2056 PW: 51980570 |
| 21-Feb | 4:30 PM | Edison International | 800-369-2198 PW: Edison | Webcast |
| 22-Feb | 9:00 AM | NiSource Inc. | 855-219-9570 PW: 49967771 | 855-859-2056 PW: 49967771 |
| 22-Feb | 7:30AM | Southern Company | 800-667-1520 PW: Southern Co. | 800-663-8284 PW: 21816810 |
| 23-Feb | | Aqua America Inc. | | |
| 24-Feb | | Alliant Energy | 888-221-9591 PW: 8244179 | Webcast |
| 24-Feb | | Great Plains Energy | | |
| 24-Feb | 11:00 AM | Pinnacle West Capital Corporation | 877-407-8035 | 877-481-4010 PW: 10176 |
| 24-Feb | 11:00 AM | Public Service Enterprise Group | | |
| 24-Feb | | Advanced Disposal | 866-478-7805 PW: 51793168 | 855-859-2056 PW: 51793168 |
| 28-Feb | | CenterPoint Energy Inc. | | |
| 28-Feb | 8:00AM | NRG Energy | 877-359-9508 PW: 55294420 | Webcast |
| 28-Feb | 9:15AM | NRG Yield Inc | 877-402-8188 PW: 55331580 | Webcast |
| 28-Feb | | PNM Resources | | |
| 3-Mar | No Call | Canadian Utilities Ltd | No Call | No Call |

Source: Company Releases, Thomson

## IPP Update and Mark to Market

The fourth quarter was the third of what we believe will be four consecutive relatively easy weather comparison quarters for the power sector. 4Q16, while 12% milder than normal, HDD were up nationally by 17% year-on-year. CDD are not included as they are not relevant for fourth quarter results. Impacts will be most significant in all regions outside of the West, which saw milder winter temperatures than last year, which was much closer to normal levels.

FIGURE 4

**Q4 Heating Degree Days**

| | Heating | % Change vs. | |
|---|---|---|---|
| **Region** | **Degree Days** | **Normal** | **Q4 2015** |
| New England | 1,844 | -5% | 27% |
| Mid-Atlantic | 1,646 | -7% | 35% |
| E N Central (IL, IN, OH, MI, WI) | 1,826 | -9% | 26% |
| W N Central (IA, KS, MN, ND, NE, SD) | 1,893 | -14% | 11% |
| South Atlantic | 814 | -14% | 49% |
| E S Central | 1,028 | -16% | 39% |
| W S Central (AR, LA, TX, OK) | 610 | -28% | 4% |
| Mountain | 1,460 | -15% | -13% |
| Pacific | 909 | -11% | -12% |
| United States | 1,268 | -12% | 17% |

Source: NOAA, Barclays Research

We are updating our Q4 '16 and full year 2016 EBITDA estimates for the Independent Power Producers (IPPs) to reflect a mark to market on the power and commodity forward curves as of 1/13/2017. We expect CPN and DYN to be slightly ahead of consensus while NRG is expected to be slightly below consensus estimates. Our annual estimates for all three IPPs are consistent with the companies' guidance ranges for the year.

FIGURE 5

**EBITDA Estimates and Consensus for 3Q '16 and 2016 Annual for the IPPs ($ in mn)**

| | 4Q 2016 | | 2016 | | |
|---|---|---|---|---|---|
| | **EBITDA** | **Consensus** | **EBITDA** | **Consensus** | **Guidance** |
| CPN | 360 | 354 | 1,832 | 1,817 | 1,800-1,850 |
| DYN | 269 | 232 | 1,057 | 1,029 | 1,000-1,100 |
| NRG | 476 | 495 | 3,240 | 3,252 | 3,250-3,350 |

Source: Thomson, Barclays Research Estimates

We are also refreshing valuations and our 2017-2019 EBITDA estimates for the IPPs. We will discuss catalysts for each name separately in our January Review/February Preview monthly publication. The updated estimates and price targets are shown in

Figure 6 below.

FIGURE 6

Updated EBITDA Estimates and Price Targets for the IPPs

| US$m | | | EBITDA Estimates ($ in mn) | | | |
|---|---|---|---|---|---|---|
| **Ticker** | | **PT** | **2016E** | **2017E** | **2018E** | **2019E** |
| CPN | Current | $ 18 | 1,832 | 1,868 | 1,901 | 1,990 |
| | Prior | $ 17 | 1,777 | 1,830 | 1,899 | 2,121 |
| DYN | Current | $ 14 | 1,057 | 1,303 | 1,543 | 1,439 |
| | Prior | $ 13 | 1,005 | 1,238 | 1,521 | 1,573 |
| NRG | Current | $ 18 | 3,240 | 2,766 | 2,931 | 2,826 |
| | Prior | $ 16 | 3,176 | 2,754 | 2,933 | 2,841 |

Note: Marked to Market on 1/13/2017 Power and Commodity Curves

Source: Barclays Research Estimates

FIGURE 7

Spark Spreads 2018 Forward Strips End of Year vs. End of 3Q 2016 by Market

| | 2018 Forwards BOP | | | 2018 Forwards EOP | | | 2018 Forwards % Change | | |
|---|---|---|---|---|---|---|---|---|---|
| | **On Peak** | **Natural Gas** | **Spark Spread** | **On Peak** | **Natural Gas** | **Spark Spread** | **On Peak** | **Natural Gas** | **Spark Spread** |
| ERCOT Houston | $ 35.38 | $ 2.87 | $ 14.72 | $ 35.12 | $ 2.93 | $ 14.05 | -1% | 2% | -5% |
| Internal Hub | $ 43.43 | $ 3.93 | $ 15.11 | $ 43.29 | $ 4.17 | $ 13.30 | 0% | 6% | -12% |
| Hudson Valley - G | $ 45.39 | $ 3.77 | $ 18.27 | $ 43.81 | $ 3.84 | $ 16.18 | -3% | 2% | -11% |
| Alberta | $ 45.12 | $ 2.03 | $ 30.53 | $ 39.30 | $ 2.03 | $ 24.67 | -13% | 0% | -19% |
| Illinois Hub | $ 33.70 | $ 2.86 | $ 13.14 | $ 33.94 | $ 2.86 | $ 13.33 | 1% | 0% | 1% |
| NP15 | $ 35.63 | $ 3.27 | $ 12.06 | $ 38.90 | $ 3.20 | $ 15.83 | 9% | -2% | 31% |
| Eastern Hub | $ 40.14 | $ 3.14 | $ 17.50 | $ 38.97 | $ 3.20 | $ 15.94 | -3% | 2% | -9% |
| Western Hub | $ 36.79 | $ 2.78 | $ 16.75 | $ 36.20 | $ 2.73 | $ 16.52 | -2% | -2% | -1% |

BOP = Forward Curve as of 9/30/16; EOP = Forward Curve as of 01/03/2017

Source: SNL Financial, Barclays Research Estimates

## Price Target Methodologies

### *Ameren Corp*

We are raising our price target $3 to $56. Our $56 target is a 9% premium to the 15.7x Regulated Utility group including -1% for exposure to tax changes applied to our $3.25 EPS estimate. Previously our $53 target included the same 9% premium applied to the 2019 Regulated Utility P/E of 15.1x and our $3.20 EPS estimate.

We are fine-tuning our EPS estimates for the impact of Illinois legislation to $2.74 for 2016, $2.75 for 2017, $3.03 for 2018 and $3.25 for 2019 versus $2.70/$2.77/$2.99/$3.20. Our estimates imply 7% from a $2.63 normalized 2016 base to 2019.

In the near-term the drivers include Missouri regulatory lag and a fine-tuning of Illinois ratebase. Starting in June 2017 we assume a 1-2 cents EPS benefit for capitalizing smart meter spending in Illinois.

### *Calpine Corp*

Our prior $17 price target was premised upon the mid-cycle multiple of 7.6x our 2018E Open EBITDA of $1.889 billion, net debt of $11.2 billion and an NPV of NOLs of $2.9 billion on 359 million shares outstanding.

Our current $18 price target is premised upon the mid-cycle multiple of 7.6x our 2018E Open EBITDA of $1.901 billion, net debt of $10.7 billion and an NPV of NOLs of $2.6 billion on 359 million shares outstanding.

*DTE Energy*

We are raising our price target $5 to $106. Our $106 price target is a 12% premium to the group including +1.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.7x and our $6.07 EPS estimate. Previously our $101 price target was a 12% premium to the group applied to the 2019 Regulated Utility P/E of 15.1x and our $6.00 EPS estimate.

We are fine-tuning our EPS estimates to $5.29 for 2017, $5.74 for 2018 and $6.07 for 2019 versus $5.35/$5.75/$6.07 for 2017-2019, respectively to assume a 10.2% ROE in the company's current DTE Electric rate case.

*Dynegy Inc.*

Our prior $13 price target was premised upon closing the ENGIE transaction, a 7.1x EV/EBITDA mid-cycle multiple, and our post-close 2019E EBITDA of $1.5 billion net of debt of $8.5 billion, environmental capex of $0.5 billion, and a NPV of NOLs of $0.3 billion. We use shares outstanding of 161.08 million.

Our current $14 price target is premised upon closing the ENGIE transaction, a 7.1x EV/EBITDA mid-cycle multiple, and our post-close 2019E EBITDA of $1.543 billion net of debt of $8.521 billion, environmental capex of $0.5 billion, and a NPV of NOLs of $0.3 billion. We use shares outstanding of 151.08 million.

*Edison International*

We are raising our price target $4 to $77. Our $77 price target is a 4% premium to the group including -0.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.7x and our $4.70 EPS estimate.

Our prior $73 price target reflected a 4% premium to the group, including -0.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.1x and our $4.68 EPS estimate.

We are fine-tuning our EPS estimates to $3.93 for 2016, $4.11 for 2017, $4.30 for 2018 and $4.70 for 2019 versus $3.95/$4.28/$4.37/$4.68 for 2016-2019, respectively.

*FirstEnergy*

We are revising our EPS estimates for a mark-to-market of the forward power curves. Our new EPS estimates are $2.37 for 2018 and $2.21 for 2019 versus $2.31/$2.23 previously.

*Hawaiian Electric Industries*

We are raising our price target to $27 from $25. Our $27 PT reflects a 5% discount to the Regulated Utility average P/E of 15.7x our 2019E utility earnings of $1.32, plus a 1.5% premium to 14.4x bank earnings of $0.50.

Our previous PT reflected a 5% discount to 14.5x our 2019E utility earnings of $1.32, plus a 1.5% premium to 14.4x bank earnings of $0.50.

*NRG Energy Inc.*

Our prior $16 price target was premised upon a half turn discount to the mid-cycle multiple of 7.6x our recourse basis '18E Open EBITDA of $1.6 billion, $1.3 billion for NYLD at market value, $1.1 billion in NPV of NOLs, $0.2 billion in environmental capex, and $8.2 billion in recourse only net debt.

Our current $18 price target is premised upon a half turn discount to the mid-cycle multiple of 7.6x our recourse basis '18E Open EBITDA of $1.7 billion, $1.5 billion for NYLD at market value, $1.1 billion in NPV of NOLs, $0.2 billion in environmental capex, and $8.2 billion in recourse only net debt.

*OGE Energy.*

We are raising our price target $2 to $36. This comprises '19E EPS of $1.75 at OG&E (utility), using a 2.9% discount to the 15.7x utility group multiple equating to $28, plus $9 for OGE's 26.3% ownership of Enable Midstream Partners LP (ENBL), marked to current price. Previously our $34 target was comprised of '19E EPS of $1.75 at OG&E (utility), using a 2.9% discount to the 15.1x utility group multiple equating to $25, plus $8 for OGE's 26.3% ownership of Enable Midstream Partners LP (ENBL), marked to current price

*Portland General.*

We are raising our price target $2 to $41. Our price target reflects the 2019 group average P/E multiple of 15.7x applied to our 2019 EPS estimate of $2.61. Previously our $39 target reflected the 2019 group average P/E multiple of 15.1x applied to our 2019 EPS estimate of $2.61.

*PPL Corporation*

We are raising our price target $2 to $37. Our $37 price target is a 2019 Regulated Utility average P/E of 15.7x applied to $2.35 in Open EPS reflecting a 1.24x $/British Pound exchange rate and $0.21/share for the NPV of hedges. Our $35 price target was a 2019 Regulated Utility average P/E of 15.1x applied to $2.34 in Open EPS reflecting a 1.24x $/British Pound exchange rate and $0.19/share for the NPV of hedges.

*Public Service Enterprise Group*

We are raising our price target $2 to $48. Our $48 target reflects a sum of the parts including $37 for PSE&G at a 11% premium including +2% for exposure to tax reform applied to the 2019 Regulated Utility average of 15.7x and our $2.11E, $10 for PSEG Power at 7.4x '18 Open EBITDA of $1.1B less $3.2B of net debt and $2 for Enterprises and other at a 2019 Regulated Utility average multiple of $0.12 EPS.

Previously our $46 target reflected a sum of the parts including $34 for PSE&G at a 11% premium to the 2019 Regulated Utility average of 15.1x and our $2.08E, $10 for PSEG Power at 7.4x '18 Open EBITDA of $1.1B less $3.2B of net debt and $2 for Enterprises and other at a 2019 Regulated Utility average multiple of $0.12 EPS.

We are fine-tuning our EPS estimates to $2.92 for 2017, $2.98 for 2018 and $2.84 for 2019 versus $2.99/$2.98/$2.87 for 2017-2019, respectively. Reasons for the change in our EPS estimates are a mark-to-market of PSEG Power and increased cap-ex spending at PSE&G that has not been added to the forecast.

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Ameren Corp. (AEE)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 6,098 | 6,426 | 6,509 | 6,657 | 3.0% |
| EBITDA (adj) | 2,124 | 2,235 | 2,288 | 2,479 | 5.3% |
| EBIT (adj) | 1,328 | 1,390 | 1,395 | 1,530 | 4.8% |
| Pre-tax income (adj) | 1,017 | 1,078 | 1,080 | 1,189 | 5.3% |
| Net income (adj) | 624 | 668 | 669 | 737 | 5.7% |
| EPS (adj) ($) | 2.56 | 2.74 | 2.75 | 3.03 | 5.7% |
| Diluted shares (mn) | 243.6 | 243.6 | 243.6 | 243.6 | 0.0% |
| DPS ($) | 1.66 | 1.70 | 1.73 | 1.77 | 2.0% |
| **Margin and return data** | | | | | **Average** |
| EBITDA (adj) margin (%) | 34.8 | 34.8 | 35.2 | 37.2 | 35.5 |
| EBIT (adj) margin (%) | 21.8 | 21.6 | 21.4 | 23.0 | 22.0 |
| Pre-tax (adj) margin (%) | 16.7 | 16.8 | 16.6 | 17.9 | 17.0 |
| Net (adj) margin (%) | 10.2 | 10.4 | 10.3 | 11.1 | 10.5 |
| ROIC (%) | 9.2 | 9.1 | 8.8 | 9.1 | 9.0 |
| ROA (%) | 2.6 | 2.8 | 2.6 | 2.8 | 2.7 |
| ROE (%) | 9.0 | 9.3 | 9.0 | 9.5 | 9.2 |
| **Balance sheet and cash flow ($mn)** | | | | | **CAGR** |
| Net PP&E | 18,799 | 19,898 | 21,198 | 22,746 | 6.6% |
| Total net assets | 23,640 | 24,255 | 25,436 | 26,702 | 4.1% |
| Capital employed | 14,393 | 15,307 | 15,933 | 16,830 | 5.4% |
| Shareholders' equity | 6,946 | 7,201 | 7,448 | 7,755 | 3.7% |
| Net debt/(funds) | 7,155 | 7,984 | 8,429 | 9,249 | 8.9% |
| Cash flow from operations | 2,017 | 1,970 | 2,019 | 2,183 | 2.7% |
| Capital expenditure | -1,917 | -2,160 | -2,193 | -2,498 | N/A |
| Free cash flow | -302 | -604 | -595 | -745 | N/A |
| Pre-dividend FCF | 100 | -190 | -174 | -315 | N/A |
| **Valuation and leverage metrics** | | | | | **Average** |
| P/E (adj) (x) | 20.2 | 18.9 | 18.9 | 17.1 | 18.8 |
| EV/EBITDA (adj) (x) | 9.3 | 9.2 | 9.2 | 8.8 | 9.1 |
| EV/EBIT (adj) (x) | 14.9 | 14.8 | 15.0 | 14.3 | 14.7 |
| P/BV (x) | 1.8 | 1.8 | 1.7 | 1.6 | 1.7 |
| Dividend yield (%) | 3.2 | 3.3 | 3.3 | 3.4 | 3.3 |
| Total debt/capital (%) | 51.7 | 53.0 | 53.3 | 53.9 | 53.0 |
| Net debt/EBITDA (adj) (x) | 3.4 | 3.6 | 3.7 | 3.7 | 3.6 |
| **Selected operating metrics** | | | | | **Average** |
| Payout ratio (%) | 65.0 | 61.9 | 63.0 | 58.4 | 62.1 |
| Interest cover (x) | 3.7 | 3.9 | 3.9 | 4.0 | 3.9 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Price (19-Jan-2017) | USD 51.81 |
|---|---|
| Price Target | USD 56.00 |

**Why Overweight?** With Missouri legislation AEE can grow EPS and the dividend at 6-7% with rates that are substantially formula driven. The company maintains a strong balance sheet without the need to issue equity.

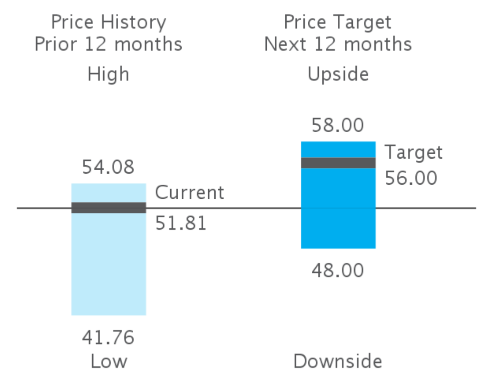
**Upside case** — **USD 58.00**

Our upside case reflects a 10% premium to the average Regulated Utility multiple of $3.39 in 2019 EPS which assumes 5% ratebase growth in Missouri.

**Downside case** — **USD 48.00**

Our downside case reflects a 5% discount P/E of the 2019 Regulated Utility multiple applied to downside case EPS of $3.23 in '19 which reflects 50 bp of Missouri regulatory lag and a lower ROEs at FERC (10.2%).

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## AES Corp. (AES)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 14,963 | 11,637 | 11,110 | 11,615 | -8.1% |
| EBITDA (adj) | 3,814 | 3,134 | 3,408 | 3,796 | -0.2% |
| EBIT (adj) | 2,670 | 1,970 | 2,194 | 2,532 | -1.8% |
| Pre-tax income (adj) | 1,425 | 889 | 1,019 | 1,215 | -5.2% |
| Net income (adj) | 836 | 631 | 723 | 826 | -0.4% |
| EPS (adj) ($) | 1.22 | 0.95 | 1.10 | 1.26 | 1.0% |
| Diluted shares (mn) | 684.5 | 661.7 | 657.3 | 657.3 | -1.3% |
| DPS ($) | 0.40 | 0.44 | 0.48 | 0.53 | 10.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 25.5 | 26.9 | 30.7 | 32.7 | 28.9 |
| EBIT (adj) margin (%) | 17.8 | 16.9 | 19.8 | 21.8 | 19.1 |
| Pre-tax (adj) margin (%) | 9.5 | 7.6 | 9.2 | 10.5 | 9.2 |
| Net (adj) margin (%) | 5.6 | 5.4 | 6.5 | 7.1 | 6.2 |
| ROIC (%) | 11.1 | 8.2 | 9.0 | 10.2 | 9.7 |
| ROA (%) | 4.0 | 3.8 | 4.1 | 4.4 | 4.1 |
| ROE (%) | 19.6 | 20.0 | 20.7 | 21.2 | 20.4 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 22,816 | 24,381 | 25,673 | 27,171 | 6.0% |
| Total net assets | 36,850 | 37,973 | 39,345 | 40,744 | 3.4% |
| Capital employed | 23,960 | 23,893 | 24,392 | 24,738 | 1.1% |
| Shareholders' equity | 3,153 | 3,493 | 3,898 | 4,374 | 11.5% |
| Net debt/(funds) | 19,545 | 19,580 | 19,594 | 19,564 | 0.0% |
| Cash flow from operations | 2,134 | 2,579 | 2,810 | 3,143 | 13.8% |
| Capital expenditure | -2,308 | -2,729 | -2,506 | -2,763 | N/A |
| Free cash flow | -450 | -441 | -13 | 30 | N/A |
| Pre-dividend FCF | -174 | -150 | 305 | 380 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 9.6 | 12.3 | 10.7 | 9.3 | 10.5 |
| EV/EBITDA (adj) (x) | 7.2 | 8.7 | 8.0 | 7.2 | 7.8 |
| EV/EBIT (adj) (x) | 10.2 | 13.9 | 12.5 | 10.8 | 11.9 |
| P/BV (x) | 2.5 | 2.2 | 2.0 | 1.8 | 2.1 |
| Dividend yield (%) | 3.4 | 3.8 | 4.1 | 4.5 | 4.0 |
| Total debt/capital (%) | 86.8 | 85.4 | 84.0 | 82.3 | 84.6 |
| Net debt/EBITDA (adj) (x) | 5.1 | 6.2 | 5.7 | 5.2 | 5.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 32.8 | 46.1 | 44.0 | 42.4 | 41.3 |
| Interest cover (x) | 2.9 | 2.1 | 2.3 | 2.7 | 2.5 |
| Regulated (%) | 85.0 | 85.0 | 85.0 | 85.0 | 85.0 |

| Price (19-Jan-2017) | USD 11.73 |
|---|---|
| Price Target | USD 12.00 |

**Why Equal Weight?** We like AES' plan to delever and simplify the outlook, but we believe the company is facing long-term pressures as a global fossil generator which are beginning to play out in Chile, the U.S. and eventually in other places.

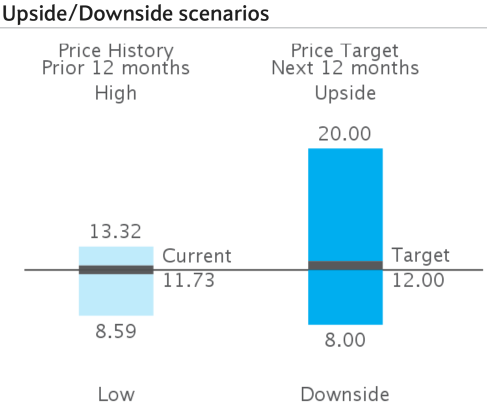
**Upside case** USD 20.00

A Regulated Utility average P/E multiple applied to $1.35 EPS in 2019 which reflects execution of the strategy and delevering.

**Downside case** USD 8.00

A sum of the parts which includes $8 for market values of the publicly traded Lat Am subsidiaries and Regulated U.S. utilities at 15.7x 2019 net income and -$0.15/sh for 6.7x $954M in proportional EBITDA for unlisted subsidiaries and parent expenses less $6.4B in net debt & NOLs.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** | **Industry View: NEUTRAL**

## American States Water Company (AWR)

**Stock Rating: UNDERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 459 | 469 | 482 | 494 | 2.5% |
| EBITDA (adj) | 161 | 167 | 174 | 181 | 4.1% |
| EBIT (adj) | 118 | 122 | 126 | 131 | 3.6% |
| Pre-tax income (adj) | 98 | 100 | 106 | 111 | 4.2% |
| Net income (adj) | 60 | 61 | 66 | 69 | 4.5% |
| EPS (adj) ($) | 1.60 | 1.64 | 1.75 | 1.84 | 4.7% |
| Diluted shares (mn) | 37.6 | 37.4 | 37.4 | 37.4 | -0.2% |
| DPS ($) | 0.87 | 0.92 | 0.97 | 1.02 | 5.3% |
| **Margin and return data** | | | | | **Average** |
| EBITDA (adj) margin (%) | 35.1 | 35.5 | 36.1 | 36.7 | 35.9 |
| EBIT (adj) margin (%) | 25.7 | 25.9 | 26.2 | 26.6 | 26.1 |
| Pre-tax (adj) margin (%) | 21.3 | 21.2 | 22.0 | 22.4 | 21.7 |
| Net (adj) margin (%) | 13.1 | 13.1 | 13.6 | 13.9 | 13.4 |
| ROIC (%) | 14.3 | 14.6 | 14.9 | 15.0 | 14.7 |
| ROA (%) | 4.8 | 5.2 | 5.4 | 5.5 | 5.2 |
| ROE (%) | 11.9 | 12.1 | 12.7 | 12.8 | 12.4 |
| **Balance sheet and cash flow ($mn)** | | | | | **CAGR** |
| Net PP&E | 802 | 854 | 905 | 957 | 6.1% |
| Total net assets | 1,162 | 1,199 | 1,223 | 1,265 | 2.9% |
| Capital employed | 826 | 836 | 848 | 878 | 2.1% |
| Shareholders' equity | 500 | 510 | 522 | 553 | 3.4% |
| Net debt/(funds) | 243 | 257 | 286 | 295 | 6.7% |
| Cash flow from operations | 163 | 132 | 135 | 138 | -5.3% |
| Capital expenditure | -91 | -95 | -95 | -95 | N/A |
| Free cash flow | 39 | 3 | 4 | 5 | -48.9% |
| Pre-dividend FCF | 72 | 37 | 40 | 43 | -15.6% |
| **Valuation and leverage metrics** | | | | | **Average** |
| P/E (adj) (x) | 26.5 | 25.9 | 24.2 | 23.1 | 24.9 |
| EV/EBITDA (adj) (x) | 11.4 | 11.0 | 10.7 | 10.4 | 10.9 |
| EV/EBIT (adj) (x) | 15.5 | 15.2 | 14.8 | 14.3 | 14.9 |
| P/BV (x) | 3.2 | 3.1 | 3.0 | 2.9 | 3.1 |
| Dividend yield (%) | 2.1 | 2.2 | 2.3 | 2.4 | 2.2 |
| Total debt/capital (%) | 39.5 | 39.0 | 38.4 | 37.1 | 38.5 |
| Net debt/EBITDA (adj) (x) | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 |
| **Selected operating metrics** | | | | | **Average** |
| Payout ratio (%) | 54.7 | 56.1 | 55.3 | 55.6 | 55.4 |
| Interest cover (x) | 5.7 | 5.5 | 6.1 | 6.4 | 5.9 |
| Regulated (%) | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |

| | |
|---|---|
| Price (19-Jan-2017) | USD 42.39 |
| Price Target | USD 43.00 |

**Why Underweight?** AWR is a solid well-run utility with average-to-below average growth compared to its peers. The single state regulatory jurisdiction argues for a premium valuation. The ASUS business is a great asset light business but has more risk than the regulated water business. As such, at current levels we feel the name is overvalued compared to peer companies.

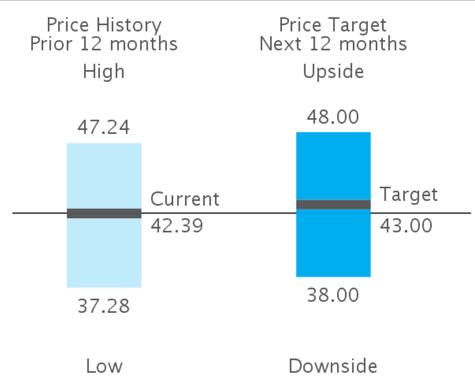
**Upside case** USD 48.00

Our upside case of assumes that regulatory issues and ASUS growth are at the top end of expectations, driving a further premium valuation to the group.

**Downside case** USD 38.00

Our downside case of assumes a reduction to ROE at the utility combined with slowed growth from bonus depreciation and lack of other investment from CPUC restrictions as well as low contract win rates from ASUS driving AWR to a group average multiple.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Calpine Corp. (CPN)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 5,442 | 4,231 | 5,013 | 4,823 | -3.9% |
| EBITDA (adj) | 1,976 | 1,832 | 1,868 | 1,901 | -1.3% |
| EBIT (adj) | 1,363 | 1,164 | 1,178 | 1,195 | -4.3% |
| Pre-tax income (adj) | 348 | 194 | 270 | 280 | -7.0% |
| Net income (adj) | 236 | 167 | 239 | 248 | 1.6% |
| EPS (adj) ($) | 0.64 | 0.47 | 0.68 | 0.70 | 3.1% |
| Diluted shares (mn) | 368.7 | 352.7 | 352.7 | 352.7 | -1.5% |
| DPS ($) | 0.00 | 0.00 | 0.00 | 0.00 | N/A |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 36.3 | 43.3 | 37.3 | 39.4 | 39.1 |
| EBIT (adj) margin (%) | 25.0 | 27.5 | 23.5 | 24.8 | 25.2 |
| Pre-tax (adj) margin (%) | 6.4 | 4.6 | 5.4 | 5.8 | 5.5 |
| Net (adj) margin (%) | 4.3 | 4.0 | 4.8 | 5.1 | 4.6 |
| ROIC (%) | 9.6 | 7.9 | 7.8 | 8.1 | 8.3 |
| ROA (%) | 5.1 | 5.7 | 5.8 | 5.7 | 5.6 |
| ROE (%) | 7.0 | 5.4 | 7.2 | 7.0 | 6.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 12,780 | 12,858 | 12,827 | 12,582 | -0.5% |
| Total net assets | 17,614 | 18,089 | 18,436 | 18,207 | 1.1% |
| Capital employed | 14,197 | 14,787 | 15,017 | 14,804 | 1.4% |
| Shareholders' equity | 3,114 | 3,324 | 3,554 | 3,791 | 6.8% |
| Net debt/(funds) | 10,720 | 10,720 | 10,496 | 9,992 | -2.3% |
| Cash flow from operations | 941 | 987 | 895 | 974 | 1.2% |
| Capital expenditure | 240 | 514 | 660 | 460 | 24.2% |
| Free cash flow | 701 | 473 | 235 | 514 | -9.8% |
| Pre-dividend FCF | 701 | 473 | 235 | 514 | -9.8% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 19.0 | 25.7 | 18.0 | 17.3 | 20.0 |
| EV/EBITDA (adj) (x) | 7.6 | 8.2 | 8.0 | 7.6 | 7.9 |
| EV/EBIT (adj) (x) | 11.1 | 13.0 | 12.6 | 12.0 | 12.2 |
| P/BV (x) | 1.4 | 1.3 | 1.2 | 1.1 | 1.3 |
| Dividend yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total debt/capital (%) | 78.1 | 77.5 | 76.3 | 74.4 | 76.6 |
| Net debt/EBITDA (adj) (x) | 5.4 | 5.9 | 5.6 | 5.3 | 5.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest cover (x) | 2.2 | 1.9 | 2.0 | 2.1 | 2.1 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Price (19-Jan-2017) | USD 12.19 |
|---|---|
| Price Target | USD 18.00 |

**Why Overweight?** We like CPN for: 1) its 11-15% FCF yield 2016E-18E; 2) a shareholder-friendly management with allocations toward buybacks; 3) a clean and geographically diverse asset mix, and 4) its leverage to lower natural gas prices with a pure spark spread fleet.

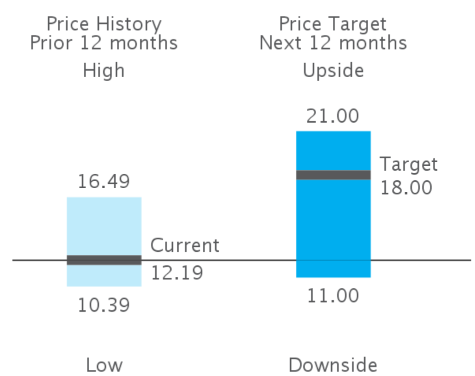
**Upside case** USD 21.00

Our upside case is reflective of current 2018 strip natural gas, capacity prices moving back to $200/MW-day, a 7.6x mid-cycle EV/EBITDA multiple, and indicated deleveraging of $573 million.

**Downside case** USD 11.00

Our downside case is reflective of $2.50/MMBtu perpetual natural gas, no upside to capacity prices, a discounted 7.1x EV/EBITDA multiple, and no credit for indicated deleveraging.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## California Water Service Group (CWT)

**Stock Rating: UNDERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 588 | 601 | 637 | 656 | 3.7% |
| EBITDA (adj) | 157 | 162 | 193 | 206 | 9.4% |
| EBIT (adj) | 96 | 96 | 122 | 129 | 10.6% |
| Pre-tax income (adj) | 70 | 70 | 93 | 98 | 12.2% |
| Net income (adj) | 45 | 43 | 58 | 61 | 11.0% |
| EPS (adj) ($) | 0.94 | 0.90 | 1.20 | 1.27 | 10.5% |
| Diluted shares (mn) | 47.8 | 48.0 | 48.2 | 48.4 | 0.4% |
| DPS ($) | 0.67 | 0.69 | 0.71 | 0.73 | 2.9% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 26.7 | 26.9 | 30.3 | 31.4 | 28.8 |
| EBIT (adj) margin (%) | 16.3 | 15.9 | 19.1 | 19.7 | 17.8 |
| Pre-tax (adj) margin (%) | 11.8 | 11.6 | 14.6 | 15.0 | 13.3 |
| Net (adj) margin (%) | 7.7 | 7.2 | 9.1 | 9.4 | 8.3 |
| ROIC (%) | 9.0 | 8.3 | 9.9 | 9.9 | 9.3 |
| ROA (%) | 2.0 | 1.9 | 2.4 | 2.4 | 2.2 |
| ROE (%) | 7.1 | 6.6 | 8.5 | 8.7 | 7.7 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 1,664 | 1,803 | 1,947 | 2,096 | 8.0% |
| Total net assets | 2,244 | 2,384 | 2,528 | 2,676 | 6.0% |
| Capital employed | 1,063 | 1,149 | 1,237 | 1,308 | 7.2% |
| Shareholders' equity | 640 | 674 | 695 | 716 | 3.8% |
| Net debt/(funds) | 420 | 472 | 540 | 589 | 11.9% |
| Cash flow from operations | 141 | 160 | 187 | 198 | 12.0% |
| Capital expenditure | -135 | -205 | -215 | -225 | N/A |
| Free cash flow | -26 | -81 | -71 | -72 | N/A |
| Pre-dividend FCF | 6 | -45 | -28 | -27 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 35.0 | 36.5 | 27.3 | 25.9 | 31.2 |
| EV/EBITDA (adj) (x) | 12.7 | 12.7 | 11.0 | 10.5 | 11.7 |
| EV/EBIT (adj) (x) | 20.9 | 21.4 | 17.3 | 16.7 | 19.1 |
| P/BV (x) | 2.5 | 2.3 | 2.3 | 2.2 | 2.3 |
| Dividend yield (%) | 2.0 | 2.1 | 2.2 | 2.2 | 2.1 |
| Total debt/capital (%) | 39.8 | 41.3 | 43.9 | 45.3 | 42.6 |
| Net debt/EBITDA (adj) (x) | 2.7 | 2.9 | 2.8 | 2.9 | 2.8 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 71.2 | 76.4 | 58.9 | 57.5 | 66.0 |
| Interest cover (x) | 3.3 | 3.3 | 3.8 | 3.8 | 3.5 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Price (19-Jan-2017) | USD 32.95 |
|---|---|
| Price Target | USD 29.00 |

**Why Underweight?** We rate shares of CWT Underweight as the theorhetic earnings power of the utility is lower than previously expected as rate base is lower as outlined in the settlement for their California rate case.

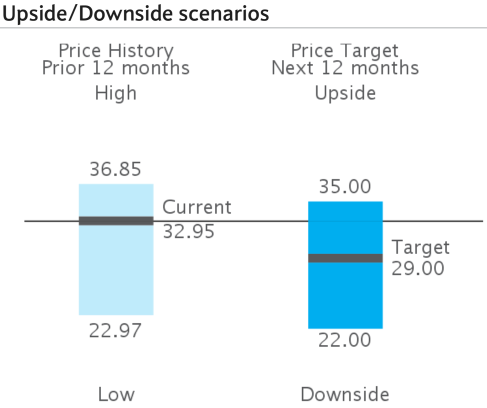
**Upside case** USD 35.00

Applying a multiple on EV/EBITDA more commensurate with transaction multiples would yield upside, assuming 11x 2018 EV/EBITDA. Continued consolidation would lead to either higher growth or higher valuations

**Downside case** USD 22.00

Water assets are valuable as shown by the various roll up and tuck in strategies in the industry. As such we have not seen assets valued at less than 1.5x book and use this multiple for our downside.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## DTE Energy (DTE)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 10,337 | 9,130 | 9,380 | 9,560 | -2.6% |
| EBITDA (adj) | 2,243 | 2,658 | 2,835 | 3,010 | 10.3% |
| EBIT (adj) | 1,391 | 1,711 | 1,777 | 1,872 | 10.4% |
| Pre-tax income (adj) | 1,102 | 1,369 | 1,363 | 1,489 | 10.6% |
| Net income (adj) | 862 | 960 | 952 | 1,034 | 6.2% |
| EPS (adj) ($) | 4.82 | 5.33 | 5.29 | 5.74 | 6.0% |
| Diluted shares (mn) | 179.0 | 180.1 | 180.1 | 180.1 | 0.2% |
| DPS ($) | 2.84 | 3.46 | 3.44 | 3.73 | 9.5% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 21.7 | 29.1 | 30.2 | 31.5 | 28.1 |
| EBIT (adj) margin (%) | 13.5 | 18.7 | 18.9 | 19.6 | 17.7 |
| Pre-tax (adj) margin (%) | 10.7 | 15.0 | 14.5 | 15.6 | 13.9 |
| Net (adj) margin (%) | 8.3 | 10.5 | 10.2 | 10.8 | 10.0 |
| ROIC (%) | 7.5 | 8.3 | 8.0 | 7.9 | 7.9 |
| ROA (%) | 3.0 | 3.0 | 2.8 | 2.9 | 2.9 |
| ROE (%) | 9.8 | 10.4 | 10.0 | 10.4 | 10.2 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 18,034 | 20,867 | 22,399 | 24,051 | 10.1% |
| Total net assets | 28,737 | 32,085 | 33,468 | 35,133 | 6.9% |
| Capital employed | 18,542 | 20,709 | 22,149 | 23,721 | 8.6% |
| Shareholders' equity | 8,772 | 9,212 | 9,546 | 9,909 | 4.1% |
| Net debt/(funds) | 9,770 | 11,497 | 12,603 | 13,812 | 12.2% |
| Cash flow from operations | 1,911 | 1,893 | 2,104 | 2,253 | 5.6% |
| Capital expenditure | -2,020 | -2,480 | -2,590 | -2,790 | N/A |
| Free cash flow | -109 | -587 | -486 | -537 | N/A |
| Pre-dividend FCF | 392 | 37 | 133 | 135 | -29.9% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 20.4 | 18.4 | 18.6 | 17.1 | 18.6 |
| EV/EBITDA (adj) (x) | 12.2 | 11.0 | 10.7 | 10.4 | 11.1 |
| EV/EBIT (adj) (x) | 19.7 | 17.0 | 17.0 | 16.8 | 17.6 |
| P/BV (x) | 2.0 | 1.9 | 1.9 | 1.8 | 1.9 |
| Dividend yield (%) | 2.9 | 3.5 | 3.5 | 3.8 | 3.4 |
| Total debt/capital (%) | 52.9 | 57.2 | 57.4 | 58.3 | 56.4 |
| Net debt/EBITDA (adj) (x) | 4.4 | 4.3 | 4.4 | 4.6 | 4.4 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 59.0 | 65.0 | 65.0 | 65.0 | 63.5 |
| Interest cover (x) | 5.1 | 6.7 | 6.0 | 6.0 | 6.0 |
| Regulated (%) | 80.5 | 79.2 | 81.1 | 77.2 | 79.5 |

| Price (19-Jan-2017) | USD 98.14 |
|---|---|
| Price Target | USD 106.00 |

**Why Overweight?** Our target implies a reasonable 7% consolidated premium to the RU group for DTE's best in-class Regulated Utility and Michigan regulatory environment along with the company's track record for investing in the unregulated businesses. On the unregulated side, DTE has generated growth complementary to the regulated business with upside potential.

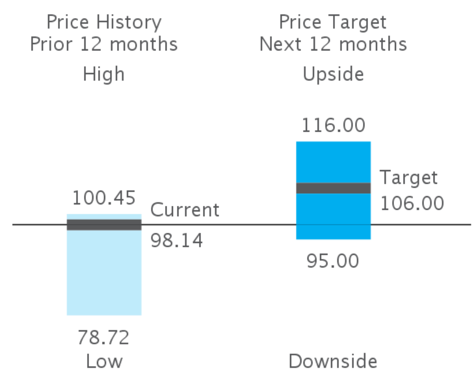
**Upside case** — **USD 116.00**

We assume stronger growth at the gas and electric business of +1%, positive results from the trading business and 25-50bp of higher allowed ROEs from the next rate case process. We also assume a slight premium in the midstream business as growth becomes more visible.

**Downside case** — **USD 95.00**

We assume weaker growth at the gas and electric business of -1%, negative results from the trading business, 25-50bp of lower allowed ROEs from the next case and higher corporate costs. We assume a slight discount for midstream as the MLP opportunity becomes less visible.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Duke Energy (DUK)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 23,459 | 23,292 | 22,496 | 22,809 | -0.9% |
| EBITDA (adj) | 8,856 | 9,149 | 8,865 | 9,068 | 0.8% |
| EBIT (adj) | 5,712 | 5,844 | 5,636 | 5,844 | 0.8% |
| Pre-tax income (adj) | 4,487 | 4,782 | 4,696 | 4,906 | 3.0% |
| Net income (adj) | 3,151 | 3,282 | 3,201 | 3,336 | 1.9% |
| EPS (adj) ($) | 4.54 | 4.75 | 4.58 | 4.78 | 1.7% |
| Diluted shares (mn) | 694.0 | 690.7 | 698.6 | 698.6 | 0.2% |
| DPS ($) | 3.30 | 3.42 | 3.54 | 3.66 | 3.5% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 37.8 | 39.3 | 39.4 | 39.8 | 39.0 |
| EBIT (adj) margin (%) | 24.3 | 25.1 | 25.1 | 25.6 | 25.0 |
| Pre-tax (adj) margin (%) | 19.1 | 20.5 | 20.9 | 21.5 | 20.5 |
| Net (adj) margin (%) | 13.4 | 14.1 | 14.2 | 14.6 | 14.1 |
| ROIC (%) | 6.9 | 6.3 | 6.0 | 5.9 | 6.3 |
| ROA (%) | 2.6 | 2.6 | 2.4 | 2.5 | 2.5 |
| ROE (%) | 7.8 | 8.1 | 7.7 | 7.8 | 7.8 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 75,709 | 86,169 | 88,114 | 92,290 | 6.8% |
| Total net assets | 121,148 | 131,056 | 133,454 | 137,911 | 4.4% |
| Capital employed | 82,348 | 92,248 | 94,646 | 99,103 | 6.4% |
| Shareholders' equity | 39,771 | 41,434 | 42,162 | 42,939 | 2.6% |
| Net debt/(funds) | 41,728 | 50,517 | 51,734 | 55,133 | 9.7% |
| Cash flow from operations | 6,676 | 6,587 | 6,431 | 6,561 | -0.6% |
| Capital expenditure | -6,766 | -9,025 | -7,575 | -7,400 | N/A |
| Free cash flow | -2,344 | -4,800 | -3,617 | -3,399 | N/A |
| Pre-dividend FCF | -90 | -2,438 | -1,144 | -839 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 17.0 | 16.2 | 16.8 | 16.1 | 16.5 |
| EV/EBITDA (adj) (x) | 10.7 | 11.3 | 11.8 | 11.9 | 11.4 |
| EV/EBIT (adj) (x) | 16.6 | 17.7 | 18.6 | 18.5 | 17.9 |
| P/BV (x) | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Dividend yield (%) | 4.3 | 4.4 | 4.6 | 4.8 | 4.5 |
| Total debt/capital (%) | 51.7 | 55.1 | 55.5 | 56.7 | 54.7 |
| Net debt/EBITDA (adj) (x) | 4.7 | 5.5 | 5.8 | 6.1 | 5.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 72.7 | 72.0 | 77.3 | 76.7 | 74.7 |
| Interest cover (x) | 3.5 | 3.6 | 3.4 | 3.3 | 3.5 |
| Regulated (%) | 97.2 | 97.2 | 97.2 | 97.2 | 97.2 |

| Price (19-Jan-2017) | USD 77.12 |
|---|---|
| Price Target | USD 78.00 |

**Why Equal Weight?** We believe DUK is a premium regulated utility and the sale of the international assets removes an overhang. As such, we value DUK at a 5% premium to the industry average multiple.

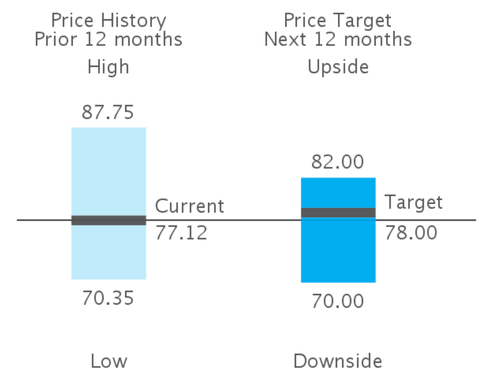
**Upside case** — **USD 82.00**

Now that the headwinds at the International segment have been removed, the remaining overhang to resolve is and the coal ash recovery; the stock could trade to a 10% premium vs. the regulated group over time.

**Downside case** — **USD 70.00**

We see the downside as being that DUK is unable to produce earnings growth in 2018, and the stock trades at an average regulated utility multiple on flat earnings.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Dynegy Inc. (DYN)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 3,870 | 4,366 | 3,717 | 3,939 | 0.6% |
| EBITDA (adj) | 850 | 1,057 | 1,303 | 1,543 | 22.0% |
| EBIT (adj) | 288 | 550 | 271 | 470 | 17.8% |
| Pre-tax income (adj) | -226 | 3 | -258 | -38 | N/A |
| Net income (adj) | 28 | 2 | -155 | -23 | N/A |
| EPS (adj) ($) | 0.22 | 0.01 | -1.34 | -0.20 | N/A |
| Diluted shares (mn) | 126 | 116 | 116 | 116 | -2.7% |
| DPS ($) | 0.00 | 0.00 | 0.00 | 0.00 | N/A |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 22.0 | 24.2 | 35.1 | 39.2 | 30.1 |
| EBIT (adj) margin (%) | 7.4 | 12.6 | 7.3 | 11.9 | 9.8 |
| Pre-tax (adj) margin (%) | -5.8 | 0.1 | -6.9 | -1.0 | -3.4 |
| Net (adj) margin (%) | 0.7 | 0.0 | -4.2 | -0.6 | -1.0 |
| ROIC (%) | 3.1 | 6.0 | 3.0 | 5.3 | 4.3 |
| ROA (%) | -0.3 | 2.9 | 1.5 | 2.6 | 1.7 |
| ROE (%) | 0.9 | 0.1 | -6.2 | -1.0 | -1.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 9,412 | 9,171 | 8,930 | 8,689 | -2.6% |
| Total net assets | 11,402 | 11,155 | 10,808 | 10,756 | -1.9% |
| Capital employed | 9,423 | 9,181 | 9,029 | 8,802 | -2.2% |
| Shareholders' equity | 2,738 | 2,491 | 2,232 | 2,194 | -7.1% |
| Net debt/(funds) | 6,685 | 6,690 | 6,797 | 6,608 | -0.4% |
| Cash flow from operations | 204 | 511 | 160 | 455 | 30.7% |
| Capital expenditure | -365 | -266 | -266 | -266 | N/A |
| Free cash flow | -161 | 245 | -106 | 189 | N/A |
| Pre-dividend FCF | -161 | 245 | -106 | 189 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 43.7 | N/A | N/A | N/A | 43.7 |
| EV/EBITDA (adj) (x) | 12.2 | 9.8 | 8.1 | 6.7 | 9.2 |
| EV/EBIT (adj) (x) | 36.0 | 18.9 | 38.8 | 21.9 | 28.9 |
| P/BV (x) | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 |
| Dividend yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total debt/capital (%) | 70.9 | 72.9 | 75.3 | 75.1 | 73.5 |
| Net debt/EBITDA (adj) (x) | 7.9 | 6.3 | 5.2 | 4.3 | 5.9 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest cover (x) | 0.5 | 1.0 | 0.5 | 1.0 | 0.8 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **USD 9.70** |
| **Price Target** | **USD 14.00** |

**Why Overweight?** With the recent acquisitions of the ENGIE assets, and the rationalization of IPH and MISO Zone 4 Dynegy continues to move further toward a spark spread fleet, with assets in PJM, ERCOT and New England and MISO. This will also leave the fleet less exposed to natural gas prices, and no longer exposed to MISO capacity auctions.

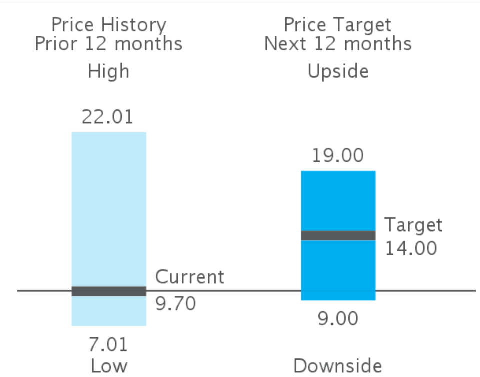
**Upside case** — **USD 19.00**

The upside case is based on a $2/MWh expansion in spark and dark spreads.

**Downside case** — **USD 9.00**

The downside case is based on a 23% - 55% compression in spark spreads across all markets and the 2018 position remaining unhedged. This reduction equates to a $3/MWh compression.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Consolidated Edison (ED)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 12,554 | 11,934 | 12,252 | 12,589 | 0.1% |
| EBITDA (adj) | 3,566 | 3,678 | 3,928 | 4,187 | 5.5% |
| EBIT (adj) | 2,436 | 2,438 | 2,589 | 2,748 | 4.1% |
| Pre-tax income (adj) | 1,807 | 1,777 | 1,923 | 2,041 | 4.1% |
| Net income (adj) | 1,202 | 1,185 | 1,289 | 1,356 | 4.1% |
| EPS (adj) ($) | 4.08 | 3.94 | 4.13 | 4.34 | 2.1% |
| Diluted shares (mn) | 294.4 | 300.7 | 311.9 | 312.3 | 2.0% |
| DPS ($) | 2.60 | 2.68 | 2.69 | 2.82 | 2.8% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 28.4 | 30.8 | 32.1 | 33.3 | 31.1 |
| EBIT (adj) margin (%) | 19.4 | 20.4 | 21.1 | 21.8 | 20.7 |
| Pre-tax (adj) margin (%) | 14.4 | 14.9 | 15.7 | 16.2 | 15.3 |
| Net (adj) margin (%) | 9.6 | 9.9 | 10.5 | 10.8 | 10.2 |
| ROIC (%) | 8.9 | 8.1 | 8.1 | 8.1 | 8.3 |
| ROA (%) | 2.7 | 2.5 | 2.6 | 2.6 | 2.6 |
| ROE (%) | 9.4 | 8.7 | 8.8 | 8.8 | 8.9 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 32,209 | 36,037 | 38,455 | 40,760 | 8.2% |
| Total net assets | 45,651 | 48,723 | 50,758 | 53,151 | 5.2% |
| Capital employed | 27,344 | 30,012 | 32,136 | 34,069 | 7.6% |
| Shareholders' equity | 13,070 | 14,158 | 15,159 | 15,693 | 6.3% |
| Net debt/(funds) | 13,330 | 15,666 | 17,173 | 18,481 | 11.5% |
| Cash flow from operations | 3,277 | 2,741 | 3,038 | 3,255 | -0.2% |
| Capital expenditure | -3,418 | -4,285 | -3,981 | -3,966 | N/A |
| Free cash flow | -2,047 | -3,156 | -2,618 | -2,473 | N/A |
| Pre-dividend FCF | -1,314 | -2,350 | -1,780 | -1,592 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 18.0 | 18.7 | 17.8 | 16.9 | 17.9 |
| EV/EBITDA (adj) (x) | 10.0 | 10.3 | 10.1 | 9.8 | 10.0 |
| EV/EBIT (adj) (x) | 14.7 | 15.6 | 15.3 | 14.9 | 15.1 |
| P/BV (x) | 1.7 | 1.6 | 1.5 | 1.5 | 1.5 |
| Dividend yield (%) | 3.5 | 3.6 | 3.7 | 3.8 | 3.7 |
| Total debt/capital (%) | 52.2 | 52.8 | 52.8 | 53.9 | 52.9 |
| Net debt/EBITDA (adj) (x) | 3.7 | 4.3 | 4.4 | 4.4 | 4.2 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 63.7 | 68.0 | 65.0 | 65.0 | 65.4 |
| Interest cover (x) | 3.7 | 3.5 | 3.5 | 3.5 | 3.6 |
| Regulated (%) | 94.7 | 96.0 | 95.9 | 94.8 | 95.3 |

| Price (19-Jan-2017) | USD 73.49 |
|---|---|
| Price Target | USD 74.00 |

**Why Equal Weight?** We rate ED as Equal Weight as we believe the current valuation balances ED's above-average yield, liquidity and rate base growth with regulatory risk overhang.

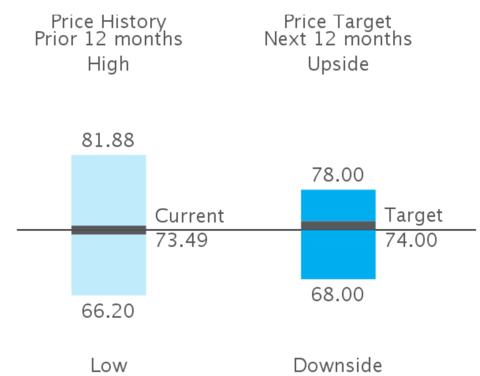
**Upside case** — **USD 78.00**

Our upside case implies a 10% premium of the 2019 Regulated Utility average P/E applied to $4.51 which reflects a 9.5% electric and gas ROE at CECONY and a modest penalty for East Harlem fine.

**Downside case** — **USD 68.00**

Our downside case assumes a 9.0% earned ROE and $4.59 EPS in 2019 applied to a modest discount of the average Regulated Utility multiple.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

North America Power & Utilities — Industry View: NEUTRAL

## Edison International (EIX)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 11,485 | 11,072 | 11,281 | 11,656 | 0.5% |
| EBITDA (adj) | 4,582 | 4,582 | 4,582 | 4,582 | 0.0% |
| EBIT (adj) | 2,652 | 2,761 | 2,863 | 3,028 | 4.5% |
| Pre-tax income (adj) | 2,190 | 2,271 | 2,322 | 2,398 | 3.1% |
| Net income (adj) | 1,349 | 1,280 | 1,340 | 1,415 | 1.6% |
| EPS (adj) ($) | 4.10 | 3.93 | 4.11 | 4.34 | 1.9% |
| Diluted shares (mn) | 329.0 | 326.0 | 326.0 | 326.0 | -0.3% |
| DPS ($) | 1.67 | 1.92 | 2.07 | 2.24 | 10.3% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 39.8 | 42.7 | 43.3 | 43.9 | 42.4 |
| EBIT (adj) margin (%) | 23.1 | 24.9 | 25.4 | 26.0 | 24.8 |
| Pre-tax (adj) margin (%) | 19.1 | 20.5 | 20.6 | 20.6 | 20.2 |
| Net (adj) margin (%) | 11.7 | 11.6 | 11.9 | 12.1 | 11.8 |
| ROIC (%) | 10.9 | 10.6 | 10.4 | 10.2 | 10.5 |
| ROA (%) | 2.7 | 2.5 | 2.5 | 2.5 | 2.5 |
| ROE (%) | 9.9 | 8.9 | 8.9 | 8.9 | 9.1 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 35,018 | 36,143 | 38,233 | 40,729 | 5.2% |
| Total net assets | 49,872 | 51,832 | 54,263 | 56,759 | 4.4% |
| Capital employed | 24,337 | 25,947 | 27,567 | 29,783 | 7.0% |
| Shareholders' equity | 13,672 | 14,410 | 15,130 | 15,846 | 5.0% |
| Net debt/(funds) | 10,639 | 11,490 | 12,335 | 13,722 | 8.9% |
| Cash flow from operations | 4,624 | 3,793 | 4,341 | 3,923 | -5.3% |
| Capital expenditure | 4,210 | 4,067 | 4,110 | 4,580 | 2.8% |
| Free cash flow | -130 | -900 | -445 | -1,387 | N/A |
| Pre-dividend FCF | 414 | -274 | 231 | -657 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 17.5 | 18.3 | 17.4 | 16.5 | 17.4 |
| EV/EBITDA (adj) (x) | 7.5 | 7.7 | 7.9 | 8.2 | 7.8 |
| EV/EBIT (adj) (x) | 12.9 | 12.7 | 12.6 | 12.3 | 12.6 |
| P/BV (x) | 1.7 | 1.6 | 1.5 | 1.5 | 1.6 |
| Dividend yield (%) | 2.3 | 2.7 | 2.9 | 3.1 | 2.8 |
| Total debt/capital (%) | 43.8 | 44.5 | 45.1 | 46.8 | 45.0 |
| Net debt/EBITDA (adj) (x) | 2.3 | 2.4 | 2.5 | 2.7 | 2.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 40.7 | 48.9 | 50.4 | 51.6 | 47.9 |
| Interest cover (x) | 5.0 | 5.5 | 5.2 | 4.7 | 5.1 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | |
|---|---|
| Price (19-Jan-2017) | USD 71.72 |
| Price Target | USD 77.00 |

**Why Equal Weight?** We are Equal Weight on EIX for 9% total return potential but like the company's 7% rate-base growth and California regulatory environment.

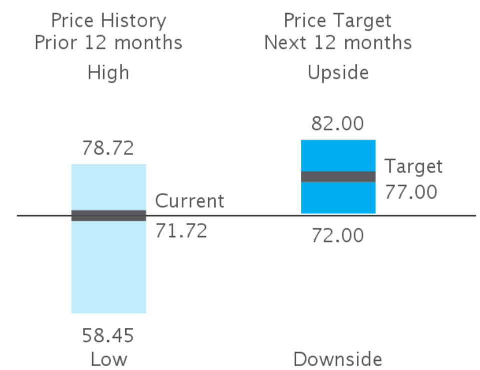
**Upside case** USD 82.00

The upside case is a 10% premium to the group average 2019 P/E applied to $4.70.

**Downside case** USD 72.00

Our downside case is a Regulated Utility average 2019 P/E applied to $1B lower ratebase and $4.62 EPS.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Entergy Corp. (ETR)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 11,514 | 10,649 | 10,563 | 10,858 | -1.9% |
| EBITDA (adj) | 3,219 | 3,681 | 3,621 | 3,736 | 5.1% |
| EBIT (adj) | 4,836 | 5,374 | 5,391 | 5,613 | 5.1% |
| Pre-tax income (adj) | 1,138 | 1,499 | 1,364 | 1,343 | 5.7% |
| Net income (adj) | 1,077 | 1,264 | 846 | 831 | -8.3% |
| EPS (adj) ($) | 6.00 | 7.05 | 4.72 | 4.64 | -8.2% |
| Diluted shares (mn) | 179.2 | 179.3 | 179.3 | 179.3 | 0.0% |
| DPS ($) | 3.40 | 3.48 | 3.56 | 3.64 | 2.3% |
| **Margin and return data** | | | | | **Average** |
| EBITDA (adj) margin (%) | 28.0 | 34.6 | 34.3 | 34.4 | 32.8 |
| EBIT (adj) margin (%) | 42.0 | 50.5 | 51.0 | 51.7 | 48.8 |
| Pre-tax (adj) margin (%) | 9.9 | 14.1 | 12.9 | 12.4 | 12.3 |
| Net (adj) margin (%) | 9.4 | 11.9 | 8.0 | 7.7 | 9.2 |
| ROIC (%) | 21.0 | 21.7 | 20.5 | 19.7 | 20.7 |
| ROA (%) | 2.1 | 2.8 | 1.8 | 1.7 | 2.1 |
| ROE (%) | 9.8 | 13.2 | 8.4 | 8.1 | 9.9 |
| **Balance sheet and cash flow ($mn)** | | | | | **CAGR** |
| Net PP&E | 27,824 | 29,942 | 31,787 | 33,690 | 6.6% |
| Total net assets | 44,648 | 46,226 | 47,742 | 49,946 | 3.8% |
| Capital employed | 23,077 | 24,714 | 26,289 | 28,551 | 7.4% |
| Shareholders' equity | 9,257 | 9,913 | 10,123 | 10,305 | 3.6% |
| Net debt/(funds) | 12,469 | 13,988 | 15,682 | 17,463 | 11.9% |
| Cash flow from operations | 3,291 | 2,976 | 2,636 | 2,728 | -6.1% |
| Capital expenditure | -2,501 | -3,810 | -3,615 | -3,780 | N/A |
| Free cash flow | 172 | -1,478 | -1,638 | -1,725 | N/A |
| Pre-dividend FCF | 790 | -834 | -979 | -1,052 | N/A |
| **Valuation and leverage metrics** | | | | | **Average** |
| P/E (adj) (x) | 11.8 | 10.1 | 15.1 | 15.3 | 13.1 |
| EV/EBITDA (adj) (x) | 7.8 | 7.3 | 7.9 | 8.1 | 7.8 |
| EV/EBIT (adj) (x) | 5.2 | 5.0 | 5.3 | 5.4 | 5.2 |
| P/BV (x) | 1.4 | 1.3 | 1.3 | 1.2 | 1.3 |
| Dividend yield (%) | 4.8 | 4.9 | 5.0 | 5.1 | 5.0 |
| Total debt/capital (%) | 59.9 | 59.9 | 61.5 | 63.9 | 61.3 |
| Net debt/EBITDA (adj) (x) | 3.9 | 3.8 | 4.3 | 4.7 | 4.2 |
| **Selected operating metrics** | | | | | **Average** |
| Payout ratio (%) | 56.7 | 49.4 | 75.5 | 78.5 | 65.0 |
| Interest cover (x) | 7.2 | 7.8 | 7.6 | 7.6 | 7.5 |
| Regulated (%) | 82.8 | 71.1 | 96.2 | 99.5 | 87.4 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **USD 71.08** |
| **Price Target** | **USD 73.00** |

**Why Equal Weight?** Our base case presumes that the Utility/Parent segments trade at the industry average multiple. We include no incremental value for EWC.

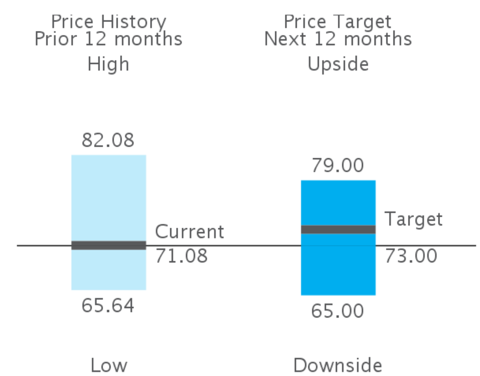
**Upside case** — **USD 79.00**

Upside case reflects Utility/Parent segments trading at a 5% premium to the group average multiple due to an improving regulatory outlook and diminished merchant nuclear exposure. It also reflects EWC valued at the high end of our DCF analysis, assuming IP remains operational.

**Downside case** — **USD 65.00**

Our downside case applies a 5% discount to the average group multiple for the Utility/Parent earnings. The downside reflects zero value for EWC.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## FirstEnergy Corp. (FE)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 15,026 | 15,359 | 15,628 | 15,505 | 1.1% |
| EBITDA (adj) | 4,355 | 4,226 | 4,403 | 4,280 | -0.6% |
| EBIT (adj) | 2,805 | 2,741 | 2,798 | 2,597 | -2.5% |
| Pre-tax income (adj) | 1,768 | 1,837 | 1,936 | 1,775 | 0.1% |
| Net income (adj) | 1,143 | 1,139 | 1,201 | 1,101 | -1.3% |
| EPS (adj) ($) | 2.71 | 2.62 | 2.68 | 2.37 | -4.4% |
| Diluted shares (mn) | 422.0 | 439.1 | 456.3 | 473.4 | 3.9% |
| DPS ($) | 1.44 | 1.44 | 1.44 | 1.44 | 0.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 29.0 | 27.5 | 28.2 | 27.6 | 28.1 |
| EBIT (adj) margin (%) | 18.7 | 17.8 | 17.9 | 16.7 | 17.8 |
| Pre-tax (adj) margin (%) | 11.8 | 12.0 | 12.4 | 11.4 | 11.9 |
| Net (adj) margin (%) | 7.6 | 7.4 | 7.7 | 7.1 | 7.5 |
| ROIC (%) | 8.1 | 7.9 | 8.0 | 7.4 | 7.8 |
| ROA (%) | 3.5 | 3.3 | 3.2 | 2.9 | 3.2 |
| ROE (%) | 9.2 | 9.2 | 8.9 | 7.5 | 8.7 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 34,765 | 35,997 | 37,251 | 38,347 | 3.3% |
| Total net assets | 52,187 | 54,142 | 55,488 | 56,716 | 2.8% |
| Capital employed | 34,488 | 34,855 | 35,012 | 35,162 | 0.6% |
| Shareholders' equity | 12,422 | 13,535 | 14,691 | 15,722 | 8.2% |
| Net debt/(funds) | 21,935 | 21,190 | 20,138 | 19,183 | -4.4% |
| Cash flow from operations | 3,447 | 3,355 | 4,050 | 3,917 | 4.3% |
| Capital expenditure | -2,940 | -2,888 | -2,778 | -2,697 | N/A |
| Free cash flow | -101 | -158 | 627 | 550 | N/A |
| Pre-dividend FCF | 507 | 468 | 1,272 | 1,220 | 34.0% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 11.2 | 11.6 | 11.3 | 12.8 | 11.7 |
| EV/EBITDA (adj) (x) | 8.0 | 8.0 | 7.5 | 7.4 | 7.7 |
| EV/EBIT (adj) (x) | 12.3 | 12.4 | 11.7 | 12.3 | 12.2 |
| P/BV (x) | 1.0 | 1.0 | 0.9 | 0.9 | 1.0 |
| Dividend yield (%) | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 |
| Total debt/capital (%) | 64.0 | 61.2 | 58.0 | 55.3 | 59.6 |
| Net debt/EBITDA (adj) (x) | 5.0 | 5.0 | 4.6 | 4.5 | 4.8 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 53.2 | 55.0 | 53.7 | 60.8 | 55.7 |
| Interest cover (x) | 2.8 | 2.8 | 3.0 | 2.9 | 2.9 |
| Regulated (%) | 77.2 | 78.2 | 95.9 | 110.5 | 90.4 |

| Price (19-Jan-2017) | USD 30.31 |
|---|---|
| Price Target | USD 34.00 |

**Why Equal Weight?** We like FE's focus on getting more Regulated and believe acceleration of that would help the stock. The company's biggest strengths are the strategy, regulatory relationships and operations.

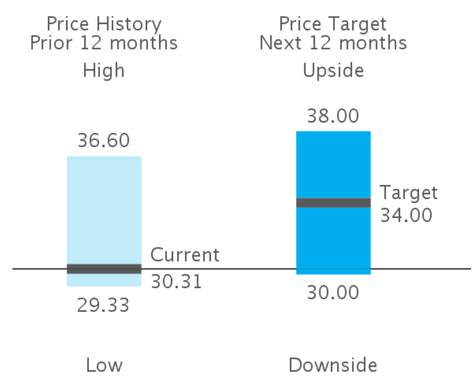
**Upside case** — **USD 38.00**

Our upside case reflects a sum of the parts asset values which includes a DCF of the merchant generation cash flows and $41 for the Regulated Utility net of parent EPS of $2.68 in 2019 and a 9% discount to the average multiple.

**Downside case** — **USD 30.00**

Our downside case values the Ohio rate relief as a 3 year NPV and uses a 10% Regulated Utility P/E discount applied to $2.42 in '19 less $3/share for the merchant unfunded pension NPV.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## Great Plains Energy Inc. (GXP)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,502 | 2,756 | 4,557 | 5,503 | 30.0% |
| EBITDA (adj) | 861 | 1,056 | 1,781 | 2,199 | 36.7% |
| EBIT (adj) | 530 | 701 | 1,151 | 1,421 | 38.9% |
| Pre-tax income (adj) | 335 | 483 | 695 | 845 | 36.2% |
| Net income (adj) | 213 | 314 | 405 | 477 | 30.9% |
| EPS (adj) ($) | 1.37 | 1.83 | 1.64 | 1.82 | 10.0% |
| Diluted shares (mn) | 154.8 | 170.8 | 246.9 | 262.7 | 19.3% |
| DPS ($) | 0.97 | 1.05 | 1.10 | 1.16 | 6.2% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 34.4 | 38.3 | 39.1 | 40.0 | 37.9 |
| EBIT (adj) margin (%) | 21.2 | 25.4 | 25.3 | 25.8 | 24.4 |
| Pre-tax (adj) margin (%) | 13.4 | 17.5 | 15.3 | 15.4 | 15.4 |
| Net (adj) margin (%) | 8.5 | 11.4 | 8.9 | 8.7 | 9.4 |
| ROIC (%) | 7.3 | 9.3 | 6.2 | 7.6 | 7.6 |
| ROA (%) | 2.0 | 2.7 | 1.7 | 2.0 | 2.1 |
| ROE (%) | 5.8 | 8.2 | 6.0 | 7.0 | 6.8 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 8,662 | 8,962 | 19,256 | 19,742 | 31.6% |
| Total net assets | 10,739 | 11,586 | 23,741 | 24,288 | 31.3% |
| Capital employed | 7,302 | 7,541 | 18,462 | 18,715 | 36.9% |
| Shareholders' equity | 3,657 | 3,816 | 6,763 | 6,805 | 23.0% |
| Net debt/(funds) | 3,634 | 3,559 | 11,583 | 11,734 | 47.8% |
| Cash flow from operations | 753 | 909 | 1,385 | 1,682 | 30.7% |
| Capital expenditure | -677 | -680 | -1,110 | -1,290 | N/A |
| Free cash flow | -80 | 36 | -153 | -161 | N/A |
| Pre-dividend FCF | 76 | 215 | 20 | 21 | -34.8% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 19.8 | 14.8 | 16.5 | 14.9 | 16.5 |
| EV/EBITDA (adj) (x) | 9.1 | 7.3 | 8.8 | 7.2 | 8.1 |
| EV/EBIT (adj) (x) | 14.7 | 11.0 | 13.7 | 11.2 | 12.6 |
| P/BV (x) | 1.1 | 1.2 | 1.0 | 1.0 | 1.1 |
| Dividend yield (%) | 3.6 | 3.9 | 4.1 | 4.3 | 4.0 |
| Total debt/capital (%) | 49.9 | 49.4 | 63.4 | 63.6 | 56.6 |
| Net debt/EBITDA (adj) (x) | 4.2 | 3.4 | 6.5 | 5.3 | 4.9 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 70.7 | 57.4 | 67.2 | 63.7 | 64.8 |
| Interest cover (x) | 2.7 | 3.3 | 2.6 | 2.5 | 2.8 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Price (19-Jan-2017) | USD 27.05 |
|---|---|
| Price Target | USD 27.00 |

**Why Equal Weight?** We are Equal Weight GXP following completion of the equity offerings for the WR merger. We like the 6-8% EPS growth for the merged company and regulation is the key risk.

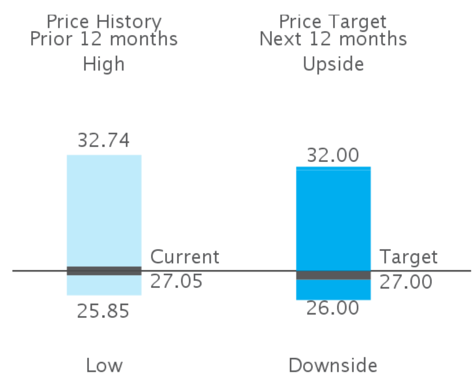
**Upside case** — USD 32.00

Our upside case assumes a 50 bp reduction in regulatory lag which adds 9 cents to EPS. We also see 7-8% EPS growth to 2020. We value GXP at a modest 2.5% discount to the '19 Regulated Utility average applied to $2.13.

**Downside case** — USD 26.00

Our downside case reflects failure of the WR merger to close and a $380M break fee (pre-tax). We assume GXP repurchases the deal stock and cancels the mandatory. The valuation reflects a 10% discount to the Regulated Utility 2019 average P/E and $1.88.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** | **Industry View: NEUTRAL**

## Hawaiian Electric Inds (HE)

**Stock Rating: UNDERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,603 | 2,848 | 2,820 | 3,003 | 4.9% |
| EBITDA (adj) | 539 | 589 | 584 | 621 | 4.9% |
| EBIT (adj) | 343 | 388 | 373 | 401 | 5.4% |
| Pre-tax income (adj) | 248 | 290 | 270 | 289 | 5.3% |
| Net income (adj) | 176 | 187 | 174 | 186 | 2.0% |
| EPS (adj) ($) | 1.65 | 1.74 | 1.62 | 1.72 | 1.5% |
| Diluted shares (mn) | 107 | 107 | 108 | 108 | 0.5% |
| DPS ($) | 1.24 | 1.24 | 1.24 | 1.24 | 0.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 |
| EBIT (adj) margin (%) | 13.2 | 13.6 | 13.2 | 13.4 | 13.4 |
| Pre-tax (adj) margin (%) | 9.5 | 10.2 | 9.6 | 9.6 | 9.7 |
| Net (adj) margin (%) | 6.1 | 6.6 | 6.2 | 6.2 | 6.3 |
| ROIC (%) | 9.4 | 10.3 | 9.4 | 9.5 | 9.7 |
| ROA (%) | 1.4 | 1.6 | 1.4 | 1.5 | 1.5 |
| ROE (%) | 8.3 | 9.3 | 8.3 | 8.6 | 8.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 4,378 | 4,516 | 4,776 | 5,056 | 4.9% |
| Total net assets | 11,790 | 11,935 | 12,201 | 12,488 | 1.9% |
| Capital employed | 3,652 | 3,751 | 3,971 | 4,212 | 4.9% |
| Shareholders' equity | 1,928 | 2,015 | 2,088 | 2,173 | 4.1% |
| Net debt/(funds) | 1,615 | 1,627 | 1,774 | 1,929 | 6.1% |
| Cash flow from operations | 356 | 428 | 424 | 446 | 7.8% |
| Capital expenditure | -364 | -340 | -470 | -500 | N/A |
| Free cash flow | -482 | -46 | -180 | -189 | N/A |
| Pre-dividend FCF | -350 | 88 | -46 | -54 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 20.1 | 19.0 | 20.5 | 19.2 | 19.7 |
| EV/EBITDA (adj) (x) | 9.6 | 8.8 | 9.1 | 8.8 | 9.1 |
| EV/EBIT (adj) (x) | 15.1 | 13.4 | 14.3 | 13.7 | 14.1 |
| P/BV (x) | 1.8 | 1.8 | 1.7 | 1.6 | 1.7 |
| Dividend yield (%) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| Total debt/capital (%) | 52.4 | 51.4 | 52.2 | 52.9 | 52.3 |
| Net debt/EBITDA (adj) (x) | 3.0 | 2.8 | 3.0 | 3.1 | 3.0 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 82.8 | 71.1 | 76.7 | 72.1 | 75.7 |
| Interest cover (x) | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Regulated (%) | 84.9 | 76.9 | 76.9 | 76.9 | 78.9 |

| Price (19-Jan-2017) | USD 33.08 |
|---|---|
| Price Target | USD 27.00 |

**Why Underweight?** The Underweight rating reflects the ongoing challenges to HE continuing to operate on a stand alore basis. The merger with NEE was rejected by the PUC.

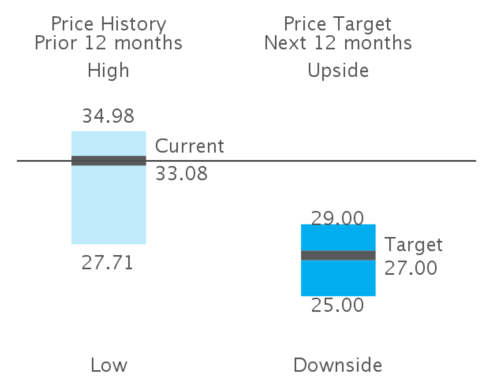
**Upside case** USD 29.00

Our upside case considers the possibility of increased PUC support for a standalone HE, reflecting a 10% premium to the Regulated Utilities industry average P/E and the replacement of the revenue adjustment mechanism.

**Downside case** USD 25.00

On a stand alone basis, potential erosion to HE's customer base could negatively impact onoging earnings and put the dividend at risk. In this scenario, HE utility earnings could trade down to a 15% discount to the average multiple.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## NextEra Energy (NEE)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 17,486 | 18,040 | 18,929 | 19,637 | 3.9% |
| EBITDA (adj) | 7,489 | 7,854 | 8,459 | 8,937 | 6.1% |
| EBIT (adj) | 4,658 | 4,780 | 5,169 | 5,523 | 5.8% |
| Pre-tax income (adj) | 4,016 | 4,198 | 4,473 | 4,792 | 6.1% |
| Net income (adj) | 2,782 | 2,917 | 3,080 | 3,303 | 5.9% |
| EPS (adj) ($) | 5.71 | 6.23 | 6.60 | 7.04 | 7.2% |
| Diluted shares (mn) | 454 | 463 | 462 | 462 | 0.6% |
| DPS ($) | 3.08 | 3.45 | 3.86 | 4.32 | 12.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 42.8 | 43.5 | 44.7 | 45.5 | 44.1 |
| EBIT (adj) margin (%) | 26.6 | 26.5 | 27.3 | 28.1 | 27.1 |
| Pre-tax (adj) margin (%) | 23.0 | 23.3 | 23.6 | 24.4 | 23.6 |
| Net (adj) margin (%) | 15.9 | 16.2 | 16.3 | 16.8 | 16.3 |
| ROIC (%) | 9.0 | 8.5 | 9.1 | 9.8 | 9.1 |
| ROA (%) | 3.5 | 3.4 | 3.4 | 3.6 | 3.5 |
| ROE (%) | 13.1 | 12.5 | 12.4 | 12.5 | 12.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 61,386 | 66,328 | 71,054 | 75,656 | 7.2% |
| Total net assets | 82,479 | 88,469 | 90,199 | 90,860 | 3.3% |
| Capital employed | 51,475 | 56,303 | 56,871 | 56,370 | 3.1% |
| Shareholders' equity | 22,574 | 24,022 | 25,547 | 27,200 | 6.4% |
| Net debt/(funds) | 28,330 | 29,471 | 30,821 | 31,917 | 4.1% |
| Cash flow from operations | 6,116 | 7,153 | 7,532 | 7,879 | 8.8% |
| Capital expenditure | -8,016 | -8,016 | -8,016 | -8,016 | N/A |
| Free cash flow | -3,274 | -2,310 | -2,019 | -1,765 | N/A |
| Pre-dividend FCF | -1,889 | -842 | -463 | -116 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 20.9 | 19.1 | 18.1 | 16.9 | 18.8 |
| EV/EBITDA (adj) (x) | 11.1 | 10.8 | 10.2 | 9.7 | 10.5 |
| EV/EBIT (adj) (x) | 17.9 | 17.7 | 16.6 | 15.8 | 17.0 |
| P/BV (x) | 2.4 | 2.3 | 2.2 | 2.0 | 2.2 |
| Dividend yield (%) | 2.6 | 2.9 | 3.2 | 3.6 | 3.1 |
| Total debt/capital (%) | 56.1 | 57.3 | 55.1 | 51.7 | 55.1 |
| Net debt/EBITDA (adj) (x) | 3.8 | 3.8 | 3.6 | 3.6 | 3.7 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 53.9 | 55.3 | 58.5 | 61.4 | 57.3 |
| Interest cover (x) | 3.8 | 3.9 | 4.1 | 4.3 | 4.0 |
| Regulated (%) | 63.6 | 63.6 | 63.6 | 63.6 | 63.6 |

| Price (19-Jan-2017) | USD 119.28 |
|---|---|
| Price Target | USD 133.00 |

**Why Overweight?** NEE's Overweight rating is supported by 6-8% earnings growth and 12-14% dividend growth which exceeds the industry average. NEE is also considered one of the premier renewable developers in the industry.

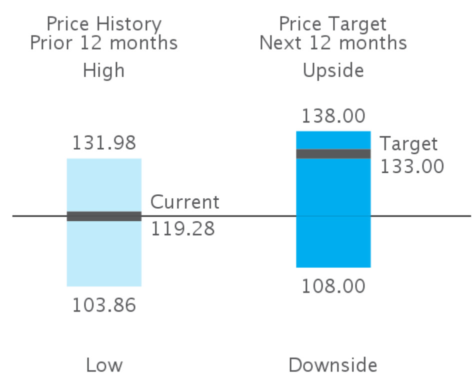
**Upside case** — **USD 138.00**

We assume in this scenario that NEE's core earnings trade at a 15% premium to the regulated utility group on the strength of its growth. We do not include incremental value from NEE's GP stake in NEP, so further upside potential is possible as that value becomes evident.

**Downside case** — **USD 108.00**

Our downside case applies an industry average multiple to 2018E earnings and excludes value for the yieldco.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** | **Industry View: NEUTRAL**

## NextEra Energy Partners, LP. (NEP)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 471 | 886 | 1,156 | 1,365 | 42.6% |
| EBITDA (adj) | 404 | 668 | 854 | 964 | 33.6% |
| EBIT (adj) | 263 | 467 | 587 | 636 | 34.2% |
| Pre-tax income (adj) | 101 | 213 | 318 | 338 | 49.6% |
| Net income (adj) | 80 | 192 | 252 | 268 | 49.6% |
| EPS (adj) ($) | 0.46 | 1.33 | 1.59 | 1.59 | 51.2% |
| Diluted shares (mn) | 105.8 | 144.0 | 158.8 | 168.7 | 16.8% |
| DPS ($) | 1.23 | 1.38 | 1.54 | 1.73 | 12.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 85.8 | 75.5 | 73.9 | 70.6 | 76.4 |
| EBIT (adj) margin (%) | 55.8 | 52.7 | 50.8 | 46.6 | 51.5 |
| Pre-tax (adj) margin (%) | 21.4 | 24.0 | 27.6 | 24.8 | 24.5 |
| Net (adj) margin (%) | 17.0 | 21.6 | 21.8 | 19.6 | 20.0 |
| ROIC (%) | 5.2 | 6.6 | 7.1 | 6.9 | 6.4 |
| ROA (%) | 1.8 | 2.7 | 2.9 | 2.7 | 2.5 |
| ROE (%) | 7.0 | 10.2 | 10.8 | 10.2 | 9.5 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 4,200 | 5,562 | 6,659 | 7,559 | 21.6% |
| Total net assets | 6,112 | 8,181 | 9,355 | 10,325 | 19.1% |
| Capital employed | 5,017 | 7,098 | 8,272 | 9,242 | 22.6% |
| Shareholders' equity | 1,582 | 2,184 | 2,500 | 2,749 | 20.2% |
| Net debt/(funds) | 3,274 | 4,047 | 4,828 | 5,478 | 18.7% |
| Cash flow from operations | 240 | 393 | 519 | 596 | 35.4% |
| Capital expenditure | -125 | 0 | 0 | 0 | N/A |
| Free cash flow | -376 | 163 | 235 | 213 | N/A |
| Pre-dividend FCF | 115 | 393 | 519 | 596 | 73.0% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 60.1 | 20.8 | 17.4 | 17.4 | 28.9 |
| EV/EBITDA (adj) (x) | 17.9 | 12.0 | 10.3 | 9.8 | 12.5 |
| EV/EBIT (adj) (x) | 27.5 | 17.2 | 15.0 | 14.8 | 18.6 |
| P/BV (x) | N/A | 1.8 | 1.8 | 1.7 | 1.8 |
| Dividend yield (%) | 4.5 | 5.0 | 5.6 | 6.3 | 5.3 |
| Total debt/capital (%) | 68.5 | 69.2 | 69.8 | 70.3 | 69.4 |
| Net debt/EBITDA (adj) (x) | N/A | N/A | N/A | N/A | N/A |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 0.0 | 78.5 | 70.8 | 85.5 | 58.7 |
| Interest cover (x) | 2.2 | 1.7 | 2.4 | 2.3 | 2.1 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| Price (19-Jan-2017) | USD 27.64 |
|---|---|
| Price Target | USD 34.00 |

**Why Overweight?** The base case for NEP relies on a high quality, long-term contracted asset base, highly visible long-term growth in the range of 12-15% per year for the next several years, high level of operating competence by the management team, and continuing investor demand for yielding equity vehicles.

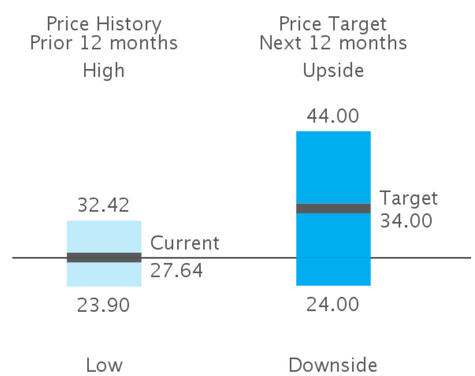
**Upside case** — USD 44.00

Our upside case applies applies a target yield of 3.5% to the 2017E annualized distribution rate of $1.54 for NEP. This gets us to our $44 upside case.

**Downside case** — USD 24.00

Our downside case assumes that, despite the characteristics we describe in our base case, NEP's yield widens. At 200bps wide of our base case - or a 6.5% yield - that implies downside to $24.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## NRG Energy (NRG)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 14,642 | 13,125 | 13,362 | 13,680 | -2.2% |
| EBITDA (adj) | 3,308 | 3,240 | 2,766 | 2,931 | -4.0% |
| EBIT (adj) | 1,742 | 1,609 | 1,063 | 1,119 | -13.7% |
| Pre-tax income (adj) | -40 | 464 | -16 | 343 | N/A |
| Net income (adj) | 7 | 345 | 43 | 284 | 241.0% |
| EPS (adj) ($) | 0.02 | 1.08 | 0.14 | 0.89 | 243.9% |
| Diluted shares (mn) | 328.7 | 320.5 | 320.5 | 320.5 | -0.8% |
| DPS ($) | 0.59 | 0.24 | 0.12 | 0.12 | -41.4% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 22.6 | 24.7 | 20.7 | 21.4 | 22.4 |
| EBIT (adj) margin (%) | 11.9 | 12.3 | 8.0 | 8.2 | 10.1 |
| Pre-tax (adj) margin (%) | 0.0 | 2.6 | 0.3 | 2.1 | 1.3 |
| Net (adj) margin (%) | 0.0 | 2.6 | 0.3 | 2.1 | 1.3 |
| ROIC (%) | 5.8 | 5.5 | 3.7 | 3.8 | 4.7 |
| ROA (%) | -0.8 | -0.8 | 2.9 | -7.3 | -1.5 |
| ROE (%) | 0.1 | 3.4 | 0.4 | 2.7 | 1.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 21,984 | 21,553 | 20,400 | 19,090 | -4.6% |
| Total net assets | 40,539 | 39,858 | 38,366 | 35,595 | -4.2% |
| Capital employed | 30,094 | 29,385 | 28,625 | 29,671 | -0.5% |
| Shareholders' equity | 9,884 | 10,279 | 10,284 | 10,530 | 2.1% |
| Net debt/(funds) | 17,308 | 16,454 | 16,028 | 18,289 | 1.9% |
| Cash flow from operations | 2,019 | 2,110 | 1,829 | 2,179 | 2.6% |
| Capital expenditure | 1,508 | 1,200 | 550 | 502 | -30.7% |
| Free cash flow | 320 | 834 | 1,241 | 1,638 | 72.3% |
| Pre-dividend FCF | 511 | 910 | 1,279 | 1,677 | 48.6% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | N/A | 14.4 | N/A | 17.6 | 16.0 |
| EV/EBITDA (adj) (x) | 6.7 | 6.6 | 7.6 | 7.9 | 7.2 |
| EV/EBIT (adj) (x) | 12.7 | 13.3 | 19.7 | 20.7 | 16.6 |
| P/BV (x) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Dividend yield (%) | 3.8 | 1.5 | 0.8 | 0.8 | 1.7 |
| Total debt/capital (%) | 67.2 | 65.0 | 64.1 | 64.5 | 65.2 |
| Net debt/EBITDA (adj) (x) | 5.2 | 5.1 | 5.8 | 6.2 | 5.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 2,731.5 | N/A | N/A | N/A | 2,731.5 |
| Interest cover (x) | 1.5 | 1.2 | 0.9 | 1.2 | 1.2 |
| Regulated (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **USD 15.56** |
| **Price Target** | **USD 18.00** |

**Why Overweight?** We like NRG for 1) diversified business mix; 2) leverage to higher PJM capacity prices; 3) limited recourse leverage; and 4) solid retail franchise protecting gross margins in lower power environments.

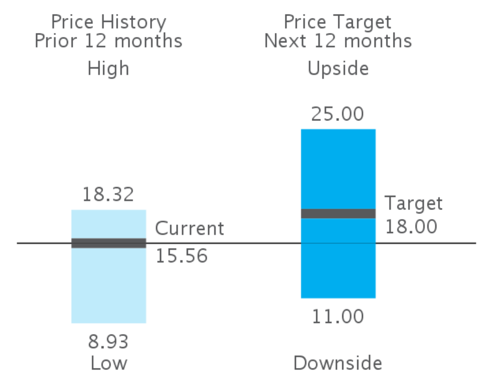
**Upside case** — **USD 25.00**

Includes the ringfenced GenOn subsidiary in the valuation and expands spark and dark spreads by $2/MWh.

**Downside case** — **USD 11.00**

Assumes 1x multiple discount and closes several plants in a $2.50/MMBtu perpetual natural gas price scenario, which reduces Open EBITDA by approximately $275 million.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

North America Power & Utilities — Industry View: NEUTRAL

## OGE Energy Corp. (OGE)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,197 | 2,311 | 2,361 | 2,424 | 3.3% |
| EBITDA (adj) | 789 | 889 | 960 | 1,003 | 8.3% |
| EBIT (adj) | 481 | 557 | 598 | 624 | 9.1% |
| Pre-tax income (adj) | 464 | 501 | 552 | 581 | 7.8% |
| Net income (adj) | 342 | 361 | 386 | 407 | 5.9% |
| EPS (adj) ($) | 1.71 | 1.79 | 1.91 | 2.01 | 5.6% |
| Diluted shares (mn) | 201 | 201 | 202 | 203 | 0.3% |
| DPS ($) | 1.03 | 1.13 | 1.24 | 1.36 | 10.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 35.9 | 38.5 | 40.6 | 41.4 | 39.1 |
| EBIT (adj) margin (%) | 21.9 | 24.1 | 25.3 | 25.7 | 24.3 |
| Pre-tax (adj) margin (%) | 21.1 | 21.7 | 23.4 | 24.0 | 22.5 |
| Net (adj) margin (%) | 15.6 | 15.6 | 16.4 | 16.8 | 16.1 |
| ROIC (%) | 7.2 | 8.0 | 8.2 | 8.2 | 7.9 |
| ROA (%) | 3.5 | 3.5 | 3.6 | 3.7 | 3.6 |
| ROE (%) | 10.1 | 10.2 | 10.6 | 10.7 | 10.4 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 7,272 | 7,641 | 8,180 | 8,326 | 4.6% |
| Total net assets | 9,674 | 10,170 | 10,680 | 11,128 | 4.8% |
| Capital employed | 6,656 | 6,969 | 7,298 | 7,636 | 4.7% |
| Shareholders' equity | 3,385 | 3,522 | 3,662 | 3,796 | 3.9% |
| Net debt/(funds) | 2,700 | 2,852 | 3,357 | 3,413 | 8.1% |
| Cash flow from operations | 695 | 737 | 792 | 830 | 6.1% |
| Capital expenditure | -600 | -700 | -900 | -525 | N/A |
| Free cash flow | 95 | 37 | -108 | 305 | 47.7% |
| Pre-dividend FCF | 300 | 264 | 143 | 582 | 24.7% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 19.5 | 18.5 | 17.4 | 16.6 | 18.0 |
| EV/EBITDA (adj) (x) | 11.8 | 10.7 | 10.4 | 10.0 | 10.7 |
| EV/EBIT (adj) (x) | 19.4 | 17.0 | 16.7 | 16.1 | 17.3 |
| P/BV (x) | 2.0 | 1.9 | 1.8 | 1.8 | 1.9 |
| Dividend yield (%) | 3.1 | 3.4 | 3.7 | 4.1 | 3.6 |
| Total debt/capital (%) | 44.4 | 45.2 | 45.8 | 45.9 | 45.3 |
| Net debt/EBITDA (adj) (x) | 3.4 | 3.2 | 3.5 | 3.4 | 3.4 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 60.1 | 62.9 | 64.8 | 68.0 | 63.9 |
| Interest cover (x) | 5.4 | 5.6 | 5.7 | 5.7 | 5.6 |
| Regulated (%) | 79.0 | 83.3 | 83.6 | 83.2 | 82.3 |

| | |
|---|---|
| Price (19-Jan-2017) | USD 33.22 |
| Price Target | USD 36.00 |

**Why Equal Weight?** We rate OGE EW for its combination of a well run utility with below average rate base growth and above average dividend growth. The uncertainty associated with midstream markets provides an overhang based on the ownership stake in ENBL.

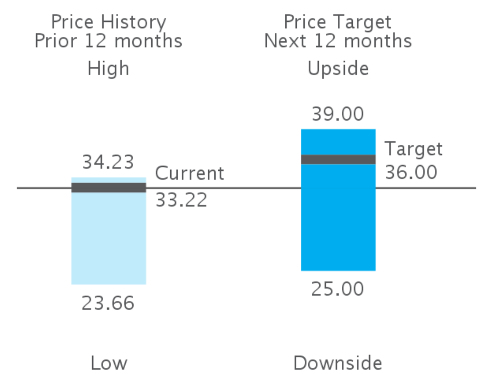
**Upside case** — USD 39.00

Our upside case factors in a 5% utility P/E premium based on 2018 utility EPS combined with ENBL valued at $9/share for OGE and a $1 adder of GP value of ENBL.

**Downside case** — USD 25.00

Our downside case factors in a 15% discount to the group average at the utility, for regulatory risk and uncertainty; and $1.50 downside case for ENBL associated with a sale of the units in the $4-$5/unit range.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** — **Industry View: NEUTRAL**

## PNM Resources (PNM)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 1,444,352 | 1,366,887 | 1,434,665 | 1,470,253 | 0.6% |
| EBITDA (adj) | 481,504 | 514,047 | 572,352 | 600,182 | 7.6% |
| EBIT (adj) | 333,203 | 347,119 | 384,617 | 401,381 | 6.4% |
| Pre-tax income (adj) | 218,417 | 217,915 | 243,368 | 266,716 | 6.9% |
| Net income (adj) | 131,484 | 129,603 | 147,399 | 163,020 | 7.4% |
| EPS (adj) ($) | 1.64 | 1.62 | 1.84 | 2.03 | 7.4% |
| Diluted shares (mn) | 80,139 | 80,139 | 80,139 | 80,139 | 0.0% |
| DPS ($) | 0.80 | 0.88 | 0.97 | 1.07 | 10.1% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 21.5 | 37.6 | 39.9 | 40.8 | 35.0 |
| EBIT (adj) margin (%) | 11.1 | 25.4 | 26.8 | 27.3 | 22.7 |
| Pre-tax (adj) margin (%) | 3.2 | 15.9 | 17.0 | 18.1 | 13.6 |
| Net (adj) margin (%) | 1.1 | 9.5 | 10.3 | 11.1 | 8.0 |
| ROIC (%) | 3.9 | 7.8 | 8.8 | 9.3 | 7.5 |
| ROA (%) | 0.3 | 2.0 | 2.3 | 2.6 | 1.8 |
| ROE (%) | 0.9 | 7.8 | 9.3 | 10.9 | 7.2 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 4,535,372 | 4,800,044 | 5,049,226 | 5,193,341 | 4.6% |
| Total net assets | 6,009,328 | 6,359,964 | 6,279,008 | 6,262,950 | 1.4% |
| Capital employed | 4,080,297 | 4,430,933 | 4,349,977 | 4,333,919 | 2.0% |
| Shareholders' equity | 1,726,220 | 1,655,698 | 1,577,963 | 1,492,454 | -4.7% |
| Net debt/(funds) | 2,296,497 | 2,697,921 | 3,024,838 | 3,254,462 | 12.3% |
| Cash flow from operations | 386,874 | 222,866 | 239,173 | 250,240 | -13.5% |
| Capital expenditure | -558,589 | -472,100 | -472,917 | -378,917 | N/A |
| Free cash flow | -235,966 | -320,284 | -312,007 | -214,714 | N/A |
| Pre-dividend FCF | -171,715 | -249,234 | -233,744 | -128,677 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 20.4 | 20.7 | 18.2 | 16.4 | 18.9 |
| EV/EBITDA (adj) (x) | 10.3 | 10.5 | 10.0 | 9.9 | 10.2 |
| EV/EBIT (adj) (x) | 14.9 | 15.5 | 14.8 | 14.8 | 15.0 |
| P/BV (x) | 1.6 | 1.6 | 1.7 | 1.8 | 1.7 |
| Dividend yield (%) | 2.4 | 2.6 | 2.9 | 3.2 | 2.8 |
| Total debt/capital (%) | 57.4 | 62.4 | 63.5 | 65.3 | 62.1 |
| Net debt/EBITDA (adj) (x) | N/A | N/A | N/A | N/A | N/A |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 48.8 | 54.4 | 52.7 | 52.5 | 52.1 |
| Interest cover (x) | 4.2 | 4.0 | 4.1 | 4.5 | 4.2 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **USD 33.45** |
| **Price Target** | **USD 33.00** |

**Why Equal Weight?** We see above average earnings growth potential into 2019 as a result of the rate cases and several projects moving into rate base.

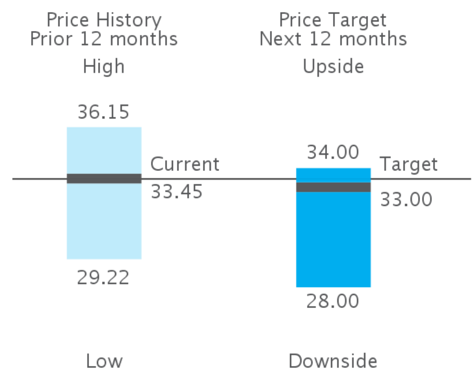
**Upside case** — **USD 34.00**

Our upside case reflects an 8% premium for PNM driven by favorable rate case outcomes and continued high takeout premiums paid in the industry.

**Downside case** — **USD 28.00**

Our downside case assumes that growth proceeds at a slower pace and the regulatory and/or economic landscape in NM does not improve. PNM could trade down to a 10% discount in this environment.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

North America Power & Utilities | Industry View: NEUTRAL

## Public Service Enterprise Gp (PEG)

Stock Rating: EQUAL WEIGHT

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 10,415 | 10,029 | 9,997 | 10,445 | 0.1% |
| EBITDA (adj) | 3,770 | 3,942 | 3,869 | 4,197 | 3.6% |
| EBIT (adj) | 2,556 | 2,709 | 2,793 | 3,040 | 5.9% |
| Pre-tax income (adj) | 2,327 | 2,304 | 2,361 | 2,410 | 1.2% |
| Net income (adj) | 1,476 | 1,448 | 1,478 | 1,509 | 0.7% |
| EPS (adj) ($) | 2.91 | 2.86 | 2.92 | 2.98 | 0.7% |
| Diluted shares (mn) | 507.1 | 507.1 | 507.1 | 507.1 | 0.0% |
| DPS ($) | 1.56 | 1.64 | 1.72 | 1.81 | 5.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 36.2 | 39.3 | 38.7 | 40.2 | 38.6 |
| EBIT (adj) margin (%) | 24.5 | 27.0 | 27.9 | 29.1 | 27.1 |
| Pre-tax (adj) margin (%) | 22.3 | 23.0 | 23.6 | 23.1 | 23.0 |
| Net (adj) margin (%) | 14.2 | 14.4 | 14.8 | 14.4 | 14.5 |
| ROIC (%) | 11.2 | 10.8 | 10.1 | 10.5 | 10.7 |
| ROA (%) | 4.7 | 4.7 | 4.6 | 4.6 | 4.7 |
| ROE (%) | 12.1 | 11.1 | 10.8 | 10.6 | 11.1 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 26,038 | 29,282 | 32,483 | 34,806 | 10.2% |
| Total net assets | 35,897 | 38,297 | 41,125 | 43,024 | 6.2% |
| Capital employed | 22,848 | 25,026 | 27,558 | 29,017 | 8.3% |
| Shareholders' equity | 13,067 | 13,684 | 14,291 | 14,884 | 4.4% |
| Net debt/(funds) | 9,387 | 11,285 | 13,172 | 13,905 | 14.0% |
| Cash flow from operations | 3,919 | 3,410 | 3,262 | 3,665 | -2.2% |
| Capital expenditure | -3,942 | -4,477 | -4,277 | -3,481 | N/A |
| Free cash flow | -62 | -1,067 | -1,015 | 184 | N/A |
| Pre-dividend FCF | -23 | -1,067 | -1,015 | 184 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 15.0 | 15.3 | 15.0 | 14.7 | 15.0 |
| EV/EBITDA (adj) (x) | 8.4 | 8.5 | 9.1 | 8.6 | 8.6 |
| EV/EBIT (adj) (x) | 12.3 | 12.3 | 12.6 | 11.9 | 12.3 |
| P/BV (x) | 1.7 | 1.6 | 1.5 | 1.5 | 1.6 |
| Dividend yield (%) | 3.6 | 3.8 | 3.9 | 4.1 | 3.8 |
| Total debt/capital (%) | 42.8 | 45.3 | 48.1 | 48.7 | 46.2 |
| Net debt/EBITDA (adj) (x) | 2.5 | 2.9 | 3.4 | 3.3 | 3.0 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 53.6 | 57.4 | 59.0 | 60.7 | 57.7 |
| Interest cover (x) | 6.5 | 6.1 | 5.0 | 4.7 | 5.6 |
| Regulated (%) | 53.3 | 62.8 | 63.8 | 67.9 | 62.0 |

| | |
|---|---|
| Price (19-Jan-2017) | USD 43.68 |
| Price Target | USD 48.00 |

**Why Equal Weight?** Three positives for PEG are: 1) Ability to operate in the New Jersey regulatory environment and grow regulated earnings attractively; 2) PSEG Power assets in the relatively tight PJM East zone called PS North; and 3) a strong balance sheet.

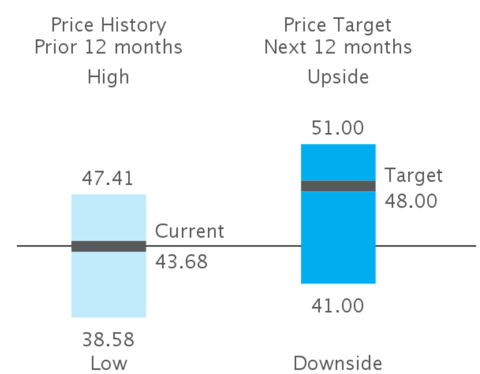
**Upside case** USD 51.00

Our upside case reflects an incremental $1B in ratebase and 50 cent increase in gas prices. We include $37 for PSE&G using a 11% premium to the Regulated Utility average applied to $2.11, $12 for PSEG Power at 7.6x $1.2B in Open EBITDA less $3.2B in debt and $2 at Enterprises.

**Downside case** USD 41.00

Our downside case is $1B less ratebase and 50 cent decrease in gas prices. We include $31 for PSE&G using a Regulated Utility average applied to $1.97, $8 for PSEG Power at 7.4x $0.8B in Open EBITDA less $3.2B in debt and $1 at Enterprises.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** | **Industry View: NEUTRAL**

## Portland General Electric Co. (POR)

**Stock Rating: UNDERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 1,898 | 1,998 | 2,092 | 2,166 | 4.5% |
| EBITDA (adj) | 613 | 647 | 715 | 763 | 7.5% |
| EBIT (adj) | 308 | 324 | 370 | 397 | 8.8% |
| Pre-tax income (adj) | 217 | 257 | 291 | 304 | 11.8% |
| Net income (adj) | 172 | 185 | 210 | 219 | 8.3% |
| EPS (adj) ($) | 2.04 | 2.12 | 2.40 | 2.50 | 7.0% |
| Diluted shares (mn) | 85 | 88 | 88 | 88 | 1.2% |
| DPS ($) | 1.20 | 1.28 | 1.36 | 1.44 | 6.3% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 32.3 | 32.4 | 34.2 | 35.2 | 33.5 |
| EBIT (adj) margin (%) | 16.3 | 16.2 | 17.7 | 18.3 | 17.1 |
| Pre-tax (adj) margin (%) | 11.5 | 12.9 | 13.9 | 14.0 | 13.1 |
| Net (adj) margin (%) | 9.1 | 9.3 | 10.0 | 10.1 | 9.6 |
| ROIC (%) | 6.5 | 6.8 | 7.4 | 7.6 | 7.1 |
| ROA (%) | 2.3 | 2.4 | 2.6 | 2.7 | 2.5 |
| ROE (%) | 7.1 | 7.4 | 8.1 | 8.1 | 7.7 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 5,932 | 6,148 | 6,381 | 6,642 | 3.8% |
| Total net assets | 7,413 | 7,616 | 7,918 | 8,133 | 3.1% |
| Capital employed | 4,735 | 4,742 | 5,025 | 5,219 | 3.3% |
| Shareholders' equity | 2,437 | 2,512 | 2,603 | 2,697 | 3.4% |
| Net debt/(funds) | 2,174 | 2,309 | 2,469 | 2,564 | 5.6% |
| Cash flow from operations | 477 | 508 | 555 | 585 | 7.0% |
| Capital expenditure | -558 | -539 | -578 | -627 | N/A |
| Free cash flow | -81 | -31 | -23 | -42 | N/A |
| Pre-dividend FCF | 21 | 80 | 95 | 83 | 58.5% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 21.4 | 20.6 | 18.2 | 17.4 | 19.4 |
| EV/EBITDA (adj) (x) | 9.8 | 9.5 | 8.8 | 8.4 | 9.1 |
| EV/EBIT (adj) (x) | 19.4 | 18.9 | 17.0 | 16.1 | 17.8 |
| P/BV (x) | 1.5 | 1.5 | 1.5 | 1.4 | 1.5 |
| Dividend yield (%) | 2.8 | 2.9 | 3.1 | 3.3 | 3.0 |
| Total debt/capital (%) | 49.9 | 48.3 | 49.7 | 48.3 | 49.1 |
| Net debt/EBITDA (adj) (x) | 3.5 | 3.6 | 3.5 | 3.4 | 3.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 58.8 | 60.5 | 56.8 | 57.6 | 58.4 |
| Interest cover (x) | 5.4 | 5.5 | 5.8 | 6.1 | 5.7 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **USD 43.58** |
| **Price Target** | **USD 41.00** |

**Why Underweight?** We rate POR as Underweight. Even though we expect the company to raise the dividend at 5-7% near term, cap-ex spending is dropping over the next few years and is dependent on the IRP to remain above D&A levels. We value POR at a 6% discount to the group average multiple to reflect the low rate base growth.

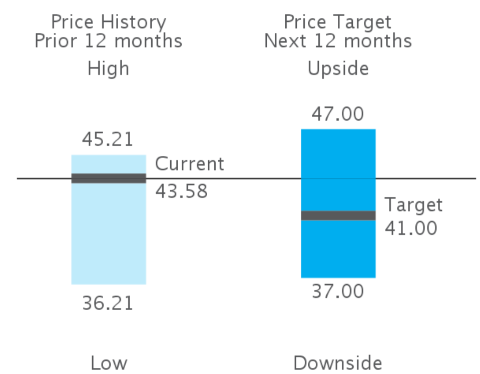
**Upside case** — **USD 47.00**

Our upside case reflects an 5% premium to the utility group average multiple, applied to higher earnings driven by additional rate base growth and higher sales growth

**Downside case** — **USD 37.00**

Our downside case reflects a 10% discount to the regulated group, applied to lower earnings driven by lower sales growth and issues with Carty and/or regulatory lag.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

North America Power & Utilities | Industry View: NEUTRAL

## PPL Corporation (PPL)

Stock Rating: EQUAL WEIGHT

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 7,669 | 8,067 | 8,202 | 8,588 | 3.8% |
| EBITDA (adj) | 3,699 | 3,970 | 4,105 | 4,333 | 5.4% |
| EBIT (adj) | 2,816 | 3,067 | 3,123 | 3,260 | 5.0% |
| Pre-tax income (adj) | 2,053 | 2,147 | 1,899 | 2,143 | 1.4% |
| Net income (adj) | 1,481 | 1,601 | 1,448 | 1,609 | 2.8% |
| EPS (adj) ($) | 2.21 | 2.38 | 2.14 | 2.37 | 2.3% |
| Diluted shares (mn) | 669.0 | 673.3 | 676.0 | 679.0 | 0.5% |
| DPS ($) | 1.51 | 1.52 | 1.58 | 1.64 | 2.9% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 48.2 | 49.2 | 50.0 | 50.5 | 49.5 |
| EBIT (adj) margin (%) | 36.7 | 38.0 | 38.1 | 38.0 | 37.7 |
| Pre-tax (adj) margin (%) | 26.8 | 26.6 | 23.2 | 25.0 | 25.4 |
| Net (adj) margin (%) | 19.3 | 19.8 | 17.6 | 18.7 | 18.9 |
| ROIC (%) | 7.2 | 8.1 | 8.0 | 7.9 | 7.8 |
| ROA (%) | 4.2 | 5.8 | 5.7 | 5.8 | 5.4 |
| ROE (%) | 10.9 | 16.1 | 13.7 | 14.5 | 13.8 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 30,382 | 32,419 | 34,287 | 36,033 | 5.9% |
| Total net assets | 39,301 | 41,776 | 42,483 | 44,190 | 4.0% |
| Capital employed | 28,131 | 28,339 | 29,814 | 31,148 | 3.5% |
| Shareholders' equity | 9,919 | 10,595 | 11,073 | 11,665 | 5.6% |
| Net debt/(funds) | 18,212 | 17,744 | 18,740 | 19,483 | 2.3% |
| Cash flow from operations | 2,577 | 3,781 | 3,047 | 3,318 | 8.8% |
| Capital expenditure | -3,495 | -3,160 | -3,070 | -3,040 | N/A |
| Free cash flow | -1,922 | -402 | -1,092 | -838 | N/A |
| Pre-dividend FCF | -918 | 621 | -23 | 278 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 15.5 | 14.4 | 16.0 | 14.4 | 15.1 |
| EV/EBITDA (adj) (x) | 11.2 | 10.3 | 10.2 | 9.8 | 10.4 |
| EV/EBIT (adj) (x) | 14.7 | 13.3 | 13.4 | 13.1 | 13.6 |
| P/BV (x) | 2.3 | 2.2 | 2.1 | 2.0 | 2.1 |
| Dividend yield (%) | 4.4 | 4.4 | 4.6 | 4.8 | 4.6 |
| Total debt/capital (%) | 46.3 | 42.5 | 44.1 | 44.1 | 44.3 |
| Net debt/EBITDA (adj) (x) | 4.9 | 4.5 | 4.6 | 4.5 | 4.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 68.2 | 63.9 | 73.8 | 69.4 | 68.8 |
| Interest cover (x) | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| Regulated (%) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Price (19-Jan-2017) | USD 34.23 |
|---|---|
| Price Target | USD 37.00 |

**Why Equal Weight?** We like PPL's fully regulated busines model and 4.4% dividend yield. PPL represents attractive value and a 9-10% total return comprised of 5% EPS growth and 4% DPS growth.

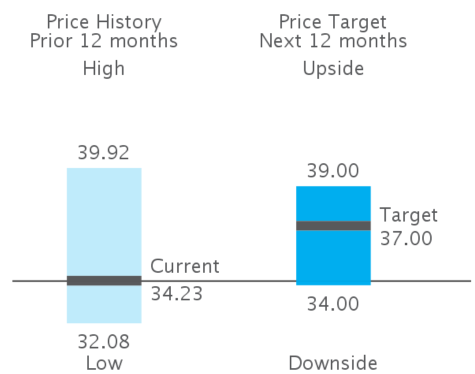
**Upside case** USD 39.00

Our upside case reflects an average '19 Regulated Utility P/E multiple applied to $2.42 of EPS net of hedges.

**Downside case** USD 34.00

Our downside case is a 5% discount to the '19 Regulated Utility P/E multiple and a downside currency translation of 1.15x applied to Open EPS of $2.27 plus $0.21/share for the NPV of hedges at a 3% discount rate.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Power & Utilities** | **Industry View: NEUTRAL**

## Sempra Energy (SRE)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 10,231 | 10,495 | 10,891 | 11,281 | 3.3% |
| EBITDA (adj) | 3,402 | 3,612 | 3,838 | 4,201 | 7.3% |
| EBIT (adj) | 2,152 | 2,260 | 2,386 | 2,647 | 7.1% |
| Pre-tax income (adj) | 1,620 | 1,671 | 1,778 | 2,016 | 7.6% |
| Net income (adj) | 1,301 | 1,268 | 1,313 | 1,486 | 4.5% |
| EPS (adj) ($) | 5.17 | 5.05 | 5.17 | 5.85 | 4.2% |
| Diluted shares (mn) | 250.9 | 251.4 | 253.9 | 254.2 | 0.4% |
| DPS ($) | 2.80 | 3.02 | 3.26 | 3.52 | 8.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 33.3 | 34.4 | 35.2 | 37.2 | 35.0 |
| EBIT (adj) margin (%) | 21.0 | 21.5 | 21.9 | 23.5 | 22.0 |
| Pre-tax (adj) margin (%) | 15.8 | 15.9 | 16.3 | 17.9 | 16.5 |
| Net (adj) margin (%) | 12.7 | 12.1 | 12.1 | 13.2 | 12.5 |
| ROIC (%) | 8.3 | 8.2 | 8.1 | 8.6 | 8.3 |
| ROA (%) | 3.2 | 3.0 | 3.0 | 3.3 | 3.1 |
| ROE (%) | 11.2 | 10.5 | 10.3 | 11.0 | 10.8 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 28,039 | 29,832 | 31,625 | 33,265 | 5.9% |
| Total net assets | 41,150 | 42,924 | 44,769 | 46,222 | 4.0% |
| Capital employed | 25,850 | 27,624 | 29,469 | 30,922 | 6.2% |
| Shareholders' equity | 11,809 | 12,368 | 13,154 | 13,794 | 5.3% |
| Net debt/(funds) | 13,638 | 14,872 | 15,879 | 16,879 | 7.4% |
| Cash flow from operations | 2,905 | 2,621 | 2,767 | 3,042 | 1.5% |
| Capital expenditure | -3,156 | -3,145 | -3,245 | -3,195 | N/A |
| Free cash flow | -608 | -1,283 | -1,306 | -1,049 | N/A |
| Pre-dividend FCF | 20 | -524 | -478 | -153 | N/A |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 19.7 | 20.2 | 19.7 | 17.5 | 19.3 |
| EV/EBITDA (adj) (x) | 11.6 | 11.2 | 10.8 | 10.1 | 10.9 |
| EV/EBIT (adj) (x) | 18.3 | 17.9 | 17.4 | 16.1 | 17.4 |
| P/BV (x) | 2.2 | 2.1 | 2.0 | 1.9 | 2.0 |
| Dividend yield (%) | 2.7 | 3.0 | 3.2 | 3.5 | 3.1 |
| Total debt/capital (%) | 54.3 | 55.2 | 55.4 | 55.4 | 55.1 |
| Net debt/EBITDA (adj) (x) | N/A | N/A | N/A | N/A | N/A |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 54.2 | 59.9 | 63.0 | 60.3 | 59.3 |
| Interest cover (x) | N/A | 3.8 | 3.9 | 4.2 | 4.0 |
| Regulated (%) | N/A | N/A | N/A | N/A | N/A |

| Price (19-Jan-2017) | USD 102.08 |
|---|---|
| Price Target | USD 108.00 |

**Why Overweight?** We believe SRE's conglomerate utility model has several valuable assets and deserves a premium to the industry average overall. We value the majority of SRE's regulated and contracted earnings streams based on the regulated industry average multiple. We also include $20/share of value for the Cameron LNG facility and $17/sh for incremental IENOVA value.

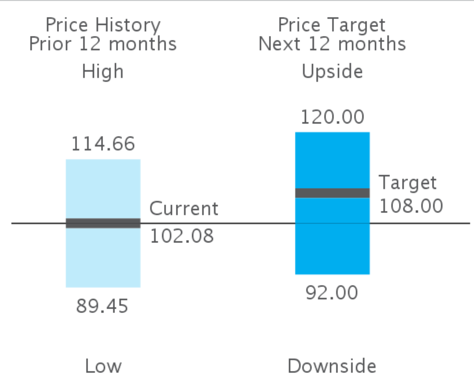
**Upside case** USD 120.00

Our upside case increases the premium for the core business growth to 10% and assumes execution of the $7-8B development opportunities, which could add $10 per share of value.

**Downside case** USD 92.00

Our downside case assumes the CA utilities trade at an average group multiple, applies a discounted MLP multiple to Cameron trains 1-3 earnings, and gives no credit for future development opportunties.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Alternative Energy & Environmental Services** — **Industry View: NEUTRAL**

## Waste Connections (WCN)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,117 | 3,353 | 4,361 | 4,666 | 30.1% |
| EBITDA (adj) | 711 | 1,061 | 1,360 | 1,495 | 28.1% |
| EBIT (adj) | 442 | 594 | 772 | 891 | 26.4% |
| Pre-tax income (adj) | 377 | 502 | 663 | 783 | 27.6% |
| Net income (adj) | 252 | 337 | 533 | 615 | 34.7% |
| EPS (adj) ($) | 2.03 | 2.10 | 3.03 | 3.50 | 19.9% |
| Diluted shares (mn) | 123.9 | 153.9 | 175.8 | 175.8 | 12.4% |
| DPS ($) | 0.53 | 0.56 | 0.64 | 0.69 | 9.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 33.6 | 31.6 | 31.2 | 32.0 | 32.1 |
| EBIT (adj) margin (%) | 20.9 | 17.7 | 17.7 | 19.1 | 18.8 |
| Pre-tax (adj) margin (%) | 17.8 | 15.0 | 15.2 | 16.8 | 16.2 |
| Net (adj) margin (%) | 11.9 | 10.0 | 12.2 | 13.2 | 11.8 |
| ROIC (%) | 5.4 | 3.4 | 5.6 | 6.5 | 5.2 |
| ROA (%) | 3.4 | 2.7 | 4.2 | 4.6 | 3.7 |
| ROE (%) | N/A | 5.5 | 8.3 | 9.0 | 7.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 0 | 4,774 | 4,869 | 5,065 | N/A |
| Total net assets | 3,121 | 5,691 | 6,037 | 6,455 | 27.4% |
| Capital employed | 5,223 | 9,086 | 8,972 | 8,983 | 19.8% |
| Shareholders' equity | 0 | 5,684 | 6,029 | 6,448 | N/A |
| Net debt/(funds) | 2,103 | 3,395 | 2,935 | 2,528 | 6.3% |
| Cash flow from operations | 577 | 836 | 1,146 | 1,218 | 28.3% |
| Capital expenditure | -378 | -308 | -436 | -467 | N/A |
| Free cash flow | 199 | 527 | 721 | 768 | 56.8% |
| Pre-dividend FCF | 85 | 339 | 511 | 583 | 89.9% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 39.2 | 37.9 | 26.3 | 22.8 | 31.5 |
| EV/EBITDA (adj) (x) | 22.7 | 16.4 | 12.5 | 11.1 | 15.7 |
| EV/EBIT (adj) (x) | 36.5 | 29.4 | 22.0 | 18.6 | 26.6 |
| P/BV (x) | 3.1 | 2.5 | 2.3 | 2.2 | 2.5 |
| Dividend yield (%) | 0.7 | 0.7 | 0.8 | 0.9 | 0.8 |
| Total debt/capital (%) | 41.1 | 40.3 | 40.8 | 40.8 | 40.8 |
| Net debt/EBITDA (adj) (x) | 3.0 | 3.2 | 2.2 | 1.7 | 2.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 29.7 | 34.4 | 24.4 | 22.5 | 27.7 |
| Interest cover (x) | 6.7 | 5.2 | 7.1 | 8.2 | 6.8 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **USD 79.73** |
| **Price Target** | **USD 86.00** |

**Why Overweight?** Our OW recommendation is based on stronger than peer group expected growth and potential upside from synergies in the Progressive Waste Solutions transaction.

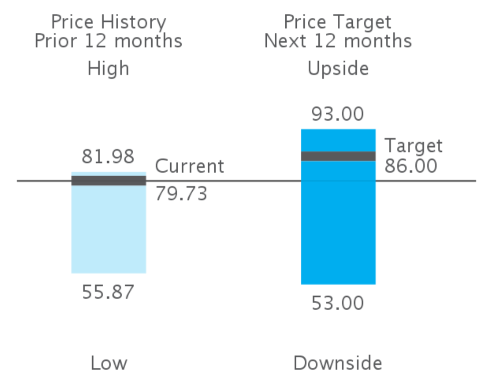
**Upside case** — **USD 93.00**

Our upside case is based on a 10% premium to the 3-year peak EV/EBITDA multiple of 11.6x on 2018E estimates of the combined entity, driven by faster than expected synergies and accretive asset swaps.

**Downside case** — **USD 53.00**

Our downside case is based on a 10% discount to the 3-year trough EV/EBITDA multiple of 9.1x on 2018E estimates and would be driven by higher than expected integration costs and dilutive asset swaps.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

**North America Alternative Energy & Environmental Services** — **Industry View: NEUTRAL**

## Waste Connections (WCN.TO)

**Stock Rating: OVERWEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 2,117 | 3,353 | 4,361 | 4,666 | 30.1% |
| EBITDA (adj) | 711 | 1,061 | 1,360 | 1,495 | 28.1% |
| EBIT (adj) | 442 | 594 | 772 | 891 | 26.4% |
| Pre-tax income (adj) | 377 | 502 | 663 | 783 | 27.6% |
| Net income (adj) | 252 | 337 | 533 | 615 | 34.7% |
| EPS (adj) (CAD) | 2.66 | 2.71 | 3.91 | 4.51 | 19.3% |
| Diluted shares (mn) | 123.9 | 153.9 | 175.8 | 175.8 | 12.4% |
| DPS ($) | 0.53 | 0.56 | 0.64 | 0.69 | 9.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 33.6 | 31.6 | 31.2 | 32.0 | 32.1 |
| EBIT (adj) margin (%) | 20.9 | 17.7 | 17.7 | 19.1 | 18.8 |
| Pre-tax (adj) margin (%) | 17.8 | 15.0 | 15.2 | 16.8 | 16.2 |
| Net (adj) margin (%) | 11.9 | 10.0 | 12.2 | 13.2 | 11.8 |
| ROIC (%) | 5.4 | 3.4 | 5.6 | 6.5 | 5.2 |
| ROA (%) | 3.4 | 2.7 | 4.2 | 4.6 | 3.7 |
| ROE (%) | N/A | 5.5 | 8.3 | 9.0 | 7.6 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 0 | 4,774 | 4,869 | 5,065 | N/A |
| Total net assets | 3,121 | 5,691 | 6,037 | 6,455 | 27.4% |
| Capital employed | 5,223 | 9,086 | 8,972 | 8,983 | 19.8% |
| Shareholders' equity | 0 | 5,684 | 6,029 | 6,448 | N/A |
| Net debt/(funds) | 2,103 | 3,395 | 2,935 | 2,528 | 6.3% |
| Cash flow from operations | 577 | 836 | 1,146 | 1,218 | 28.3% |
| Capital expenditure | -378 | -308 | -436 | -467 | N/A |
| Free cash flow | 199 | 527 | 721 | 768 | 56.8% |
| Pre-dividend FCF | 85 | 339 | 511 | 583 | 89.9% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 39.9 | 39.1 | 27.1 | 23.5 | 32.4 |
| EV/EBITDA (adj) (x) | 22.7 | 16.4 | 12.5 | 11.1 | 15.7 |
| EV/EBIT (adj) (x) | 36.5 | 29.3 | 22.0 | 18.6 | 26.6 |
| P/BV (x) | 3.1 | 2.5 | 2.3 | 2.2 | 2.5 |
| Dividend yield (%) | 0.7 | 0.7 | 0.8 | 0.9 | 0.8 |
| Total debt/capital (%) | 41.1 | 40.3 | 40.8 | 40.8 | 40.8 |
| Net debt/EBITDA (adj) (x) | 3.0 | 3.2 | 2.2 | 1.7 | 2.5 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 29.7 | 34.4 | 24.4 | 22.5 | 27.7 |
| Interest cover (x) | 6.7 | 5.2 | 7.1 | 8.2 | 6.8 |

| | |
|---|---|
| **Price (19-Jan-2017)** | **CAD 106.12** |
| **Price Target** | **CAD 120.00** |

**Why Overweight?** Our OW recommendation is based on stronger than peer group expected growth and potential upside from synergies in the BIN transaction which closed 1 June 2016.

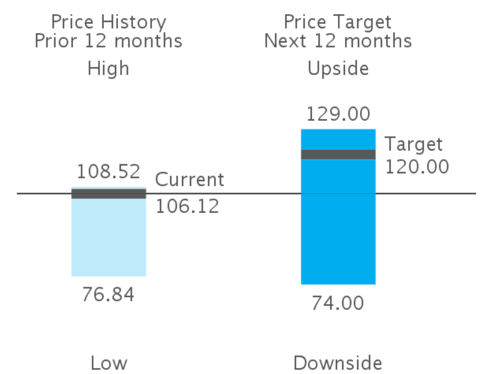
| | |
|---|---|
| **Upside case** | **CAD 129.00** |

Our upside case is based on a 10% premium to the 3-year peak EV/EBITDA multiple of 11.6x on 2018E estimates of the combined entity, driven by faster than expected synergies and accretive asset swaps.

| | |
|---|---|
| **Downside case** | **CAD 74.00** |

Our downside case is based on a 10% discount to the 3-year trough EV/EBITDA multiple of 9.1x on 2018E estimates and would be driven by higher than expected integration costs and dilutive asset swaps.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

## Valuation Methodology and Risks

### North America Alternative Energy & Environmental Services

**Waste Connections (WCN)**

**Valuation Methodology:** Our $86 TP is based on 12x 2018E EV/EBITDA for the combined entity. WCN is currently trading at 12.9x 12-month forward EV/EBITDA. We see potential for medium-term upside in growth if WCN is able to quickly execute accretive asset swaps.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Further weakness in recycled commodity prices, lower U.S. housing construction in WCN's core markets and lower E&P activities are the key macroeconomic risks in 2016, in our view. WCN has the highest expected growth in the industry. Any missteps in execution could drive multiple contraction and downside risk to our estimates. WCN also has the highest exposure to E&P waste disposal and while we expect this business to recover from its current lows, further drops in domestic E&P drilling would impact WCN relatively more than peers. Given a successful merger in 2Q16, key risks to our recommendation are a slowing Canadian economy and weaker CAD/USD FX rate, as well as potentially slower revenue growth due to the larger scale of the combined entity.

**Waste Connections (WCN CT / WCN.TO)**

**Valuation Methodology:** Our C$120 price target for WCN.TO Canadian listed share is based on a conversion of our price target for WCN U.S. listed shares using a 0.72 USD per CAD exchange rate, Barclays' forecast 2H17 average exchange rate. Our $86 TP is based on 12x 2018E EV/EBITDA for the combined entity. WCN is currently trading at 12.9x 12-month forward EV/EBITDA. We see potential for medium-term upside in growth if WCN is able to quickly execute accretive asset swaps.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Further weakness in recycled commodity prices, lower U.S. housing construction in WCN's core markets and lower E&P activities are the key macroeconomic risks in 2016, in our view. WCN has the highest expected growth in the industry. Any missteps in execution could drive multiple contraction and downside risk to our estimates. WCN also has the highest exposure to E&P waste disposal and while we expect this business to recover from its current lows, further drops in domestic E&P drilling would impact WCN relatively more than peers. Given the successful merger in 2Q16, key risks to our recommendation for Canadian dollar investors is a stronger CAD/USD FX rate given over three-quarters of recurring cash flow is expected to be generated in the US.

### North America Power & Utilities

**AES Corp. (AES)**

**Valuation Methodology:** Our $12 price target reflects the average of: $16 for P/E, which is a 20% discount to the 15.1x 2019 Regulated Utility average applied to $1.35, and $8 for a sum of the parts, which includes $8 for market values of the publicly traded Lat Am subsidiaries and Regulated U.S. utilities at 15.1x 2018 net income and -$0.15/share for 6.7x $954M in proportional EBITDA for unlisted subsidiaries and parent expenses less $6.4B in net debt and NOLs.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** As a global power company and electric utility, AES is exposed to merchant power risk, country risk, currency risk (particularly in South America), regulatory risk, and counterparty risk.

**Alliant Energy (LNT)**

**Valuation Methodology:** Our $38 price target is premised on a 9.85% premium to the 2019 regulated group average P/E multiple of 15.1x applied to our 2019 earnings estimate of $2.28.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include utility regulation; execution of its renewable generation expansion program; commodity prices; and interest rates.

**Ameren Corp. (AEE)**

**Valuation Methodology:** Our $56 target is a 9% premium to the 15.7x Regulated Utility group including -1% for exposure to tax changes applied to our $3.25 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the Ameren outlook are interest rates, regulation (Missouri, Illinois and the Federal Energy Regulatory Commission), outlook for Missouri legislation and the capital markets.

**American States Water Company (AWR)**

**Valuation Methodology:** Our $43 price target is premised upon the 2019 water group average multiple of 22.2x applied to our 2019 estimate of $1.93.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory issues resulting in lower ability to spend capital or a lower ROE, ability to obtain additional military contracts and perform on the current contracts are all risks.

**American Water Works (AWK)**

**Valuation Methodology:** Our $86 price target is derived from applying a 10% high-quality premium to a water group average of 22.2x P/E multiple to our $3.51 2019 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to AWK include an inability to achieve tighter cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential.

**Aqua America (WTR)**

**Valuation Methodology:** Our price target is based on applying a 5% discount the water group average 2019 P/E multiple of 22.2x to our 2019 EPS estimate of $1.55.

## Valuation Methodology and Risks

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include a potential acquisition of a gas ldc or non water utility, an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential, and potential tax reform.

### California Water Service Group (CWT)

**Valuation Methodology:** Our $29 price target is premised upon applying the 2019 water group average multiple of 22.2x to our 2018 estimate of $1.32.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Main risks are regulatory given the significant impact the outcome and timing of the California general rate case can have. Also the California drought and associated recovery has impacted results in the past several years. Interest rates impact commission granted return on equity levels as well as impacting the rate paid on short term debt. National policy such as bonus depreciation and EPA actions will also impact spending levels and financing for the utility.

### Calpine Corp. (CPN)

**Valuation Methodology:** Our $18 price target is premised upon the mid-cycle multiple of 7.6x our 2018E Open EBITDA of $1.901 billion, net debt of $10.7 billion and an NPV of NOLs of $2.6 billion on 359 million shares outstanding.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks for Calpine are the higher reserve margins, recession, wholesale market regulatory risk; risk of environmental mandates, and the gas price.

### Connecticut Water Service Inc. (CTWS)

**Valuation Methodology:** Our $53 price target is premised upon applying the 2018 water group average PE multiple of 22.2x to our 2019 estimate of $2.40.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risk are the main issues even with positive regulatory mechanisms in both CT and ME, the eventual true up or consideration surrounding repair tax flow through accounting could cause a potential larger than expected rate increase to customers limiting capital recovery in that year.

### Consolidated Edison (ED)

**Valuation Methodology:** Our $74 price target is a 6% premium to the group including +0.8% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.1x and our $4.64 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include rating agency actions, regulatory risk, interest rates, and access to the capital markets.

### DTE Energy (DTE)

**Valuation Methodology:** Our $106 price target is a 12% premium to the group including +1.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.7x and our $6.07 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include wholesale commodity prices, generation development market conditions, the outcome of regulatory proceedings, rating agency actions, interest rates, IRS tax regulations, the outlook for energy technology, and access to the capital markets.

### Duke Energy (DUK)

**Valuation Methodology:** We believe DUK is worth $78/share, which is based on applying a 5% premium to the 15.1x industry average P/E on our 2019E earnings of $5.12. Our PT also reflects a 4.4% discount for potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to regulated utilities, and DUK specifically, include weakening demand, higher than expected inflationary pressures, interest rates, regulatory lag and greater scrutiny from regulators and politicians around investment and operating decisions. Lingering political effects and regulatory recovery of the coal ash spill in NC remains an outstanding risk specific to DUK. There is also uncertainty with regard to potential tax reform.

### Dynegy Inc. (DYN)

**Valuation Methodology:** Our $14 price target is premised upon closing the ENGIE transaction, a 7.1x EV/EBITDA mid-cycle multiple, and our post-close 2019E EBITDA of $1.543 billion net of debt of $8.521 billion, environmental capex of $0.5 billion, and a NPV of NOLs of $0.3 billion. We use shares outstanding of 151.08 million.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Dynegy Inc. is an independent power company with a 50% natural gas 50% coal fired fleet diversified across MISO, PJM, New England, and New York. Risks to performance include natural gas, coal, and power prices, as well as annually set capacity prices in PJM and MISO. Risks to our valuation also include the ENGIE asset acquisition not closing as expected.

### Edison International (EIX)

**Valuation Methodology:** Our $77 price target is a 4% premium to the group including -0.5% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.7x and our $4.70 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include wholesale commodity prices, generation development market conditions, the outcome of regulatory proceedings, rating agency actions, interest rates, and access to the capital markets.

### Entergy Corp. (ETR)

**Valuation Methodology:** Our $73 price target is derived by applying the industry average multiple of 15.1x to our 2019E of $5.12 for UP&O. Our

## Valuation Methodology and Risks

price target also reflects a 5.6% discount for potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** EWC-related risks include: negative developments related to all operating and closed nuclear facilities, declining forward price curves, and unscheduled non-regulated plant outages. Utility-related risks include: regulatory lag, poor rate case outcomes, and ANO-related remediation expenses. There is also uncertainty regarding potential tax reform.

**Exelon Corp. (EXC)**

**Valuation Methodology:** Our $40 price target is premised upon a 2019 group average multiple of 15.1x applied to the utility net parent earnings of $1.81 resulting in $28 of utility value. Exgen is valued at 6.5x 2018 EBTIDA netted against debt resulting in $12 of value for Exgen, The combined value is $40.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The major risks for the utility are regulatory outcomes given the multiple regulatory districts combines with the expectation of reducing regulatory lag. For Exgen the major risks are commodity price, supply rationalization or lack thereof and unplanned outages.

**FirstEnergy Corp. (FE)**

**Valuation Methodology:** Our $34 price target is a 9% discount to the group including -4.0% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.1x and our $2.68 EPS estimate for Utility net of parent EPS.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks are an interruption in the delevering strategy from failure to close/announce asset sales, nuclear plant performance, interest rates, and the economy.

**Great Plains Energy Inc. (GXP)**

**Valuation Methodology:** Our $27 price target is an average of $29 for a 9% discount (including 4% for tax policy) to the 2019 Regulated Utility average P/E multiple of 15.6x applied to $2.04 in merged EPS and $26 for a 5% discount to the 2019 Regulated Utility average P/E multiple applied to $1.88 in 2019 EPS post a potential broken deal.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include the outcome of regulatory proceedings, construction risk, rating agency actions, interest rates, and access to the capital markets.

**Hawaiian Electric Inds (HE)**

**Valuation Methodology:** Our $27 PT reflects a 5% discount to the Regulated Utility average P/E of 15.7x our 2019E utility earnings of $1.32, plus a 1.5% premium to 14.4x bank earnings of $0.50.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** HE has regulatory and political risk moving forward on a stand alone basis. Executing on the legislated goal of 100% renewable energy by 2045 also carries execution risk. HE has a robust capital expenditure plan to meet the state targets, but will require PUC support to successfully execute. Ultimately the dividend could be at risk in a more extreme scenario where HE's margins come under increased pressure or there is customer erosion. There is also uncertainty regarding potential tax reform.

**NextEra Energy (NEE)**

**Valuation Methodology:** Our price target of $133 is based on applying a 10% premium to the regulated utility multiple of 15.1x to our 2019 EPS estimate of $7.46. We also assign a 1.25% premium to reflect opportunity related to potential tax reform. In addition, we add $7.50/share value for NEE's pro rata ownership of NEP.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** NextEra Energy Resources has merchant exposure to volatile gas and power prices, and risks associated with expansion in the size of its wind asset base. In addition, volatility around fuel prices and high levels of capital spending at its utility present regulatory risk. There is also uncertainty regarding potential tax reform.

**NextEra Energy Partners, LP. (NEP)**

**Valuation Methodology:** We value NEP at $34/share on the basis of the 2017E annualized LP distribution rate of $1.54 and a yield of 4.5%. The base case for NEP relies on a high quality, long-term contracted asset base, highly visible long-term growth rate in the range of 12-15% per year for the next several years, high level of operating competence by the management team, and continuing investor demand for yielding equity vehicles.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The risks to the business model and our thesis are diminished investor appetite for yielding equities; rising interest rates, and/or fluctuating wind resource impairs short-term cash generation abilities which could create problems funding and growing the distributions; operational issues surrounding the wind and solar assets; and the elimination of production tax credits as a result of political maneuvering.

**NiSource, Inc. (NI)**

**Valuation Methodology:** Our $23 price target is a 15% premium to the group including -0.6% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.1x and our $1.33 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include adverse regulatory outcomes, lower sales growth, higher cost of capital, and earlier than expected equity needs.

**NRG Energy (NRG)**

**Valuation Methodology:** Our $18 price target is premised upon a half turn discount to the mid-cycle multiple of 7.6x our recourse basis '18E Open EBITDA of $1.7 billion, $1.5 billion for NYLD at market value, $1.1 billion in NPV of NOLs, $0.2 billion in environmental capex, and $8.2 billion in recourse only net debt.

## Valuation Methodology and Risks

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include commodity prices, regulation, capital markets, interest rates and environmental policy.

**OGE Energy Corp. (OGE)**

**Valuation Methodology:** Our price target is $36.  This comprises '19E EPS of $1.75 at OG&E (utility), using a 2.9% discount to the 15.7x utility group multiple equating to $28, plus $9 for OGE's 26.3% ownership of Enable Midstream Partners LP (ENBL), marked to current price.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Federal (FERC, EPA) and state (Oklahoma, Arkansas) regulation, costs of compliance with environmental laws and regulations,  Operational risks associated with OGE's businesses, economic conditions, climate change, cyber security risks and increased reliance on automated processes.  Enable share price may be impacted by volumes or commodity prices on their system as well as changes to the distribution.

**PG&E Corp. (PCG)**

**Valuation Methodology:** Our $63 price target is a 4% premium to the group including a modest negative exposure to tax changes applied to the 2019 Regulated Utility P/E of 15.1x and our $4.02 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are California and Federal regulation, rating agency actions, interest rates and access to capital markets.

**Pinnacle West Capital (PNW)**

**Valuation Methodology:** Our $77 price target is premised on a 4.9% premium to the 2019 group average P/E of 15.6x applied to our 2019 estimate of $4.71

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are Arizona state and Federal (FERC and NRC) regulation.  Demand and rooftop solar can impact earnings significantly under current regulatory construct.

**PNM Resources (PNM)**

**Valuation Methodology:** Our price target of $33 is premised upon a 5% premium to the industry average multiple of 15.1x our 2019E EPS of $2.13. We also assign a 1.9% discount to reflect uncertainty associated with potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are environmental regulation, regulatory environment in Texas and New Mexico, weather, and the New Mexico and Texas economies. PNM's anticipated future rate case in NM also presents risk. There is also uncertainty with regard to potential tax reform.

**Portland General Electric Co. (POR)**

**Valuation Methodology:** Our price target reflects  the 2019 group average P/E multiple of 15.7x applied to our 2019 eps estimate of $2.61.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The main risks to our valuation are the commercial operation of the Carty Generating Station, regulatory filings and outcomes, as well as economic issues impacting demand growth and inflation.  In the event that demand growth accelerates given the local Portland economy, our estimates would prove to be conservative.

**PPL Corporation (PPL)**

**Valuation Methodology:** Our $37 price target is a 2019 Regulated Utility average P/E of 15.7x applied to $2.35 in Open EPS reflecting a 1.24x $/British Pound exchange rate and $0.21/share for the NPV of hedges.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include the outcome of regulatory proceedings, rating agency actions, foreign currency translation, interest rates, and access to the capital markets.

**Public Service Enterprise Gp (PEG)**

**Valuation Methodology:** Our $48 target reflects a sum of the parts including $37 for PSE&G at a 11% premium including +2% for exposure to tax reform applied to the 2019 Regulated Utility average of 15.7x and our $2.11E, $10 for PSEG Power at 7.4x '18 Open EBITDA of $1.1B less $3.2B of net debt and $2 for Enterprises and other at a 2019 Regulated Utility average multiple of $0.12 EPS.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are wholesale power prices, New Jersey and federal utility regulation, and interest rates.

**SCANA Corp. (SCG)**

**Valuation Methodology:** Our current price target of $71 is premised upon our 2019 EPS estimate of $4.68E applied to the regulated group's 2019  P/E ratio of 15.1x.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Primary risk factors are construction risk associated with the V.C. Summer nuclear facilities, regulatory risk from frequent proceedings and rate fatigue in the company's service territory, financing risk from the frequent need to come to market for new equity, and economic risk connected to the South Carolina economy.

**Sempra Energy (SRE)**

**Valuation Methodology:** Our price target is premised upon a sum of the parts valuation, applying a 5% premium to the regulated utility group average multiple to our 2019 EPS estimates for the majority of SRE's regulated and contracted businesses, adding $20/share for trains 1-3 at Cameron, and $17/share for the value inherent in SRE's ownership interest in IEnova.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** SRE's long-term earnings growth is largely dependent on successful completion of Cameron trains 1-3. Construction delays present a risk to valuation. A portion of earnings are also exposed to international, political, and currency risk. Tail risk from the Aliso Canyon gas leak persists, as does ongoing regulatory risk in CA. There is also uncertainty with regard to potential tax reform.

## Valuation Methodology and Risks

| Southern Co. (SO) |
| --- |
| **Valuation Methodology:** Our current price target of $55 is based upon a 8.95% premium to the utility group average multiple of 15.1x applied to our 2018 estimate. |
| **Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risks associated with closing the SNG pipeline venture with KMI, construction risk for Vogtle and Kemper, as well as standard regulatory risk associated with regulated assets. |
| **Westar Energy (WR)** |
| **Valuation Methodology:** Our $60 target reflects closing of the merger with Great Plains Energy. |
| **Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks include but are not limited to utility regulation by Kansas Corporation Commission and FERC Transmission Regulation. |

Source: Barclays Research.

## ANALYST(S) CERTIFICATION(S):

We, Daniel Ford, CFA, Ross A. Fowler, CFA, Gregg Orrill and Jon Windham, CFA, hereby certify (1) that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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**Primary Stocks (Ticker, Date, Price)**

**AES Corp.** (AES, 19-Jan-2017, USD 11.73), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M/N

**Alliant Energy** (LNT, 19-Jan-2017, USD 37.28), Equal Weight/Neutral, A/CE/D/J/K/L/M

**Ameren Corp.** (AEE, 19-Jan-2017, USD 51.81), Overweight/Neutral, CD/CE/D/J/K/L/M

**American Electric Power** (AEP, 19-Jan-2017, USD 62.70), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**American States Water Company** (AWR, 19-Jan-2017, USD 42.39), Underweight/Neutral, CE/J

**American Water Works** (AWK, 19-Jan-2017, USD 71.87), Overweight/Neutral, CE/J

**Aqua America** (WTR, 19-Jan-2017, USD 29.79), Equal Weight/Neutral, CE/J

**Brookfield Infrastructure Partners LP** (BIP, 19-Jan-2017, USD 35.47), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N/R

**Brookfield Renewable Energy Partners LP** (BEP, 19-Jan-2017, USD 28.87), Equal Weight/Neutral, A/CD/D/J/K/L/M/R

**California Water Service Group** (CWT, 19-Jan-2017, USD 32.95), Underweight/Neutral, CD/J

**Calpine Corp.** (CPN, 19-Jan-2017, USD 12.19), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**Canadian Utilities Ltd.** (CU.TO, 19-Jan-2017, CAD 37.21), Underweight/Neutral, CD/J

**CenterPoint Energy Inc.** (CNP, 19-Jan-2017, USD 25.44), Equal Weight/Neutral, CD/CE/J/K/M

**CMS Energy** (CMS, 19-Jan-2017, USD 42.13), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Connecticut Water Service Inc.** (CTWS, 19-Jan-2017, USD 52.86), Equal Weight/Neutral, CD/J

**Consolidated Edison** (ED, 19-Jan-2017, USD 73.49), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M

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**Dominion Resources** (D, 19-Jan-2017, USD 75.62), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**DTE Energy** (DTE, 19-Jan-2017, USD 98.14), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**Duke Energy** (DUK, 19-Jan-2017, USD 77.12), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

Other Material Conflicts: Barclays Bank and/or its affiliate is providing investment banking services to Duke Energy Corp (NYSE: DUK) in relation to its potential acquisition of Piedmont Natural Gas Company Inc.

**Dynegy Inc.** (DYN, 19-Jan-2017, USD 9.70), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M/N

## IMPORTANT DISCLOSURES CONTINUED

**Edison International** (EIX, 19-Jan-2017, USD 71.72), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N

**Emera Inc.** (EMA.TO, 19-Jan-2017, CAD 45.88), Overweight/Neutral, A/CD/D/J/K/L/M/R

**Entergy Corp.** (ETR, 19-Jan-2017, USD 71.08), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Eversource Energy** (ES, 19-Jan-2017, USD 55.07), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Exelon Corp.** (EXC, 19-Jan-2017, USD 35.74), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**FirstEnergy Corp.** (FE, 19-Jan-2017, USD 30.31), Equal Weight/Neutral, CD/CE/D/E/J/K/L/M

**Great Plains Energy Inc.** (GXP, 19-Jan-2017, USD 27.05), Equal Weight/Neutral, A/CD/CE/D/E/FA/J/K/L/M

**Hawaiian Electric Inds** (HE, 19-Jan-2017, USD 33.08), Underweight/Neutral, CD/CE/J/K/M

**Hydro One Ltd.** (H.TO, 19-Jan-2017, CAD 24.27), Equal Weight/Neutral, A/D/J/L/R

**NextEra Energy** (NEE, 19-Jan-2017, USD 119.28), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**NextEra Energy Partners, LP.** (NEP, 19-Jan-2017, USD 27.64), Overweight/Neutral, CE/J

**NiSource, Inc.** (NI, 19-Jan-2017, USD 22.34), Equal Weight/Neutral, CE/D/J/K/L/M

**NRG Energy** (NRG, 19-Jan-2017, USD 15.56), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**NRG Yield Inc.** (NYLD, 19-Jan-2017, USD 16.00), Overweight/Neutral, CD/D/FA/J/K/L/M

**OGE Energy Corp.** (OGE, 19-Jan-2017, USD 33.22), Equal Weight/Neutral, CD/CE/D/J/L

**Ormat Technologies** (ORA, 19-Jan-2017, USD 52.80), Underweight/Neutral, CD/CE/J

**PG&E Corp.** (PCG, 19-Jan-2017, USD 61.10), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**Pinnacle West Capital** (PNW, 19-Jan-2017, USD 77.05), Equal Weight/Neutral, A/CE/D/J/K/L/M

**PNM Resources** (PNM, 19-Jan-2017, USD 33.45), Equal Weight/Neutral, CE/J

**Portland General Electric Co.** (POR, 19-Jan-2017, USD 43.58), Underweight/Neutral, CD/CE/D/J/K/L/M

**PPL Corporation** (PPL, 19-Jan-2017, USD 34.23), Equal Weight/Neutral, A/CE/D/J/K/L/M

**Public Service Enterprise Gp** (PEG, 19-Jan-2017, USD 43.68), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**SCANA Corp.** (SCG, 19-Jan-2017, USD 70.99), Equal Weight/Neutral, CD/CE/J

**Sempra Energy** (SRE, 19-Jan-2017, USD 102.08), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**Southern Co.** (SO, 19-Jan-2017, USD 49.05), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**Waste Connections** (WCN, 19-Jan-2017, USD 79.73), Overweight/Neutral, CE/J/K/M

**Waste Connections** (WCN.TO, 19-Jan-2017, CAD 106.12), Overweight/Neutral, CE/J/K/M

**WEC Energy Group** (WEC, 19-Jan-2017, USD 58.56), Equal Weight/Neutral, CD/CE/D/E/J/K/L/M

**Westar Energy** (WR, 19-Jan-2017, USD 55.54), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Xcel Energy** (XEL, 19-Jan-2017, USD 40.89), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Materially Mentioned Stocks (Ticker, Date, Price)**

**8point3 Energy Partners LP** (CAFD, 19-Jan-2017, USD 14.18), Overweight/Neutral, D/E/J/K/L/M/N

**Canadian Solar Inc.** (CSIQ, 19-Jan-2017, USD 12.49), Equal Weight/Neutral, CD/CE/E/FA/J/K/L/M

**Clean Harbors** (CLH, 19-Jan-2017, USD 53.51), Underweight/Neutral, CD/CE/J

**Covanta Holding Corp.** (CVA, 19-Jan-2017, USD 15.75), Equal Weight/Neutral, CD/CE/J/K/M/N

**First Solar Inc.** (FSLR, 19-Jan-2017, USD 34.42), Overweight/Neutral, CE/J

**Republic Services** (RSG, 19-Jan-2017, USD 57.31), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**SolarEdge Technologies Inc.** (SEDG, 19-Jan-2017, USD 13.20), Overweight/Neutral, J

**SunPower Corp.** (SPWR, 19-Jan-2017, USD 6.87), Equal Weight/Neutral, CD/CE/D/E/J/K/L/M/N

**Sunrun Inc.** (RUN, 19-Jan-2017, USD 5.81), Overweight/Neutral, J

**Terraform Global Inc.** (GLBL, 19-Jan-2017, USD 4.10), Rating Suspended/Neutral, CE/J

**US Ecology, Inc.** (ECOL, 19-Jan-2017, USD 50.40), Underweight/Neutral, J

**Waste Management** (WM, 19-Jan-2017, USD 69.57), Overweight/Neutral, CD/CE/J/K/M

Prices are sourced from Thomson Reuters as of the last available closing price in the relevant trading market.

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**Overweight** - The stock is expected to outperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

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## IMPORTANT DISCLOSURES CONTINUED

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|---|---|---|
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| Canadian Solar Inc. (CSIQ) | Clean Harbors (CLH) | Covanta Holding Corp. (CVA) |
| First Solar Inc. (FSLR) | Hannon Armstrong Sustainable Infrastructure Capital, Inc (HASI) | Republic Services (RSG) |
| SolarEdge Technologies Inc. (SEDG) | SunPower Corp. (SPWR) | Sunrun Inc. (RUN) |
| Terraform Global Inc. (GLBL) | US Ecology, Inc. (ECOL) | Waste Connections (WCN) |
| Waste Connections (WCN.TO) | Waste Management (WM) | |

| North America Power & Utilities | | |
|---|---|---|
| AES Corp. (AES) | Alliant Energy (LNT) | Ameren Corp. (AEE) |
| American Electric Power (AEP) | American States Water Company (AWR) | American Water Works (AWK) |
| Aqua America (WTR) | Brookfield Infrastructure Partners LP (BIP) | Brookfield Infrastructure Partners LP (BIP_u.TO) |
| Brookfield Renewable Energy Partners LP (BEP) | Brookfield Renewable Energy Partners LP (BEP_u.TO) | California Water Service Group (CWT) |
| Calpine Corp. (CPN) | Canadian Utilities Ltd. (CU.TO) | CenterPoint Energy Inc. (CNP) |
| CMS Energy (CMS) | Connecticut Water Service Inc. (CTWS) | Consolidated Edison (ED) |
| Dominion Resources (D) | DTE Energy (DTE) | Duke Energy (DUK) |
| Dynegy Inc. (DYN) | Edison International (EIX) | Emera Inc. (EMA.TO) |
| Entergy Corp. (ETR) | Eversource Energy (ES) | Exelon Corp. (EXC) |
| FirstEnergy Corp. (FE) | Fortis Inc. (FTS.TO) | Great Plains Energy Inc. (GXP) |
| Hawaiian Electric Inds (HE) | Hydro One Ltd. (H.TO) | National Grid Plc (NGG) |
| NextEra Energy (NEE) | NextEra Energy Partners, LP. (NEP) | NiSource, Inc. (NI) |
| NRG Energy (NRG) | NRG Yield Inc. (NYLD) | OGE Energy Corp. (OGE) |
| Ormat Technologies (ORA) | PG&E Corp. (PCG) | Pinnacle West Capital (PNW) |
| PNM Resources (PNM) | Portland General Electric Co. (POR) | PPL Corporation (PPL) |
| Public Service Enterprise Gp (PEG) | SCANA Corp. (SCG) | Sempra Energy (SRE) |
| Southern Co. (SO) | TerraForm Power, Inc. (TERP) | Vivint Solar Inc. (VSLR) |
| WEC Energy Group (WEC) | Westar Energy (WR) | Xcel Energy (XEL) |

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To see a list of companies that comprise a particular industry coverage universe, please go to https://publicresearch.barclays.com.

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Equity Research

Power & Utilities | North America Power & Utilities

18 January 2017

# Aqua America

# 2017 Update

| | |
|---|---|
| Stock Rating | EQUAL WEIGHT |
| | Unchanged |
| Industry View | NEUTRAL |
| | Unchanged |
| Price Target | USD 33.00 |
| | lowered -3% from USD 34.00 |

| | |
|---|---|
| Price (17-Jan-2017) | USD 30.49 |
| Potential Upside/Downside | +8.2% |
| Tickers | WTR |

| | |
|---|---|
| Market Cap (USD mn) | 5408 |
| Shares Outstanding (mn) | 177.36 |
| Free Float (%) | 99.76 |
| 52 Wk Avg Daily Volume (mn) | 0.8 |
| 52 Wk Avg Daily Value (USD mn) | N/A |
| Dividend Yield (%) | 2.5 |
| Return on Equity TTM (%) | 11.96 |
| Current BVPS (USD) | 10.33 |

Source: Thomson Reuters

| | |
|---|---|
| Price Performance | Exchange-NYSE |
| 52 Week range | USD 35.83-28.03 |


*Link to Barclays Live for interactive charting*

**2017 Guidance Short vs. Consensus…** WTR provided 2017 EPS guidance of $1.34–1.39. This compares to our ingoing estimate of $1.41 and consensus of $1.39. The guidance reflects modest growth (below rate base growth of 6–7%) over the 2016 guidance range of $1.30–1.35. Management explained that overearnings in PA should cause earnings growth to lag rate base growth in 2017 and 2018; however, the company expects to file a rate case in 2018 for rates effective in 2019, which should true-up the regulatory lag.

**…but Acquisition Opportunities Abound.** Despite the slight disappointment in the guidance, it is apparent that management is invigorated by the prospects for future acquisitions of water and wastewater companies. WTR indicated that they are seeing an unprecedented level of deal activity, particularly in states where fair value legislation exists. In some case, WTR is even approaching potential muni targets with unsolicited offers. Management reiterated its sweet spot is targets with ~ 2,500–25,000 customers.

**Gas LDC Acquisitions are Not on the Front Burner.** Management also took the opportunity to temper market concerns that the company might stray from its core competency into gas LDCs. Management acknowledged that while gas is interesting because of the distribution pipe and customer profile similarities, management and the board are not looking for gas LDC acquisitions.

**Early Look at Tax Reform Appears Neutral to Negative.** WTR outlined four potential tax reform policy changes, the implications of which appear to be neutral (lower tax rate, excess deferred taxes) to negative (reduced repair tax deduction, accelerated depreciation) to earnings.

**Reducing '17/'18 estimates; PT revised to $33.** We are revising our '17 and '18 estimates to reflect the regulatory lag in PA. Our estimates for 2016/17/18/19 are $1.33, $1.38, $1.46, and $1.55 compared to our prior estimates of $1.33, $1.41, $1.49, and $1.59. Our PT is reduced to $1 to $33. The methodology applies a 5% discount to the average water P/E multiple (22.2x) to our 2019E ($1.55 new, $1.59 old).

**WTR: Quarterly and Annual EPS (USD)**

| | 2015 | 2016 | | | 2017 | | | Change y/y | |
|---|---|---|---|---|---|---|---|---|---|
| FY Dec | Actual | Old | New | Cons | Old | New | Cons | 2016 | 2017 |
| Q1 | 0.27A | 0.29A | 0.29A | 0.29A | N/A | N/A | 0.29E | 7% | N/A |
| Q2 | 0.32A | 0.33A | 0.33A | 0.33A | N/A | N/A | 0.35E | 3% | N/A |
| Q3 | 0.38A | 0.41A | 0.41A | 0.41A | N/A | N/A | 0.45E | 8% | N/A |
| Q4 | 0.28A | N/A | N/A | 0.29E | N/A | N/A | 0.31E | N/A | N/A |
| Year | 1.26A | 1.33E | 1.33E | 1.32E | 1.41E | 1.38E | 1.39E | 6% | 4% |
| P/E | 24.2 | | 22.9 | | | 22.1 | | | |

Source: Barclays Research.
Consensus numbers are from Thomson Reuters

North America Power & Utilities

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**North America Power & Utilities** — **Industry View: NEUTRAL**

## Aqua America (WTR)

**Stock Rating: EQUAL WEIGHT**

| Income statement ($mn) | 2015A | 2016E | 2017E | 2018E | CAGR |
|---|---|---|---|---|---|
| Revenue | 814 | 854 | 852 | 892 | 3.1% |
| EBITDA (adj) | 446 | 479 | 506 | 539 | 6.5% |
| EBIT (adj) | 321 | 341 | 353 | 372 | 5.0% |
| Pre-tax income (adj) | 238 | 257 | 269 | 287 | 6.4% |
| Net income (adj) | 223 | 237 | 245 | 258 | 5.0% |
| EPS (adj) ($) | 1.26 | 1.33 | 1.38 | 1.46 | 5.0% |
| Diluted shares (mn) | 177.5 | 177.5 | 177.5 | 177.5 | 0.0% |
| DPS ($) | 0.68 | 0.74 | 0.80 | 0.86 | 8.0% |

| Margin and return data | | | | | Average |
|---|---|---|---|---|---|
| EBITDA (adj) margin (%) | 54.8 | 56.1 | 59.4 | 60.5 | 57.7 |
| EBIT (adj) margin (%) | 39.4 | 39.9 | 41.5 | 41.7 | 40.6 |
| Pre-tax (adj) margin (%) | 29.3 | 30.1 | 31.6 | 32.2 | 30.8 |
| Net (adj) margin (%) | 27.4 | 27.7 | 28.8 | 29.0 | 28.2 |
| ROIC (%) | 9.2 | 9.3 | 9.2 | 9.4 | 9.3 |
| ROA (%) | 4.0 | 4.0 | 4.0 | 4.1 | 4.0 |
| ROE (%) | 13.1 | 12.9 | 12.5 | 12.4 | 12.7 |

| Balance sheet and cash flow ($mn) | | | | | CAGR |
|---|---|---|---|---|---|
| Net PP&E | 4,688 | 4,914 | 5,126 | 5,329 | 4.4% |
| Total net assets | 5,787 | 6,001 | 6,202 | 6,380 | 3.3% |
| Capital employed | 3,502 | 3,656 | 3,834 | 3,980 | 4.4% |
| Shareholders' equity | 1,768 | 1,900 | 2,018 | 2,138 | 6.5% |
| Net debt/(funds) | 1,715 | 1,750 | 1,822 | 1,871 | 2.9% |
| Cash flow from operations | 407 | 434 | 456 | 474 | 5.2% |
| Capital expenditure | -350 | -365 | -365 | -370 | N/A |
| Free cash flow | -50 | -47 | -35 | -29 | N/A |
| Pre-dividend FCF | 72 | 84 | 106 | 124 | 19.9% |

| Valuation and leverage metrics | | | | | Average |
|---|---|---|---|---|---|
| P/E (adj) (x) | 24.2 | 22.9 | 22.1 | 20.9 | 22.5 |
| EV/EBITDA (adj) (x) | 16.0 | 15.0 | 14.3 | 13.5 | 14.7 |
| EV/EBIT (adj) (x) | 22.2 | 21.1 | 20.5 | 19.6 | 20.8 |
| P/BV (x) | 3.1 | 2.8 | 2.7 | 2.5 | 2.8 |
| Dividend yield (%) | 2.2 | 2.4 | 2.6 | 2.8 | 2.5 |
| Total debt/capital (%) | 49.5 | 48.0 | 47.4 | 46.3 | 47.8 |
| Net debt/EBITDA (adj) (x) | 3.8 | 3.7 | 3.6 | 3.5 | 3.6 |

| Selected operating metrics | | | | | Average |
|---|---|---|---|---|---|
| Payout ratio (%) | 54.4 | 55.4 | 57.8 | 59.2 | 56.7 |
| Interest cover (x) | 4.2 | 4.0 | 4.1 | 4.2 | 4.1 |
| Regulated (%) | 98.0 | 98.0 | 198.0 | 298.0 | 173.0 |

| Price (17-Jan-2017) | USD 30.49 |
|---|---|
| Price Target | USD 33.00 |

**Why Equal Weight?** While we believe WTR is a well-run utility and appreciate the relatively high earned ROE, the uncertainty associated with overearning in two of their largest jurisdictions keeps us at an Equal Weight rating.

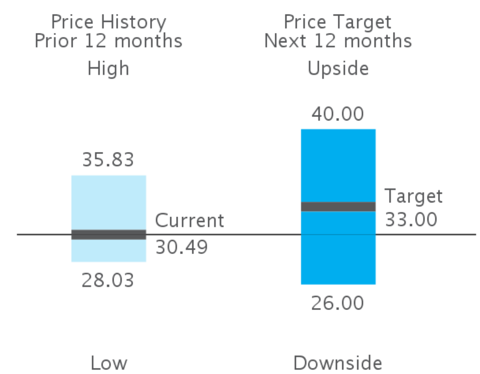
**Upside case** USD 40.00

If results improve at a faster rate than we expect or if the market-based opportunities develop at a faster pace, a 15% premium to the group average multiple would be warranted.

**Downside case** USD 26.00

If regulatory issues impact earnings negatively or cost pressures occur, the stock trading at a group average multiple would be a reasonable assumption.

**Upside/Downside scenarios**




Source: Company data, Barclays Research
Note: FY End Dec

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**Primary Stocks (Ticker, Date, Price)**

**Aqua America** (WTR, 17-Jan-2017, USD 30.49), Equal Weight/Neutral, CE/J

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| | | |
|---|---|---|
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## IMPORTANT DISCLOSURES CONTINUED

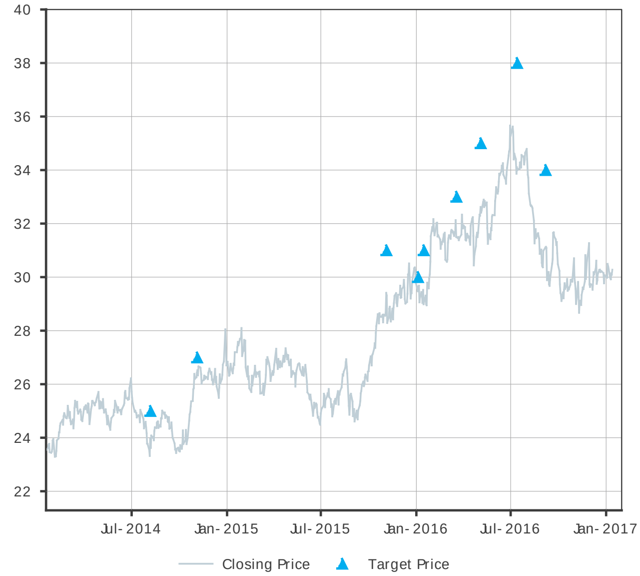
### Aqua America (WTR / WTR)

**USD 30.49 (17-Jan-2017)**

Stock Rating: **EQUAL WEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 17-Jan-2017)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating* | Adjusted Price Target |
|---|---|---|---|
| 06-Sep-2016 | 31.11 | | 34.00 |
| 13-Jul-2016 | 34.10 | | 38.00 |
| 04-May-2016 | 32.62 | | 35.00 |
| 18-Mar-2016 | 31.50 | | 33.00 |
| 15-Jan-2016 | 28.99 | | 31.00 |
| 04-Jan-2016 | 29.47 | | 30.00 |
| 04-Nov-2015 | 29.41 | | 31.00 |
| 04-Nov-2014 | 26.44 | | 27.00 |
| 06-Aug-2014 | 23.96 | | 25.00 |

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*The rating for this security remained Equal Weight during the relevant period.

*Link to Barclays Live for interactive charting*

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**Valuation Methodology:** Our price target is based on applying a 5% discount the water group average 2019 P/E multiple of 22.2x to our 2019 EPS estimate of $1.55.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include a potential acquisition of a gas ldc or non water utility, an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential, and potential tax reform.

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Equity Research | Instant Insights
4 May 2017

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## Aqua America

# Q1 on Track; No Change in Outlook

**Stock Rating/Industry View:** Overweight/Neutral
**Price Target:** USD 36.00
**Price (03-May-2017):** USD 32.72
**Potential Upside/Downside:** 10%
**Tickers:** WTR

### Q1 Results

Aqua America reported 1Q17 earnings of $0.28 compared to our estimate of $0.31 and consensus of $0.29. Earnings of $0.29 recorded in 1Q16 benefited from a one-time gain of approximately $0.01 related to the sale of North Carolina assets, somewhat skewing the year-over-year comparison. In the quarter, customer growth and revenue increases were offset by consumption declines. Tax repair benefits were a drag on earnings by approximately half a penny. WTR's exit from its market-based activities will create slightly negative quarterly comparisons for the next several quarters.

### Key Takeaways

Outlook: Management reiterated its 2017 guidance of $1.34–1.39. WTR is on track to invest approximately $450MM in new infrastructure assets in 2017, having invested approximately $95MM in 1Q17. The company also has four pending acquisitions that are expected to close by year-end 2017. These acquisitions should add 8,800 customers to WTR's system, accounting for roughly half of the targeted customer growth.

Our estimates are $1.38 in 2017, $1.46 in 2018, and $1.55 in 2019. Our Overweight rating and $36 price target reflects a 5% premium to the average multiple for water utilities based on our 2019 estimate. WTR's geographic footprint and industry leadership

BARCLAYS

North America Power & Utilities

# August Review/September Preview

INDUSTRY UPDATE

North America Power & Utilities
NEUTRAL
Unchanged

For a full list of our ratings, price target and earnings changes in this report, please see table on page 2.

**This report begins a multi-part look at efficient electrification with a review of electric vehicles and indoor farming.** While we are not expecting revolutionary changes which would reignite the sales growth seen in prior decades, we do see electricity taking share of end use Btu consumption globally and in North America. From our point of view there are three drivers: 1) Electrification improves the environment: Electric emissions per Btu of output are lower across a wide spectrum of pollutants including CO2; 2) Cost savings: Several electric applications have experienced efficiency improvements and are at, or approaching, cost parity with primary fuel uses; and 3) Electricity is compatible with technological trends: Advances in networks favour the flexibility and interconnectedness of electric grids for productivity improvements. Please see full report *Mary Jane Gets a New Car;* 8/28/17.

**Combined we expect EV's and indoor farming could add 12 GW of demand nationally by 2025. While not a game changer, anything that contributes to growth in electricity which has experienced stagnant sales for the last decade would be welcomed. Companies in areas with the largest sales increase that are not decoupled are: EXC, XEL, ES, BRKa, PNW, and PEG.**

**Consistent with Barclays Auto & Auto Parts research forecast for EVs and plug-in hybrids of 8M vehicles in 2025 we forecast 21 MMWhr or 9.6 GW of demand.** We expect California maintains the most share and utilities there have proposed $1B for charging infrastructure. Our estimates for the capital cost for charging installations nationwide are $13-$16B by 2025. At the extreme, should the entire US car fleet transition to electric, infrastructure costs could approach $186-$189B.

**On the indoor farming side, we focused on cannabis as a case study for the implications of growth in the 'locally grown' produce market.** Using Colorado's increase in electricity demand for Marijuana production, we see the potential for 13 MMwhrs or 2GW of need to fuel demand from 16 states that have or could adopt recreational cannabis. Extrapolating this to the 50% of the 'locally grown' produce market implies another 31 MMwhrs or another 5GW of load.

**Potential drivers of new solar and wind**: Of these two drivers of electrification, we forecast indoor agriculture to drive the majority of demand with 7GW of solar and 3GW of wind added through 2025. We forecast EV charging to be a smaller contributor, but still material at approximately 3GW of new wind capacity and 2GW of new solar capacity through 2025.

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Completed: 28-Aug-17, 01:58 GMT Released: 28-Aug-17, 04:20 GMT

**Summary of our Ratings, Price Targets and Earnings Changes in this Report (all changes are shown in bold)**

| Company | Rating | | Price | Price Target | | | EPS FY1 (E) | | | EPS FY2 (E) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Old | New | 25-Aug-17 | Old | New | %Chg | Old | New | %Chg | Old | New | %Chg |
| **North America Power & Utilities** | Neu | Neu | | | | | | | | | | |

Source: Barclays Research. Share prices and target prices are shown in the primary listing currency and EPS estimates are shown in the reporting currency.
FY1(E): Current fiscal year estimates by Barclays Research. FY2(E): Next fiscal year estimates by Barclays Research.
Stock Rating: OW: Overweight; EW: Equal Weight; UW: Underweight; RS: Rating Suspended
Industry View: Pos: Positive; Neu: Neutral; Neg: Negative

## Upcoming Events

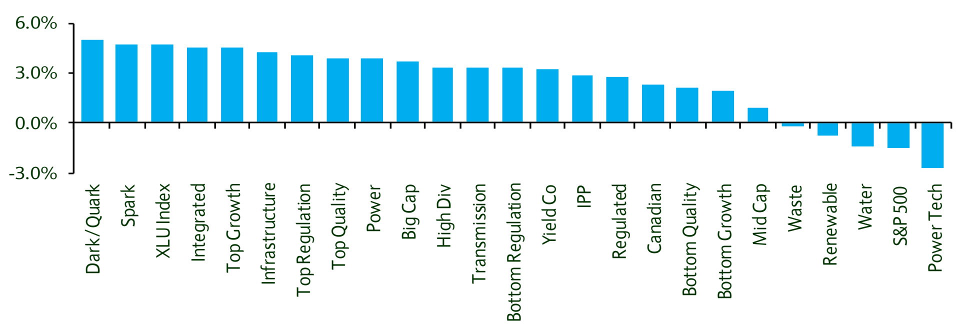
- Adjudicative hearings scheduled at NH Site Evaluation Committee for Northern Pass Transmission – August 29–31, 2017 and September 11–13, 15, 18, 19, 21, 22, 25, 26, 28, 29, 2017
- Results of joint report from DOE and Dept of Homeland Security that assesses risk to the power system associated with a cyber incident – anytime
- Senate Energy and Natural Resources Committee scheduled to hold a nominations hearing for FERC nominees Kevin McIntyre and Richard Glick – September 7, 2017
- FERC to hold first open meeting regaining a quorum – September 20, 2017
- Anticipated deadline for cooperating agencies to complete their respective permit authorizations for FERC to issue certification for Mountain Valley Pipeline – late September 2017

## What Happened Last Month

From July 25 through August 24, 2017 the XLU (+4.7%) outperformed the S&P500 by 6%. Dark/Quark (+5.1%), Spark (+4.8%), Integrated (+4.8%), Top Growth (+4.5%), and Infrastructure (+4.3%) were the top 5 performing subsectors. Power Tech (-2.8%), Water (-1.4%), Renewable (-0.8%), Waste (-0.3%), Mid Cap (+0.9%) were the bottom 5 performing subsectors. Regulated Utilities rose 2.8% and outperformed the S&P 500 by 4.3%.

FIGURE 1

**Monthly Performance by Style Factor**




Note: Performance is 7/25/17 through 8/24/17
Source: Thomson, Barclays Research

FIGURE 2

**Top and Bottom Performers**

| | Company | Ticker | MTD |
|---|---|---|---|
| Top 5 | Solaredge | SEDG | 16.7% |
| | Dynegy Inc | DYN | 9.9% |
| | PNM Resources | PNM | 9.4% |
| | Ameren Corp. | AEE | 8.0% |
| | Brookfield Infrastructure Partners LP | BIP | 8.0% |
| Index | XLU | XLU | 4.7% |
| Bottom 5 | Connecticut Water Service | CTWS | -6.0% |
| | SCANA Corp | SCG | -6.8% |
| | Azure Power Global Ltd | AZRE | -6.9% |
| | Canadian Solar Inc. | CSIQ | -8.4% |
| | SunPower Corp. | SPWR | -17.7% |

Note: Performance Measured from 7/25/17 through 8/24/17
Source: Thomson, Barclays Research Estimates

## Key regulatory updates and other key dates

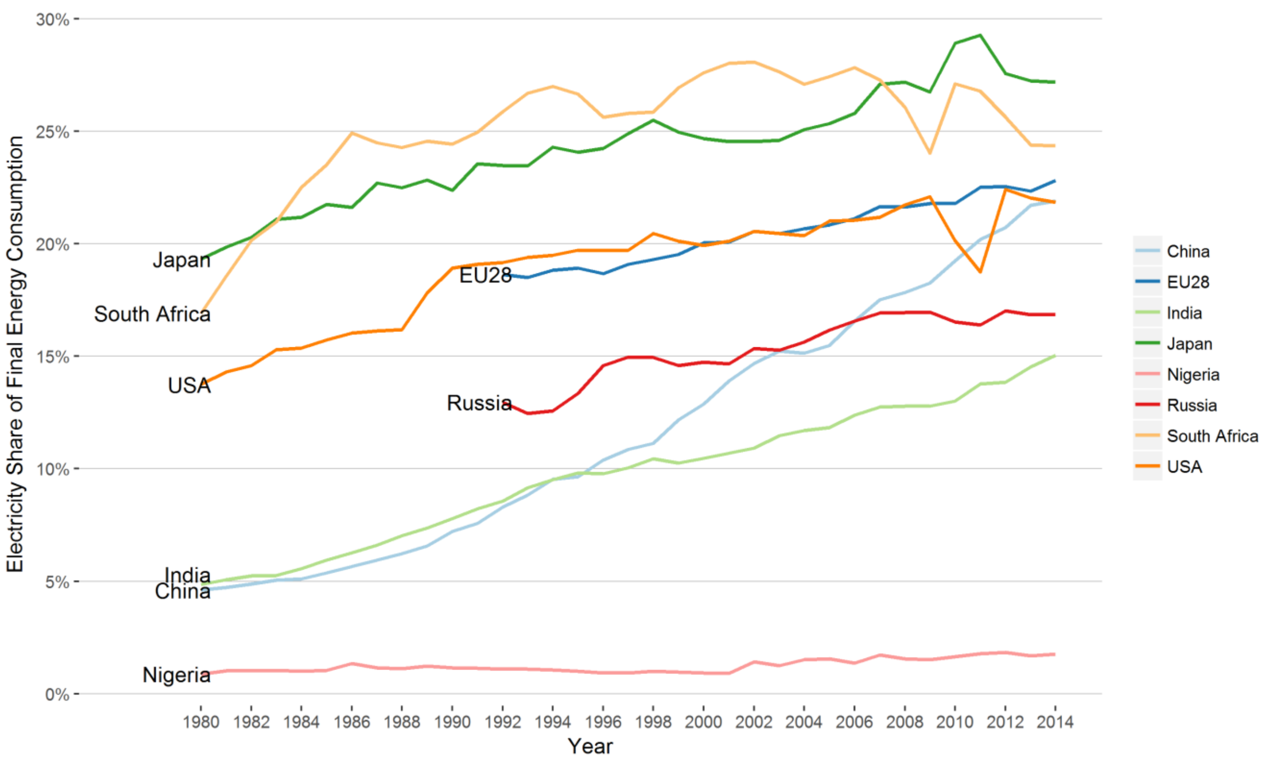
- AES Corp. DP&L Rate settlement: Potential ruling – *16-0395*
- American Electric Power – Potential settlement in Ohio electric security plan proceeding *16-1852*.
- Centerpoint Energy – The company could reach a conclusion in its review of option for its 54.1% stake in ENBL. On the Q2'17 conference call management indicated that they were working to identify a swap candidate.
- CMS Energy analyst conference – September 25. Also final ruling on Palisades securitization and decommissioning (*U-18250*).
- DTE Energy. Potential FERC notice to proceed on 50% owned NEXUS project. (*CP16-22*). Staff and Intervenor testimony due in electric general rate case (*U-18255*) August 29, 2017.
- Edison International – Potential update on unregulated business strategy and financial guidance implications. Also ALJ decision on San Onofre Order Initiating Investigation (*I12-10-013*).
- Emera/Eversource Energy/National Grid. FERC staff testimony in New England ROE complaint #4 (EL16-64) – September 18, 2017
- Eversource Energy. Staff and intervenor testimony for Northern Pass lease (DE15-464) – September 14, 2017
- Hawaiian Electric Industries. Consumer Advocate testimony due in Hawaiian Electric Company rate case (2016-0328) – September 22, 2017
- PG&E Corp. – Expects to file GT&S rate case.
- PNM Resources. PRC to hold public workshop on rulemaking on utility ratemaking policies (17-00046-UT) – September 14, 2017
- PPL Corporation – Preliminary filing in review of U.K.'s RIIO-ED rate framework.

## Mary Jane Gets a New Car

In this piece, we begin a multi-part look at efficient electrification  While, we are not expecting revolutionary change which reignites the sales growth seen in prior decades, we do see electricity taking share of end use Btu consumption globally and in North America. There are three drivers for our point of view:  1) Electrification improves the environment: Electric emissions per Btu of output are lower across a wide spectrum of pollutants including CO2; 2) Cost savings: Several electric applications have experienced efficiency improvements and are at, or approaching, cost parity with primary fuel uses; and 3) Electricity is compatible with technological trends: Advances in networks favour the flexibility and interconnectedness of electric grids for productivity improvements.

FIGURE 3

**Electrification – Everybody's Doing It**

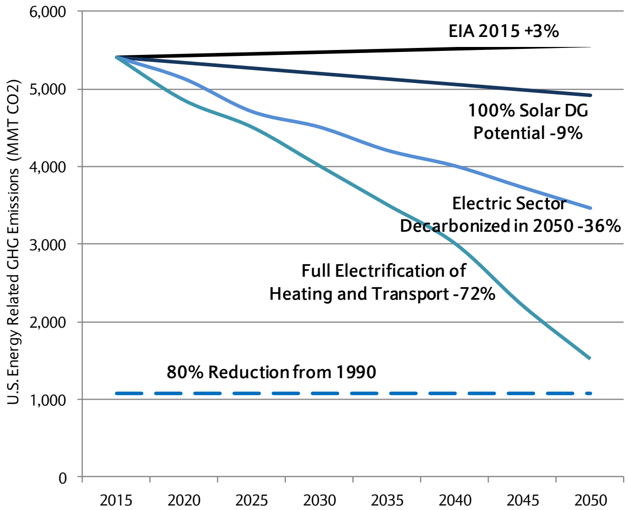



Source: National Renewable Energy Laboratory

These trends have already resulted in share gains globally for electricity.  We believe a valid case can be made for an acceleration of this trend due to the combination of drivers noted above.  In several studies related to deep decarbonisation, models predict electricity could rise to a 50% share of end use Btu consumption by 2050 from approximately 20% today.

FIGURE 4

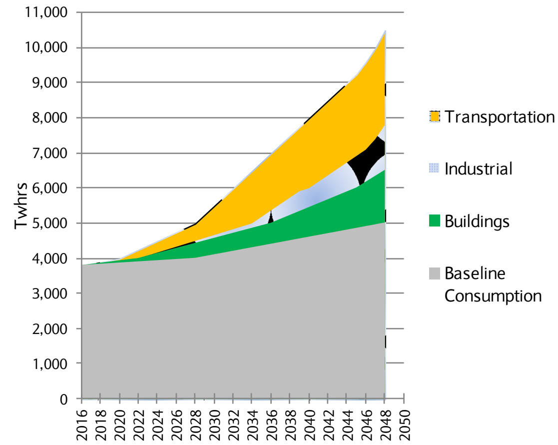
**Deep De-carbonization Waterfall**




Source: NREL (Weiss et al., 2017)

FIGURE 5

**Electrification Could Accelerate Sales Growth**




Source: NREL (Steinberg, et al., 2017)

What is in this report? In this report we examine models for 2 near-term electrification opportunities – Electric Vehicles and Indoor Farming.

## Electric Vehicles

There have been nearly 650 thousand electric vehicles and plug-in hybrids (PHEV) sold in the United States through June 2017. This compares to a total base of 263.6 million cars and light trucks on the road in 2015 (Source: Statista and the U.S. Department of Transportation). At only 0.3% share, EV's and PHEV's have significant upside. The drivers for sales growth are subsidies, costs travel range, and overall greater consumer acceptance of the technology. We expect that growth accelerates into and through the 2020s. Meaningful improvements in battery technology addressing cost and travel range are happening. Additionally, there are a number of federal and state led policies that have created incentive structures to grow the pool of EV's over time. We expect that the main drivers to reach cost parity with internal combustion engines will be reductions in the cell and pack cost. Please see "*European Autos: Future Powertrain Conference: Tesla's Competition hots up as the ICE melts*" (7/12/17)

FIGURE 6

**The Tipping Point for Electric Vehicles July 2017**

| | Battery cost / kWh | | | | | |
|---|---|---|---|---|---|---|
| **Component** | **$75** | **$100** | **$150** | **$200** | **$300** | **$350** |
| Mid-size ICE vehicle | $26,000 | $26,000 | $26,000 | $26,000 | $26,000 | $26,000 |
| Additional HEP cost | $1,600 | $1,600 | $1,600 | $1,600 | $1,600 | $1,600 |
| Additional 48V | $1,100 | $1,100 | $1,100 | $1,100 | $1,100 | $1,100 |
| **Mid-size ICE vehicle with HEP & 48V** | **$28,700** | **$28,700** | **$28,700** | **$28,700** | **$28,700** | **$28,700** |
| *less* | | | | | | |
| Engine / transmission | -$5,500 | -$5,500 | -$5,500 | -$5,500 | -$5,500 | -$5,500 |
| *plus* | | | | | | |
| Electric drivetrain / power electronics | $3,250 | $3,250 | $3,250 | $3,250 | $3,250 | $3,250 |
| 35 kWh battery (~112-155 mile range) | $2,625 | $3,500 | $5,250 | $7,000 | $10,500 | $12,250 |
| **Total** | **$26,375** | **$27,250** | **$29,000** | **$30,750** | **$34,250** | **$36,000** |
| 50 kWh battery (~149-180 mile range) | $3,750 | $5,000 | $7,500 | $10,000 | $15,000 | $17,500 |
| **Total** | **$27,500** | **$28,750** | **$31,250** | **$33,750** | **$38,750** | **$41,250** |

Source: Barclays Research, European and U.S. Autos & Auto Parts "Future PowerTrain Conference: Tesla's competition hots up as the ICE melts" 7/12/17

FIGURE 7

**EV and PHEV Individual Rebates and Goals**

| | Rebate Car | Rebate Charger | Tax Credit | Detail | Other Tax Benefit | Carpool Lane Access, Tolls | Reduced Rates for Charging | Fuel Tax Exemptions | State EV Goals |
|---|---|---|---|---|---|---|---|---|---|
| All States (a) | | | $2,500-$7,500 | | | | | | |
| Arizona | | | $75 | Charger | Reduced license tax | x | x | | |
| California (b) | $2,500 | 15% of loans up to $75,000 | | | | x | x | | 3.3M MOU by '25 |
| Connecticut | Up to $3,000 | | | | | | | | 3.3M MOU by '25 |
| Colorado | | $3,260 | $5,000 | | | | | | Cut fuel consumption |
| Delaware | $3,500 | $500 | | | | | | | |
| District of Columbia | | | $19,000<br>$500 | Conversion<br>Charger | Excise tax exempt | | | | |
| Florida | ----------County specific---------- | | | | | x | | | |
| Georgia | $200 fee | | | | | x | | | |
| Hawaii | | | | | Reduced license tax | x | x | | |
| Illinois | | $3,750 | | | | | | | 60% new vehicles be hybrids and 15% electric by 2025 |
| Indiana | | | | | | | x | | |
| Kentucky | | | | | | | x | | |
| Louisiana | | | $1,500 | | | | | | |
| Maryland | | | | | | x | x | | 3.3M MOU by '25 |
| Massachusetts | $2,500 | | | | | | | | 3.3M MOU by '25 |
| Michigan | | | | | | | x | | |
| Minnesota | | | | | | | x | | |
| Missouri | | | $1,500 | Charger | | | | x | |
| Nebraska | | | | | | x | | | |
| Nevada | | | | | | x | x | | |
| New Jersey | | | | | Sales tax exempt | x | | | |
| New York | $500 | | $2,500 | Charger | | x | x | | 3.3M MOU by '25 |
| North Carolina | | | | | | x | | | |
| Oklahoma | | | $1,500 | Charger | | | | | |
| Oregon | | $700 | $750 | Charger | | | | | 3.3M MOU by '25 |
| Pennsylvania (c) | $1,750 | | | | | | | | |
| Rhode Island | $2,500 | | | | | | | | 3.3M MOU by '25 |
| Tennessee | | | | | | x | | | |
| Utah | | | | | | x | | x | |
| Vermont | | | | | | | | | 3.3M MOU by '25 |
| Virginia | | | | | | | x | x | |
| Washington | | | | | Sales tax exempt | | | | 50K by 2020 |
| Wisconsin | | | | | | | | x | |
| Wyoming | | | | | | | | x | |

(a) Phaseout begins following sales of 200,000 qualifying vehicles. The credit declines to 50% in the 2 quarters following the start of the phase-out and to 25% in the following 2 quarters prior to phase-out.
(b) Based on income eligibility
(c) First 250

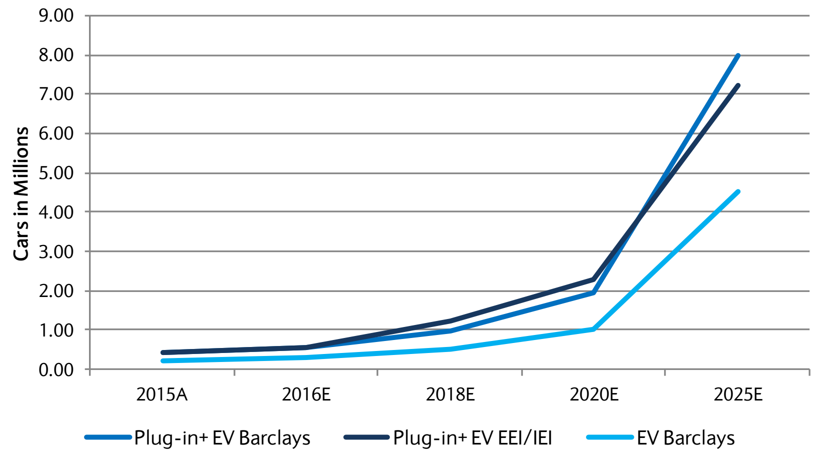
Source: Internal Revenue Service, Tesla.com, NESCAUM, Fleetcarma.com, Barclays Research

For structure of our analysis, we will: 1) discuss our model for EV and PHEV deployment; 2) Analyze what this means for incremental electricity usage and where; and 3) review the charging infrastructure needed to support EV growth and its costs.

## Our EV model

FIGURE 8

**Electric Vehicle Forecasts – United States**




Source: Edison Electric Institute, IEI, Barclays Research, EIA

The most significant EV policy initiative creating demand is in California and that is SB 350. There have been other significant initiatives but without the same level of commitment. In October 2013 8 states signed an MOU to have 3.3 M zero emission vehicles on the road by 2025 CA, CT, MD, MA, NY, OR, RI and VT. It is worth noting that plug-in hybrid electric vehicles can fulfil the mandate as well. At year-end 2016 we estimate that California had about a 46% share of the nation's electric vehicles which is far ahead of other states' based on 2016 sales data. Over time, we expect CA's share to drop relative to the rest of the country.

Market expectations are that growth accelerates in the 2020s for both plug-in hybrids and electric vehicles. Barclays expects sales of these cars to go from 1% of the market in 2018 to 7% for electric vehicles and 4% for plug-in hybrids by 2025. Plug-in hybrids are expected to be about 45% of electric vehicles and hybrids on the road in 2025.

FIGURE 9

**Electric and Plug-in Vehicles for Sale**

| Electric Vehicles for Sale | |
|---|---|
| Strategic Group | Subseries |
| BMW | BMW i3 |
| Daimler | FORTWO |
| Daimler | MERCEDES B CLASS |
| Fiat Chrysler | FIAT 500e |
| Ford | FOCUS |
| General Motors | BOLT |
| General Motors | SPARK |
| Honda | CLARITY |
| Hyundai Group | IONIQ |
| Hyundai Group | SOUL |
| Mitsubishi | I |
| Renault Nissan | LEAF |
| Tesla Motors | MODEL 3 |
| Tesla Motors | MODEL S |
| Tesla Motors | MODEL X |
| VW Porsche | GOLF |

| Plug-in Hybrids for Sale | |
|---|---|
| Strategic Group | Subseries |
| BMW | BMW 3 SERIES |
| BMW | BMW 5 SERIES |
| BMW | BMW 7 SERIES |
| BMW | BMW i8 |
| BMW | BMW X5 |
| BMW | COUNTRYMAN |
| Daimler | MERCEDES C CLASS |
| Daimler | MERCEDES GLE |
| Daimler | MERCEDES S CLASS |
| Fiat Chrysler | PACIFICA |
| Ford | C-MAX |
| Ford | FUSION |
| General Motors | CT6 |
| General Motors | ELR |
| General Motors | VOLT |
| Hyundai Group | OPTIMA |
| Hyundai Group | SONATA |
| Toyota | PRIUS |
| VW Porsche | AUDI A3 |
| VW Porsche | CAYENNE |
| VW Porsche | PANAMERA |
| Zhejiang Geely | VOLVO XC90 |

Source: WardsAuto Infobank

This forecast is a compilation of the Barclays' North America Auto & Auto Parts research which is driven by market share of vehicles. Please see "*European Autos: Future Powertrain Conference: Tesla's Competition hots up as the ICE melts*" (7/12/17)

FIGURE 10

**State EV and PEV Estimates – Barclays Research**

| | 2016E | 2020E | 2025E |
|---|---|---|---|
| PEVs MM | 0.3 | 1.0 | 3.5 |
| EVs MM | 0.3 | 1.0 | 4.5 |
| | | | |
| % EVs | | | |
| CA | 45.8% | 45.4% | 18.8% |
| WA | 4.2% | 4.2% | 6.3% |
| DC | 2.2% | 2.2% | 3.3% |
| OR | 3.3% | 3.3% | 4.9% |
| NY | 3.0% | 3.0% | 4.5% |
| NJ | 2.4% | 2.5% | 3.7% |
| HI | 1.6% | 1.6% | 2.4% |
| MD | 2.2% | 2.2% | 3.3% |
| MA | 2.2% | 2.2% | 3.3% |
| CO | 2.2% | 2.2% | 3.2% |
| UT | 1.9% | 1.9% | 2.8% |
| CT | 1.8% | 1.8% | 2.6% |
| WI | 1.6% | 1.7% | 2.5% |
| ME | 1.6% | 1.6% | 2.4% |
| NV | 1.6% | 1.6% | 2.4% |
| AZ | 1.5% | 1.5% | 2.3% |
| VT | 1.1% | 1.1% | 1.6% |
| FL | 1.1% | 1.1% | 1.6% |
| IL | 1.6% | 1.6% | 2.4% |
| VA | 1.1% | 1.1% | 1.6% |

Source: Barclays Research, WardsAuto

## How Much Electricity Will EV's Consume and Where?

Fortunately, there is significant usage data for the US auto fleet. Assuming that EV and PHEV's are driven in a similar fashion, we can easily predict the electricity consumption likely given our sales forecast. Figure 11 below shows the demand formula per EV and PHEV.

FIGURE 11

**EV Charging Math at Current Fuel Prices**

**Electric Vehicle**

Electricity=10,000 miles/((240 miles range)/(70 kwhr))

Electricity=10,000 miles / (3.4 miles/kwhr)

Electricity=2,941 kwhrs

Electricity=2.94 Mwhrs per year * $100.28/MWhr average price

Electricity = $295/year

**Plug-in Hybrid Vehicle**

Assume 70% of Miles are Electric

Electricity=7,000 miles /(53 miles range/(20 kwhr)

Electricity=7,000 miles / (2.65 miles/kwhr)

Electricity=2,641 kwhrs

Electricity=2.64 Mwhrs per year * $100.28/MWhr average price

Electricity = $264/year

Assume 30% of Miles are Gas

Gas = 3,000 miles / 40 miles per gallon

Gas=75 gallons * $2.34/gallon=$175/year

Gas = $175/year

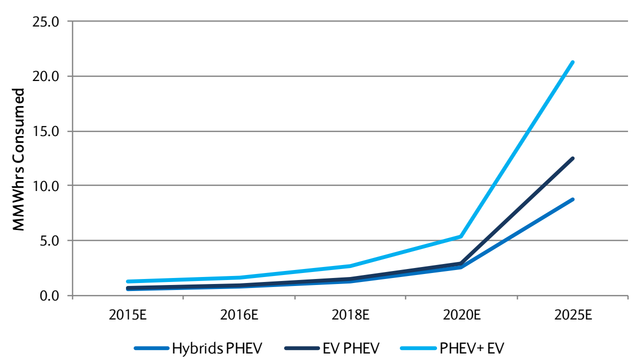
Total Cost per Year = $264 + $175 = $439

*Note: Volt Gen 2, Ford Fusion and Prius used to determine PHEV average battery and range and Bolt, Leaf and Model 3 were considered for pure electric.*

Source: Barclays Research, Department of Energy

FIGURE 12

**Electric Vehicle and Hybrid Mwhr Use Forecasts**




Source: Barclays Research, EIA

From a sales standpoint we expect that the combined use of hybrids and electric vehicles could total 21 twhrs in 2025 (0.54% of total U.S. retail sales) and cost $3.5B at a charging price of $164/Mwh in 2025. To derive this cost we used a base of the average retail price, state retail sales growth at EIA forecasted levels and grew the price by our nationally forecasted increases through 2025. The drivers for the price increases include cap-ex spending and fuel (where we use forwards and hold static starting in 2018).

FIGURE 13

**EV Electricity Usage Forecast – Units are Millions (except for miles)**

| | 2015E | 2016E | 2018E | 2020E | 2025E |
|---|---|---|---|---|---|
| Cumlative PEVs+EVs in Use | 0.41 | 0.56 | 0.95 | 1.95 | 8.00 |
| Cumlative PEVs in Use | 0.19 | 0.27 | 0.46 | 0.96 | 3.50 |
| Cumlative EVs in Use | 0.21 | 0.29 | 0.49 | 0.99 | 4.50 |
| | | | | | |
| Miles Per year | 10,000 | 10,000 | 10,250 | 10,750 | 12,000 |
| PEV Miles/kwhr | 2.49 | 2.57 | 2.73 | 2.90 | 3.36 |
| EV Miles/Kwhr | 3.20 | 3.30 | 3.50 | 3.72 | 4.31 |
| PEV electric % | 70% | 70% | 70% | 70% | 70% |
| | | | | | |
| Electricity Consumed PEVs | 0.55 | 0.72 | 1.21 | 2.48 | 8.76 |
| Electricity Consumed EVs | 0.67 | 0.89 | 1.45 | 2.87 | 12.54 |
| Total | 1.22 | 1.62 | 2.66 | 5.35 | 21.30 |

Source: Barclays Research, EIA, WardsAuto

Of the total we expect electric vehicles will consume 13 twhrs including efficiency improvements of 3% per year. Hybrids consume less electricity but will be a meaningful contributor at 9 twhrs. In the table below we highlight which states are likely to have the biggest sales impact. We also highlight the Utilities we expect to be most impacted. We also point out whether those companies have decoupled revenue streams or not.

FIGURE 14

**EVs and Retail Sales Implications**

| | Retail Mwhr Sales MM | % Electric Sales | | | | |
|---|---|---|---|---|---|---|
| | 2016 | 2016 | 2020 | 2025 | Ticker | Decoupled? |
| DC | 11.39 | 0.31% | 1.00% | 5.81% | EXC | EE and weather |
| HI | 9.44 | 0.23% | 0.81% | 5.17% | HE | Yes |
| ME | 11.41 | 0.23% | 0.81% | 5.17% | EMA-T | No |
| OR | 46.41 | 0.11% | 0.38% | 2.34% | POR | Yes |
| CT | 28.82 | 0.10% | 0.35% | 2.22% | ES | No |
| UT | 29.86 | 0.10% | 0.33% | 1.89% | BRKa | Partial |
| WA | 88.03 | 0.08% | 0.26% | 1.60% | BRKa | Yes |
| MA | 52.32 | 0.07% | 0.24% | 1.50% | ES, NGG | Yes |
| CA | 254.44 | 0.29% | 0.97% | 1.64% | EIX, PCG, SRE | Yes |
| NV | 36.03 | 0.07% | 0.24% | 1.35% | BRKa | No |
| CO | 54.80 | 0.06% | 0.21% | 1.19% | XEL | Weather only |
| MD | 61.33 | 0.06% | 0.19% | 1.16% | EXC | No |
| NJ | 74.77 | 0.05% | 0.18% | 1.07% | PEG, FE, EXC | No |
| WI | 69.47 | 0.04% | 0.13% | 0.76% | LNT, WEC | No |
| NY | 146.68 | 0.03% | 0.12% | 0.74% | ED, NGG | Yes |
| NM | 23.06 | 0.04% | 0.12% | 0.71% | PNM, XEL | No |
| AZ | 78.05 | 0.03% | 0.10% | 0.57% | PNW | No |

Source: Edison Electric Institute, IEI, Electric Power Research Institute (EPRI), National Renewable Energy Laboratory (NREL), SNL, Barclays Research

The companies with the most sales in areas that are not decoupled are Overweight rated EMA-T and EXC and also Equal Weight rated XEL.

## How Will EV's Be Charged and How Much Infrastructure Is Needed?

We expect customers will charge their vehicles in different ways than they do today. Due to lengthy charging times compared to gasoline fuelling, we don't anticipate a filling station model. Rather, depending on local rate structures, we believe a majority of charging will take place at home or work. Rapid charging stations are likely to be focussed on the highway system for distance travel and in cities where space and time is dearer.

There are three levels of charger service. Level 1, mainly for the home user who has ample charging time; Level 2 for home and office; and Level 3 for fast charging in filling stations and cities. The table below shows cost and charging time estimates for each level.

FIGURE 15

**EV Charging Station Characteristics**

| | | Equipment Cost | | |
|---|---|---|---|---|
| Type | Time | Residential | Work | Commercial |
| 120v Level 1 | 3-5 miles/hr 17 hrs | $200 | $1,400 | $1,700 |
| 240v Level 2 | 10-20 miles/hr 4-7 hrs | $2,200 | $4,600 | $5,500 |
| 200-450v Fast Charger/ DCFC | 30 minutes | | | $5,000-$95,000 |

Use assumed 12,500 miles/year

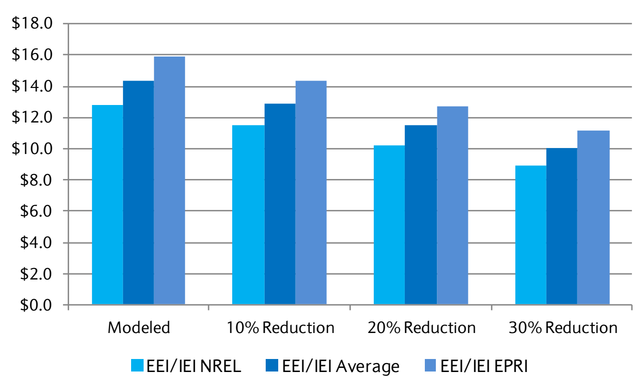
Source: EEI, Department of Energy, Barclays Research

Right now there are about 43 thousand level 2 charging stations in the United States at 16 thousand locations according to EIA. California has the most charging stations with 4,482 locations and 15,888 stations.

The average EEI/IEI estimate is 4.95M chargers in 2025. The EEI/IEI estimate is the average of forecasts developed with National Renewable Energy Laboratory (4.4M) and EPRI (5.5M) forecasts. Before cost reductions we estimate infrastructure investment of $13-$16B for the range.

FIGURE 16

**EV Infrastructure Cost Scenarios for 2025 - $B**




Source: Edison Electric Institute, IEI, Electric Power Research Institute (EPRI), National Renewable Energy Laboratory (NREL), SNL, Barclays Research

FIGURE 27

**EV Infrastructure Scenario Details**

| EEI/IEI Average of Scenarios | Chargers MM | % Total | $/ Charger | Total $ B |
|---|---|---|---|---|
| Commercial-DCFC | 0.31 | 6.3% | $5,500 | $1.7 |
| Work-Level 2 | 1.86 | 37.6% | $4,600 | $8.6 |
| Home-Level 2 | 1.86 | 37.6% | $2,200 | $4.1 |
| Home-Level 1 | 0.92 | 18.6% | $200 | $0.2 |
| Total | 4.95 | | | $14.4 |

| EEI/IEI and NREL | Chargers MM | % Total | $/ Charger | Total $ B |
|---|---|---|---|---|
| Commercial-DCFC | 0.28 | 6.3% | $5,500 | $1.5 |
| Work-Level 2 | 1.65 | 37.6% | $4,600 | $7.6 |
| Home-Level 2 | 1.65 | 37.6% | $2,200 | $3.6 |
| Home-Level 1 | 0.82 | 18.6% | $200 | $0.2 |
| Total | 4.40 | | | $12.8 |

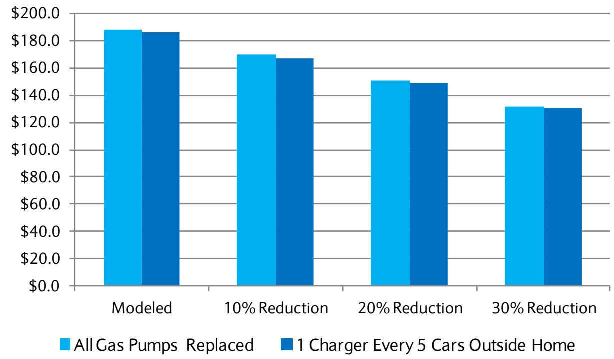
| EEI/IEI and EPRI | Chargers MM | % Total | $/ Charger | Total $ B |
|---|---|---|---|---|
| Commercial-DCFC | 0.34 | 6.3% | $5,500 | $1.9 |
| Work-Level 2 | 2.07 | 37.6% | $4,600 | $9.5 |
| Home-Level 2 | 2.07 | 37.6% | $2,200 | $4.5 |
| Home-Level 1 | 1.02 | 18.6% | $200 | $0.2 |
| Total | 5.50 | | | $15.9 |

Source: Edison Electric Institute, IEI, Electric Power Research Institute (EPRI), National Renewable Energy Laboratory (NREL), SNL, Barclays Research

In an upside case for electric cars we think a charging station away from home would be required for every 5 cars. In the United States there are about 1M gas pumps and on-average there are 8.5 pumps per gas station. Overall a fully built out infrastructure could cost $186-$189B. Realistically the costs of building the cost per station is likely to decline due to efficiency. To date Volkswagen has committed $2B to building out the infrastructure under "Electrify America" (*https://www.electrifyamerica.com/*). Tesla is also building out its supercharger network.

FIGURE 38

**EV Infrastructure Cost Upside Scenarios for 2025 - $B**




Source: Edison Electric Institute, IEI, Electric Power Research Institute (EPRI), Barclays Research

FIGURE 49

**EV Infrastructure Scenario Details – Upside Cases**

| Replace Every Gas Pump with a Charger | Chargers MM | % Total | $/ Charger | Total $ B |
|---|---|---|---|---|
| Commercial-DCFC | 4.02 | 6.3% | $5,500 | $22.1 |
| Work-Level 2 | 24.12 | 37.6% | $4,600 | $110.9 |
| Home-Level 2 | 24.13 | 37.6% | $2,200 | $53.1 |
| Home-Level 1 | 11.94 | 18.6% | $200 | $2.4 |
| Total | 64.20 | | | $188.5 |

| Scaled to 1 Charger for Every 5 Cars Outside the Home | Chargers MM | % Total | $/ Charger | Total $ B |
|---|---|---|---|---|
| Commercial-DCFC | 3.97 | 6.3% | $5,500 | $21.8 |
| Work-Level 2 | 23.81 | 37.6% | $4,600 | $109.5 |
| Home-Level 2 | 23.81 | 37.6% | $2,200 | $52.4 |
| Home-Level 1 | 11.79 | 18.6% | $200 | $2.4 |
| Total | 63.38 | | | $186.1 |

Source: Edison Electric Institute, IEI, Electric Power Research Institute (EPRI), SNL, Barclays Research

### *Case study for California*

Utilities will be a part of the charging infrastructure and we expect other companies (like ChargePoint) will participate competitively as well. The investor-owned utilities (EIX, PCG, SRE) have already proposed $1B of spending for their program in dockets 17-01-020 to 17-01-022. Hearings are scheduled during September 25–October 13, 2017 as needed with proposed decisions in Q1'18 and a final order on or about April 15, 2018. For more details on the process please see the scoping *memo*. We believe the developments in California are worth watching as it is the largest rollout of charging stations in the U.S. with direct investment from utilities.

FIGURE 20

**California Utility Proposed EV Infrastructure Spending**

| 2020 Spending Plans-$MM | Onroad Med-Heavy Infrastructure | Residential Infrastructure | Offroad Infrastructure | Public DC Fast Charging | Taxi/ Ridesharing | Education/ Outreach | Total |
|---|---|---|---|---|---|---|---|
| SRE | $4 | $226 | $5 | $4 | $4 | $2 | $244 |
| EIX | $558 | $4 | $5 | $4 | $4 | $0 | $575 |
| PCG | $217 | $0 | $3 | $22 | $0 | $2 | $244 |
| Total | $779 | $230 | $13 | $30 | $8 | $4 | $1,063 |

Source: California Energy Commission, Barclays Research

# Indoor Agriculture

Legalization of medicinal and recreational cannabis in various states is providing a model for Indoor Farming. Indoor Farming in not only a significant user of electricity for lighting, but has several other beneficial attributes compared to traditional farm models as well. Finally, it plays well into the 'Locally Grown or Farm to Table' trend in consumer purchases of produce.

FIGURE 21

**Indoor Farming Benefits**

| Benefit | Potential Impact |
|---|---|
| Crop Cycle | 10-30% reduction |
| Fertilizer Reduction | 20-50% reduction |
| Nurtritional Quality | 5-20% increase |
| Transportation Cost | Up to 54% reduction in cost of food |
| Water Usage | 70%+ reduction |

Source: Electric Research Power Institute, Barclays Research

Indoor farming locations include: custom warehouses, pods or shipping containers, controlled greenhouses, or variants on the first three areas.

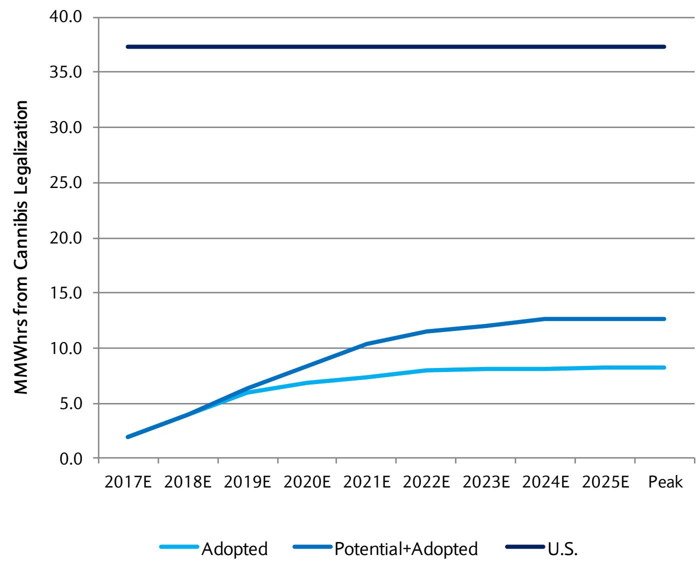
## Case study: Recreational Cannabis in Colorado

Colorado was one of the first 2 states to legalize recreational cannabis in 2012. Following legalization there was a scaling of the market over the first few years. Total demand in the last five years from these customers has grown from zero to approximately 75MW. On a MWh basis this represents approximately 0.5MM incremental sales. On an annualized basis, this load has added 0.5% per annum to Colorado's load and is still growing at double digits per year

To track the demand we also looked at tax revenues and fees. Last year, recreational cannabis taxes and fees in Colorado grew 19% which was a tapering of growth, and we expect that the taper will continue over the next few years. Based on XEL's Colorado experience we believe that the demand grows rapidly in the years following legalization and then growth tapers over a seven-year growth phase.

FIGURE 52

**Potential MMwhrs Consumed by Cannabis Customers**




Source: Company reports, Barclays Research , Colorado Department of Revenue, SNL

So far we have seen recreational marjiuana approved in 10 states and potentially another 6 in 2017 or 2018. Of the 6 states that could move forward with recreational cannabis they are all through ballott initiatives except for New Jersey. In Montana, medical cannabis was most recently approved in 2016.

We believe there is 8 twhrs of demand from states that have already implemented the law; 13 twhrs including the 6 states that could enact the law and 37 twhrs for all of the United States at peak levels.

FIGURE 63

**Potential Mwhrs Consumed from Cannabis Customers**

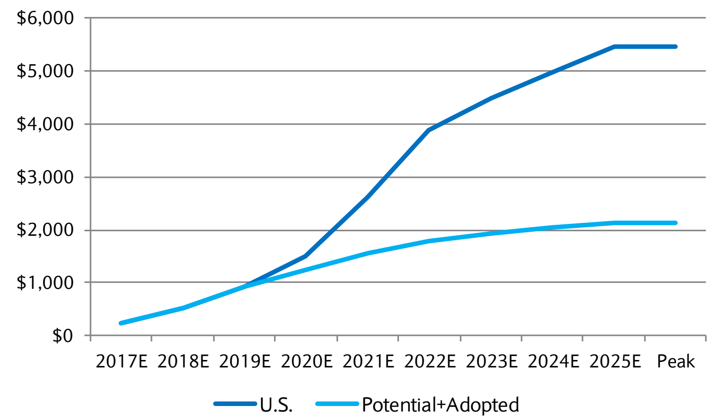
| States | 2017E | 2018E | 2019E | 2020E | 2021E | 2022E | 2023E | 2024E | 2025E | Peak | MW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Adopted | 1.99 | 3.89 | 5.94 | 6.79 | 7.39 | 7.99 | 8.07 | 8.15 | 8.23 | 8.23 | 1,253 |
| Potential+Adopted | 1.99 | 3.89 | 6.33 | 8.35 | 10.38 | 11.56 | 12.07 | 12.58 | 12.69 | 12.70 | 1,933 |
| United States | | | | | | | | | | 37.25 | 5,670 |

Source: Company reports, Barclays Research , Colorado Department of Revenue, SNL

If you look at it in terms of retail electric revenues, the approved and likely states represent a $2.1B revenue opportunity and for all of the United States it is $5.5B.

FIGURE 74

Cannabis Related Electricity Spending




Source: SNL, company reports, Colorado Department of Revenue

## Electrification of Locally Grown Food Market

Using Cannabis as a model, we see significant upside in electric use should a small percentage of produce migrate to Indoor Farming. According to the USDA locally grown or direct to consumer (DTC) farming represented 7.8% of the industry or about 164K farms. There were 9,435 farms using greenhouses or high tunnel electrification and 3,867 were growing vegetables and herbs.

To estimate electricity demand we utilized the data from indoor cannabis farming. We assumed that customers with less than $75K in sales have one half of the demand of the usage of larger customers. We also assumed that the potential market is one-half of the 164K direct to consumer farms or 82K.

FIGURE 85

**Electrification of Farm to Table Presents Upside**

| | Direct to Consumer | Growth Rate 2007-2012 | Total | Current MWhrs | Potential MMWhrs |
|---|---|---|---|---|---|
| Farms | 163,675 | | 2,098,397 | | *Total electric use assuming 50% electrified.* |
| Greenhouse/High Tunnel Producers <$75K in sales | | | | | |
| Veg&herbs | 3,168 | 246% | 4,212 | 1.0 | |
| Total | 7,287 | 198% | 9,766 | 2.2 | |
| | | | | | |
| $/Acre Spent | | | | | |
| Utilities | $28.25 | | | | |
| Fuel | $31.99 | | | | |
| | | | | | |
| Greenhouse/High Tunnel Producers >$75K in sales | | | | | |
| Veg&herbs | 699 | 124% | 1,056 | 0.4 | |
| Total | 2,148 | 99% | 3,210 | 1.3 | |
| | | | | | |
| $/Acre Spent | | | | | |
| Utilities | $85.53 | | | | |
| Fuel | $106.68 | | | | |
| | | | | | |
| Total Greenhouse/High Tunnel Producers | | | | | |
| Veg&herbs | 3,867 | | | 1.4 | |
| Total | 9,435 | | | 3.6 | 31.0 |

Source: USDA 2012 Census, Barclays Research, company reports.

## Retail sales implications from EV and Cannabis

From a retail sales standpoint the companies that have the most leverage to these 2 issues are: EXC, XEL, ES, BRKa, PNW, PEG, AEE, and SO. EXC benefits from higher sales in DC, DE and NJ. XEL benefits more from the impact of the legalization of recreational cannabis in Colorado and its impact on indoor farming. In Arizona decoupling is authorized but has not been implemented for PNW and the outlook for residential solar is a potential offsetting impact. For PEG the company's only jurisdiction is New Jersey where recreational cannabis legislation is stalled in Senate (S3195) but could come back.

FIGURE 26

**Summary of Retail Sales Implications and Related Company Impacts**

| State | % '16 Sales | Ticker | Decoupled |
|---|---|---|---|
| DC | 8.38% | EXC | EE and weather |
| VT | 7.98% | N/A | Partial |
| ME | 7.01% | IBE.MC | No |
| HI | 6.95% | HE | Yes |
| RI | 5.81% | NGG | Yes |
| AK | 5.23% | N/A | N/A |
| OR | 3.86% | POR | Yes |
| NH | 3.72% | ES | No |
| CA | 3.54% | EIX, PCG, SRE | Yes |
| DE | 3.46% | EXC | No |
| MA | 3.17% | ES, NGG | Yes |
| WA | 2.92% | BRKa | Yes |
| CO | 2.82% | XEL | Weather only |
| NV | 2.78% | BRKa | No |
| NJ | 2.65% | PEG, FE, EXC | No |
| UT | 2.52% | BRKa | No |
| CT | 2.47% | ES | No |
| AZ | 1.84% | PNW | No |
| MT | 1.82% | N/A | No |
| MN | 1.59% | XEL | Yes |
| MD | 1.43% | EXC | No |
| MO | 1.44% | AEE | No |
| GA | 1.16% | SO | No |

Source: SNL, Barclays Research

## EV and Indoor Agriculture Impact on Renewable Demand

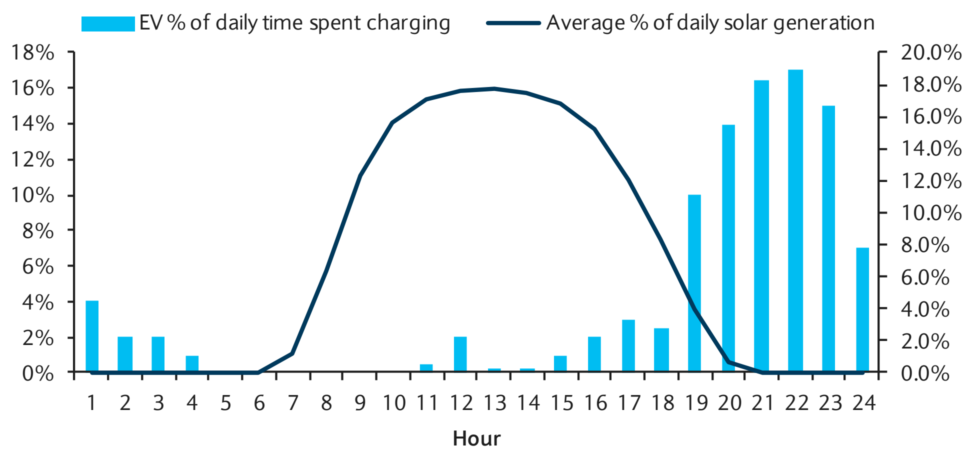
Given the potential electric demand growth driven by EVs and an increase in indoor agriculture, we look at potential new capacity demand for solar and wind that could be driven by these trends.

Based on the time of generation relative to the typical time of charging for EVs, we find that the solar 'generation curve' lines up poorly with the hours of highest electric demand for EV charging. This is somewhat intuitive, given the tendency for many EV owners to charge their vehicles overnight at home.

However, there are currently policy and rate-design initiatives underway (most notably in California) that include time of use rates and infrastructure spending on workplace chargers to incentivize EV charging at the workplace during off-peak hours. As a result we estimate solar will comprise 25% of renewable capacity deployed to meet EV charging demand.

FIGURE 97

**Solar average time of generation and EV daily time spent charging**

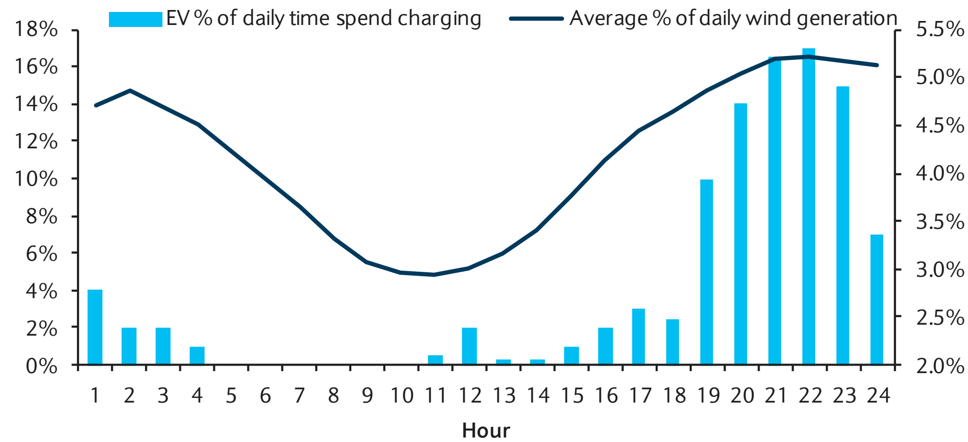



Source: CAISO, U.S. DOE, Barclays Research

Looking at the average time of generation for wind, we see that it lines up nicely to the average time of EV charging. Our forecast assumes wind comprises 75% of renewable capacity deployed to meet the increase in EV charging demand.

FIGURE 108

**Wind average time of generation and EV daily time spent charging**



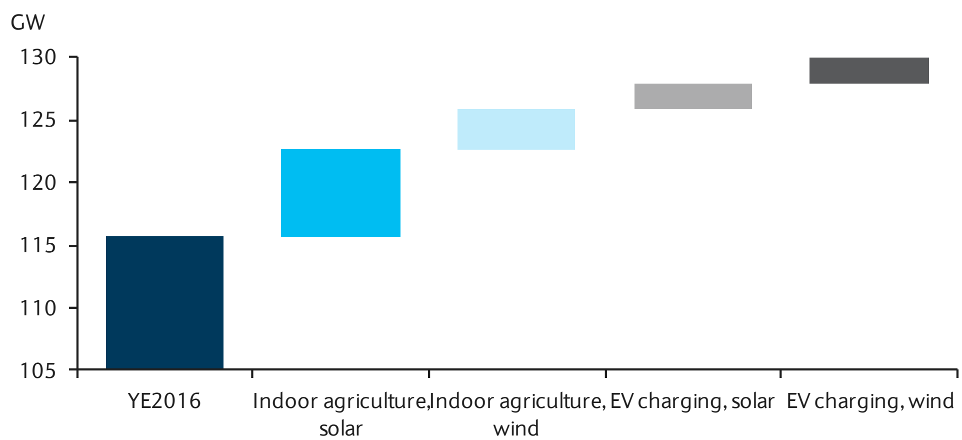

Source: CAISO, U.S. DOE, Barclays Research

Overall we forecast that EV charging and indoor agriculture could drive a total of 15GW of new renewable demand through 2025. Our analysis assumes that capacity additions are comprised of two-thirds renewable sources split 50/50 between solar/wind for indoor agriculture and 25/75 for EV charging.

Of these two potential demand drivers, we forecast indoor agriculture to drive the majority of demand with 7GW of solar and 3GW of wind added through 2025. For comparison, these figures equate to roughly half of new U.S. solar installations and a third of new U.S. wind installations in 2016. We forecast EV charging to be a smaller contributor, but still material at approximately 3GW of new wind capacity and 2GW of new solar capacity through 2025.

FIGURE 119

**Potential drivers of new U.S. renewable capacity, 2025**




Source: U.S. DOE, Barclays Research

## Current Thoughts on the 201 Solar Trade Case

The U.S. ITC held the injury hearing on 15 August 2017 with the actual vote on injury expected on 22 September 2017. We do not have a formal prediction on the outcome, except to say that it seems to us that there is at least a reasonable case to be made that imports were a substantial cause of harm to domestic based module producers (the trade case and our analysis here excludes thin-film solar modules). However, the small size of the U.S. module manufacturing industry and the potential harm on non-manufacturing solar jobs seems to suggest a small tariff ($0.01-0.05/w) could be used as a remedy, far below what the complaining parties have asked for in the case. The remedy hearing would be on 3 October 2017, if injury is found. The outcome of the injury finding and potential remedy is highly uncertain. We thought we would provide some context for investors to inform their own views.

FIGURE 30

**Key dates in 201 proceeding**

| Date | Event |
|---|---|
| 15 August 2017 | Injury hearing |
| 11 September 2017 | Injury report to the commission |
| 22 September 2017 | Proposed vote on injury |
| 3 October 2017 | Remedy hearing |
| 23 October 2017 | Remedy report to the commission |
| 31 October 2017 | Proposed vote on remedy |
| 13 November 2017 | Report submitted to President |

Source: U.S. ITC, Barclays Research

### Recent rulings

The U.S. ITC already imposes tariffs on solar modules imported from China and Taiwan, although these tariffs are imposed under different rules than the 201. The Chinese tariff stems from a U.S. ITC finding in November 2012 that was extended to Taiwan in February 2015. The U.S. ITC voted 6-0 in the original November 2012 China case and 5-0 in the Taiwan case as it related to solar modules (one commissioner not participating). Two of the six commissioner seats are currently vacant.

FIGURE 31

**Current U.S. ITC commissioners**

| Commissioner | Party | Nominated by | Vote for 2012 tariff on China | Vote for 2015 tariff on Taiwan |
|---|---|---|---|---|
| Rhonda Schmidtlein | Democrat | Obama | Not on ITC at the time | Yes |
| David Johanson | Republican | Obama | Yes | Yes |
| Irving Williamson | Democrat | G.W. Bush | Yes | Yes |
| Meredith Broadbent | Republican | Obama | Yes | Yes* |

Source: USITC, Barclays Research.

Note: * Commissioner Broadbent voted for the tariff on modules, but was the only commissioner to vote against extending the tariff to include solar cells.

### Criteria

Under section 201, the Commission is mandated to consider whether "an article is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article" and to take into account closing of domestic capacity and significant unemployment with the domestic industry.

In preparation for the injury hearing, the USITC reported that of the twenty-seven solar module manufacturing facilities that were confirmed open as of 1 January 2012, nineteen (70%) had closed by July 2017.

### Remedy

Not to get ahead of ourselves, but if the U.S. ITC finds injury, the asked for $0.75/w minimum price is not necessarily the end remedy. The U.S. ITC has discretion in proposing a remedy to the President and the President has discretion in what remedy, if any, would ultimately be imposed. Importantly, the tariff does not need to be high enough to make the domestic production competitive against imports.

The 201 safeguard is meant to help domestic industry make a positive adjustment to import competition through becoming "able to compete successfully with imports" without tariffs imposed or "***experiencing an orderly transfer of resources to other productive pursuits***." The later seems to apply here, in our view, as the U.S. solar module industry is already shielded by import tariffs and struggles to compete. In other words, remedy should focus on helping the domestic solar module manufacturing industry go do something else.

In 2014-2016 the U.S. annual imports of solar modules averaged 8.6GW of capacity at an average price of $0.47/w for an annual average of $4.0bn. By comparison, the total revenue reported to the USITC for domestic module manufacturing was only $470mnpa.

Assuming a similar import rate in 2018-2021, a tariff of just $0.05/w would off-set 100% of the domestic industries estimated historical annual revenue. A $0.01/w tariff would replace total manufacturing and related complete annual wages.

FIGURE 122

**Solar module production workers impacted by the 201 trade case**

| Metric | Unit | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| Number of workers | (number) | 1,293 | 1,080 | 963 | 1,106 | 1,340 |
| Avg. weekly hours | (hours) | 47 | 43 | 37 | 41 | 38 |
| Hourly wage estimate* | ($/hr) | 25.00 | 25.00 | 25.00 | 25.00 | 25.00 |
| Annual avg. salary | $ | 61,149 | 56,213 | 48,436 | 52,799 | 48,876 |
| Total production wages | $mn | 79.1 | 60.7 | 46.6 | 58.4 | 65.5 |

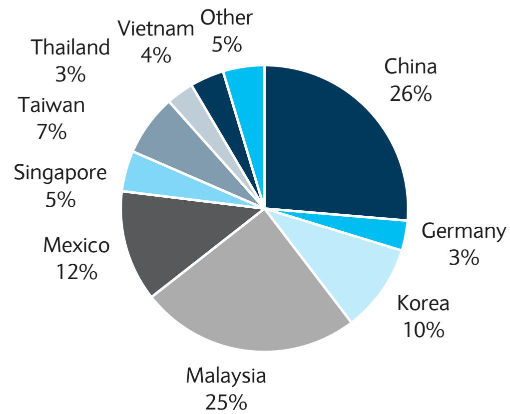
Source: USITC, Barclays Research estimates.
Note: * USITC has kept the actual hourly wage confidential; we have used $25/hr as an estimate.

### Module trade flows

We thought it would be helpful to give investors a sense of the shape of global module trade that may be impacted should the case result in a significant tariff. The U.S. imports modules primarily from Asia.

*The U.S. imports $8.2bn of solar modules in 2016, double the 2014 value imported.*

FIGURE 13
**Source of U.S. module imports 2014-2016**



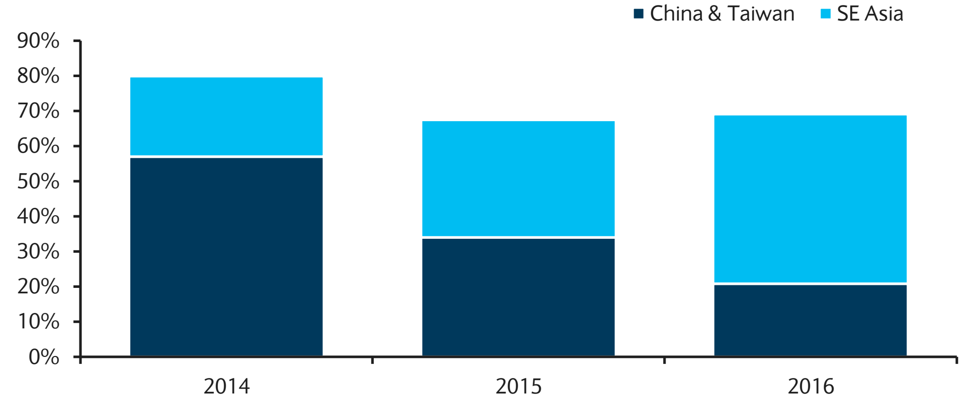

Source: USITC, Barclays Research.

In response to the U.S. decision to apply tariffs on modules imported from both China (2012) and Taiwan (2015) manufacturers have expanded capacity in Southeast Asia to circumvent the U.S. import tariffs. As a result, China and Taiwan's share of U.S. solar module imports declined to just 21% of total U.S. imports in 2016. The expanded capacity in Southeast Asia is also a significant driver in the solar module manufacturing overcapacity, in our view.

*The U.S. imports from China declined 6% and declined 72% from Taiwan in 2016 compared to 2014 despite total U.S. imports doubling.*

FIGURE 144

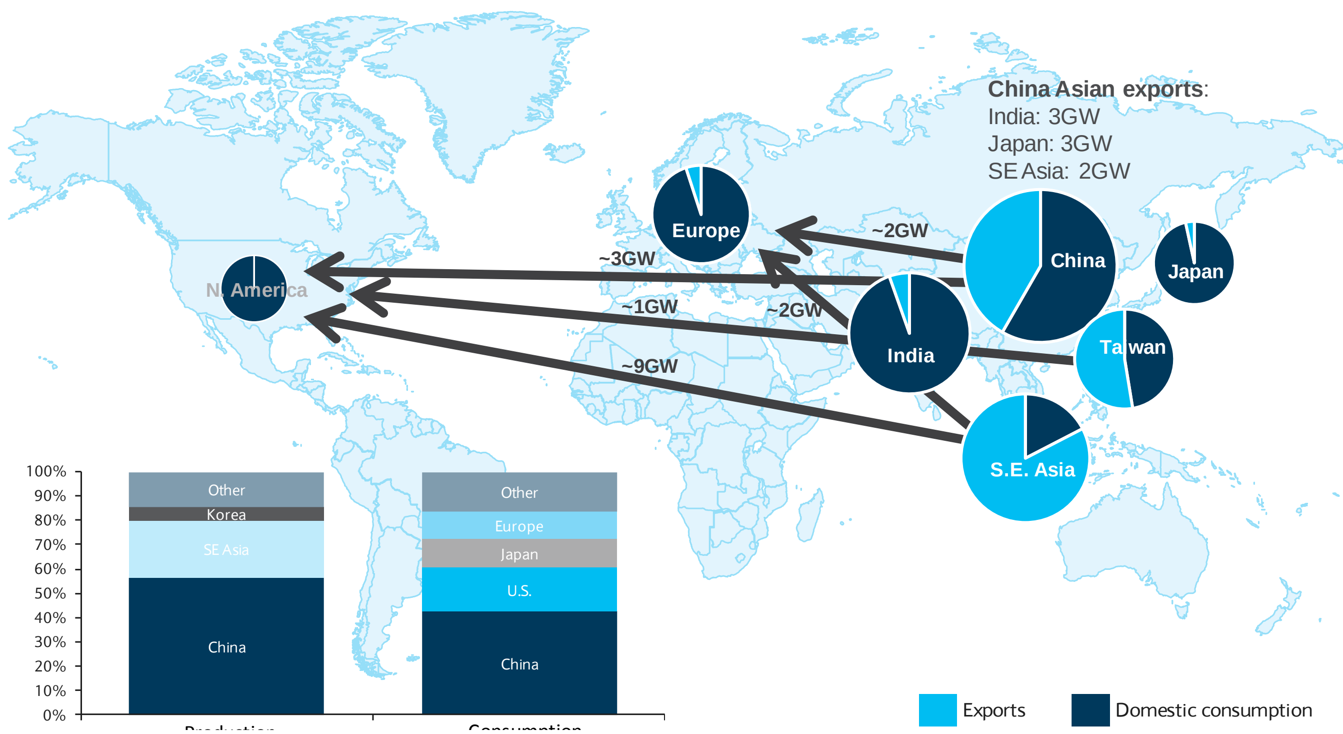
**Proportion of U.S. solar module imports**




Source: USITC, Barclays Research.

FIGURE 155

**Solar module trade flows**




Note: Pie chart size approximately represents relative size of manufacturing capacity

Source: Barclays Research

## In Case You Didn't See It

*RUN: Connecting with Comcast*, August 24, 2017

*DOE Report Supports PJM Pricing Initiatives*, August 24, 2017

*Court Ruling Presents Risk of Further Delay in FERC Certification of Gas Pipeline Projects*, August 23, 2017

*SO: Approaching the Finish Line in Mississippi*, August 22, 2017

*CSIQ: Downgrade to UW*, August 21, 2017

*WEC: Foxconn Incentive Bill Advances to WI Senate*, August 18, 2017

*Missouri Regulation: So You're Saying There's a Chance?*, August 17, 2017

*SRCL: Shareholder transition from Growth to Value underway*, August 16, 2017

*RUN: OoO – Takeaways from RUN meetings & 201 testimony*, August 16, 2017

*SCG: Withdraws Abandonment Petition to Allow Time for Review*, August 16, 2017

*EIX: No Outcome Yet for SONGs*, August 15, 2017

*Equity Income Outflows in July*, August 14, 2017

*H-T: Fairly Valued; Potential M&A Overhang*, August 14, 2017

*WEC: UPDATE: Return on Deferral Balance Poses a Challenge*, August 11, 2017

*ES: Positive Final EIS for Northern Pass*, August 10, 2017

*WEC: Rate Freeze Approved with Conditions*, August 10, 2017

*ES: Time is not on the side of Northern Pass*, August 10, 2017

*POR: Still Waiting for IRP Clarity*, August 9, 2017

*AES: Progress With or Without Alto Maipo*, August 8, 2017

*DYN: Debt Offering and Tender Upsized, ECP Registers Shares as Regular Course*, August 8, 2017

*AEP/OGE: Potential for Better Regulation in Oklahoma*, August 8, 2017

*SRE: Cameron Delayed again, but (Maybe) it doesn't Matter*, August 7, 2017

*SCG: Ex Parte Transcript; 2Q'17 Results*, August 3, 2017

*CNP: Strong Utility Supports Valuation*, August 3, 2017

*NYLD: Clarity by Year-end on Transformation*, August 3, 2017

*NRG: Look for Q3 Call for Strategic Updates*, August 3, 2017

*SO: The Great Escape from Vogtle, Not So Fast*, August 2, 2017

*D: Cove Point on Track as the Growth Engine*, August 2, 2017

*LNT: Iowa GRC Testimony Limited, but in Opposition*, August 2, 2017

*SCG: Summer Isn't Coming; Upgrade Overweight on Nuclear Abandonment*, August 1, 2017

*AEP: Filings Begin on Wind Catcher*, August 1, 2017

*FE: Moving Forward on FES*, July 28, 2017

*CPN: 2Q'17 Results; Board Has Been in Sale Discussions Since Spring 2017*, July 28, 2017

*FSLR: 2Q17: Significant Beat*, July 27, 2017

*EMA.TO: Emera Bids Atlantic Link in Massachusetts RFP*, July 27, 2017

*ES: Northern Pass COD Delayed for One Year*, July 27, 2017

*AEP: Trifecta: Customers, Shareholders and the Environment Win*, July 27, 2017

*NEE/NEP: Industry Leader Kicks off 2Q17 Earnings Season with Solid Results*, July 26, 2017

*DTE: Raising 2017 EPS Guidance*, July 26, 2017

*EXC: Court Upholds New York Zero Emission Credits*, July 26, 2017

*Power & Utilities: Update 2Q17 Quarterly Earnings Preview*; July 21, 2017

*Power & Utilities: Record Equity Income Outflow in June*, July 18, 2017

Footnotes:

Figures 1,2 and 3: Steinberg, Daniel, Dave Bielen, Josh Eichman, Kelly Eurek, Jeff Logan, Trieu Mai, Colin McMillan, Andrew Parker, Laura Vimmerstedt, and Eric Wilson. 2017. *Electrification & Decarbonization: Exploring U.S. Energy Use and Greenhouse Gas Emissions in Scenarios with Widespread Electrification and Power Sector Decarbonization*. NREL/TP-6A20-68214. Golden, CO: National Renewable Energy Laboratory. *https://www.nrel.gov/docs/fy17osti/68214.pdf*.

Figure 2: Jurgen Weiss, Ryan Hledik, Michael Hagerty, Will Gorman – January 2017. *Electrification: Emerging Opportunities for Utility Growth*
*Link*

## Valuation Methodology and Risks

### North America Power & Utilities

**AES Corp. (AES)**

**Valuation Methodology:** Our valuation is the average of $16 for a global average P/E of 13.1x in 2018E applied to $1.23 and $9.50 for our sum of the parts, which includes $18 for the businesses using regional EBITDA and P/E multiples less $6 for recourse debt and $2 for tax policy exposure. As comps we use Caribbean Utilities (CUP'U-T), EDP Energia (ENBR3-BR), Emera (EMA-T), Enel Americas (ENELAM-SA), E'on (EOAN-XE), Kansai Electric (9503-TO) and U.S. Regulated Utilities.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** As a global power company and electric utility, AES is exposed to merchant power risk, country risk, currency risk (particularly in South America), regulatory risk, and counterparty risk.

**Alliant Energy (LNT)**

**Valuation Methodology:** Our $43 price target is premised on a 9.85% premium to the 2019 regulated group average P/E multiple of 17.4x applied to our 2019 earnings estimate of $2.28.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include utility regulation; execution of its renewable generation expansion program; commodity prices; and interest rates.

**Ameren Corp. (AEE)**

**Valuation Methodology:** Our $58 target is a 5% premium to the 17.2x Regulated Utility group applied to our $3.20 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the Ameren outlook are interest rates, regulation (Missouri, Illinois and the Federal Energy Regulatory Commission), outlook for Missouri legislation and the capital markets.

**American States Water Company (AWR)**

**Valuation Methodology:** Our price target is premised upon the 2019 water group average multiple of 23.2x applied to our 2019 estimate of $1.87.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory issues resulting in lower ability to spend capital or a lower ROE, ability to obtain additional military contracts and perform on the current contracts are all risks.

**Aqua America (WTR)**

**Valuation Methodology:** Our price target is based on applying a 5% premium the water group average 2019 P/E multiple of 22.1x to our 2019 EPS estimate of $1.55.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include a potential acquisition of a gas ldc or non water utility, an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential, and potential tax reform.

**California Water Service Group (CWT)**

**Valuation Methodology:** Our price target is premised upon applying the 2019 water group average multiple of 22.2x to our 2019 estimate of $1.34.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Main risks are regulatory given the significant impact the outcome and timing of the California general rate case can have. Also the California drought and associated recovery has impacted results in the past several years. Interest rates impact commission granted return on equity levels as well as impacting the rate paid on short term debt. National policy such as bonus depreciation and EPA actions will also impact spending levels and financing for the utility.

**CMS Energy (CMS)**

**Valuation Methodology:** Our price target of $49 is premised upon a 15% premium to the current 2019E regulated utility multiple of 17.0x our 2019E EPS of $2.53.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** CMS Energy faces risk from Michigan utility regulation, commodity prices, and interest rates.

**Connecticut Water Service Inc. (CTWS)**

**Valuation Methodology:** Our $53 price target is premised upon applying the 2018 water group average PE multiple of 22.2x to our 2019 estimate of $2.40.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risk are the main issues even with positive regulatory mechanisms in both CT and ME, the eventual true up or consideration surrounding repair tax flow through accounting could cause a potential larger than expected rate increase to customers limiting capital recovery in that year.

**Consolidated Edison (ED)**

**Valuation Methodology:** Our $82 price target is a 6% premium to the group including +0.8% for exposure to tax changes applied to the 2019 Regulated Utility P/E of 17.0x and our $4.57 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to the outlook include rating agency actions, regulatory risk, interest rates, and access to the capital markets.

**Dominion Energy (D)**

**Valuation Methodology:** We use a sum of the parts methodology on 2019 estimates to derive the valuation for Dominion Resources. We value VEPCO, the regulated electric utility subsidiary at a 15% premium to to the average regulated utility P/E multiple. We value D Energy at a 5%

## Valuation Methodology and Risks

premium to the average midstream P/E multiple.We value Corp & Other at a regulated utility average multiple. We value the merchant generation at 7.6x EBITDA and deduct allocated debt. We value Atlantic Coast Pipeline at a 14.2x MLP multiple to EBITDA, discounted back one year to 2019. We add $2 value for D's LP ownership stake in DM.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Changes to the regulatory landscape could change D's earnings potential. In addition, D has an extensive capital expenditure forecast driving its growth strategy. Changes to availability of capital could impede its growth objectives. Project delays could push out projected earnings growth. A decline in the forward power curves could reduce earnings coming from Millstone's unhedged production. There is also uncertainty with regard to potential tax reform.

**Duke Energy (DUK)**

**Valuation Methodology:** Our valuation for DUK is based upon a 0.6% premium to the industry average P/E on our 2019E earnings. The premium reflects the net of a 5% premium offset by a 4.4% discount for potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to regulated utilities, and DUK specifically, include weakening demand, higher than expected inflationary pressures, interest rates, regulatory lag and greater scrutiny from regulators and politicians around investment and operating decisions. Lingering political effects and regulatory recovery of the coal ash spill in NC remains an outstanding risk specific to DUK. There is also uncertainty with regard to potential tax reform.

**Entergy Corp. (ETR)**

**Valuation Methodology:** Our price target is derived by applying the industry average multiple of 17.0x to our 2019E of $4.85 for UPO. Our price target also reflects a 5.6% discount for potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** EWC-related risks include: negative developments related to all operating and closed nuclear facilities, declining forward price curves, and unscheduled non-regulated plant outages. Utility-related risks include: regulatory lag, poor rate case outcomes, and ANO-related remediation expenses. There is also uncertainty regarding potential tax reform.

**Eversource Energy (ES)**

**Valuation Methodology:** Our price target reflects a 10% premium to the industry average multiple of 17.4x our 2019E estimate. We also apply a 0.75% discount to reflect uncertainty related to potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risk factors include regulatory approval and permitting of Access Northeast and Northern Pass projects, changes to prevailing local, state and federal governmental policies and regulatory actions with respect to allowed rates of return, rate structure, continued recovery of regulatory assets and energy costs, financing, changes in tax laws and policies, and changes in compliance with environmental and safety laws and policies among other risks. There is also uncertainty regarding potential tax reform.

**FirstEnergy Corp. (FE)**

**Valuation Methodology:** Our revised $37 target is a 5% discount to the Regulated Utility 2019 average P/E of 17.3x applied to UNOP EPS of $2.25. Our base case valuation subtracts ½ of the Ohio rider mechanism ($0.27/share) which is approved for 3 years and extendable to 5 years starting January 1, 2017. We also assume 25% equity funding for $1.5B of liabilities (-$0.14/share) and ongoing support services for FES (-$0.10/share).

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks are an interruption in the delevering strategy from failure to close/announce asset sales, nuclear plant performance, interest rates, and the economy.

**Hawaiian Electric Inds (HE)**

**Valuation Methodology:** Our price target reflects a 5% discount to the Regulated Utility average P/E of 17.0x our 2019E utility earnings of $1.33, plus a 1.5% premium to 14.4x bank earnings of $0.50.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** HE has regulatory and political risk moving forward on a stand alone basis. Executing on the legislated goal of 100% renewable energy by 2045 also carries execution risk. HE has a robust capital expenditure plan to meet the state targets, but will require PUC support to successfully execute. Ultimately the dividend could be at risk in a more extreme scenario where HE's margins come under increased pressure or there is customer erosion. There is also uncertainty regarding potential tax reform.

**NextEra Energy (NEE)**

**Valuation Methodology:** Our price target is based on applying a 10% premium to the regulated utility multiple of 17.5x to our 2019 EPS estimate of $7.74. We also assign a 1.25% premium to reflect opportunity related to potential tax reform. In addition, we add $8.50/share value for NEE's pro rata ownership of NEP.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** NextEra Energy Resources has merchant exposure to volatile gas and power prices, and risks associated with expansion in the size of its wind asset base. In addition, volatility around fuel prices and high levels of capital spending at its utility present regulatory risk. There is also uncertainty regarding potential tax reform.

**OGE Energy Corp. (OGE)**

**Valuation Methodology:** Our price target is $38. This comprises '19E EPS of $1.77 at OG&E (utility), using a 2.9% discount to the 16.9x utility group multiple equating to $29, plus $9 for OGE's 26.5% ownership of Enable Midstream Partners LP (ENBL), marked to current price.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Federal (FERC, EPA) and state (Oklahoma, Arkansas) regulation, costs of compliance with environmental laws and regulations, Operational risks associated with OGE's businesses, economic conditions, climate change, cyber security risks and increased reliance on automated processes. Enable share price may be impacted

### Valuation Methodology and Risks

by volumes or commodity prices on their system as well as changes to the distribution.

**Pinnacle West Capital (PNW)**

**Valuation Methodology:** Our $87 price target is premised on a 4.9% premium to the 2019 group average P/E of 17.6x applied to our 2019 EPS estimate of $4.71.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are Arizona state and Federal (FERC and NRC) regulation. Demand and rooftop solar can impact earnings significantly under current regulatory construct.

**Portland General Electric Co. (POR)**

**Valuation Methodology:** Our $44 price target reflects the 2019 group average P/E multiple of 17.6x applied to our 2019 eps estimate of $2.49.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** The main risks to our valuation are the commercial operation of the Carty Generating Station, regulatory filings and outcomes, as well as economic issues impacting demand growth and inflation. In the event that demand growth accelerates given the local Portland economy, our estimates would prove to be conservative.

**Public Service Enterprise Gp (PEG)**

**Valuation Methodology:** Our $49 target reflects a sum of the parts including $42 for PSE&G at a 11% premium including +2% for exposure to tax reform applied to the 2019 Regulated Utility average of 17.4x and our $2.29E, $5 for PSEG Power at 7.4x '19 Open EBITDA of $0.8B less $3.66B of net debt.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Key risks are wholesale power prices, New Jersey and federal utility regulation, and interest rates.

**WEC Energy Group (WEC)**

**Valuation Methodology:** Our price target for WEC is predicated on a 15% premium to the industry average P/E multiple of 17x our 2019E of $3.55. We also assign a 2.0% discount to reflect potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** FERC is currently reviewing a complaint filed against MISO transmission owners, of which WEC is an owner through its share in ATC. A revision in the allowed ROE by FERC to a base ROE that is significantly lower than FERC's recent order in MISO complaint #1 could negatively impact WEC. Also, continued cost escalation or execution delays to the pipeline replacement program (AMRP) in Illinois could create political and regulatory pressure. Regulatory risk is also a factor in WEC's various jurisdictions. There is also uncertainty with regard to potential tax reform.

**Xcel Energy (XEL)**

**Valuation Methodology:** Our XEL valuation is premised upon a 10% premium to the regulated utility average P/E multiple on our 2019 estimate of $2.59. We also assign a 2.4% discount to reflect uncertainty related to potential tax reform exposure.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks are interest rates, state and federal utility regulation, and access to external capital to fund capital expenditures. XEL operates in multiple jurisdictions and often has multiple rate cases pending which carry knowable and unforseeable risks. There is also uncertainty with regard to potential tax reform.

Source: Barclays Research.

## ANALYST(S) CERTIFICATION(S):

We, Daniel Ford, CFA, Gregg Orrill and Jon Windham, CFA, hereby certify (1) that the views expressed in this research report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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**Primary Stocks (Ticker, Date, Price)**

**AES Corp.** (AES, 25-Aug-2017, USD 11.43), Equal Weight/Neutral, CD/CE/D/J/K/L/M/N

**Alliant Energy** (LNT, 25-Aug-2017, USD 42.87), Equal Weight/Neutral, A/CE/D/J/K/L/M

**Ameren Corp.** (AEE, 25-Aug-2017, USD 60.37), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**American States Water Company** (AWR, 25-Aug-2017, USD 49.01), Underweight/Neutral, CE/J

**Aqua America** (WTR, 25-Aug-2017, USD 34.00), Overweight/Neutral, CE/J

**California Water Service Group** (CWT, 25-Aug-2017, USD 36.65), Underweight/Neutral, J

**CMS Energy** (CMS, 25-Aug-2017, USD 48.50), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Connecticut Water Service Inc.** (CTWS, 25-Aug-2017, USD 54.88), Equal Weight/Neutral, CD/J

**Consolidated Edison** (ED, 25-Aug-2017, USD 84.48), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Dominion Energy** (D, 25-Aug-2017, USD 80.08), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**Duke Energy** (DUK, 25-Aug-2017, USD 87.23), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M

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**Edison International** (EIX, 25-Aug-2017, USD 80.75), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Entergy Corp.** (ETR, 25-Aug-2017, USD 79.85), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**Eversource Energy** (ES, 25-Aug-2017, USD 63.08), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**FirstEnergy Corp.** (FE, 25-Aug-2017, USD 32.69), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**Hawaiian Electric Inds** (HE, 25-Aug-2017, USD 33.58), Underweight/Neutral, CD/CE/J/K/M

**NextEra Energy** (NEE, 25-Aug-2017, USD 150.10), Overweight/Neutral, CD/CE/D/J/K/L/M

**OGE Energy Corp.** (OGE, 25-Aug-2017, USD 36.22), Equal Weight/Neutral, CD/CE/D/J/L

**PG&E Corp.** (PCG, 25-Aug-2017, USD 70.08), Overweight/Neutral, CD/CE/D/J/K/L/M

**Pinnacle West Capital** (PNW, 25-Aug-2017, USD 90.02), Equal Weight/Neutral, CE/D/J/K/L/M

**Portland General Electric Co.** (POR, 25-Aug-2017, USD 47.14), Underweight/Neutral, CD/CE/D/J/K/L/M

**PPL Corporation** (PPL, 25-Aug-2017, USD 39.59), Equal Weight/Neutral, CE/D/E/J/K/L/M

**Public Service Enterprise Gp** (PEG, 25-Aug-2017, USD 47.29), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

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**WEC Energy Group** (WEC, 25-Aug-2017, USD 65.10), Equal Weight/Neutral, CD/CE/D/J/K/L/M

**Xcel Energy** (XEL, 25-Aug-2017, USD 49.37), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M

**Materially Mentioned Stocks (Ticker, Date, Price)**

**American Water Works** (AWK, 25-Aug-2017, USD 81.96), Overweight/Neutral, CE/J

**Brookfield Infrastructure Partners LP** (BIP, 25-Aug-2017, USD 43.79), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N/R

**Brookfield Infrastructure Partners LP** (BIP_u.TO, 25-Aug-2017, CAD 54.58), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M/N/R

**Brookfield Renewable Energy Partners LP** (BEP, 25-Aug-2017, USD 35.37), Equal Weight/Neutral, A/CD/D/J/K/L/M/R

**Brookfield Renewable Energy Partners LP** (BEP_u.TO, 25-Aug-2017, CAD 44.13), Equal Weight/Neutral, A/CD/D/J/K/L/M/R

**Calpine Corp.** (CPN, 25-Aug-2017, USD 14.64), Rating Suspended/Neutral, CD/CE/D/J/K/L/M

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**Canadian Utilities Ltd.** (CU.TO, 25-Aug-2017, CAD 39.16), Underweight/Neutral, CD/J

**Caribbean Utilities Ltd.** (CUPu.TO, 25-Aug-2017, USD 13.30), Underweight/Neutral, J

**CenterPoint Energy Inc.** (CNP, 25-Aug-2017, USD 29.73), Equal Weight/Neutral, A/CD/CE/D/J/K/L/M

**DTE Energy** (DTE, 25-Aug-2017, USD 111.50), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**Dynegy Inc.** (DYN, 25-Aug-2017, USD 9.59), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M/N

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**Emera Inc.** (EMA.TO, 25-Aug-2017, CAD 47.87), Overweight/Neutral, A/CD/D/J/L/R

**Exelon Corp.** (EXC, 25-Aug-2017, USD 38.30), Overweight/Neutral, A/CD/CE/D/E/J/K/L/M

**FORTIS INC** (FTS, 25-Aug-2017, USD 36.81), Overweight/Neutral, CD/J

**Fortis Inc.** (FTS.TO, 25-Aug-2017, CAD 45.91), Overweight/Neutral, CD/J

**Great Plains Energy Inc.** (GXP, 25-Aug-2017, USD 31.09), Rating Suspended/Neutral, A/CD/CE/D/FA/J/K/L/M

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**Hydro One Ltd.** (H.TO, 25-Aug-2017, CAD 22.86), Equal Weight/Neutral, A/CD/D/J/L/R

**National Grid Plc** (NGG, 25-Aug-2017, USD 63.42), Equal Weight/Neutral, A/CD/CE/D/E/FA/J/K/L/M/N/Q

**NextEra Energy Partners, LP.** (NEP, 25-Aug-2017, USD 38.92), Overweight/Neutral, CE/E/J/L

**NiSource, Inc.** (NI, 25-Aug-2017, USD 27.11), Equal Weight/Neutral, A/CE/D/J/K/L/M

**NRG Energy** (NRG, 25-Aug-2017, USD 24.58), Overweight/Neutral, CD/CE/D/FA/J/K/L/M

**NRG Yield Inc.** (NYLD, 25-Aug-2017, USD 18.51), Overweight/Neutral, CD/D/FA/J/K/L/M

**PNM Resources** (PNM, 25-Aug-2017, USD 42.80), Equal Weight/Neutral, CE/J

**SCANA Corp.** (SCG, 25-Aug-2017, USD 60.08), Overweight/Neutral, CD/CE/J

**Sempra Energy** (SRE, 25-Aug-2017, USD 119.03), Equal Weight/Neutral, A/CD/CE/D/E/J/K/L/M

**Southern Co.** (SO, 25-Aug-2017, USD 48.31), Overweight/Neutral, A/CD/CE/D/J/K/L/M

**TerraForm Power, Inc.** (TERP, 25-Aug-2017, USD 13.62), Rating Suspended/Neutral, CE/J/K/M/N

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**Vistra Energy Corp.** (VST, 25-Aug-2017, USD 17.75), Equal Weight/Neutral, CE/J

**Vivint Solar Inc.** (VSLR, 25-Aug-2017, USD 4.75), Rating Suspended/Neutral, J

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**Westar Energy** (WR, 25-Aug-2017, USD 51.70), Rating Suspended/Neutral, A/CD/CE/D/J/K/L/M

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| Aqua America (WTR) | Brookfield Infrastructure Partners LP (BIP) | Brookfield Infrastructure Partners LP (BIP_u.TO) |
| Brookfield Renewable Energy Partners LP (BEP) | Brookfield Renewable Energy Partners LP (BEP_u.TO) | California Water Service Group (CWT) |
| Calpine Corp. (CPN) | Canadian Utilities Ltd. (CU.TO) | Caribbean Utilities Ltd. (CUPu.TO) |
| CenterPoint Energy Inc. (CNP) | CMS Energy (CMS) | Connecticut Water Service Inc. (CTWS) |
| Consolidated Edison (ED) | Dominion Energy (D) | DTE Energy (DTE) |
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North America Power & Utilities

# Water: Giving up YTD Gains; AWK and WTR Demonstrating Resilience

INDUSTRY UPDATE

North America Power & Utilities
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**Since 27 April, 2017, when the first of our covered water companies reported Q1 results, water stocks have declined by 6%, underperforming the S&P 500 by a similar amount and giving up nearly all the gains the sector made earlier in the year.** Although we do not see a fundamental negative shift in outlook for the industry (in fact, quite the contrary) we cannot deny the correlation of the underperformance to the earnings reporting season, particularly in light of the relative strength of electric utilities to the broader market over that same period. In our opinion, investors should not be spooked by the modest shortfalls in Q1 earnings relative to consensus, or surprised by the increased attention on M&A by company managements. Despite the recent precipitous underperformance, the water stocks are still in the neutral zone of valuation relative to the S&P 500 (Figure 1).

**Consolidation was a high-profile topic on Q1 conference calls, and we expect it to remain a theme for the industry going forward.** The water companies are actively engaged in discussions with stakeholders to facilitate and encourage industry consolidation. Efforts include discussions with legislators and regulators regarding fair market value legislation, regulatory mechanisms that support infrastructure recovery, and equitable playing fields among publicly traded and municipals water utilities. AWK and CWT have bolstered their corporate development offices in recent months.

**Inside, as a case study, we take an illustrative look at three theoretical paths for privately held Aquarion Company.** Aquarion is the largest investor-owned water utility in New England and is among the 10 largest in the U.S., serving more than 200,000 customers in Connecticut, Massachusetts, and New Hampshire. **We chose Aquarion because of some questions we recently received about the company.**

**Barclays will host a Water Symposium on May 18, 2017 in New York City.** The event supports Barclays' Impact Series report, *The water challenge: preserving a global resource*.

Please click *here* to register for the Water Symposium.



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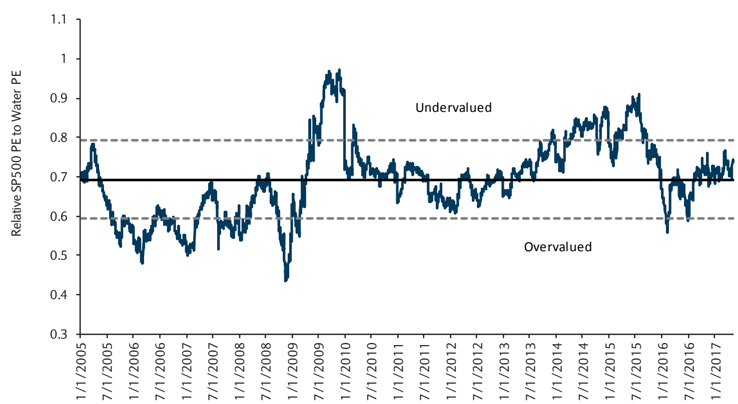
## S&P 500 Relative to the Waters: In the Neutral Zone

Historically, water utilities carry a 43% premium to the S&P 500. The sector is currently trading in the neutral zone of valuation relative to the broader market. Year to date, water utilities have underperformed the S&P 500 by six percentage points and the UTY (Philadelphia Utility Sector Index) by nearly five percentage points with the large-cap waters demonstrating the most resilience in a market that just recently turned fickle to the water sector. The water stocks reached their near-term peak performance at the market close on April 26, 2017 just prior to the first of our covered stocks reporting Q1 earnings. From January 1 to April 26, 2017 the water stocks increased 7%, or within 100 basis points of the S&P performance. Since CWT reported Q1 results, the water stocks have underperformed the S&P 500 by 6 percentage points, giving up the gains achieved since January 1. Although we do not see a fundamental negative shift in outlook for the industry, we cannot deny the correlation of the underperformance to the earnings reporting season, particularly in light of the relative strength of electric utilities to the broader market over that same period.

FIGURE 1

**S&P 500 P/E Relative to Water P/E, 2005–Present**




Source: Barclays Research, Thomson One

At the current valuations, we continue to see opportunity in AWK (PT $86) and WTR (PT $36), both Overweight rated, and we see risk in AWR (PT $41) and CWT (PT $30), both Underweight rated. In our view, because of their geographic diversity, AWK and WTR are better positioned to benefit from infrastructure spending and consolidation (two primary themes in the water sector that we've written about extensively) than their New England or California-concentrated IOU peers. As such, we assign a 10% premium to AWK (the industry flagship), a 5% premium to WTR, and an industry average multiple to AWR, CWT, and CTWS (PT $53; Equal Weight).

FIGURE 2

**Water Utility Sector Comps**

| | | | Closing | | Expected | | Published | Earnings Per Share | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Price | Annualized | Dividend | Current | Price | 2016A | 2017E | 2018E | 2019E | 2016 | 2017 | 2018 | 2019 | 3-Yr Annual | Market Cap |
| Rating | Ticker | Company | 5/8/2017 | Dividend | Growth | Yield | Target | EPS | EPS | EPS | EPS | P/E | P/E | P/E | P/E | Total Return | ($mn) |
| OW | AWK | American Water Works Co. | $76.57 | $1.66 | 10.0% | 2.17% | $86 | $2.84 | $3.06 | $3.28 | $3.51 | 27.0x | 25.0x | 23.3x | 21.8x | 7.4% | $13,644 |
| UW | AWR | American States Water Co. | $44.00 | $0.97 | 8.0% | 2.20% | $41 | $1.62 | $1.69 | $1.77 | $1.87 | 27.2x | 26.0x | 24.8x | 23.5x | 4.9% | $1,611 |
| UW | CWT | California Water Service Group | $34.20 | $0.69 | 5.0% | 2.11% | $30 | $1.01 | $1.21 | $1.28 | $1.34 | 33.7x | 28.3x | 26.7x | 25.4x | 9.8% | $1,642 |
| NR | MSEX | Middlesex Water Co. | $35.74 | $0.75 | 6.0% | 2.36% | | $1.38 | $1.50 | $1.63 | $1.72 | 25.9x | 23.8x | 21.9x | 20.8x | 7.6% | $583 |
| NR | SJW | SJW Corp. | $47.30 | $0.73 | 7.0% | 1.84% | | $2.57 | $2.14 | $2.29 | $2.44 | 18.4x | 22.1x | 20.7x | 19.4x | 7.0% | $970 |
| OW | WTR | Aqua America Inc. | $31.99 | $0.61 | 5.8% | 2.39% | $36 | $1.32 | $1.38 | $1.46 | $1.55 | 24.2x | 23.1x | 21.9x | 20.6x | 5.6% | $5,681 |
| NR | YORW | York Water Co. | $34.05 | $0.55 | 4.0% | 2.39% | | $0.92 | $0.96 | $0.99 | $1.05 | 37.0x | 35.5x | 34.4x | 32.4x | 4.5% | $437 |
| EW | CTWS | Connecticut Water Service | $53.25 | $1.13 | 4.0% | 2.12% | $53 | $2.08 | $2.22 | $2.31 | $2.40 | 25.6x | 24.0x | 23.1x | 22.2x | 4.9% | $603 |
| **Water Group Average** | | | | **$1.23** | **8.1%** | **2.1%** | | | | | | **26.6x** | **24.9x** | **23.4x** | **21.9x** | **6.9%** | |

Source: Barclays Research, Thomson One. Source for estimates for companies that are Not Rated (MSEX, SJW, YORW) is Thomson One.
Stock rating: OW = Overweight; EW = Equal Weight; UW = Underweight; RS = Rating Suspended; NR = Not Rated. Industry view: Neutral. For full disclosures on each covered company, including details of our company-specific valuation methodology and risks, please refer to *http://publicresearch.barcap.com*

## Q1 Review

Our covered water companies wrapped up earnings reporting season earlier this week. We consider the results essentially in line with expectations, as we don't tend to sweat modest deviations that occur early in the year. Earnings guidance for 2017 was reaffirmed by AWK at $2.98–3.08 and by WTR at $1.34–1.39. AWR, CWT, and CTWS do not provide earnings guidance. Management scripts and Q&A focused on capital spending, rate cases, the outlook for regulatory/legislative initiations, and M&A.

FIGURE 3

**Q1 Earnings Review**

| | Reported | Adjusted | Adjusted +/- vs. | Consensus | Barclays | Consensus | Barclays | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1Q17A | 1Q17A | Consensus | 1Q17E | 1Q17E | 2017E | 2017E | LTM | Guidance |
| AWR | $0.34 | $0.32 | -- | $0.32 | $0.31 | $1.70 | $1.69 | $1.66 | |
| AWK | $0.52 | $0.52 | -- | $0.52 | $0.53 | $3.04 | $3.06 | $2.91 | $2.98 - $3.08 |
| WTR | $0.28 | $0.28 | ($0.02) | $0.30 | $0.31 | $1.37 | $1.38 | $1.30 | $1.34 - $1.39 |
| CWT | $0.02 | $0.02 | ($0.03) | $0.05 | $0.06 | $1.30 | $1.21 | $1.05 | |
| CTWS | $0.36 | $0.36 | ($0.01) | $0.37 | $0.38 | $2.20 | $2.22 | $2.16 | |

Notes:
AWR: Adjusted EPS excludes previously incurred drought-related items recorded during 1Q17
AWK: Adjusted EPS includes $0.02 benefit from stock based compensation

Source: Barclays Research, Thomson One, company filings

Capital spending targets remain intact and on trend for Q1 seasonality. Spending levels for AWK, WTR, and CTWS are influenced by winter weather. As a result, we expect spending at those companies to ramp up in Q2 and Q3, whereas spending at the California-dominated utilities, AWR and CWT, is expected to occur more evenly throughout the year.

FIGURE 4

**Water Sector Capital Spending**

| ($ in millions) | 2015A | 2016A | 2017E | 1Q17A | 1Q as a % of 2017E |
|---|---|---|---|---|---|
| American States Water Company | $86 | $121 | $110 - $120 | $23 | 20% |
| American Water Works | $1,200 | $1,300 | $1,200 | $223 | 19% |
| Aqua America | $325 | $383 | $450 | $95 | 21% |
| California Water Services Group | $177 | $229 | $210 | $52 | 25% |
| Connectict Water Service, Inc | $48 | $66 | $55 | $10 | 18% |

Source: Barclays Research, company filings

## Consolidation as a Catalyst

Consolidation is a recurring theme in the sector. The U.S. water industry is highly fragmented, with approximately 85% of the water systems municipally-owned. Budgetary constraints and compliance mandates spurred by the Flint, Michigan tragedy are forcing municipalities to consider selling their water assets. The acquisitive appetites of IOUs make them willing counterparties to municipalities seeking to exit the business; and AWK and CWT have acknowledged bolstering their corporate development offices in recent months. WTR management has indicated they are seeing an unprecedented level of deal activity, particularly in states where fair value legislation exists; and CWT management expressed a sharp focus on M&A, looking at tuck-ins as well as larger acquisitions.

Consolidation is most easily accomplished in states that have fair market value legislation, which allows the IOU to include in ratebase the value of the assets based on an appraisal determination as opposed to the book value. Six states currently have fair value legislation. Other mechanisms, such as single tariff pricing and infrastructure recovery, can also be supportive of industry consolidation. Managements are actively engaged in discussions at the local level to educate stakeholders, regulators, and legislators about mechanisms that would strengthen and enhance water quality and encourage consolidation.

FIGURE 5

**Fair Value Legislation by State and Company**

| State | IOU's Operating in the State |
|---|---|
| Arizona | None |
| California | AWK, AWR, CWT |
| Illinois | AWK, WTR |
| Indiana | AWK, WTR |
| Kentucky | AWK |
| Missouri | AWK |
| New Jersey | AWK, WTR |
| Pennsylvania | AWK, WTR |
| Virginia | AWK, WTR |

Source: Barclays Research, S&P Global Market Intelligence, company filings

Most of the acquisitions that we see in the water sector have been smaller, tuck-in acquisitions; therefore, we don't have a ready data set of valuation comparisons for a large, strategic acquisition in the water industry. In our *April Preview/March Review*, March 17, 2017, we looked at acquisition premiums of historical transactions in the electric utility sector. We found that in the 14 deals announced since 2013, electric utility acquisitions of gas utilities garnered the highest average multiples on the basis of price/earnings-LTM, enterprise value/EBITDA-LTM, and price/book. We attribute this to the somewhat higher growth rates of gas utilities than electric utilities. The total return outlook for water utilities is also higher than electric utilities and similar to gas utilities. As a result, we might expect the transaction metrics of a strategic water acquisition to be on par with those of a gas utility.

FIGURE 6

**Total Return Relative to S&P 500**

| Sector | EPS Growth | Dividend Growth | Dividend Yield | Total |
|---|---|---|---|---|
| Water Utilities | 6.9% | 8.1% | 2.1% | 9.0 |
| Electric Utilities | 4.7% | 6.2% | 3.3% | 8.0 |
| S&P 500 | 8-10% | | 2.0% | 10-1 |

Source: Barclays Research, Thomson One

FIGURE 7

**Comparison of Electric Utility Merger Premiums**

| | Merger Multiples (14 deals since 2013) | | | |
|---|---|---|---|---|
| | P/E Trailing | EBITDA Trailing | Price/ Book | Last Price |
| Electric-Electric | 23.3x | 10.2x | 2.1x | 26.8% |
| Electric-Gas | 23.3x | 12.5x | 3.0x | 34.0% |
| Private Equity | 21.9x | 9.7x | 2.2x | 14.7% |
| Total | 23.2x | 10.6x | 2.4x | 27.2% |

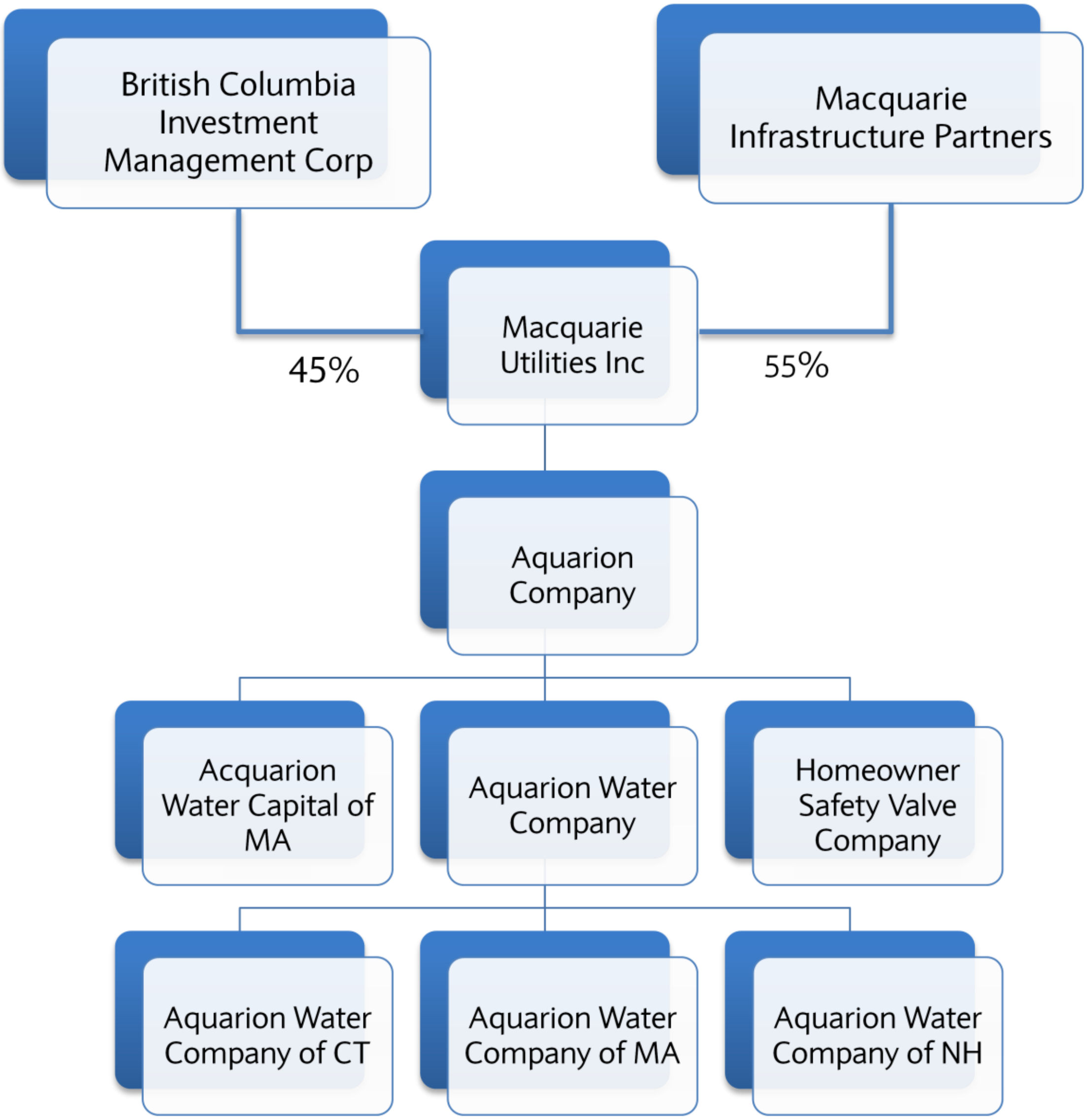
Source: Barclays Research, Thomson One, company reports

## Aquarion Company – A Case Study

In 2006, a Macquarie-led consortium purchased Aquarion Company from Kelda Group plc for $860MM. Aquarion Company is owned by Macquarie Utilities Inc., which is an infrastructure fund owned by Macquarie Infrastructure Partners (55%) and British Columbia Investment Management Corp (45%). Aquarion Company is the holding company of Aquarion Water Company, which in turn owns regulated public water utility operating subsidiaries in Connecticut, Massachusetts, and New Hampshire. Aquarion Company also owns Aquarion Water Capital of Massachusetts (AWCap) and Homeowner Safety Valve Company (HSV). AWCap is a non-regulated subsidiary that leases a water treatment plant to Aquarion Water Company of Massachusetts. HSV offers water service line and sewer line warranty protection programs. Figure 7 diagrams the corporate structure.

FIGURE 8

**Aquarion Company Corporate Structure**




Source: Company filings

Aquarion Company is the largest investor-owned water utility in New England, and is among the ten largest in the U.S. Aquarion serves over 200,000 customers in Connecticut, Massachusetts, and New Hampshire, with a total ratebase approximating $665MM. CT accounts for the vast majority of ratebase and earnings.

FIGURE 9

**Aquarion Company Approximate Financial and Operating Statistics**

| ($ in millions) | Connecticut | Massachusetts | New Hampshire | Aquarion Water Company | Aquarion Company |
|---|---|---|---|---|---|
| Customers | 196,000 | 19,600 | 9,400 | 225,000 | |
| 2016 infrastructure invesment | $57 | N/A | N/A | | |
| Ratebase | $612 | $38 | $25 | $674 | |
| Allowed ROE | 9.63% | 10.25% | 9.60% | | |
| Allowed Equity Ratio | | 40.98% | 40.75% | | |
| Utility Operating Income | $51 | $2 | $2 | $55 | |
| Earned ROE after adjs | N/A | N/A | 13.11% | | |
| Short-term debt | | | | | $40 |
| Long-term debt | $311 | $19 | $14 | $344 | $710 |
| Weighted average cost of debt | 4.76% | 5.50% | 5.90% | | |
| Cash | | | | | $7 |
| EBITDA | | | | | $115 |
| Net Income | $40 | $1 | $2 | $42 | $35 |

N/A = not available

All figures are approximate and reflect data collected from public filings for years ended 2015 and 2016

Note: On 4/13/17, Aquarion filed a rate case in MA, seeking a 10.5% ROE premised upon a 44.91% equity ratio, $38.6MM rate base for test year ended 12/30/16

Source: CT, MA and NH public regulatory commissions; S&P Global Market Intelligence

The increased emphasis on infrastructure spending and enhanced consolidation outlook for the water industry, present Macquarie and BCIMC with options for Aquarion, including continued ownership, IPO, or sale of the company. Some of the factors which could influence the potential value of Aquarion under each scenario include the lack of fair market value legislation in Aquarion's service territories; approximately $280MM of goodwill currently on Aquarion's balance sheet; and the relatively high parent company leverage (~66% debt ratio), among others. Below we examine the options from the perspective of water utility investors.

### *Remain Private*

Maintaining the status quo might be advantageous to Aquarion's current owners, but offers little appeal for public equity investors. As a stand-alone entity (either through the current ownership structure or an equitization, as we discuss below), Aquarion could choose to participate in the consolidation theme as an acquirer; however, the current financial leverage at the parent may be a limiting factor.

### *IPO*

An IPO would add another publicly traded water utility to the sector, which would generally be positive for public equity investors, as it would offer another avenue for sector-specific diversification. However, due to the limited historical context that investors would have for Aquarion, we estimate a trading range between the industry average multiple and a 10% discount to the average multiple. For purposes of our analysis we look at an implied market value based on estimated 2016 earnings of $35MM and a 2016 industry multiple of 26.2x. This implies a fair market equity value of approximately $825MM–$917MM for Aquarion Company on a stand-alone basis, which would put the stock roughly in the middle of the pack on a market capitalization basis among the publicly traded water utilities. However, sanity checking this math against our Enterprise Value math assuming a sale of the company (see below) indicates our equity value range may be overly generous. The amount of parent company leverage could result in an even steeper discount.

FIGURE 10

**Market Capitalization Ranking Including Theoretical Aquarion Company**

| Ticker | | Market Cap ($mn) |
|---|---|---|
| AWK | American Water Works | $13,644 |
| WTR | Aqua America Inc | $5,681 |
| CWT | California Water Service Group | $1,642 |
| AWR | American States Water | $1,611 |
| SJW | SJW Corp | $970 |
| | Aquarion Company - theoretical | $825-$917 |
| CTWS | Connecticut Water Service | $603 |
| MSEX | Middlesex Water Company | $583 |
| YORW | York Water Company | $437 |

Source: Barclays Research, Thomson One

### *Sale of the Company*

A potential sale of Aquarion would likely attract interest from publicly traded IOUs, infrastructure investors, or other strategic investors. Using the EV/EBITDA-trailing metrics from electric-gas acquisitions shown in Figure 7 as a proxy, we estimate potential Enterprise Value in the range of $1.1 billion to $1.4 billion. Applying the historical P/E transaction multiples would result in an Enterprise Value closer to $1.5 billion. As we mentioned, a sale of the company would not necessarily put Aquarion back on public equity investors' radar screens, as the assets could simply transfer to another private owner.

FIGURE 11

**Aquarion Company Theoretical Valuation Analysis**

| | ($ in millions) |
|---|---|
| **Equity Value** | |
| *Assumptions:* | |
| Net Income | $35 |
| Average 2016 market value multiple | 26.2x |
| Discount/premium | -10% - 0% |
| Theoretical Market Value | $825 - $917 |
| **Enterprise Value** | |
| *Assumptions:* | |
| EBITDA | $115 |
| Historical transactions EV/EBITDA range | 9.7x - 12.5x |
| Theoretical Enterprise Value | $1,100 - $1,400 |
| *Assumptions:* | |
| Net Income | $35 |
| Historical transaction P/E trailing multiple | 21.9x - 23.3x |
| Total debt | $750 |
| Theoretical Enterprise Value | $1,500 - $1,550 |

Source: Barclays Research, CT, MA and NH public regulatory commissions

## Rate Cases and California Cost of Capital

AWK and WTR each have rate cases pending in several jurisdictions, which is typical for these multi-jurisdictional utilities. The companies continue to receive reasonable final orders, reducing the risk of unpredictable or adverse outcomes. AWR is on the second year of its three-year water rate plan and will file a new water general rate case in July for rates effective 2019–2021. Earlier this month, AWR filed an electric rate case for rates effective 2018–2021. A final decision in that case is scheduled by year-end 2017.

## CA Cost of Capital

On April 3, 2017, after being denied an extension of the existing authorization by the California Public Utilities Commission (CPUC), four California water companies filed their Cost of Capital applications for 2018–2020: California-American Water Company (AWK), Golden State Water Company (AWR), California Water Service Company (CWT), and San Jose Water (SJW Group; SJW $45.74; Not Rated). ALJ Karl Bernesderfer and Commissioner Martha Guzman Aceves have been assigned and a procedural schedule is expected in short order.

FIGURE 12

**California Cost of Capital**

| | AWR | AWK | CWT | San Jose Water Co. |
|---|---|---|---|---|
| Docket # | A.17-04-002 | A.17-04-003 | A.17-04-006 | A.17-04-001 |
| ***Requested:*** | | | | |
| ROE | 11.00% | 10.80% | 10.75% | 10.75% |
| Equity Ratio | 57.00% | 55.40% | 53.40% | 53.28% |
| Cost of Debt | 6.60% | 5.63% | 5.51% | 6.21% |
| Debt Ratio | 43.00% | 44.60% | 46.60% | 46.72% |
| ***Authorized:*** | | | | |
| ROE | 9.43% | 9.99% | 9.43% | 9.43% |
| Equity Ratio | 55.00% | 53.00% | 53.00% | 51.35% |
| Cost of Debt | 7.00% | 6.63% | 6.24% | 6.68% |
| Debt Ratio | 45.00% | 47.00% | 47.00% | 48.65% |

Note: The current ROE for AWR, CWT and San Jose Water was originally set at 9.99%. Due to a decline in the average Moody's Aa utility bond index rate, the Water Cost of Capital Mechanism was triggered, lowering the ROE to 9.43% effective 1/1/13. This adjustment did not apply to AWK.

Source: Barclays Research, California Public Utilities Commission

The California electric utilities – Southern California Edison (EIX), Pacific Gas & Electric (PCG), San Diego Gas & Electric and Southern California Gas (SRE) – reached a settlement with ORA (Office of Ratepayer Advocates) and TURN (The Utility Reform Network) to extend the existing Cost of Capital authorizations, with minor modifications to allowed ROE and cost of debt. The settlement was supported by a Proposed Decision from Commissioner Picker and was scheduled for a vote by the CPUC on April 27, 2017 However, one day before the CPUC meeting, the item was pulled from the agenda for unknown reasons. A coordinated ex parte meeting between the companies and commissioners occurred on May 8 and we are awaiting further updates as to the future of the settlement. It is unclear what impact, if any, the electric Cost of Capital proceeding will have on the water Cost of Capital proceeding.

Separately, CPUC staff recently issued a *white paper* on Cost of Capital, detailing shortcomings in the current methodology utilized by the commission. The paper highlights the opportunity for companies to over-earn the allowed equity return during the period. And cost of debt…It is also unclear what impact, if any, this paper will have on the electric Cost of Capital settlement or the water Cost of Capital proceeding.

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**Materially Mentioned Stocks (Ticker, Date, Price)**

**American States Water Company** (AWR, 09-May-2017, USD 43.32), Underweight/Neutral, CE/J

**American Water Works** (AWK, 09-May-2017, USD 75.30), Overweight/Neutral, CE/J

**Aqua America** (WTR, 09-May-2017, USD 31.30), Overweight/Neutral, CE/J

**California Water Service Group** (CWT, 09-May-2017, USD 33.25), Underweight/Neutral, J

**Connecticut Water Service Inc.** (CTWS, 09-May-2017, USD 52.18), Equal Weight/Neutral, CD/J

Prices are sourced from Thomson Reuters as of the last available closing price in the relevant trading market.

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**North America Power & Utilities**

| | | |
|---|---|---|
| AES Corp. (AES) | Alliant Energy (LNT) | Ameren Corp. (AEE) |
| American Electric Power (AEP) | American States Water Company (AWR) | American Water Works (AWK) |
| Aqua America (WTR) | Brookfield Infrastructure Partners LP (BIP) | Brookfield Infrastructure Partners LP (BIP_u.TO) |
| Brookfield Renewable Energy Partners LP (BEP) | Brookfield Renewable Energy Partners LP (BEP_u.TO) | California Water Service Group (CWT) |

## IMPORTANT DISCLOSURES CONTINUED

| | | |
|---|---|---|
| Calpine Corp. (CPN) | Canadian Utilities Ltd. (CU.TO) | Caribbean Utilities Ltd. (CUPu.TO) |
| CenterPoint Energy Inc. (CNP) | CMS Energy (CMS) | Connecticut Water Service Inc. (CTWS) |
| Consolidated Edison (ED) | Dominion Resources (D) | DTE Energy (DTE) |
| Duke Energy (DUK) | Dynegy Inc. (DYN) | Edison International (EIX) |
| Emera Inc. (EMA.TO) | Entergy Corp. (ETR) | Eversource Energy (ES) |
| Exelon Corp. (EXC) | FirstEnergy Corp. (FE) | FORTIS INC (FTS) |
| Fortis Inc. (FTS.TO) | Great Plains Energy Inc. (GXP) | Hawaiian Electric Inds (HE) |
| Hydro One Ltd. (H.TO) | National Grid Plc (NGG) | NextEra Energy (NEE) |
| NextEra Energy Partners, LP. (NEP) | NiSource, Inc. (NI) | NRG Energy (NRG) |
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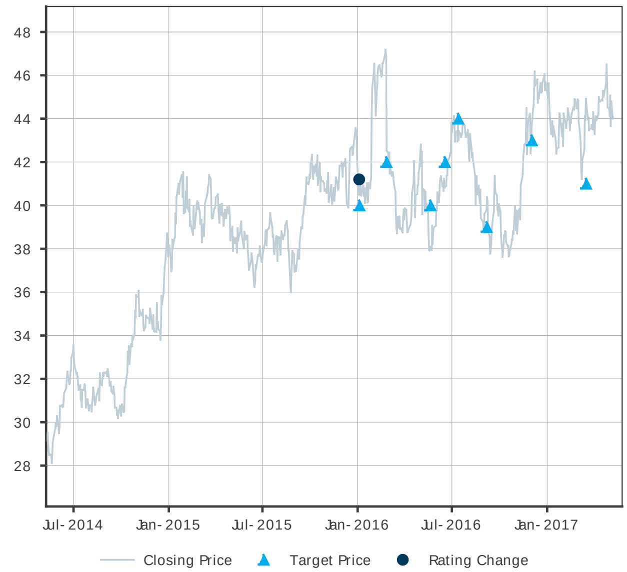
IMPORTANT DISCLOSURES CONTINUED

## American States Water Company (AWR / AWR)

Stock Rating: **UNDERWEIGHT** | Industry View: **NEUTRAL**

**USD 43.32 (09-May-2017)**

**Rating and Price Target Chart - USD (as of 09-May-2017)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 17-Mar-2017 | 44.92 | | 41.00 |
| 02-Dec-2016 | 43.63 | | 43.00 |
| 06-Sep-2016 | 39.79 | | 39.00 |
| 13-Jul-2016 | 43.77 | | 44.00 |
| 17-Jun-2016 | 40.83 | | 42.00 |
| 20-May-2016 | 38.10 | | 40.00 |
| 25-Feb-2016 | 46.87 | | 42.00 |
| 04-Jan-2016 | 40.50 | Underweight | 40.00 |

Source: Thomson Reuters, Barclays Research

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*Link to Barclays Live for interactive charting*

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**Valuation Methodology:** Our $41 price target is premised upon the 2019 water group average multiple of 22.1x applied to our 2019 estimate of $1.87.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory issues resulting in lower ability to spend capital or a lower ROE, ability to obtain additional military contracts and perform on the current contracts are all risks.

## IMPORTANT DISCLOSURES CONTINUED

### American Water Works (AWK / AWK)

**USD 75.30 (09-May-2017)**

Stock Rating: **OVERWEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 09-May-2017)**


Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 02-Dec-2016 | 72.52 | | 86.00 |
| 06-Sep-2016 | 75.90 | | 81.00 |
| 13-Jul-2016 | 82.00 | | 87.00 |
| 17-Jun-2016 | 78.17 | | 83.00 |
| 05-May-2016 | 73.20 | | 79.00 |
| 25-Feb-2016 | 68.05 | | 75.00 |
| 04-Jan-2016 | 60.32 | | 70.00 |
| 18-Dec-2015 | 59.55 | | 68.00 |
| 05-Nov-2015 | 58.19 | | 67.00 |
| 25-Feb-2015 | 54.46 | | 57.00 |
| 15-Dec-2014 | 51.66 | | 56.00 |
| 06-Nov-2014 | 51.99 | | 54.00 |

On 09-May-2014, prior to any intra-day change that may have been published, the rating for this security was Overweight, and the adjusted price target was 50.00.

Source: Thomson Reuters, Barclays Research

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**Valuation Methodology:** Our $86 price target is derived from applying a 10% high-quality premium to a water group average of 22.2x P/E multiple to our $3.51 2019 EPS estimate.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to AWK include an inability to achieve tighter cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential.

## IMPORTANT DISCLOSURES CONTINUED

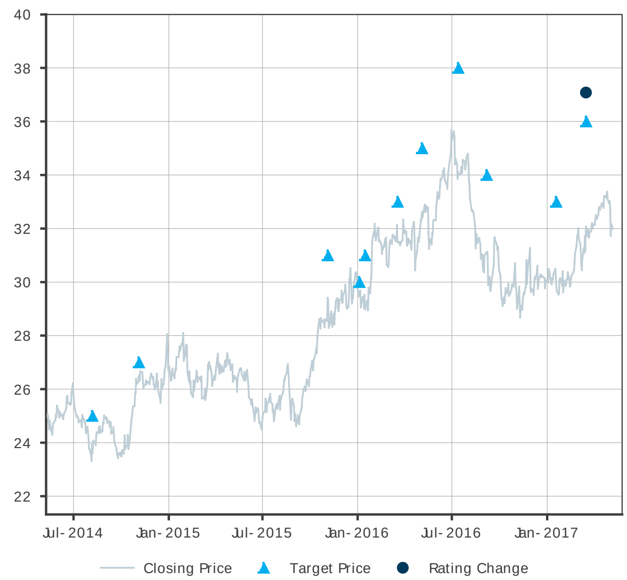
### Aqua America (WTR / WTR)

**USD 31.30 (09-May-2017)**

Stock Rating: **OVERWEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 09-May-2017)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 17-Mar-2017 | 32.07 | Overweight | 36.00 |
| 18-Jan-2017 | 30.16 | | 33.00 |
| 06-Sep-2016 | 31.11 | | 34.00 |
| 13-Jul-2016 | 34.10 | | 38.00 |
| 04-May-2016 | 32.62 | | 35.00 |
| 18-Mar-2016 | 31.50 | | 33.00 |
| 15-Jan-2016 | 28.99 | | 31.00 |
| 04-Jan-2016 | 29.47 | | 30.00 |
| 04-Nov-2015 | 29.41 | | 31.00 |
| 04-Nov-2014 | 26.44 | | 27.00 |
| 06-Aug-2014 | 23.96 | | 25.00 |

On 09-May-2014, prior to any intra-day change that may have been published, the rating for this security was Equal Weight, and the adjusted price target was 26.00.

Source: Thomson Reuters, Barclays Research

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**Valuation Methodology:** Our price target is based on applying a 5% premium the water group average 2019 P/E multiple of 22.1x to our 2019 EPS estimate of $1.55.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Risks to WTR include a potential acquisition of a gas ldc or non water utility, an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, a slowdown in acquisition activity that would impact sales growth potential, and potential tax reform.

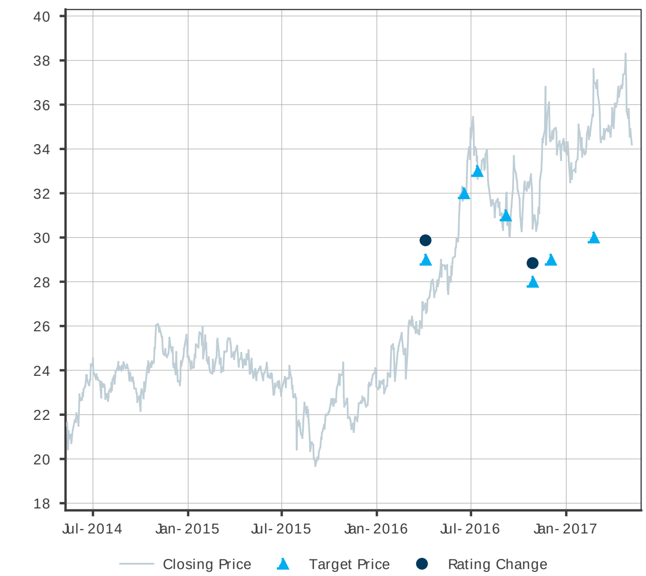
## IMPORTANT DISCLOSURES CONTINUED

### California Water Service Group (CWT / CWT)

**USD 33.25 (09-May-2017)**

| Stock Rating | Industry View |
|---|---|
| **UNDERWEIGHT** | **NEUTRAL** |

**Rating and Price Target Chart - USD (as of 09-May-2017)**




Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 23-Feb-2017 | 37.60 | | 30.00 |
| 02-Dec-2016 | 34.35 | | 29.00 |
| 28-Oct-2016 | 30.40 | Underweight | 28.00 |
| 06-Sep-2016 | 31.17 | | 31.00 |
| 13-Jul-2016 | 33.65 | | 33.00 |
| 17-Jun-2016 | 31.90 | | 32.00 |
| 04-Apr-2016 | 27.01 | Equal Weight | 29.00 |

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**Valuation Methodology:** Our price target is premised upon applying the 2019 water group average multiple of 22.2x to our 2019 estimate of $1.34.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Main risks are regulatory given the significant impact the outcome and timing of the California general rate case can have. Also the California drought and associated recovery has impacted results in the past several years. Interest rates impact commission granted return on equity levels as well as impacting the rate paid on short term debt. National policy such as bonus depreciation and EPA actions will also impact spending levels and financing for the utility.

## IMPORTANT DISCLOSURES CONTINUED

## Connecticut Water Service Inc. (CTWS / CTWS)

**USD 52.18 (09-May-2017)**

Stock Rating: **EQUAL WEIGHT**

Industry View: **NEUTRAL**

**Rating and Price Target Chart - USD (as of 09-May-2017)**


Source: IDC, Barclays Research

**Currency=USD**

| Publication Date | Closing Price | Rating | Adjusted Price Target |
|---|---|---|---|
| 02-Dec-2016 | 54.81 | | 53.00 |
| 06-Sep-2016 | 46.73 | Equal Weight | 52.00 |

Source: Thomson Reuters, Barclays Research

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**Valuation Methodology:** Our $53 price target is premised upon applying the 2018 water group average PE multiple of 22.2x to our 2019 estimate of $2.40.

**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target:** Regulatory risk are the main issues even with positive regulatory mechanisms in both CT and ME, the eventual true up or consideration surrounding repair tax flow through accounting could cause a potential larger than expected rate increase to customers limiting capital recovery in that year.

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3 August 2016


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## Aqua America

# WTR: A Quiet Quarter

**Stock Rating/Industry View:** Equal Weight/Neutral
**Price Target:** USD 38.00
**Price (02-Aug-2016):** USD 34.40
**Potential Upside/Downside:** 10%
**Tickers:** WTR

**WTR Reported Q2 EPS of $0.33 and Reaffirmed 2016 Guidance**

WTR reported Q2 EPS of $0.33 in line with the consensus estimate of $0.34 and reaffirmed 2016 guidance $1.30-$1.35 versus the consensus estimate of $1.33. The main drivers for the quarter were lower expens regulated growth and rate case impacts partially offset by consumption, which was weather driven. The company expects to offset poor weather through continued cost controls and municipal acquisitions and a such expects to be in the middle of the $1.30-$1.35 guidance range. The water system acquisitions year date have added 5,396 customers (approximately 0.6% customer growth). The expectation is for an acceleration of acquisitions resulting from the increased number of states having fair value legislation for water system acquisitions.

Yesterday WTR announced a 7.5% increase in their annual dividend, consistent with expectations.

**Analyst(s) Certification(s):**
I, Daniel Ford, CFA, hereby certify (1) that the views expressed in this research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

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**Mentioned Stocks (Ticker, Date, Price)**

**Aqua America** (WTR, 02-Aug-2016, USD 34.40), Equal Weight/Neutral, CE/J

**Valuation Methodology:** Our $38 price target is based on applying a 5% premium to the water group average 2018 P/E multiple of 24.1x to our 2018 EPS estimate of $1.50.
**Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target**
Risks to WTR include an inability to maintain cost control, sub-par regulatory results from pending and future rate cases, and a slowdown in acquisition activity that would impact sales growth potential.

**Ratings and Price Target History:**
Aqua America
Currency=USD


Source: IDC, Barclays Research

| Publication Date | Closing Price | Rating* | Adjusted Price Target |
|---|---|---|---|
| 13-Jul-2016 | 34.10 | | 38.00 |
| 04-May-2016 | 32.62 | | 35.00 |
| 18-Mar-2016 | 31.50 | | 33.00 |
| 15-Jan-2016 | 28.99 | | 31.00 |
| 04-Jan-2016 | 29.47 | | 30.00 |
| 04-Nov-2015 | 29.41 | | 31.00 |
| 04-Nov-2014 | 26.44 | | 27.00 |
| 06-Aug-2014 | 23.96 | | 25.00 |
| 03-Sep-2013 | 24.50 | | 26.00 |
| 08-Aug-2013 | 25.74 | | 27.20 |

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

*The rating for this security remained Equal Weight during the relevant period.

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## Aqua America

# WTR: Status Quo Remains

**Stock Rating/Industry View:** Equal Weight/Neutral
**Price Target:** USD 34.00
**Price (01-Nov-2016):** USD 29.99
**Potential Upside/Downside:** 13%
**Tickers:** WTR

**WTR reported Q3 results and reaffirmed 2016 guidance**

WTR reported $0.41 for Q3, in line with our estimate and a penny ahead of consensus.  2016 guidance was reaffirmed at $1.30-$1.35 with commentary on the call pointing to the middle to just below the middle of the range similar to previous quarters.  There was not much in terms of incremental information, however the following items should be of interest.

- Smaller tuck-in acquisitions are getting more competitive based on both strategics and other municipalities bidding.  This is especially the case in PA, IL and NJ based on recent legislation.

- The larger the acquisition, the more competitive they seem to be.  There has been a definite chase up in price; it remains to be seen whether under fair value legislation this will result in the winning bidders having to carry some level of goodwill.

- On the strategic front, WTR still sees opportunity to do a deal that leverages its regulatory expertise to the extent that it identifies a deal that would be accretive.  We continue to believe that the potential acquisition of a regulated asset or company outside of water is the primary overhang on the shares.

- Pennsylvania will see is DSIC filing in 2017 and a general rate case filed in 2018 for new rates in 2019.

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**Barron's Summary**
**Saturday, June 18, 2016 08:17:57 PM (GMT)**

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    - Barron's Penta picks the best watches of 2016 in eight different categories. (We're talking wristwatches here, not stocks to watch) (link).
- **Features**:
    - With bond yields historically low, stocks remain the best game in town. Barron's believes we'll see a worldwide relief rally if Britain votes to stay in the European Union on Thursday. Based on valuations and dividend yields, stocks in Europe and parts of Asia look more attractive than U.S. issues, and would get a bigger bump if Britain votes to stay. Gold could continue to strengthen as low inflation-adjusted interest rates remain. It's also a good time to hold some cash to balance your equity portfolio (and keep some dry powder on deck) (link).
    - **Square (SQ)**: Barron's is cautious on Square. While the payments processor continues to grow rapidly, it faces an uphill battle towards profitability as it navigates a tough, price-sensitive market and battles many competitors. The recent lockup expiration on more than 250M shares creates a menacing overhang. Square's focus on customers that operate volatile small businesses is also troublesome. Once retailers realize that they can pay less for similar services elsewhere, Square could wind up stuck with less-creditworthy borrowers who don't have other lending options. Shares could fall from a current $9 per share toward $5 to $6 a share (link).
    - Profile examines Jamie Wilhelm, manager of the Touchstone Focused fund. Buffett-inspired Wilhelm and his four analysts search for businesses that have a significant and sustainable competitive advantage, and then look to buy when a stock trades below their estimate of its intrinsic value (link).
    - Barron's interviews Russell Napier, a former equity-market and global-macro strategist at CLSA, who now publishes a global macroeconomic and strategy report on an online platform he cofounded for investment research. Napier has been bearish on equities and commodities since 2011, and expects deflation to eventually impact developed markets. With central banks running out of stimulus ammo, he think's we'll see a shift towards government stimulus to spur economic growth. Napier likes "U.S. 30-year bonds; Singapore government debt, which yields slightly more than U.S. government debt; gold; and Japanese equities hedged into the U.S. dollar." (link).
    - **Delphi Automotive (DLPH)**: Barron's is positive on auto-parts supplier Delphi Automotive, believing that concerns over peaking vehicle sales in the U.S. and China have created an opportunity to buy the stock at multiples that fail to reflect the company's expected earnings growth. Delphi's focus on fuel efficiency and electronics give it a more attractive growth portfolio than other parts suppliers. Delphi deserves to be valued more like the technology firm that it is than an auto-parts supplier. On a discounted cash flow basis, shares could be worth $110 vs a current price of $66.46. Shares could thus rise 60% or more over the next 12 months (link).
- **Columns**:
    - *The Trader:* Major U.S. indexes fell more than 1% in a week of volatile trading ahead of Britain's vote on EU membership; U.S. growth was also a concern, as the Fed lowered its forecasts of U.S. growth and future rate hikes; A U.K. exit from the EU could very well be priced in.
        - *Trader Extra:* Positive on **Bank of America (BAC)**, shares of which are 20% below recent highs; This looks like a good entry point, and the stock could rise 20% as near-term headwinds fade.
        - *Trader Extra:* Water utility **Aqua America (WTR)** is overvalued, though it could be supported as investors struggle to find yield.
    - *International Trader (Europe):* Not sure what to make of Brexit? No matter, **Adidas (ADS.GR)** and **Roche (ROG.SW)** should both thrive due to their durable businesses, solid balance sheets, and strong cash flow.
    - *International Trader (Asia):* Asian markets fell last week on concerns about the potential Brexit, though it's very much up for debate whether Asia has anything to worry about; CLSA tells clients to sell **Cheung Kong Infrastructure Holdings (1038.HK)** and **Power Assets Holdings (6.HK)**, which generate much of their revenue from U.K. operations; **Tata Motors (500570.IN)** would benefit from the cheaper pound that would follow a Brexit.
    - *Emerging Markets:* A big deficit and violent turmoil haven't prevented Turkey from outperforming other emerging markets as GDP growth remains solid; Positive mentions for **TAV Havalimanlari Holding (TAVHL.TI)** and **Coca-Cola Icecek (CCOLA.TI).**
    - *The Striking Price:* Shares of **Chipotle Mexican Grill (CMG)** could keep falling, and can still be played

with a put option strategy.
  - *Current Yield:* With rates low and a number of uncertainties looming (Brexit, slowing China, Fed), now is a good time to boost your cash holdings.
  - *Commodities Corner:* Hog production in the U.S. and Europe has expanded to meet China's massive demand, which should cap the recent climb in lean hog futures.
  - *Insider Transactions:* A list of recent purchases and sales of U.S. companies made by insiders.
  - *Up And Down Wall Street:* Market watchers are all revved up about the potential Brexit, but it could very well turn out to be a Y2K-style non-event; Democrats winning big in November would be positive for infrastructure stocks (JEC, PWR, FLR, AEGN, APOG, DY, EXP, EME, ROCK, GVA, GFF, HW, KBR, LII, NCS, NX, SSD, UFPI, VMC).
  - *Streetwise:* Wages are increasing after years of little or no real growth; In theory, companies like Netflix (NFLX), Nike (NKE), and Deere (DE), could outperform more labor-intensive outfits like FedEx (FDX) and VF Corp (VFC).
  - *Technology Trader:* **Microsoft (MSFT)** is paying a hefty premium for **LinkedIn (LNKD)**, but the price tag is not unreasonable if Microsoft can create synergies with its Azure machine learning.
  - *Speaking of Dividends:* Oil prices have stabilized and the rate of dividend cuts has slowed, but they aren't necessarily over.
  - *CEO Spotlight:* A profile of Stanley Bergman, CEO of **Henry Schein (HSIC)**, a multinational distributor of dental, veterinary, and medical products.
  - *Economic Beat:* Solid May retail sales and an upward revision to key parts of April's retail data somewhat brighten the economic outlook, albeit in an era of diminished expectations; Blame the internet retail stocks' poor performance.
  - *Follow-up:* Despite their big drop, shares of **Opko Health (OPK)** still look expensive.

**Industries:** Unspecified, Water Utilities, Alternative Energy, Constr. & Agric. Machinery, Constr. - Supplies & Fixtures, Construction - Raw Materials, Construction Services, Misc. Capital Goods, Apparel/Accessories, Auto & Truck Manufacturers, Auto & Truck Parts, Footwear, Beverages (Non-Alcoholic), Oil & Gas Operations, Forestry & Wood Products, Money Center Banks, Biotechnology & Drugs, Healthcare Services & Facilities, Major Drugs, Business Services, Recreational Activities, Iron & Steel, Restaurants, Computer & Internet Services, Misc. Fabricated Products, Software & Programming, Air Courier, Misc. Transportation
**Primary Identifiers:** 1038-HK, 500570-IN, 6-HK, ADS-DE, AEGN-US, APOG-US, BAC-US, CCOLA-TR, CMG-US, DE-US, DLPH-US, DY-US, EME-US, EXP-US, FDX-US, FLR-US, GFF-US, GVA-US, HSIC-US, HW-US, JEC-US, KBR-US, LII-US, LNKD-US, MSFT-US, NCS-US, NFLX-US, NKE-US, NX-US, OPK-US, PWR-US, ROCK-US, ROG-CH, SQ-US, SSD-US, TAVHL-TR, UFPI-US, VFC-US, VMC-US, WTR-US
**Related Identifiers:** 1038-HK, 500570-IN, 6-HK, ADS-DE, AEGN-US, APOG-US, BAC-US, CCOLA-TR, CMG-US, DE-US, DLPH-US, DY-US, EME-US, EXP-US, FDX-US, FLR-US, GFF-US, GVA-US, HSIC-US, HW-US, JEC-US, KBR-US, LII-US, LNKD-US, MSFT-US, NCS-US, NFLX-US, NKE-US, NX-US, OPK-US, PWR-US, ROCK-US, ROG-CH, SQ-US, SSD-US, TAVHL-TR, UFPI-US, VFC-US, VMC-US, WTR-US
**Subjects:** Conjecture, News Media, Newspaper Summaries (Barron's, others), Published Reports
**Reference Links:**

- Barron's

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March 22, 2017

Gabelli & Company

# Aqua America (WTR - $31.90 - NYSE) Lower '17 &'18; Growth Accelerates in 2019-Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2018P | $1.45 | 22.1x | $39 | Dividend: $0.77 Current Return: 2.4% |
| 2017E | 1.35 | 23.7 | 37 | Shares O/S: 180.3 million |
| 2016A | 1.32 | 24.2 | 35 | 52-Week Range: $35.83 - $28.03 |
| 2015A | 1.26 | -- | -- | |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

We continue to recommend long-term investor Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.4% current return on the $0.77 per share annual dividend, which has increased at a 7.6% annual rate over the past ten years.

- WTR's 2017 earnings guidance range is $1.34-1.39 per share premised on 1.5-2.0% customer growth, 1-2% higher operating and maintenance (O&M) expense, $450 million of capital investment and 6-7% rate base growth. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, general rate cases and infrastructure surcharges. In 2017, subsidiaries have received $1.8 million in annual rate increases and currently have requests totaling $8.0 million awaiting PUC decisions.

- We lowered our 2017 and 2018 earnings estimates to $1.35 and $1.45 per share, from $1.40 and $1.50 per share, respectrively, but maintained our 2019 earnings estimate of $1.60 per share. In 2012, the PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base authorized the use of repair tax deductions, which resulted in a significant ramp up in earnings and delayed the need for rate increases and/or quarterly distribution system improvement charges (DSIC). The program has resulted in signficnat customer bill savings but moderate earnings growth (following the initial 32% increase in 2013) over the last few years. The company plans to file for DSIC increases in 2017 and a ~15% annual rate increase in 2018 to be effective in 2019. As a result, we expect earnings growth to accelerate in 2019 and return to its historical high-single digit growth rate.

- The 2017-2019 capital investment program totals more than $1.2 billion, including $450 million in 2017, and is expected to lead to 6-7% annual rate base growth. Roughly 65% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, NC).

- Given strong cash flow and annual infrastructure surcharges, WTR has minimal external funding needs. As of December 31, 2016, the common equity ratio was 49%, and S&P credit rating was A+ for Aqua Pennsylvania.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide.

- The 2016 PA "fair-valuation" legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems. WTR currently has four pending municipal acquisitions adding 8,761 customers for a collective purchase price of $113.7 million and 70 municipal prospects representing 390,000 customers. We expect the pace of municipal acquisitions to accelerate.

- On February 23, WTR reported 2016 earnings of $1.32 per share compared with $1.26 per share for the same period last year. In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million. In 2016, WTR subsidiaries were awarded $5.5 million in annual rate increases.

**Valuation**

Shares trade at 23.7x and 22.1x our 2017 and 2018 earnings estimates and 311% of book value ($10.26 per share), which compares to group multiples of 24.1x and 22.8x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2017-2018 PMVs are $37 and $39 per share, respectively, based on 3.5x book value. We continue to recommend purchase.

**Table 1** **Aqua America Private Market Value Analysis, 2013A-2021P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P | 2021P |
|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $883.1 | $915.3 | $948.7 | $983.5 | $1,019.6 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 496.2 | 533.5 | 581.0 | 615.7 | 652.8 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,894.0 | 1,996.0 | 2,115.5 | 2,252.1 | 2,226.0 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 0.0 | 0.0 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,986.1 | $7,404.4 | $7,882.2 | $7,790.9 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 2.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,985.1 | $7,403.4 | $7,881.2 | $7,788.9 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.3 | 180.3 | 180.3 | 180.3 |
| PMV per share | $30 | $32 | $33 | $35 | $37 | $39 | $41 | $44 | $43 |
| *Discount to PMV* | *-6%* | *0%* | *4%* | *9%* | *13%* | *17%* | *22%* | *27%* | *-99015%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.45 | $1.60 | $1.70 | $1.80 |
| P/E | 27.7 | 26.7 | 25.5 | 24.4 | 23.8 | 22.2 | 20.0 | 18.9 | 23,847.9 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.50 | $11.07 | $11.73 | $12.49 | $12.35 |
| P/B | 370% | 352% | 336% | 321% | 305% | 290% | 273% | 257% | 260% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 13.2% | 13.4% | 14.1% | 14.5% | 0.0% |

*Source: Company data and Gabelli & Company estimates.*

(1) Payments to buy out options holders at PMV, net of taxes.

**Aqua America - Price Performance**

*Source: Public data. As of March 22, 2014 WTR was rated BUY.*

I, ***Tim Winter, CFA*** the Research Analyst who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

***Tim Winter, CFA (314) 238-1314***



**Important Disclosures**

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May 1, 2018

Gabelli & Company

# Aqua America (WTR - $35.15 - NYSE) Termination of Sell Side Coverage- Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.55 | 22.7x | $40 | Dividend: $0.82 Current Return: 2.3% |
| 2018E | 1.40 | 25.1 | 38 | Shares O/S: 180.3 million |
| 2017A | 1.35 | 26.0 | 36 | 52-Week Range: $39.55 - $31.18 |
| 2016A | 1.32 | -- | -- | Book value (12/31/2017): $10.52 |

## COMPANY OVERVIEW

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

## Reason For Comment

As a result of a restructuring of the Gabelli & Company research department, we are terminating sell side coverage of this company as of May 1, 2018. The analyst has transitioned to an affiliated investment adviser. Gabelli & Company will no longer provide updates to our research or recommendations. Effective upon the termination of coverage, the last recommendation and estimates contained herein for this company should not be relied upon going forward.

## Final Recommendation – Buy

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.3% current return on the $0.82 per share annual dividend, which is secure and growing. Shares trade at 25.1x and 22.7x our 2018 and 2019 earnings estimates and 334% of book value ($10.52 per share), which compares to group multiples of 24.1x and 23.0x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2018-2019 PMV estimates are $38 and $40 per share, respectively, based on 3.5x book value.

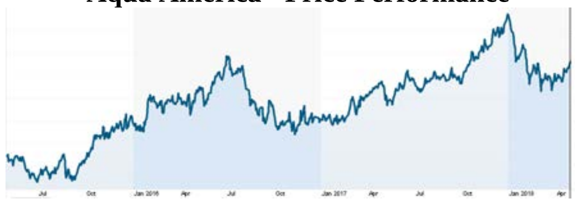
**Table 1** **Aqua America Private Market Value Analysis, 2013A-2022P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017A | 2018E | 2019P | 2020P | 2021P | 2022P |
|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $809.5 | $926.8 | $989.7 | $1,038.3 | $1,099.3 | $1,161.0 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 449.7 | 565.5 | 617.7 | 657.3 | 708.1 | 759.2 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,858.8 | 1,962.8 | 2,083.3 | 2,222.4 | 2,371.9 | 2,544.3 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,505.9 | $6,869.7 | $7,291.5 | $7,778.3 | $8,301.7 | $8,905.0 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,505.9 | $6,868.7 | $7,290.5 | $7,777.3 | $8,299.7 | $8,902.0 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.5 | 180.7 | 181.0 | 181.2 | 181.3 |
| PMV per share | $30 | $32 | $33 | $35 | $36 | $38 | $40 | $43 | $46 | $49 |
| *Discount to PMV* | *-13%* | *-7%* | *-2%* | *3%* | *5%* | *10%* | *15%* | *20%* | *25%* | *30%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.40 | $1.55 | $1.65 | $1.80 | $1.95 |
| P/E | 29.5 | 28.4 | 27.2 | 26.0 | 25.3 | 24.4 | 22.0 | 20.7 | 19.0 | 17.6 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.31 | $10.87 | $11.52 | $12.27 | $13.09 | $14.02 |
| P/B | 394% | 375% | 358% | 343% | 332% | 315% | 297% | 279% | 261% | 244% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 11.4% | 13.2% | 13.9% | 14.2% | 14.0% | 114.0% |

*Source: Company data and Gabelli & Company estimates.*

(1) Payments to buy out options holders at PMV, net of taxes.

**Aqua America - Price Performance**



*Source: Public data. As of May 1, 2015 WTR was rated BUY.*

I, ***Tim Winter, CFA*** the Research Analyst who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

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Ratings

Analysts' ratings are largely (but not always) determined by our "private market value," or PMV methodology. Our basic goal is to understand in absolute terms what a rational, strategic buyer would pay for an asset in an open, arms-length transaction. At the same time, analysts also look for underlying catalysts that could encourage those private market values to surface.

A **Buy** rated stock is one that in our view is trading at a meaningful discount to our estimated PMV. We could expect a more modest private market value to increase at an accelerated pace, the discount of the public stock price to PMV to narrow through the emergence of a catalyst, or some combination of the two to occur.

A **Hold** is a stock that may be trading at or near our estimated private market value. We may not anticipate a large increase in the PMV, or see some other factors at work.

A **Sell** is a stock that may be trading at or above our estimated PMV. There may be little upside to the value, or limited opportunity to realize the value. Economic or sector risk could also be increasing.

We prepared this report as a matter of general information. We do not intend for this report to be a complete description of any security or company and it is not an offer or solicitation to buy or sell any security. All facts and statistics are from sources we believe to be reliable, but we do not guarantee their accuracy. We do not undertake to advise you of changes in our opinion or information. Unless otherwise noted, all stock prices reflect the closing price on the business day immediately prior to the date of this report. We do not use "price targets" predicting future stock performance. We do refer to "private market value" or PMV, which is the price that we believe an informed buyer would pay to acquire 100% of a company. There is no assurance that there are any willing buyers of a company at this price and we do not intend to suggest that any acquisition is likely. Additional information is available on request.

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October 23, 2017
Gabelli & Company

# -Water-

## Takeaways from the National Association of Water Companies Water Summit
## October 15-17
## Seattle, WA

*Source: Company websites*

| Companies | Ticker | | Price | | Exchange |
|---|---|---|---|---|---|
| American States Water | AWR | - | $ 55.61 | - | NYSE |
| American Water Works | AWK | - | 87.76 | - | " |
| Aqua America | WTR | - | 36.02 | - | " |
| California Water Service Group | CWT | - | 43.25 | - | " |

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***-Please Refer To Important Disclosures On The Last Page Of This Report-***

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October 23, 2017

Gabelli & Company

# -Water Utilities In Focus- Growing Market Share

## Investment Summary

The October 15-17, 2017 National Association of Water Companies (NAWC) Water Summit in Seattle, WA reinforced our view that water utility stocks are fundamentally strong and positioned to benefit from long-term infrastructure investment and consolidation. The NAWC has increased its focus on growing the investor-owned market share of the nation's water systems from the current 15% private/85% municipal and wastewater systems from 3% private/97% municipal. The 2014-2017 California drought highlights the need for water supply investment and management in the Arid West while the Flint, MI lead pipe events highlight the need for pipe replacement throughout the nation. Recent and pending state legislative and regulatory actions provide solutions to historical consolidation challenges and enable an easier course to the acquisition of municipal water and wastewater systems.

We consider water utilities to be among the lower risk groups in the equity markets, including strong credit ratings, defensive business profile, constructive regulation and considerable investment opportunity. The relatively small group of publicly traded companies offers an average 1.9% current return and mid-to-high single digit annual earnings growth. Over 2011-2016, the water utility sector grew EPS at a 9.3% CAGR and the nation's largest water utility continues to forecast 7-10% annual EPS growth. Strong earnings growth is driven by rate base investment, acquisitions and privatization.

The ten publicly-traded water utilities generated median and average year-to-date price changes of 17% and 19% through October 19, 2017 and trade at relatively high valuation multiples including 30.0x and 28.2x as well as 320% of book value. We recommend investors Buy shares of American Water Works (AWK) and Aqua America (WTR).

**Table 1** **Water Utility Financial Metrics**

| | | Market Data | | | | | | | Valuation | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company | Symbol | Price | Px Chg. YTD | Px Chg. 2016 | Market Cap. (mil.) | Enterprise Value (mil.) | 52-Week Low | 52-Week High | P/E 2016A | P/E 2017E | P/E 2018E | P/E 2019P | EV/ EBITDA | Price/ Book |
| | | $ | | % | $ | $ | | | X | X | X | X | X | X |
| American States Water | AWR | 55.61 | 22 | 11 | 2 | 413 | 37 | 55 | 34.8 | 32.7 | 30.8 | 29.2 | 2.5 | 3.98 |
| American Water Works | AWK | 87.76 | 21 | 12 | 16 | 7,198 | 69 | 86 | 36.2 | 29.3 | 27.4 | 25.4 | 4.2 | 3.90 |
| Aqua America | WTR | 36.02 | 20 | 12 | 6 | 1,901 | 28 | 35 | 28.7 | 26.7 | 24.9 | 22.5 | 3.8 | 3.42 |
| Artesian Water Resources | ARTNA | 41.80 | 31 | 23 | 347 | 458 | 27 | 43 | 33.2 | 32.1 | 26.3 | 24.6 | 12.0 | 2.72 |
| California Water Service Gp. | CWT | 43.25 | 28 | (5) | 2 | 667 | 29 | 43 | 43.2 | 33.3 | 30.9 | 28.8 | 3.3 | 3.14 |
| Connecticut Water Service | CTWS | 63.19 | 13 | 5 | 731 | 966 | 49 | 64 | 31.0 | 28.7 | 27.5 | 25.8 | 20.5 | 2.87 |
| Consolidated Water Co. | CWCO | 12.90 | 19 | 15 | 192 | 192 | 10 | 14 | 25.3 | 19.3 | 17.9 | 17.2 | 23.2 | 1.23 |
| Middlesex Water | MSEX | 45.01 | 5 | 15 | 735 | 888 | 32 | 46 | 36.9 | 29.2 | 28.1 | 26.5 | 16.5 | 3.32 |
| SJW Corp. | SJW | 63.73 | 14 | (8) | 1 | 449 | 43 | 65 | 34.5 | 29.7 | 28.3 | 27.8 | 3.3 | 3.02 |
| York Water | YORW | 36.20 | (5) | 7 | 465 | 550 | 29 | 40 | 37.3 | 37.7 | 36.6 | 34.5 | 18.5 | 4.07 |
| **Average** | | | **17** | **9** | | | | | **34.1** | **29.9** | **27.9** | **26.2** | **10.8** | **3.17** |
| **Median** | | | **19** | **12** | | | | | **34.6** | **29.5** | **27.8** | **26.1** | **8.1** | **3.23** |

| | | Financial Performance | | | | | | | Dividends | | | Financial Strength | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company | Symbol | EBITDA 2017E | EPS 2015A | EPS 2016A | EPS 2017E | EPS 2018P | EPS 2019P | ROE (TTM) | Annual Rate | Current Yield | Growth Rate | Book Value P/S | Equity/ Capital 30-Sep | S&P Credit Rating |
| | | $mil. | $ | $ | $ | | $ | % | $ | % | % | $ | % | |
| American States Water | AWR | 163 | 1.60 | 1.63 | 1.70 | 1.80 | 1.90 | 11.6 | 1.02 | 1.8 | 13.8 | 13.97 | 58 | A+ |
| American Water Works | AWK | 1,703 | 2.43 | 2.84 | 3.00 | 3.20 | 3.45 | 12.6 | 1.66 | 1.9 | 22.1 | 22.50 | 35 | A- |
| Aqua America | WTR | 496 | 1.26 | 1.32 | 1.35 | 1.45 | 1.60 | 12.5 | 0.82 | 2.3 | 15.0 | 10.52 | 48 | A+ |
| Artesian Water Resources | ARTNA | 38 | 1.26 | 1.41 | 1.30 | 1.59 | 1.70 | 9.2 | 0.93 | 2.2 | 4.6 | 15.36 | 57 | N/A |
| California Water Service Gp. | CWT | 200 | 1.00 | 1.01 | 1.30 | 1.40 | 1.50 | 7.4 | 0.72 | 1.7 | 7.5 | 13.78 | 47 | A+ |
| Connecticut Water Service | CTWS | 47 | 2.04 | 2.08 | 2.20 | 2.30 | 2.45 | 9.5 | 1.19 | 1.9 | 11.2 | 21.99 | 51 | A |
| Consolidated Water Co. | CWCO | 8 | 0.51 | 0.51 | 0.67 | 0.72 | 0.75 | 4.9 | 0.30 | 2.3 | 0.0 | 10.46 | 88 | N/A |
| Middlesex Water | MSEX | 54 | 1.22 | 1.38 | 1.54 | 1.60 | 1.70 | 10.2 | 0.85 | 1.9 | 6.3 | 13.56 | 58 | A- |
| SJW Corp. | SJW | 136 | 1.85 | 2.57 | 2.15 | 2.25 | 2.29 | 12.2 | 0.87 | 1.4 | 11.5 | 21.09 | 50 | N/A |
| York Water | YORW | 30 | 0.97 | 0.92 | 0.96 | 0.99 | 1.05 | 10.3 | 0.64 | 1.8 | 3.1 | 8.90 | 57 | A- |
| **Average** | | | | | | | | **10.0** | | **1.9** | **9.5** | | **55** | |
| **Median** | | | | | | | | **10.3** | | **1.9** | **9.3** | | **54** | |

*Figures exclude items Gabelli & Company, Inc. believes to be non-recurring.*
*Sources: Gabelli & Company, Inc., Thomson, Yahoo! Finance, and company filings.*
*(a) Subsidiary ratings*

**Water Utility Investment Thesis**

We continue to expect water utility stocks to deliver low-risk mid-to-high single digit earnings and dividend growth for foreseeable future. While the sector has been ripe for growth for some decades, we expect growth to accelerate over the next several years. Our investment thesis is summarized below:

- Extremely fragmented industry (55,000 separate water systems)
- Roughly 80-85% of population served by municipal systems (16% investor-owned)
- Significant investment required to maintain and upgrade infrastructure
- Municipalities lack funding, desire and expertise
- Only ten publicly-traded water utilities
- Opportunity to grow through rate base investment, consolidation, and privatization
- Legislative and regulatory principles implemented to encourage consolidation

The following are key takeaways from the NAWC:

- **Consolidation Enabling Legislation and Regulation:** The Northeastern water managements expressed increased enthusiasm over the number of potential willing municipal sellers driven by recent legislative and political actions. On June 14, 2017, the Pennsylvania Public Utilities Commission (PPUC) approved WTR's acquisition of the New Garden Township (2,100 wastewater customers) for $29.5 million. The transaction was the first to test Pennsylvania's Act 12 (otherwise known as fair market value recognition) which became state law in April of 2016. Act 12 allows the PPUC to recognize the lesser of the fair market value or purchase price for municipal water and wastewater systems acquisitions in rate base. Fair market value is determined by averaging two estimated market valuations performed by PPUC approved consultants. Act 12 essentially allows goodwill into rate base as water and wastewater system market values are normally 1.3-2.0x rate base. Forms of fair market valuation adjustments are allowed in IL, NJ, CA, PA, MO, and IN. In addition, PA offers water and wastewater rate consolidation which allows for acquisition premiums of water and wastewater systems to be spread over a larger customer base.

- **Water Quality Accountability Act (WQAA):** Over the past decade, some municipal systems have deferred infrastructure investment and the regulatory agencies have delayed or neglected compliance enforcement. On July 21, 2017, New Jersey passed the WQAA that requires the state's water utilities to meet NJ Department of Environmental Protection (NJDEP) water quality and infrastructure standards and provide plans for improvement. The Act places accountability on municipal systems to invest in infrastructure or provide a plan of system improvement. We believe forcing municipalities to "comply" or "spend" will encourage some to seek alternatives to relieve the liability. In other words, the WQAA will "shake apples from the tree" and at least initiate the discussion of privatization.

- **Infrastructure Need Translates into Rate Base Growth and Privatization Opportunities:** Water utilities forecast significant infrastructure investment or rate base growth with a considerable portion (~60%) of capital allocated toward pipe replacement. In its Fifth (2015) national assessment and report to Congress, the EPA found that the nation's 52,000 community water systems and 21,400 not-for-profit non-community water systems needs to invest an estimated $384.2 billion in infrastructure improvement over the next twenty years. Roughly $247.5 billion, or 64.4%, of the national need is for transmission and distribution, $72.5 million, or 18.9%, for treatment and $39.5 million, or 10.3%, for storage. The 41,801 small systems serving 3,300 people or less require the greatest per capita need while the larger systems (over 100,000 people) require the least per capita investment. In 2017, the American Society of Civil Engineers (ASCE) gave the nation's drinking water infrastructure a grade of "D" and the wastewater infrastructure a grade of "D+". Improved regulatory principles allow greater opportunity to earn the allowed returns. Some examples inlcude revenue stabilization mechanisms, plant recovery mechanism, expense riders, and forward looking test years.

- **Distribution Surcharges for Pipe Replacement:** The average water pipe replacement rate is roughly 200 years, which is double the useful life of the pipes. Further, the American Water Works Association (AWWA) estimates that investment needs for buried drinking water infrastructure totals more than $1 trillion over the next 25 years. In several states, including IL, IA, IN, MO, NJ, NY, PA, TN, VA, and WV, regulatory principles allow for pipe replacement surcharges on a quarterly, semi-annual or annual basis. The timely investment returns translate into solid earnings growth.

- **Drought Over But not Forgotten:** On April 7, 2017, California Governor Brown declared an end to the 2014-2017 state-wide drought emergency and the state's water utilities ended mandatory conservation and rationing. The drought's financial impact on the publicly-traded water utilities was significantly minimized by the many financial protections afforded by the California Public Utility Commission (CPUC) regulation. The Water Revenue Adjustment Mechanism (WRAM) decouples consumption from revenues while the Modified Cost Balancing Account (MBCA) ensures recovery of changes in water supply costs. In addition, the drought highlighted significant investment in infrastructure and supply management required in the state and other arid geographies.

- **Allowed ROE's Likely Bottomed:** By year-end, California's four largest water utilities, AWK, CWT, AWR, and SJW, expect to receive a cost-of-capital decision, including allowed ROE's for a two or three-year period. In April 2017, the water utilities filed updated cost-of-capital (COC) applications to include allowed ROE's of 10.75-11.0% and equity ratio's ranging from 50-57% as well as a capital adjustment mechanism. California publicly-traded water utilities are currently allowed a 9.43% ROE following a formulaic "55-basis point" reduction from 9.99%, in January of 2013. In mid-2012, the California Public Utility Commission (CPUC) set the allowed ROE for the state's publicly-traded water utilities at 9.99% (53-55% common equity ratio) for the years 2012-2014, subject to a Cost of Capital Adjustment (CCA). The U.S. Treasury yields have risen nearly 100-basis points to 2.35% since reaching a bottom in June of 2016 when the 10-year US Treasury bond yielded 1.45%.

- **Military Based Privatization**: The privatization of the water and wastewater systems of US Department of Defense (DOD) Army and Airforce bases has proven to be a low-risk and "regulated-like" opportunity for water utilities. AWK (12 bases under management) and AWR (11 bases under management) have proven to be leaders. On October 2, 2017, AWR announced a 50-year $601 million contract to operate, maintain, and provide construction management for the water and wastewater systems of the U.S. Army's Fort Riley military base in Kansas. In 2017, AWR expects military base privatizations to contribute $0.34-$0.38 per share of our $1.70 per share estimate driven by ongoing construction activity, price redeterminations, and cost controls. On September 28, 2017, AWK announced a 50-year $490 million contract for ownership, operation and maintenance of the Wright-Patterson Air Force Base in Ohio. The Army, Air Force and Navy have 30-50 bases that could potentially be privatized, including 5-10 currently actively pursuing privatization.

- **Takeover Potential:** On June 2, 2017, EverSource (ES-62.13-Hold), a large New England electric distribution utility, agreed to buy Aquarion Water Company for an enterprise value of $1.675 billion, comprised of $880 million in cash and $795 million of assumed debt. Aquarion is the largest water utility in New England and serves nearly 230,000 customers in CT, MA, and NH. The transaction is expected to close by 12/31/17 after DOJ and state regulatory approvals are received. While it had been several years since a major water utility has been acquired, we consider the remaining utilities to be attractive candidates for private equity and or larger strategic utilities. Selected recent and historical acquisitions are listed below:

**Table 2** **Select Water Utility Acquisitions**

| Acquisition (Acquirer-Acquired) | Date Announced | Equity Value ($ mil.) | Trailing 12-Mos. P/E (X) | Book Value Premium (%) | Dollar Per Customer ($) |
|---|---|---|---|---|---|
| NiSource (NI) - Indianapolis Water Company | 12/19/1996 | 288 | 25.7 | 240 | 1,719 |
| Philadelphia Suburban (PSC) - Consumers Water | 6/29/1998 | 270 | 21.9 | 252 | 2,045 |
| American Water Works (AWK) - National Enterprises | 10/13/1998 | 475 | 25.9 | 240 | NA |
| California Water Svc. (CWT) - Dominguez (DOMZ) | 3/22/1999 | 53 | 36.5 | 309 | NA |
| Kelda Group - Aquarion (WTR) | 6/1/1999 | 444 | 25.5 | 281 | 4,096 |
| Suez Lyonnaise (SLEDF) - United Water (UWR) | 8/23/1999 | 1,360 | 30.3 | 292 | 4,154 |
| American Water Works (AWK) - CZN's water assets | 10/17/1999 | NA | 27.5 | 265 | 2,738 |
| American Water Works (AWK) - SJW Corp. (SJW) | 10/29/1999 | 390 | 27.1 | 289 | NA |
| Thames Water PLC - E'town (ETW) | 11/22/1999 | 607 | 26.7 | 256 | 4,732 |
| Nuon - Utilities Inc. | 3/28/2001 | 400 | NA | NA | 1,702 |
| RWE - American Water Works (AWK) | 9/17/2001 | 4,600 | 26.3 | 270 | 1,840 |
| Philadelphia Suburban (PSC) - AquaSource (DQE) | 7/30/2002 | 195 | NA | NA | 1,500 |
| Aqua America (WTR) - Heater Utilities (ALLETE) | 11/21/2003 | 48 | NA | NA | 1,407 |
| Aqua America - Florida Water Service (ALLETE) | 4/23/2004 | 14 | NA | NA | 1,382 |
| Southwest Water (SWWC) - Tecon Water Holdings | 5/3/2004 | 45 | NA | NA | 2,520 |
| AIG Highstar - Utilities, Inc. (NUON) | 5/18/2005 | NA | NA | NA | NA |
| Macquarie - Aquarion (Kelda) | 2/25/2006 | 625 | 19.7 | 223 | 4,076 |
| JP Morgan - Southwest Water Company (SWWC) | 3/3/2010 | 303 | 44.0 | 268 | NMF |
| City of Nashua - Pennichuck (PNNW) | 11/14/2010 | 135 | 30.0 | 241 | 3,756 |
| EPCOR (Arizona & New Mexico-American) | 1/24/2011 | 470 | NA | * | 2,701 |
| Corix Utilities (Utilities, Inc.) | 2/20/2012 | NA | NA | NA | NA |
| | **Average** | | **28.2** | **264** | **2,691** |

**Enterprise value to rate base of 1.33X ($470 million/$353 million).*

*Source: Company documents, SEC filings and Gabelli & Company, Inc. estimates*

**Valuations Remain Higher Than Electric and Gas Utilities**

The water utility group's price to 2017 and 2018 earnings multiples of 30.1X, and 28.1X and its median price-to-book multiple of 319%, remain higher than regulated electric distribution utility (20.1X and 19.2X; 195%) and gas distribution utility (25.5X and 24.5X; 220%) multiples. Water utilities have traded at premium valuations over the past fifteen years owing to potential takeovers, lower risk and more consistent earnings growth potential. Historical takeover multiples have averaged roughly 25-30X forward earnings, 250-300% of book value and 1.25-1.5X rate base, but we believe a willing seller in the current environment would require higher multiples.

The sector's low-risk is a function of the following: a monopoly service territory, high barriers to entry, no alternative product, minimal commodity price exposure, price inelasticity, public and regulatory support for price increases, regulated rates of return and strong financial conditions. High quality financial conditions are evidenced by superior credit ratings and solid balance sheets. As can be seen in Table 1, Standard & Poor's rates the credit of most water utilities 'A' or higher.

**Why Such High Takeover Multiples?**

Over the past twenty years, electric utilities, European and Canadian utilities and larger, well-capitalized water utilities bought and sold water utilities as aspirations of consolidating and privatizing the U.S landscape. We believe premium multiples are warranted due to the scarcity of potential vehicles to participate in the low-risk earnings growth and longer-term consolidation and privatization potential. The inefficiencies of municipal and smaller water providers have been tolerated only due to the affordability of residential water utility bills and the fact that municipal water costs are often partially subsidized. With over 55,000 water systems in the U.S., 50,000 of which serve costumer bases under 3,000, and 80% of the population served by municipal systems, we expect the long-term consolidation trend to continue.

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**American Water Works (AWK - $87.76 -NYSE) Nation's Premier Water Utility; 7-10% Growth - Buy**

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $3.45 | 25.4x | $93 | Dividend: $1.66 Current Return: 1.9 % |
| 2018P | 3.20 | 27.4 | 87 | Shares O/S: 178.3 million |
| 2017E | 3.00 | 29.3 | 82 | 52-Week Range: $87.87 - $69.41 |
| 2016A | 2.84 | - | - | BVPS (6/30/17): $22.50 |

**COMPANY OVERVIEW**

American Water Works (Voorhees, NJ) is the nation's largest investor-owned water/wastewater utility with regulated utilities in sixteen states (NJ-25% of 2016 regulated revenues; PA-22%, MO-10%, IL-10%) and serves 3.3 million customers. Market-based Business (MBB) generates ~10% of ongoing earnings and includes Keystone, Contract Services (military bases and municipalities) and Homeowner Services.

**Reason For Comment**

We reiterate our Buy recommendation on AWK. We regard AWK as the premier water utility in the nation with a unique long-term low-risk growth outlook. Given scale, geographic/regulatory diversity, managerial and technical expertise, and strong financial condition, AWK is positioned to capitalize on the long-term need to upgrade water and wastewater infrastructure as well as privatize and consolidate the fragmented industry. Shares offer a 1.9% current return on the $1.66 per share annual dividend, which represents a relatively low 55% payout of the mid-point of management's 2017 earnings guidance of $2.98-3.08 per share.

- AWK's 2017 earnings guidance range is $2.98-3.08 per share and targets long-term growth of 7-10% per annum consisting of 4-6% from rate base growth, 1-2% from regulated utility acquisitions, and 2% from non-regulated businesses. AWK expects the regulated utility to generate 85-90% of earnings for the foreseeable future. Our 2017-2019 earnings estimates are $3.00, $3.20 and $3.45 per share, respectively.

- Management expects ~5-6% annual rate base growth from $10.694 billion at year-end 2016 (10.783 billion ao 3/31/2017) driven primarily by pipe replacement due to the aging of infrastructure. In addition to the $65.4 million of revenue increases awarded this year, AWK subsidiaries have requests totaling $366.1 million in annual increases pending final orders. On October 16, 2017, Penn-American announced a rate settlement agreement calling for a $62 million annual revenue increase to be effective January 1, 2018. The case was initiated in April of 2017 when AWK requested a $108 million, or 16%, increase based on a 10.8% ROE ($3.2 billion of rate base). On June 30, 2017, Missouri-American requested an $84 million increase based on a 10.8% ROE ($1.35 billion of rate base). On July 1, 2017, California-American requested a $34.6 million annual revenue increase ($493.9 million) and has a Cost-of-Capital proceeding pending where it requested a 10.8% ROE and 55.4% equity ratio for the period 2018-2020. On September 15, 2017, New Jersey-American requested a $129.3 million annual revenue increase based on a 10.8% allowed ROE.

- AWK's five-largest water subsidiaries (and some smaller) operate in states (IL, IN, MO, NJ, NY, PA, TN and WV) that allow frequent/timely rate recognition of pipe replacement. Ongoing improvement in the regulatory process, including future test years in nine states (CA, HI, IL, IN, KY, NY, PA, TN and VA), revenue decoupling in three states (CA, IL and NY) and consolidated (uniform) tariffs in nine states (IA, IL, IN, KY, MD, MO, NJ, PA and WV) bode well.

- AWK currently has 15 acquisitions pending in six states to add 33,887 customers (9,368 water; 24,519 wastewater). Year-to-date, AWK closed 13 acquisitions adding 15,649 customers (15,254 water; 395 wastewater). In 2016, AWK completed fifteen acquisitions in eight states adding over 42,000 total customers (1,900 water; 40,300 wastewater).

- Over 2017-2021, AWK plans to invest $6.7-7.3 billion and achieve a 32.5% O&M efficiency ratio in order to minimize customer rate impacts to 2.5% per annum. The $6.7-7.3 billion budget, includes $5.9 billion regulated investment, $0.6-1.2 billion in acquisitions, and $200 million other. The 2017 capital investment totals $1.5 billion, ($1.2 billion regulated).

## Valuation

Shares trade at 29.3x and 27.4x our 2017 and 2018 earnings estimates of $3.00 and $3.20 per share compared to the water utility group, which currently trades at 30.1x and 28.1x 2017 and 2018. On a price-to-book value basis, AWK shares trade at 390% of tangible book value versus group average multiples of 319%. We use a book value multiple of 3.5x forward book value given the recent legislation that could accelerate the consolidation and privatization dynamics of the industry. Our 2018 and 2019 PMV estimates are $87 and $93 per share, respectively.

**Table 3 American Water Works Private Market Value Analysis 2013A-2021P**

| *(in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P | 2021P |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | $2,902 | $3,011 | $3,159 | $3,302 | $3,540 | $3,740 | $3,957 | $4,177 | $4,421 |
| EBITDA | 1,378 | 1,422 | 1,515 | 1,588 | 1,703 | 1,824 | 1,959 | 2,093 | 2,247 |
| Book Value (Excl. Goodwill) | 3,520 | 3,708 | 3,747 | 3,916 | 4,166 | 4,433 | 4,728 | 5,049 | 5,406 |
| Valuation Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Segment Value | $12,320 | $12,976 | $13,115 | $13,706 | $14,580 | $15,516 | $16,546 | $17,670 | $18,920 |
| Total Private Market Value | $12,320 | $12,976 | $13,115 | $13,706 | $14,580 | $15,516 | $16,546 | $17,670 | $18,920 |
| Shares Outstanding (year-end) | 178.4 | 179.5 | 178.3 | 178.3 | 178.3 | 178.3 | 178.3 | 178.3 | 178.3 |
| PMV per share | $69 | $72 | $74 | $77 | $82 | $87 | $93 | $99 | $106 |
| *Discount to PMV* | *-27.1%* | *-21.4%* | *-19.3%* | *-14.2%* | *-7.3%* | *-0.8%* | *5.4%* | *11.5%* | *17.3%* |
| EPS | $2.20 | $2.43 | $2.64 | $2.84 | $3.00 | $3.20 | $3.45 | $3.70 | $4.00 |
| P/E | 39.9 | 36.2 | 33.2 | 30.9 | 29.3 | 27.4 | 25.4 | 23.7 | 21.9 |
| Year-End Book Value Per Share | $19.73 | $20.66 | $21.02 | $21.97 | $23.37 | $24.87 | $26.52 | $28.32 | $30.32 |
| P/B | 445% | 425% | 418% | 400% | 376% | 353% | 331% | 310% | 289% |

*Source: Company data and Gabelli & Company estimates*

*(1) After-tax payments to buy out option holders at Private Market Value*

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October 23, 2017
Gabelli & Company

## Aqua America (WTR - $36.02 - NYSE) PA DSIC Filed; Historical Growth to Return - Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.60 | 22.5x | $41 | Dividend: $0.82 Current Return: 2.3% |
| 2018P | 1.45 | 24.9 | 39 | Shares O/S: 180.3 million |
| 2017E | 1.35 | 26.7 | 37 | 52-Week Range: $36.27 - $28.03 |
| 2016A | 1.32 | -- | -- | Book value (6/30/2017): $10.52 |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.3% current return on the $0.82 per share annual dividend, which has increased at a 8% annual rate over the past ten years.

- WTR's 2017 earnings guidance range is $1.34-1.39 per share premised on 1.5-2.0% customer growth, 1-2% higher operating and maintenance (O&M) expense, $450 million of capital investment and 6-7% rate base growth. Our 2017-2019 earnings estimates remain $1.35, $1.45 and $1.60 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, general rate cases and infrastructure surcharges. In 2017, subsidiaries have received $11.1 million in annual rate awards and currently have requests totaling $14.0 million awaiting PUC decisions.

- Aqua-PA requested a 2.5% distribution system improvement charges (DSIC) increase effective October 1, 2017. We expect another two 2.5% requests to be effective in January and April of 2018 to be followed by a full PA rate increase to be effective in the first half of 2019. As a result, we expect earnings growth to accelerate in 2018 and return to its historical high-single digit growth rate. In 2012, the PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base authorized the use of repair tax deductions, which resulted in a significant ramp up in earnings and delayed the need for rate increases and/or quarterly (DSIC). The program has resulted in significant customer bill savings but moderate earnings growth (following the initial 32% increase in 2013) over the last few years.

- The 2017-2019 capital investment program totals more than $1.2 billion, including $450 million in 2017, and is expected to lead to 6-7% annual rate base growth. Roughly 65% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, and NC). Given strong cash flow and annual infrastructure surcharges, WTR has minimal external funding needs. As of June 30, 2017, the common equity ratio was 48%, and S&P credit rating was A+ for Aqua Pennsylvania.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. The 2016 PA "fair-valuation" legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems.

- Year-to-date, WTR bought three small water systems adding 1,002 customers for $5.8 million and has four acquisitions pending to add 11,087 customers for $120.5 million. In addition, WTR identified 70 municipal prospects representing 500,000 customers. We expect the pace of municipal acquisitions to accelerate. In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million.

- First-half 2017 earnings were $0.62 per share compared with $0.63 per share for the same period last year. Lower results were due to lower consumption and lower non-regulated results partially offset by higher rates.

**Valuation**

Shares trade at 26.7x and 24.9x our 2017 and 2018 earnings estimates and 343% of book value ($10.52 per share), which compares to group multiples of 24.1x and 22.8x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2017-2018 PMVs are $37 and $39 per share, respectively, based on 3.5x book value.

**Table 4** **Aqua America Private Market Value Analysis, 2013A-2020P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P | 2021P |
|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $883.1 | $915.3 | $948.7 | $983.5 | $1,019.6 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 496.2 | 533.5 | 581.0 | 615.7 | 652.8 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,894.0 | 1,996.0 | 2,115.5 | 2,252.1 | 2,226.0 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,986.1 | $7,404.4 | $7,882.2 | $7,790.9 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 2.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,985.1 | $7,403.4 | $7,881.2 | $7,788.9 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.3 | 180.3 | 180.3 | 180.3 |
| PMV per share | $30 | $32 | $33 | $35 | $37 | $39 | $41 | $44 | $43 |
| *Discount to PMV* | *-19%* | *-13%* | *-8%* | *-2%* | *2%* | *7%* | *12%* | *18%* | *-99508%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.45 | $1.60 | $1.70 | $1.80 |
| P/E | 31.1 | 29.9 | 28.7 | 27.4 | 26.7 | 24.9 | 22.5 | 21.2 | 23,966.6 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.50 | $11.07 | $11.73 | $12.49 | $12.35 |
| P/B | 415% | 395% | 377% | 361% | 343% | 325% | 307% | 288% | 292% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 13.2% | 13.4% | 14.1% | 14.5% | 14.0% |

*Source: Company data and Gabelli & Company estimates.*

(1) Payments to buy out options holders at PMV, net of taxes.

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October 23, 2017
Gabelli & Company

## American States Water (AWR-$55.61-NYSE) — Leader in Military Privatization - Hold

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.90 | 29.2x | $45 | Dividend: $1.02 Current Return: 1.8% |
| 2018P | 1.80 | 30.8 | 43 | Shares O/S: 36.6 million |
| 2017E | 1.70 | 32.7 | 42 | 52-Week Range: $55.86 - $37.47 |
| 2016A | 1.62 | - | - | BVPS (6/30/2016): $13.97 |

**COMPANY OVERVIEW**

American States Water (San Dimas, CA) is the parent company for Golden States Water Company (GSWC) and American States Utilities Services (ASUS). GSWC is a regulated water utility serving 256,000 customers throughout Northern, Coastal and Southern CA, as well as providing electric distribution to 23,000 customers in Big Bear, CA. ASUS provides non-regulated water/wastewater and construction services to ten military bases across the nation.

**Reason for Comment**

AWR is a high-quality utility with a strong balance sheet (55% common equity), high credit ratings (S&P: 'A+') and successful non-regulated water/wastewater contract services business..

- Our 2017-2019 earnings estimates remain $1.70, $1.80 and $1.90 per share, respectively. The outcomes of several pending regulatory filings will determine AWR's earnings power and growth potential, including a pending cost of capital filing, the 2019-2021 GRC, and a pending electric rate case.

- In July of 2017, GSWC filed its 2019-2021 GRC and requested a ~$125 million annual capital budget. A decision is expected in the fourth quarter of 2018. In April 2017, GSWC filed an updated cost-of-capital application to include an allowed ROE of 11.0%, which compares to the current allowed ROE of 9.43%. A decision is expected by year-end 2017. On May 1, 2017, AWR filed an electric rate case for the years 2018-2021 with a decision expected by the end of 2017.

- In 2017, AWR expects ASUS to contribute $0.34-0.38 per share driven by ongoing construction activity, price redeterminations, and cost controls. ASUS serves ten military bases under 50-year contracts and has ongoing economic price adjustments as well as pursuing new business with roughly twenty RFPs outstanding for the privatization of new bases. In mid-2017, ASUS began operating the water/wastewater systems at Eglin Air Force Base (Florida) under a 50-year contract. The value of the contract is estimated at approximately $510 million over the 50-year period and is subject to annual economic price adjustments.

- On October 2, 2017, AWR announced that it had been awarded a 50-year $601 million contract to operate, maintain, and provide construction management for the water and wastewater systems of the U.S. Army's Fort Riley military base in Kansas. At over 100,000 acres, Fort Riley has a daytime population of nearly 25,000. With the addition of Fort Riley, ASUS will be providing water and wastewater utility services at eleven military bases located within eight states.

- AWR reported second quarter 2017 earnings of $0.49 per share (excludes $0.13 per share gain on sale of small system) compared to $0.45 per share last year. On June 8, 2017, the Casitas Municipal Water District acquired GSWC's 2,900 customer Ojai water system by eminent domain for $34.3 million cash. As a result, AWR recorded a non-recurring $0.13 per share gain in the second quarter. Results by segment are outlined below:

- On April 7, 2017, Governor Brown declared an end to the drought emergency and GSWC ended its mandatory conservation and rationing. Following five years of drought, California experienced one of the wettest years in history in 2016. The drought's financial impact on AWR and its peers was significantly minimized by the many financial protections afforded by the publicly-traded utilities per California Public Utility Commission (CPUC) regulation. The Water Revenue Adjustment Mechanism (WRAM) decouples consumption from revenues while the Modified Cost Balancing Account (MBCA) ensures recovery of changes in water supply costs.

## Valuation

Shares offer a 1.8% current return on the $1.02 per share annual dividend, which represents a 60% payout ratio of our 2017 earnings estimate, which allows for dividend growth. We recommend investors Hold AWR shares given our belief that the water utility's strong fundamentals are fairly recognized in the share price. AWR shares trade at 32.7x and 30.8x our 2017 and 2018 earnings estimates compared to peer group multiples of 30.1x and 28.1x, respectively. Our 2018 and 2019 PMV estimates are $43 and $49 per share, respectively, which are based on a 300% price-to-book value multiple.

**Table 5** **American States Water Company**
**Private Market Value Analysis 2013A-2021P**

| | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P | 2021P |
|---|---|---|---|---|---|---|---|---|---|
| Revenue | $472.1 | $465.8 | $458.6 | $436.1 | $457.0 | $481.1 | $504.6 | $529.1 | $554.4 |
| EBITDA | 159.2 | 160.1 | 160.5 | 153.6 | 163.2 | 174.3 | 185.2 | 195.6 | 206.2 |
| Book Value | 475.8 | 506.8 | 465.9 | 494.3 | 504.8 | 517.0 | 530.8 | 546.2 | 563.1 |
| Valuation Multiple | 2.25 | 2.25 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Segment Value | $1,070.6 | $1,140.3 | $1,397.8 | $1,482.9 | $1,514.5 | $1,551.1 | $1,592.4 | $1,638.5 | $1,689.2 |
| Total Private Market Value | $1,070.6 | $1,140.3 | $1,397.8 | $1,482.9 | $1,514.5 | $1,551.1 | $1,592.4 | $1,638.5 | $1,689.2 |
| Less: Options Payments (1) | 0.0 | 0.0 | 0.0 | (1.3) | (2.9) | 0.0 | 0.0 | 0.0 | 0.0 |
| Equity Private Market Value | $1,070.6 | $1,140.3 | $1,397.8 | $1,484.1 | $1,517.4 | $1,551.1 | $1,592.4 | $1,637.5 | $1,687.2 |
| Shares Outstanding (year-end) | 38.7 | 38.3 | 38.7 | 36.6 | 36.3 | 36.0 | 35.7 | 35.4 | 35.2 |
| PMV per share | $28 | $30 | $36 | $41 | $42 | $43 | $45 | $46 | $48 |
| *Discount to PMV* | *-101.1%* | *-86.7%* | *-54.0%* | *-37.0%* | *-32.9%* | *0.0%* | *0.0%* | *0.0%* | *0.0%* |
| EPS | $1.61 | $1.57 | $1.60 | $1.63 | $1.70 | $1.80 | $1.90 | $2.00 | $2.10 |
| P/E | 34.5 | 35.4 | 34.8 | 34.2 | 32.7 | 30.8 | 29.2 | 27.7 | 26.4 |
| Year-End Book Value Per Share | $12.29 | $13.24 | $12.04 | $13.52 | $13.93 | $14.38 | $14.88 | $15.43 | $16.02 |
| P/B | 453% | 420% | 462% | 411% | 399% | 387% | 374% | 360% | 347% |
| ROE | 13.4% | 12.3% | 12.7% | 12.7% | 12.4% | 12.7% | 13.0% | 13.2% | 13.4% |

*Source: Company data and Gabelli & Company estimates*

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## California Water Service Group (CWT-$43.25-NYSE) EPS Rebound on GRC & Drought End -Hold

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.50 | 28.8 x | $48 | Dividend: $0.72 Current Return: 1.7% |
| 2018P | 1.40 | 30.9 | 46 | Shares O/S: 48.0 million |
| 2017E | 1.30 | 33.3 | 43 | 52-Week Range: $43.75 - $29.25 |
| 2016A | 1.01 | - | - | Book value (2Q/2017): $13.78 |

**COMPANY OVERVIEW**

Located in San Jose, CA, California Water Service Group is the third-largest publicly traded water utility in the U.S., providing service to roughly two million people (510,000 customers) primarily in California (482,400 customers), but also in Washington (16,700 customers), New Mexico (8,000 customers) and Hawaii (4,400 customers). Historically, ~50% of CWT's water supply is obtained from wells, ~45% is purchased and ~5% is from surface supplies.

**Reason For Comment**

We continue to view CWT as a high-quality water utility holding with healthy earnings and dividend growth potential, a strong balance sheet (54% common equity), high investment grade credit ratings (S&P rates credit A+) and a constructive regulatory environment. We expect recent and pending rate relief combined with constructive regulatory mechanisms to result in low-risk 5% annual earnings growth for the foreseeable future.

- Our 2017-2019 earnings estimates remain $1.30, $1.40 and $1.50 per share, respectively. In 2015 and 2016, CWT earned an 8.45% and 9.03% regulatory return on equity (ROE) when excluding CWIP, which compares to the 9.43% ROE allowed.

- In December 2016, the CPUC approved the 2017-2019 General Rate Case (GRC) settlement, which resulted in a $45 million annual revenue increase effective January 1, 2017, with another $17.2 million to be implemented in 2018 and $16.3 million in 2019. The order authorizes $658.8 million in water system improvements over the three-year period of 2016-2018, including $197.3 million subject to the CPUC's advice letter procedure. CWT expects an additional $30 million of annual revenues associated with advice letter projects through 2019.

- CWT's capital budget totaled $229 million in 2016 and is expected to be $200-220 million in 2017 and $215 million in 2018. CWT forecasts rate base CAGR of 8.5% from $1.058 billion in 2016 to $1.399 billion in 2019.

- In April 2017, CWT and three other water utilities, filed an updated cost-of-capital (COC) application to include an allowed ROE of 10.75% and a 53.4% equity ratio as well as a capital adjustment mechanism similar to that last adopted for the company. The CPUC schedule for the application anticipates an ALJ recommendation as early as November 14, 2017 with a final decision on the matter on December 14, 2017 with the COC effective for 2018 and 2019. The next GRC will be filed in July of 2018 for the 2020-2022 period.

- In April of 2017, the state of California's five year drought essentially ended following one of the wettest years in history in 2016. In 2015, CWT's CA's water consumption declined nearly 30% compared to 2013 and was in compliance with Governor Brown's 25% mandatory water reduction order (April 1, 2015). In 2017, water sales have increased 3.5%, but remain below levels used for revenue requirements.

- The drought's financial impact on CWT and its peers continues to be significantly minimized by the many financial protections and CPUC regulatory principles. The Water Revenue Adjustment Mechanism (WRAM) decouples consumption from revenues while the Modified Cost Balancing Account (MBCA) ensures recovery of changes in water supply costs. The California State Water Resources Control Board is pursuing permanent water use regulations which will likely be adopted by the CPUC.

- In May, CWT filed an application to include the Travis Air Force Base (TAFB) in its service area. On September 30, 2016, CWT entered into a 50-year agreement to acquire TAFB's water utility assets in 2018. The contract calls for CWT to make $12.7 million of initial capital investments and $52 million over the contract life.

## Valuation

Shares trade at 33.3x and 30.9x our 2017 and 2018 earnings estimates compared to peer group multiples of 30.1x and 28.1x, respectively, and provide a 1.7% current return on the $0.72 annual dividend, which we consider secure with growth potential. Our 2018 PMV is $46 per share based on 300% of book value.

**Table 6 California Water Services Group Private Market Value Analysis 2013A-2021P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P | 2021P |
|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $584.1 | $597.5 | $588.4 | $609.4 | $655.8 | $689.8 | $726.4 | $760.7 | $794.5 |
| EBITDA | 153.5 | 169.4 | 158.2 | 167.6 | 199.6 | 218.1 | 238.7 | 256.2 | 272.6 |
| Book Value | 598.8 | 626.6 | 642.2 | 659.5 | 702.2 | 749.0 | 800.2 | 855.4 | 915.2 |
| Multiple | 2.2 | 2.2 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Value of Utilities | $1,317.3 | $1,378.6 | $1,926.5 | $1,978.4 | $2,106.5 | $2,246.9 | $2,400.7 | $2,566.1 | $2,745.6 |
| Less: Net Options Payments (1) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 3.0 | 4.0 |
| Private Market Value | $1,317.3 | $1,378.6 | $1,926.5 | $1,978.4 | $2,106.5 | $2,246.9 | $2,400.7 | $2,565.1 | $2,743.6 |
| Shares outstanding | 47.7 | 46.4 | 47.9 | 48.4 | 48.8 | 49.2 | 49.6 | 50.0 | 50.3 |
| PMV per share | $28 | $30 | $40 | $41 | $43 | $46 | $48 | $51 | $55 |
| *Discount to PMV* | *-57%* | *-46%* | *-8%* | *-6%* | *0%* | *5%* | *11%* | *16%* | *21%* |
| EPS | $1.02 | $1.14 | $1.00 | $1.01 | $1.30 | $1.40 | $1.50 | $1.60 | $1.70 |
| P/E | 42.5 | 38.0 | 43.2 | 42.6 | 33.3 | 30.9 | 28.8 | 27.1 | 25.4 |
| Year-End Book Value Per Share | $12.54 | $13.50 | $13.41 | $13.64 | $14.39 | $15.22 | $16.14 | $17.12 | $18.19 |
| P/B | *345%* | *320%* | *323%* | *317%* | *301%* | *284%* | *268%* | *253%* | *238%* |
| ROE | 8.5% | 8.7% | 7.4% | 7.5% | 9.3% | 9.4% | 9.6% | 9.6% | 9.7% |

*Source: Company data and Gabelli & Company estimates*

**Other Companies Mentioned:**

| | | |
|---|---|---|
| Artisan Water Resources | (ARTNA | – NASDAQ) |
| Connecticut Water Service | (CTWS | – NASDAQ) |
| Consolidated Water Co. | (CWCO | – NASDAQ) |
| Eversource Energy | (ES | – NYSE) |
| Middlesex Water | (MSEX | – NASDAQ) |
| SJW Corp. | (SJW | – NYSE) |
| York Water | (YORW | – NASDAQ) |

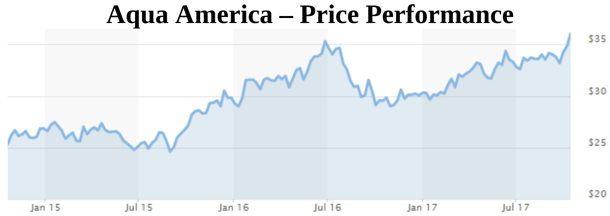
**American States Water – Price Performance**


*Source: Public data. As of October 23, 2014 AWR had a Hold recommendation*

**American Water Works – Price Performance**

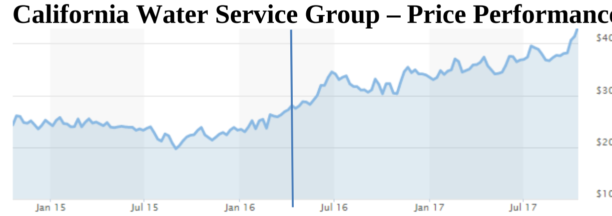

*Source: Public data. As of October 23, 2014 AWK had a BUY recommendation*

**Aqua America – Price Performance**




*Source: Public data. As of October 23, 2014 WTR had a Buy recommendation*

**California Water Service Group – Price Performance**




*Source: Public data. As of October 23, 2014 AWR had a BUY recommendation and changed to a HOLD on March 7, 2016*

I, ***Tim Winter, CFA,*** the Research Analysts who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

***Tim Winter, CFA (314) 238-1314***



**Important Disclosures**

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Ratings

Analysts' ratings are largely (but not always) determined by our "private market value," or PMV methodology. Our basic goal is to understand in absolute terms what a rational, strategic buyer would pay for an asset in an open, arms-length transaction. At the same time, analysts also look for underlying catalysts that could encourage those private market values to surface.

A **Buy** rated stock is one that in our view is trading at a meaningful discount to our estimated PMV. We could expect a more modest private market value to increase at an accelerated pace, the discount of the public stock price to PMV to narrow through the emergence of a catalyst, or some combination of the two to occur.

A **Hold** is a stock that may be trading at or near our estimated private market value. We may not anticipate a large increase in the PMV, or see some other factors at work.

A **Sell** is a stock that may be trading at or above our estimated PMV. There may be little upside to the value, or limited opportunity to realize the value. Economic or sector risk could also be increasing.

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November 2, 2017

Gabelli & Company

## Aqua America (WTR - $35.43 - NYSE) Wet Summer; Guidance Affirmed -Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.60 | 21.0x | $41 | Dividend: $0.82 Current Return: 2.3% |
| 2018P | 1.45 | 23.2 | 39 | Shares O/S: 180.3 million |
| 2017E | 1.35 | 24.9 | 37 | 52-Week Range: $36.27 - $28.03 |
| 2016A | 1.32 | -- | -- | Book value (6/30/2017): $10.52 |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On October 31, 2017, WTR reported third quarter 2017 earnings of $0.43 per share compared to $0.41 per share for the same period last year. Regulated revenues declined 3.7% due to lower water consumption reflecting wet weather in more than half of the company's service areas. Lower consumption was offset by higher rates and 0.8% customer growth as well as the absence of losses from divested non-regualted businesses.

- WTR affirmed its 2017 earnings guidance range of $1.34-1.39 per share premised on 1.5-2.0% customer growth, 1-2% higher operating and maintenance (O&M) expense, $450 million of capital investment and 6-7% rate base growth. Our 2017-2019 earnings estimates remain $1.35, $1.45 and $1.60 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, general rate cases and infrastructure surcharges.

- In 2017, subsidiaries have received $21.4 million in annual rate awards/infrastructure surcharges and currently have requests totaling $14.1 million awaiting PUC decisions.

- Aqua-PA requested a 2.5% distribution system improvement charges (DSIC) increase effective October 1, 2017. We expect another two 2.5% requests to be effective in January and April of 2018 to be followed by a full PA rate increase to be effective in the first half of 2019. As a result, we expect earnings growth to accelerate in 2018 and return to its historical high-single digit growth rate. In 2012, the PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base authorized the use of repair tax deductions, which resulted in a significant ramp up in earnings and delayed the need for rate increases and/or quarterly (DSIC). The program has resulted in significant customer bill savings but moderate earnings growth (following the initial 32% increase in 2013) over the last few years.

- The 2017-2019 capital investment program totals more than $1.2 billion, including $450 million in 2017, and is expected to lead to 6-7% annual rate base growth. Roughly 65% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, and NC). Given strong cash flow and annual infrastructure surcharges, WTR has minimal external funding needs. As of June 30, 2017, the common equity ratio was 48%, and S&P credit rating was A+ for Aqua Pennsylvania.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. The 2016 PA "fair-valuation" legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems.

- Year-to-date, WTR bought three small water systems adding 1,002 customers for $5.8 million and has five acquisitions pending to add 15,700 customers for $150 million. In addition, WTR identified 70 municipal prospects representing 500,000 customers. We expect the pace of municipal acquisitions to accelerate. In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million.

## Valuation

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.3% current return on the $0.82 per share annual dividend, which is secure and growing. Shares trade at 26.3x and 24.5x our 2017 and 2018 earnings estimates and 337% of book value ($10.52 per share), which compares to group multiples of 24.1x and 22.8x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2017-2018 PMV estimates are $37 and $39 per share, respectively, based on 3.5x book value.

**Table 1** **Aqua America Private Market Value Analysis, 2013A-2020P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P | 2021P |
|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $883.1 | $915.3 | $948.7 | $983.5 | $1,019.6 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 496.2 | 533.5 | 581.0 | 615.7 | 652.8 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,894.0 | 1,996.0 | 2,115.5 | 2,252.1 | 2,226.0 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,986.1 | $7,404.4 | $7,882.2 | $7,790.9 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 2.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,985.1 | $7,403.4 | $7,881.2 | $7,788.9 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.3 | 180.3 | 180.3 | 180.3 |
| PMV per share | $30 | $32 | $33 | $35 | $37 | $39 | $41 | $44 | $43 |
| *Discount to PMV* | *-17%* | *-11%* | *-6%* | *0%* | *4%* | *9%* | *14%* | *19%* | *-99536%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.45 | $1.60 | $1.70 | $1.80 |
| P/E | 30.6 | 29.4 | 28.2 | 26.9 | 26.3 | 24.5 | 22.1 | 20.9 | 23,973.3 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.50 | $11.07 | $11.73 | $12.49 | $12.35 |
| P/B | 409% | 389% | 371% | 355% | 337% | 320% | 302% | 284% | 287% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 13.2% | 13.4% | 14.1% | 14.5% | 14.0% |

*Source: Company data and Gabelli & Company estimates.*

**Aqua America - Price Performance**


*Source: Public data. As of November 2, 2014 WTR was rated BUY.*

I, ***Tim Winter, CFA*** the Research Analyst who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

***Tim Winter, CFA (314) 238-1314***



**Important Disclosures**

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Ratings

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A **Buy** rated stock is one that in our view is trading at a meaningful discount to our estimated PMV. We could expect a more modest private market value to increase at an accelerated pace, the discount of the public stock price to PMV to narrow through the emergence of a catalyst, or some combination of the two to occur.

A **Hold** is a stock that may be trading at or near our estimated private market value. We may not anticipate a large increase in the PMV, or see some other factors at work.

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May 1, 2018

Gabelli & Company

# Aqua America (WTR - $35.15 - NYSE) Termination of Sell Side Coverage- Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.55 | 22.7x | $40 | Dividend: $0.82 Current Return: 2.3% |
| 2018E | 1.40 | 25.1 | 38 | Shares O/S: 180.3 million |
| 2017A | 1.35 | 26.0 | 36 | 52-Week Range: $39.55 - $31.18 |
| 2016A | 1.32 | -- | -- | Book value (12/31/2017): $10.52 |

## COMPANY OVERVIEW

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

## Reason For Comment

As a result of a restructuring of the Gabelli & Company research department, we are terminating sell side coverage of this company as of May 1, 2018. The analyst has transitioned to an affiliated investment adviser. Gabelli & Company will no longer provide updates to our research or recommendations. Effective upon the termination of coverage, the last recommendation and estimates contained herein for this company should not be relied upon going forward.

## Final Recommendation – Buy

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook.  Shares offer a 2.3% current return on the $0.82 per share annual dividend, which is secure and growing.  Shares trade at 25.1x and 22.7x our 2018 and 2019 earnings estimates and 334% of book value ($10.52 per share), which compares to group multiples of 24.1x and 23.0x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2018-2019 PMV estimates are $38 and $40 per share, respectively, based on 3.5x book value.

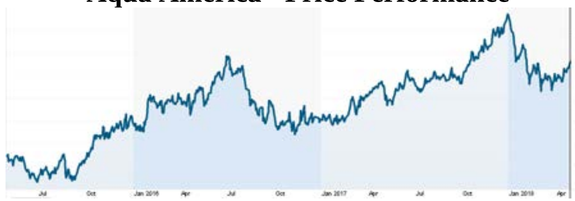
**Table 1** **Aqua America Private Market Value Analysis, 2013A-2022P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017A | 2018E | 2019P | 2020P | 2021P | 2022P |
|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $809.5 | $926.8 | $989.7 | $1,038.3 | $1,099.3 | $1,161.0 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 449.7 | 565.5 | 617.7 | 657.3 | 708.1 | 759.2 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,858.8 | 1,962.8 | 2,083.3 | 2,222.4 | 2,371.9 | 2,544.3 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,505.9 | $6,869.7 | $7,291.5 | $7,778.3 | $8,301.7 | $8,905.0 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,505.9 | $6,868.7 | $7,290.5 | $7,777.3 | $8,299.7 | $8,902.0 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.5 | 180.7 | 181.0 | 181.2 | 181.3 |
| PMV per share | $30 | $32 | $33 | $35 | $36 | $38 | $40 | $43 | $46 | $49 |
| *Discount to PMV* | *-13%* | *-7%* | *-2%* | *3%* | *5%* | *10%* | *15%* | *20%* | *25%* | *30%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.40 | $1.55 | $1.65 | $1.80 | $1.95 |
| P/E | 29.5 | 28.4 | 27.2 | 26.0 | 25.3 | 24.4 | 22.0 | 20.7 | 19.0 | 17.6 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.31 | $10.87 | $11.52 | $12.27 | $13.09 | $14.02 |
| P/B | 394% | 375% | 358% | 343% | 332% | 315% | 297% | 279% | 261% | 244% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 11.4% | 13.2% | 13.9% | 14.2% | 14.0% | 114.0% |

*Source: Company data and Gabelli & Company estimates.*

(1) Payments to buy out options holders at PMV, net of taxes.

**Aqua America - Price Performance**



*Source: Public data. As of May 1, 2015 WTR was rated BUY.*

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March 1, 2018

Gabelli & Company

# Aqua America (WTR - $34.19 - NYSE) Disappointing '18 Guidance; To File in PA - Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.55 | 22.0x | $40 | Dividend: $0.82 Current Return: 2.4% |
| 2018E | 1.40 | 24.4 | 38 | Shares O/S: 180.3 million |
| 2017A | 1.35 | 25.3 | 36 | 52-Week Range: $39.55 - $30.38 |
| 2016A | 1.32 | -- | -- | Book value (12/31/2017): $10.52 |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On February 27, 2018, WTR reported full year 2017 earnings of $1.35 per share compared to $1.32 per share in 2016. The modest EPS improvement was driven by higher rates (+$0.03) and customer growth (+$0.01) partially offset by lower water consumption (-$0.03). Operation and maintenance (O&M) expenses declined 6% primarily due to the absence of market based activities and production costs (pass-through), but also lower employee-related expenses. In 2017, WTR subsidiaries invested $478 million in infrastructure and were awarded $22 million in annual rate increases/infrastructure surcharges.

- WTR established its 2018 earnings guidance range of $1.37-1.42 per share premised on 2-3% customer growth, infrastructure investment of $500 million and 7% rate base growth. We lowered our 2018-2020 earnings estimates to $1.40, $1.55 and $1.65 per share, respectively, from $1.45, $1.60 and $1.70 per share, respectively. Earnings growth drivers include rate base investment, acquisitions, cost controls, rate cases and infrastructure surcharges.

- In 2018, WTR subsidiaries have been awarded $11 million in annual rate increases and currently have requests totaling $16 million awaiting PUC decisions. Aqua-PA re-instituted its PA quarterly distribution system improvement charges (DSIC) program with 2.5% increases effective October 1, 2017 and January 1, 2018 and request pending for April 1, 2018. More importantly, Aqua-PA expects to file a full PA rate increase to be effective in the first half of 2019. Given that WTR has not filed in PA in seven years, the company will request recognition of $2 billion investment as well as 20 acquisitions using a fully-projected future test year.

- As a result, we expect earnings growth to accelerate in 2019 and return to its historical high-single digit growth rate. In 2012, the PA PUC which regulates $2.8 billion of WTR's $4.1 billion rate base authorized the use of repair tax deductions, which resulted in a significant ramp up in earnings and delayed the need for rate increases and/or quarterly (DSIC). The program has resulted in significant customer bill savings but moderate earnings growth (following the initial 32% increase in 2013) over the last few years.

- The 2018-2020 capital investment program totals more than $1.4 billion, including $500 million in 2018, and is expected to lead to 7% annual rate base growth. Roughly 60% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, and NC). Given strong cash flow and annual infrastructure surcharges, WTR has minimal external funding needs. As of year-end 2017, the common equity ratio was 48%, and S&P credit rating was A+ for Aqua Pennsylvania.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Legislation in IL, IN, NJ and PA encourages consolidation by allowing purchase price in rate base or applying uniform rates state-wide. The 2016 PA "fair-valuation" legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems.

- In 2017, WTR bought four small water systems adding 1,002 customers for $5.8 million and has six acquisitions pending to add 16,325 customers for $151 million. In addition, WTR identified and targeted 10 municipal prospects customers. We expect the pace of municipal acquisitions to accelerate. In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million.

**Valuation**

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.4% current return on the $0.82 per share annual dividend, which is secure and growing. Shares trade at 24.4x and 22.0x our 2018 and 2019 earnings estimates and 319% of book value ($10.52 per share), which compares to group multiples of 23.1x and 22.0x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2018-2019 PMV estimates are $38 and $40 per share, respectively, based on 3.5x book value.

**Table 1** **Aqua America Private Market Value Analysis, 2013A-2022P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017A | 2018E | 2019P | 2020P | 2021P | 2022P |
|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $809.5 | $926.8 | $989.7 | $1,038.3 | $1,099.3 | $1,161.0 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 449.7 | 565.5 | 617.7 | 657.3 | 708.1 | 759.2 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,858.8 | 1,962.8 | 2,083.3 | 2,222.4 | 2,371.9 | 2,544.3 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,505.9 | $6,869.7 | $7,291.5 | $7,778.3 | $8,301.7 | $8,905.0 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 2.0 | 3.0 |
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| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.5 | 180.7 | 181.0 | 181.2 | 181.3 |
| PMV per share | $30 | $32 | $33 | $35 | $36 | $38 | $40 | $43 | $46 | $49 |
| *Discount to PMV* | *-13%* | *-7%* | *-2%* | *3%* | *5%* | *10%* | *15%* | *20%* | *25%* | *30%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.40 | $1.55 | $1.65 | $1.80 | $1.95 |
| P/E | 29.5 | 28.4 | 27.2 | 26.0 | 25.3 | 24.4 | 22.0 | 20.7 | 19.0 | 17.6 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.31 | $10.87 | $11.52 | $12.27 | $13.09 | $14.02 |
| P/B | 394% | 375% | 358% | 343% | 332% | 315% | 297% | 279% | 261% | 244% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 11.4% | 13.2% | 13.9% | 14.2% | 14.0% | 114.0% |

*Source: Company data and Gabelli & Company estimates.*

(1) Payments to buy out options holders at PMV, net of taxes.

**Aqua America - Price Performance**


*Source: Public data. As of March 1, 2015 WTR was rated BUY.*

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August 4, 2017

Gabelli & Company

## Aqua America (WTR - $33.59 - NYSE) Weak First-Half But Growth to Return -Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.60 | 21.0x | $41 | Dividend: $0.77 Current Return: 2.3% |
| 2018P | 1.45 | 23.2 | 39 | Shares O/S: 180.3 million |
| 2017E | 1.35 | 24.9 | 37 | 52-Week Range: $34.41 - $28.03 |
| 2016A | 1.32 | -- | -- | Book value (6/30/2017): $10.52 |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On August 2, 2017, WTR reported second quarter 2017 earnings of $0.34 per share compared to $0.33 per share for the same period last year. Higher earnings reflect higher consumption, higher rates, and customer growth offset by lower non-regulated results and higher expenses. In the quarter, the company completed the sale of its market-based activities that were slated for divestiture. The remaining O&M contract business and home services business are projected to earn roughly $4 million in annual revenues and less than a nickel per share in earnings.

- First-half 2017 earnings were $0.62 per share compared with $0.63 per share for the same period last year. Lower results were due to lower consumption and lower non-regulated results partially offset by higher rates.

- WTR affirmed its 2017 earnings guidance range of $1.34-1.39 per share premised on 1.5-2.0% customer growth, 1-2% higher operating and maintenance (O&M) expense, $450 million of capital investment and 6-7% rate base growth. Our 2017-2019 earnings estimates remain $1.35, $1.45 and $1.60 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, general rate cases and infrastructure surcharges. In 2017, subsidiaries have received $11.1 million in annual rate awards and currently have requests totaling $14.0 million awaiting PUC decisions.

- Aqua-PA plans to file for DSIC increases in late 2017 and a full PA rate increase in 2018 to be effective in 2019. As a result, we expect earnings growth to accelerate in 2019 and return to its historical high-single digit growth rate. In 2012, the PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base authorized the use of repair tax deductions, which resulted in a significant ramp up in earnings and delayed the need for rate increases and/or quarterly distribution system improvement charges (DSIC). The program has resulted in significant customer bill savings but moderate earnings growth (following the initial 32% increase in 2013) over the last few years.

- The 2017-2019 capital investment program totals more than $1.2 billion, including $450 million in 2017, and is expected to lead to 6-7% annual rate base growth. Roughly 65% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, and NC). Given strong cash flow and annual infrastructure surcharges, WTR has minimal external funding needs. As of June 30, 2017, the common equity ratio was 48%, and S&P credit rating was A+ for Aqua Pennsylvania.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. The 2016 PA "fair-valuation" legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems.

- Year-to-date, WTR bought 3 small water systems adding 1,002 customers for $5.8 million and has four acquisitions pending to add 11,087 customers for $120.5 million. In addition, WTR identified 70 municipal prospects representing 500,000 customers. We expect the pace of municipal acquisitions to accelerate. In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million.

**Valuation**

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.4% current return on the $0.77 per share annual dividend, which has increased at a 7.6% annual rate over the past ten years. Shares trade at 24.9x and 23.2x our 2017 and 2018 earnings estimates and 320% of book value ($10.52 per share), which compares to group multiples of 24.1x and 22.8x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2017-2018 PMVs are $37 and $39 per share, respectively, based on 3.5x book value.

**Table 1** **Aqua America Private Market Value Analysis, 2013A-2020P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P |
|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $883.1 | $915.3 | $948.7 | $983.5 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 496.2 | 533.5 | 581.0 | 615.7 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,894.0 | 1,996.0 | 2,115.5 | 2,252.1 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,986.1 | $7,404.4 | $7,882.2 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,985.1 | $7,403.4 | $7,881.2 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.3 | 180.3 | 180.3 |
| PMV per share | $30 | $32 | $33 | $35 | $37 | $39 | $41 | $44 |
| *Discount to PMV* | *-11%* | *-5%* | *-1%* | *5%* | *9%* | *13%* | *18%* | *23%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.45 | $1.60 | $1.70 |
| P/E | 29.0 | 27.9 | 26.8 | 25.5 | 24.9 | 23.2 | 21.0 | 19.8 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.50 | $11.07 | $11.73 | $12.49 |
| P/B | 387% | 368% | 352% | 337% | 320% | 303% | 286% | 269% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 13.2% | 13.4% | 14.1% | 14.5% |

***Source: Company data and Gabelli & Company estimates.***

**(1) Payments to buy out options holders at PMV, net of taxes.**

**Aqua America - Price Performance**


*Source: Public data. As of March 22, 2014 WTR was rated BUY.*

I, ***Tim Winter, CFA*** the Research Analyst who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

***Tim Winter, CFA (314) 238-1314***



**Important Disclosures**

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Ratings

Analysts' ratings are largely (but not always) determined by our "private market value," or PMV methodology. Our basic goal is to understand in absolute terms what a rational, strategic buyer would pay for an asset in an open, arms-length transaction. At the same time, analysts also look for underlying catalysts that could encourage those private market values to surface.

A **Buy** rated stock is one that in our view is trading at a meaningful discount to our estimated PMV. We could expect a more modest private market value to increase at an accelerated pace, the discount of the public stock price to PMV to narrow through the emergence of a catalyst, or some combination of the two to occur.

A **Hold** is a stock that may be trading at or near our estimated private market value. We may not anticipate a large increase in the PMV, or see some other factors at work.

A **Sell** is a stock that may be trading at or above our estimated PMV. There may be little upside to the value, or limited opportunity to realize the value. Economic or sector risk could also be increasing.

We prepared this report as a matter of general information. We do not intend for this report to be a complete description of any security or company and it is not an offer or solicitation to buy or sell any security. All facts and statistics are from sources we believe to be reliable, but we do not guarantee their accuracy. We do not undertake to advise you of changes in our opinion or information. Unless otherwise noted, all stock prices reflect the closing price on the business day immediately prior to the date of this report. We do not use "price targets" predicting future stock performance. We do refer to "private market value" or PMV, which is the price that we believe an informed buyer would pay to acquire 100% of a company. There is no assurance that there are any willing buyers of a company at this price and we do not intend to suggest that any acquisition is likely. Additional information is available on request.

As of June 30, 2017, our affiliates beneficially own on behalf of their investment advisory clients or otherwise less than 1% of Aqua America. Because the portfolio managers at our affiliates make individual investment decisions with respect to the client accounts they manage, these accounts may have transactions inconsistent with the recommendations in this report. These portfolio managers may know the substance of our research reports prior to their publication as a result of joint participation in research meetings or otherwise. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report. In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. The analysts, who wrote this report, or members of their household, owns no shares of the above mentioned companies.

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January 18, 2017

Gabelli & Company

# Aqua America (WTR - $30.49 - NYSE) '17 Guidance; Growth to Accelerate in 2019 - Buy

| Year | EPS | P/E | PMV |
|---|---|---|---|
| 2018P | $1.50 | 20.3x | $40 |
| 2017P | 1.40 | 21.8 | 37 |
| 2016E | 1.30 | 23.5 | 35 |
| 2015A | 1.26 | -- | -- |

Dividend: $0.77 Current Return: 2.5%
Shares O/S: 177.8 million
52-Week Range: $35.83 - $28.03

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about 3 million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On January 17, 2017, WTR management established a 2017 earnings guidance range of $1.34-1.39 per share premised on 1.5-2.0% customer growth, 1-2% higher operating and maintenance (O&M) expense, $450 million of capital investment and 6-7% rate base growth.

- WTR also affirmed its 2016 EPS guidance of $1.30-1.35 per share, but reiterated it was more likely to earn the lower-end of the range. The company experienced customer growth within its expected 1.5-2.0% range, controlled same-system O&M expense to a 1-2% increase, and invested ~$350 million of capital to support 6-7% annual rate base growth.

- In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million. In 2016, WTR subsidiaries were awarded $5.5 million in annual rate increases. In 2017, subsidiaries have received $1.8 million in annual rate increases and currently have requests totaling $8.0 million awaiting PUC decisions.

- The relatively flat 2015-2017 earnings growth rate of 4.5% relative to its longer-term historical growth rate of 7-10% is due to the absence of Pennsylvania general rate requests and quarterly distribution system improvement charges (DSIC). Given the use of repair tax deductions, Aqua-PA (55-60% of WTR) has delayed the need for a general rate case or DSIC since 2011, which has benefitted customers $10 per month. The company plans to file for DSIC increases in 2017 and a ~15% annual rate increase in 2018 to be effective in 2019. As a result, we expect earnings growth to accelerate in 2019 and beyond.

- We maintained our 2016-2018 earnings estimates of $1.30, $1.40 and $1.50 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, infrastructure surcharges, and the pipeline rehabilitation business.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide.

- Management highlighted that recent PA "fair-valuation" legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems. WTR currently has four pending municipal acquisitions adding 8,761 customers for a collective purchase price of $113.7 million and 70 municipal prospects representing 390,000 customers. We expect the pace of municipal acquisitions to accelerate.

- The 2017-2019 capital investment program totals $1.2 billion, including $450 million in 2017. Roughly 65% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, NC). The PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base allows for a quarterly DSIC.

- Given strong cash flow, infrastructure surcharges and cash from asset sales, WTR has minimal external funding needs. As of September 30, 2016, the common equity ratio was 49%, and S&P credit rating was A+ for Aqua Pennsylvania.

**Valuation**

WTR is a well-managed, low-risk, high-quality conservative utility with unique growth opportunities. Shares offer a 2.5% current return on the $0.77 per share annual dividend. Shares trade at 21.8x and 20.3x our 2017 and 2018 earnings estimates and 302% of book value ($10.09 per share), which compares to group multiples of 23.1x and 21.8x earnings and 275% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. We consider WTR to be one of the premier water utilities in the nation with a warranted premium, given the company's national presence, strong financial condition, successful track record, and earnings and dividend outlook. Our 2017-2018 PMVs are $37 and $40 per share, respectively, based on 3.5x book value.

**Table 1** **Aqua America Private Market Value Analysis, 2010A-2019P**

| *($ in millions, except per share data)* | 2011A | 2012A | 2013A | 2014A | 2015A | 2016E | 2017P | 2018P | 2019P |
|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $712.0 | $757.8 | $768.6 | $779.9 | $827.3 | $852.1 | $883.1 | $915.3 | $948.7 |
| Utility EBITDA | 405.6 | 445.7 | 429.8 | 442.0 | 457.2 | 476.6 | 508.9 | 543.4 | 586.1 |
| Book Value | 1,251.3 | 1,385.9 | 1,535.0 | 1,620.9 | 1,696.2 | 1,792.7 | 1,896.0 | 2,007.0 | 2,132.8 |
| Multiple | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,274.6 | $6,635.9 | $7,024.5 | $7,464.8 |
| Less: Net Options Payments (1) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 |
| Private Market Value | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,274.6 | $6,635.9 | $7,023.5 | $7,463.8 |
| Shares outstanding | 172.5 | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 |
| PMV per share | $22 | $24 | $30 | $32 | $33 | $35 | $37 | $40 | $42 |
| *Discount to PMV* | *-40%* | *-28%* | *0%* | *4%* | *9%* | *14%* | *18%* | *23%* | *27%* |
| EPS | $0.84 | $1.05 | $1.16 | $1.20 | $1.26 | $1.30 | $1.40 | $1.50 | $1.65 |
| P/E | 36.3 | 29.0 | 26.3 | 25.3 | 24.3 | 23.4 | 21.8 | 20.3 | 18.5 |
| Year End Book Value | $7.22 | $7.97 | $8.67 | $9.12 | $9.54 | $10.09 | $10.67 | $11.29 | $12.00 |
| P/B | 422% | 383% | 352% | 334% | 320% | 302% | 286% | 270% | 254% |
| ROE | 11.9% | 13.9% | 13.9% | 13.5% | 13.5% | 13.3% | 13.5% | 13.7% | 14.1% |

***Source: Company data and Gabelli & Company estimates.***

**(1) Payments to buy out options holders at PMV, net of taxes.**

**Aqua America - Price Performance**


*Source: Public data. As of January 18, 2014 WTR was rated BUY.*

I, ***Tim Winter, CFA*** the Research Analyst who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

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August 4, 2016

Gabelli & Company

# Aqua America (WTR - $33.82 - NYSE) — Solid Results; Guidance Affirmed - Buy

| Year | EPS | P/E | PMV |
|---|---|---|---|
| 2018P | $1.55 | 21.9x | $40 |
| 2017P | 1.45 | 23.3 | 38 |
| 2016E | 1.35 | 25.0 | 35 |
| 2015A | 1.26 | -- | -- |

Dividend: $0.71 Current Return: 2.1%
Shares O/S: 178.1 million
52-Week Range: $35.83 - $24.45

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about 3 million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On August 2, 2016, WTR reported second quarter 2016 earnings of $0.33 per share compared to $0.32 per share last year. Rate increases, customer growth, and lower operating expenses more than offset the negative impact of lower consumption. Year-to-date, WTR subsidiaries were awarded $5.0 million in annual rate increases and currently have requests totaling $10.5 million awaiting PUC decisions. In addition, WTR closed on ten acqusitions adding 5,204 water and 192 wastewater customers.

- Second quarter operating and maintenance (O&M) expenses declined -7.2% and the first-half 2016 operating efficiency ratio (O&M as a percent of operating revenues) declined to 37.2%, from 38.6%, for the same period last year.

**Table 1** **WTR Selected Financial**

*($ in millions, except per share data)*

| | Second Quarter | | | Six Months | | | Full Year | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | Change | 2015 | 2016 | Change | 2014A | 2015A | Change | 2016E | 2017P | 2018P |
| **EBITDA** | $ 113.1 | $ 115.9 | 2.5% | $ 215.5 | $ 221.0 | 2.6% | $ 442.0 | $ 457.2 | 3.4% | $ 486.6 | $ 518.9 | $ 551.4 |
| **Net Income** | 57.4 | 59.6 | 3.9 | 105.9 | 111.4 | 5.1 | 213.9 | 223.2 | 4.3 | 240.7 | 258.0 | 274.7 |
| **EPS** | $ 0.32 | $ 0.33 | 3.1 | $ 0.60 | $ 0.63 | 5.0 | $1.20 | $1.26 | 4.3 | $1.35 | $1.45 | $1.55 |

- WTR affirmed 2016 EPS guidance of $1.30-1.35 per share based on 1.5-2.0% customer growth, same-sytem O&M increase of 1-2%, and more than $350 million in capital investments. Our 2016-2018 earnings estimates remain $1.35, $1.45, and $1.55 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, infrastructure surcharges, and the pipeline rehabilitation business.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. We are encouraged by the possibility that the pace of municipal acqusitions could accelerate.

- Given the use of repair tax deductions, Aqua-PA has delayed the need for a general rate case or DSIC since 2011, which has benefitted customers $10 per month. The company plans to file a ~15% rate increase in late 2017 or 2018.

- The 2016-2018 capital investment program totals $1.1 billion, including $350 million in 2016. Roughly 63% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, NC). The PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base allows for a quarterly distribution system improvement charge (DSIC).

- WTR is in the process of divesting or liquidating five Market-based businesses, resulting in expected annual revenue reduction of $30.5 million and immaterial impact on net income. Management plans to opportunistically pursue Market-based ventures that would provide supplementary and complementary opportunities for the regulated business.

- Given strong cash flow, infrastructure surcharges and cash from asset sales, WTR has minimal external funding needs. As of June 30, 2016, the common equity ratio was 49%, and S&P maintained its A+ credit rating for Aqua Pennsylvania.

**Valuation**

WTR is a well-managed, low-risk, high-quality conservative utility with unique growth opportunities. Shares offer a 2.1% current return on the $0.71 per share annual dividend. Shares trade at 25.0x and 23.3x our 2016 and 2017 earnings estimates and 336% of book value ($10.06 per share), which compares to group multiples of 26.9x and 25.2x earnings and 310% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. We consider WTR to be one of the premier water utilities in the nation with a warranted premium, given the company's national presence, strong financial condition, successful track record, and earnings and dividend outlook. Our 2016-2017 PMVs are $35 and 38 per share, respectively, based on 3.5x book value.

**Table 2** **Aqua America Private Market Value Analysis, 2009A-2019P**

| *($ in millions, except per share data)* | 2009A | 2010A | 2011A | 2012A | 2013A | 2014A | 2015A | 2016E | 2017P | 2018P | 2019P |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $633.3 | $683.4 | $712.0 | $757.8 | $768.6 | $779.9 | $827.3 | $857.2 | $888.3 | $920.6 | $954.2 |
| Utility EBITDA | 342.5 | 383.9 | 405.6 | 445.7 | 429.8 | 442.0 | 457.2 | 486.6 | 518.9 | 551.4 | 586.1 |
| Book Value | 1,108.9 | 1,174.3 | 1,251.3 | 1,385.9 | 1,535.0 | 1,620.9 | 1,696.2 | 1,801.7 | 1,914.0 | 2,032.2 | 2,158.0 |
| Multiple | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,306.1 | $6,698.9 | $7,112.7 | $7,553.0 |
| Less: Net Options Payments (1) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 |
| Private Market Value | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,306.1 | $6,698.9 | $7,111.7 | $7,552.0 |
| Shares outstanding | 170.2 | 171.6 | 172.5 | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 |
| PMV per share | $20 | $21 | $22 | $24 | $30 | $32 | $33 | $35 | $38 | $40 | $42 |
| *Discount to PMV* | *-73%* | *-65%* | *-55%* | *-42%* | *-11%* | *-6%* | *-1%* | *5%* | *10%* | *15%* | *20%* |
| EPS | $0.59 | $0.69 | $0.84 | $1.05 | $1.16 | $1.20 | $1.26 | $1.35 | $1.45 | $1.55 | $1.65 |
| P/E | 57.5 | 49.1 | 40.3 | 32.1 | 29.2 | 28.1 | 26.9 | 25.0 | 23.3 | 21.9 | 20.5 |
| Year End Book Value | $6.52 | $6.84 | $7.22 | $7.97 | $8.67 | $9.12 | $9.54 | $10.14 | $10.77 | $11.43 | $12.14 |
| P/B | 519% | 494% | 469% | 424% | 390% | 371% | 354% | 334% | 314% | 296% | 279% |
| ROE | 9.2% | 10.3% | 11.9% | 13.9% | 13.9% | 13.5% | 13.5% | 13.8% | 13.9% | 13.9% | 14.0% |

***Source: Company data and Gabelli & Company estimates.***

**(1) Payments to buy out options holders at PMV, net of taxes.**

**Aqua America - Price Performance**


*Source: Public data. As of August 4 2013 WTR was rated BUY.*

We, ***Tim Winter, CFA and Eric Guo,*** the Research Analysts who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analysts have not been, are not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

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November 3, 2016

Gabelli & Company

# Aqua America (WTR - $29.79 - NYSE) Lowered '16-'18 Estimates; Reiterate - Buy

| Year | EPS | P/E | PMV |
|---|---|---|---|
| 2018P | $1.50 | 19.9x | $40 |
| 2017P | 1.40 | 21.3 | 37 |
| 2016E | 1.30 | 23.0 | 35 |
| 2015A | 1.26 | -- | -- |

Dividend: $0.77 Current Return: 2.6%
Shares O/S: 177.8 million
52-Week Range: $35.83 - $28.05

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about 3 million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On November 1, 2016, WTR reported third quarter 2016 earnings of $0.40 per share compared to $0.38 per share last year. Rate increases, customer growth, and lower operating expenses more than offset the negative impact of lower consumption. Year-to-date, WTR subsidiaries were awarded $5.5 million in annual rate increases and currently have requests totaling $8.1 million awaiting PUC decisions. In addition, WTR closed on thirteen acqusitions adding 5,298 water and 409 wastewater customers. Year-to-date, WTR added 12,900 customers, including oganic growth, for a 1.3% total customer growth rate.

- Year-ot-date operating and maintenance (O&M) expenses declined -1.8% and the first-half 2016 operating efficiency ratio (O&M as a percent of operating revenues) declined to 36.5%, from 37.5%, for the same period last year.

**Table 1** **WTR Selected Financial**

| | Third Quarter | | | Nine-Months | | | Full Year | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | Change | 2015 | 2016 | Change | 2014A | 2015A | Change | 2016E | 2017P | 2018P |
| EBITDA | $ 127.9 | $ 132.1 | 3.3% | $ 342.6 | $ 352.6 | 2.9% | $ 442.0 | $ 457.2 | 3.4% | $ 476.6 | $ 508.9 | $ 543.4 |
| Net Income | 67.4 | 73.2 | 8.5 | 173.4 | 184.5 | 6.4 | 213.9 | 223.2 | 4.3 | 231.7 | 249.0 | 267.5 |
| EPS | $ 0.38 | $ 0.41 | 7.9 | $ 0.98 | $ 1.04 | 6.1 | $1.20 | $1.26 | 4.3 | $1.30 | $1.40 | $1.50 |

*Source: Company data, Gabelli & Company estimates*

- WTR affirmed 2016 EPS guidance of $1.30-1.35 per share (but suggested the lower-end was more likely) based on 1.5-2.0% customer growth, same-sytem O&M increase of 1-2%, more than $350 million in annual capital investments and 6-7% annual rate base growth. Given the use of repair tax deductions, Aqua-PA (55-60% of WTR) has delayed the need for a general rate case or DSIC since 2011, which has benefitted customers $10 per month. The company plans to file a ~15% rate increase in late 2017 or 2018.

- We lowered our 2016-2018 earnings estiamtes to $1.30, $1.40 and $1.50 per share, from $1.35, $1.45, and $1.55 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, infrastructure surcharges, and the pipeline rehabilitation business.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. We are encouraged by the possibility that the pace of municipal acqusitions could accelerate. WTR currently has four municipal and two private system acquisition pending, which would add 4,700 customers.

- The 2016-2018 capital investment program totals $1.1 billion, including $350 million in 2016. Roughly 63% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, NC). The PA PUC which regulates $2.4 billion of WTR's $3.5 billion rate base allows for a quarterly distribution system improvement charge (DSIC).

- Given strong cash flow, infrastructure surcharges and cash from asset sales, WTR has minimal external funding needs. As of September 30, 2016, the common equity ratio was 49%, and S&P credit rating was A+ for Aqua Pennsylvania.

**Valuation**

WTR is a well-managed, low-risk, high-quality conservative utility with unique growth opportunities. Shares offer a 2.6% current return on the $0.77 per share annual dividend. Shares trade at 22.9x and 21.3x our 2016 and 2017 earnings estimates and 296% of book value ($10.09 per share), which compares to group multiples of 23.9x and 22.2x earnings and 288% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. We consider WTR to be one of the premier water utilities in the nation with a warranted premium, given the company's national presence, strong financial condition, successful track record, and earnings and dividend outlook. Our 2016-2017 PMVs are $35 and 37 per share, respectively, based on 3.5x book value.

**Table 2** **Aqua America Private Market Value Analysis, 2009A-2019P**

| *($ in millions, except per share data)* | 2009A | 2010A | 2011A | 2012A | 2013A | 2014A | 2015A | 2016E | 2017P | 2018P | 2019P |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $633.3 | $683.4 | $712.0 | $757.8 | $768.6 | $779.9 | $827.3 | $852.1 | $883.1 | $915.3 | $948.7 |
| Utility EBITDA | 342.5 | 383.9 | 405.6 | 445.7 | 429.8 | 442.0 | 457.2 | 476.6 | 508.9 | 543.4 | 586.1 |
| Book Value | 1,108.9 | 1,174.3 | 1,251.3 | 1,385.9 | 1,535.0 | 1,620.9 | 1,696.2 | 1,792.7 | 1,896.0 | 2,007.0 | 2,132.8 |
| Multiple | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,274.6 | $6,635.9 | $7,024.5 | $7,464.8 |
| Less: Net Options Payments (1) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 |
| Private Market Value | $3,326.7 | $3,522.8 | $3,753.9 | $4,157.7 | $5,372.7 | $5,673.3 | $5,936.6 | $6,274.6 | $6,635.9 | $7,023.5 | $7,463.8 |
| Shares outstanding | 170.2 | 171.6 | 172.5 | 174.9 | 176.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 | 177.8 |
| PMV per share | $20 | $21 | $22 | $24 | $30 | $32 | $33 | $35 | $37 | $40 | $42 |
| *Discount to PMV* | *-53%* | *-45%* | *-37%* | *-26%* | *2%* | *7%* | *11%* | *15%* | *20%* | *24%* | *29%* |
| EPS | $0.59 | $0.69 | $0.84 | $1.05 | $1.16 | $1.20 | $1.26 | $1.30 | $1.40 | $1.50 | $1.65 |
| P/E | 50.7 | 43.3 | 35.6 | 28.4 | 25.7 | 24.8 | 23.8 | 22.9 | 21.3 | 19.8 | 18.1 |
| Year End Book Value | $6.52 | $6.84 | $7.22 | $7.97 | $8.67 | $9.12 | $9.54 | $10.09 | $10.67 | $11.29 | $12.00 |
| P/B | 458% | 436% | 413% | 374% | 344% | 327% | 313% | 296% | 280% | 264% | 249% |
| ROE | 9.2% | 10.3% | 11.9% | 13.9% | 13.9% | 13.5% | 13.5% | 13.3% | 13.5% | 13.7% | 14.1% |

*Source: Company data and Gabelli & Company estimates.*

**Aqua America - Price Performance**


*Source: Public data. As of November 3, 2013 WTR was rated BUY.*

We, ***Tim Winter, CFA and Eric Guo,*** the Research Analysts who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analysts have not been, are not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

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**Important Disclosures**

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August 4, 2017

Gabelli & Company

# Aqua America (WTR - $33.59 - NYSE) Weak First-Half But Growth to Return -Buy

| Year | EPS | P/E | PMV | |
|---|---|---|---|---|
| 2019P | $1.60 | 21.0x | $41 | Dividend: $0.77 Current Return: 2.3% |
| 2018P | 1.45 | 23.2 | 39 | Shares O/S: 180.3 million |
| 2017E | 1.35 | 24.9 | 37 | 52-Week Range: $34.41 - $28.03 |
| 2016A | 1.32 | -- | -- | Book value (6/30/2017): $10.52 |

**COMPANY OVERVIEW**

Aqua America (Bryn Mawr, PA) is the second-largest publicly traded water utility in the US, serving about three million people in Pennsylvania (52% of earnings), Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, and Virginia.

**Reason For Comment**

- On August 2, 2017, WTR reported second quarter 2017 earnings of $0.34 per share compared to $0.33 per share for the same period last year. Higher earnings reflect higher consumption, higher rates, and customer growth offset by lower non-regulated results and higher expenses. In the quarter, the company completed the sale of its market-based activities that were slated for divestiture. The remaining O&M contract business and home services business are projected to earn roughly $4 million in annual revenues and less than a nickel per share in earnings.

- First-half 2017 earnings were $0.62 per share compared with $0.63 per share for the same period last year. Lower results were due to lower consumption and lower non-regulated results partially offset by higher rates.

- WTR affirmed its 2017 earnings guidance range of $1.34-1.39 per share premised on 1.5-2.0% customer growth, 1-2% higher operating and maintenance (O&M) expense, $450 million of capital investment and 6-7% rate base growth. Our 2017-2019 earnings estimates remain $1.35, $1.45 and $1.60 per share, respectively. Earnings growth will continue to be driven by rate base investments, acquisitions, cost controls, general rate cases and infrastructure surcharges. In 2017, subsidiaries have received $11.1 million in annual rate awards and currently have requests totaling $14.0 million awaiting PUC decisions.

- Aqua-PA plans to file for DSIC increases in late 2017 and a full PA rate increase in 2018 to be effective in 2019. As a result, we expect earnings growth to accelerate in 2019 and return to its historical high-single digit growth rate. In 2012, the PA PUC which regulates $2.4 billion of WTR’s $3.5 billion rate base authorized the use of repair tax deductions, which resulted in a significant ramp up in earnings and delayed the need for rate increases and/or quarterly distribution system improvement charges (DSIC). The program has resulted in significant customer bill savings but moderate earnings growth (following the initial 32% increase in 2013) over the last few years.

- The 2017-2019 capital investment program totals more than $1.2 billion, including $450 million in 2017, and is expected to lead to 6-7% annual rate base growth. Roughly 65% of the investment is allocated toward pipe replacement or upgrades in jurisdictions with surcharge eligible infrastructure programs (PA, IL, IN, OH, NJ, and NC). Given strong cash flow and annual infrastructure surcharges, WTR has minimal external funding needs. As of June 30, 2017, the common equity ratio was 48%, and S&P credit rating was A+ for Aqua Pennsylvania.

- We continue to believe WTR is well positioned to continue its successful acquisition strategy given U.S. water (53,000 systems) and wastewater (16,000 systems) industries are extremely fragmented and municipally dominated (water is 85% municipally-owned; wastewater 97%). Recent legislation in IL, IN, NJ and PA encourages consolidation by allowing the purchase price in rate base or applying uniform rates state-wide. The 2016 PA “fair-valuation” legislation has resulted in a dramatic acceleration of municipal water and wastewater evaluations. In other words, municipalities are engaging consulting firms to evaluate the value of water and wastewater systems.

- Year-to-date, WTR bought 3 small water systems adding 1,002 customers for $5.8 million and has four acquisitions pending to add 11,087 customers for $120.5 million. In addition, WTR identified 70 municipal prospects representing 500,000 customers. We expect the pace of municipal acquisitions to accelerate. In 2016, WTR completed nineteen acquisitions adding 6,558 customers for a collective purchase price of $22.2 million.

**Valuation**

We continue to recommend long-term investors Buy WTR given its relatively low-risk business profile and long-term growth opportunities. We consider WTR to be one of the premier water utilities in the nation given its multi-state presence, strong financial condition, successful track record, and earnings and dividend outlook. Shares offer a 2.4% current return on the $0.77 per share annual dividend, which has increased at a 7.6% annual rate over the past ten years. Shares trade at 24.9x and 23.2x our 2017 and 2018 earnings estimates and 320% of book value ($10.52 per share), which compares to group multiples of 24.1x and 22.8x earnings and 285% of book value. Over the past ten years, WTR shares have traded between 15-35x forward earnings and at significant premium multiples to the group. Our 2017-2018 PMVs are $37 and $39 per share, respectively, based on 3.5x book value.

**Table 1** **Aqua America Private Market Value Analysis, 2013A-2020P**

| *($ in millions, except per share data)* | 2013A | 2014A | 2015A | 2016A | 2017E | 2018P | 2019P | 2020P |
|---|---|---|---|---|---|---|---|---|
| Utility Revenue | $768.6 | $779.9 | $827.3 | $819.9 | $883.1 | $915.3 | $948.7 | $983.5 |
| Utility EBITDA | 429.8 | 442.0 | 457.2 | 448.4 | 496.2 | 533.5 | 581.0 | 615.7 |
| Book Value | 1,535.0 | 1,620.9 | 1,696.2 | 1,799.0 | 1,894.0 | 1,996.0 | 2,115.5 | 2,252.1 |
| Multiple | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Value of regulated utilities | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,986.1 | $7,404.4 | $7,882.2 |
| Less: Net Options Payments ( | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 |
| Private Market Value | $5,372.7 | $5,673.3 | $5,936.6 | $6,296.5 | $6,629.0 | $6,985.1 | $7,403.4 | $7,881.2 |
| Shares outstanding | 176.8 | 177.8 | 177.8 | 177.8 | 180.3 | 180.3 | 180.3 | 180.3 |
| PMV per share | $30 | $32 | $33 | $35 | $37 | $39 | $41 | $44 |
| *Discount to PMV* | *-11%* | *-5%* | *-1%* | *5%* | *9%* | *13%* | *18%* | *23%* |
| EPS | $1.16 | $1.20 | $1.26 | $1.32 | $1.35 | $1.45 | $1.60 | $1.70 |
| P/E | 29.0 | 27.9 | 26.8 | 25.5 | 24.9 | 23.2 | 21.0 | 19.8 |
| Year End Book Value | $8.67 | $9.12 | $9.54 | $9.98 | $10.50 | $11.07 | $11.73 | $12.49 |
| P/B | 387% | 368% | 352% | 337% | 320% | 303% | 286% | 269% |
| ROE | 13.9% | 13.5% | 13.5% | 13.5% | 13.2% | 13.4% | 14.1% | 14.5% |

*Source: Company data and Gabelli & Company estimates.*

(1) Payments to buy out options holders at PMV, net of taxes.

**Aqua America - Price Performance**


*Source: Public data. As of March 22, 2014 WTR was rated BUY.*

I, ***Tim Winter, CFA*** the Research Analyst who prepared this report, hereby certify that the views expressed in this report accurately reflect the analyst's personal views about the subject companies and their securities. The Research Analyst has not been, is not and will not be receiving direct or indirect compensation for expressing the specific recommendation or view in this report.

***Tim Winter, CFA (314) 238-1314***



**Important Disclosures**

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Ratings

Analysts' ratings are largely (but not always) determined by our "private market value," or PMV methodology. Our basic goal is to understand in absolute terms what a rational, strategic buyer would pay for an asset in an open, arms-length transaction. At the same time, analysts also look for underlying catalysts that could encourage those private market values to surface.

A **Buy** rated stock is one that in our view is trading at a meaningful discount to our estimated PMV. We could expect a more modest private market value to increase at an accelerated pace, the discount of the public stock price to PMV to narrow through the emergence of a catalyst, or some combination of the two to occur.

A **Hold** is a stock that may be trading at or near our estimated private market value. We may not anticipate a large increase in the PMV, or see some other factors at work.

A **Sell** is a stock that may be trading at or above our estimated PMV. There may be little upside to the value, or limited opportunity to realize the value. Economic or sector risk could also be increasing.

We prepared this report as a matter of general information. We do not intend for this report to be a complete description of any security or company and it is not an offer or solicitation to buy or sell any security. All facts and statistics are from sources we believe to be reliable, but we do not guarantee their accuracy. We do not undertake to advise you of changes in our opinion or information. Unless otherwise noted, all stock prices reflect the closing price on the business day immediately prior to the date of this report. We do not use "price targets" predicting future stock performance. We do refer to "private market value" or PMV, which is the price that we believe an informed buyer would pay to acquire 100% of a company. There is no assurance that there are any willing buyers of a company at this price and we do not intend to suggest that any acquisition is likely. Additional information is available on request.

As of June 30, 2017, our affiliates beneficially own on behalf of their investment advisory clients or otherwise less than 1% of Aqua America. Because the portfolio managers at our affiliates make individual investment decisions with respect to the client accounts they manage, these accounts may have transactions inconsistent with the recommendations in this report. These portfolio managers may know the substance of our research reports prior to their publication as a result of joint participation in research meetings or otherwise. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report. In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. The analysts, who wrote this report, or members of their household, owns no shares of the above mentioned companies.

# Utilities Monthly

## Natural Gas and Water

**January 2018**

**We recommend this report be viewed/printed in color**

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January 24, 2018

To obtain important disclosure information regarding Hilliard Lyons' rating system, valuation methods, risk factors and potential conflicts of interest with respect to the companies covered in this report, please call (800) 444-1854 ext. 8820, send a request via e-mail to RsLib@hilliard.com, or go online to http://hilliard.com/site/market-info/research-disclosures.html. Requests should include the name and date of this report and a list of companies for which the disclosure information is requested.

**Note Important Disclosures on page 23**
**Note Analyst Certifications on page 23**

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# Natural Gas Utilities

**PRICE PERFORMANCE**

Natural gas utilities slumped in December with our coverage group declining 7.64% on average, although this was in sympathy with the broader Utilities sector; the S&P 500 index gained just under 1% last month **(Exhibit 1)**. Merger-arbitrage play WGL Holdings (WGL) was our only name in positive territory for the month (+1.53%), while Northwest Natural Gas (NWN) was our top decliner at -13.74%.

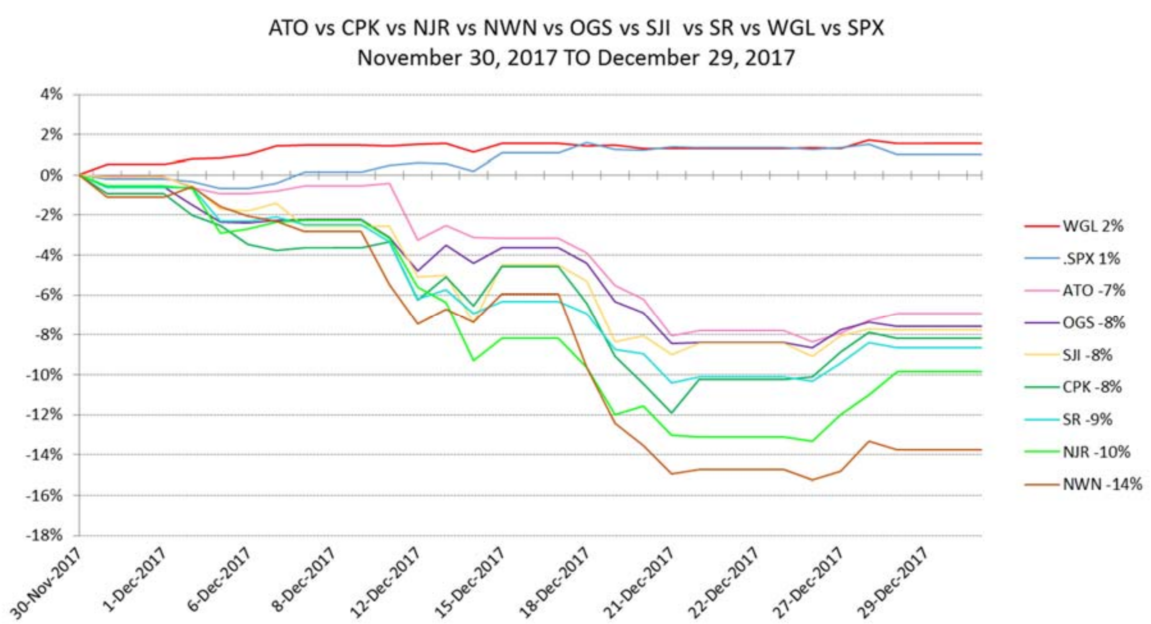
2017 performance had been satisfactory up to December, in our view. Nonetheless, the magnitude of last month's decline compelled a full year of underperformance for the industry, where our coverage group finished the year higher by 10.29%, on average, versus an S&P 500 that gained 19.42% **(Exhibit 2)**. South Jersey Industries (SJI) and Northwest Natural Gas both ended the year with negative price returns, relative outliers in our group that otherwise saw double digit returns across the board.

Trailing 52-week returns for our coverage group are equivalent to 2017 returns at this point; perhaps worth noting, our gas coverage group largely mirrored the broader market up until an acute late-year selloff. Chesapeake Utilities and Spire Inc. have been our strongest names over the TTM period **(Exhibit 3)**.

Past performance is no guarantee of future results.

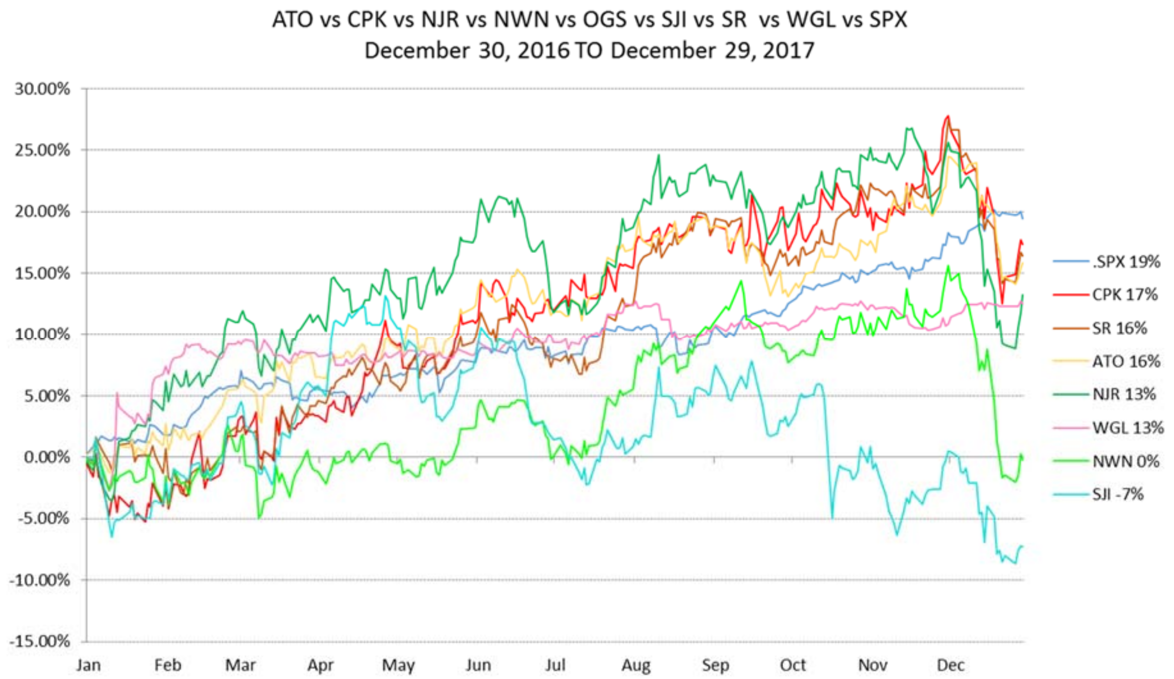
Since our prior *Utilities Monthly*, we have been fairly active on the publishing front. Most notably, we downgraded our rating on SJI to Neutral from Buy following the cancellation of their investor day. We also initiated 2019 estimates for NWN and adjusted OGS estimates following new guidance reflecting tax reform. Our ratings heading into earnings season stand at: SR and CPK at Long-term Buy; ATO, NJR, OGS, SJI and WGL are Neutral rated, while NWN remains our lone Underperform.

**Exhibit 1**
**Hilliard Lyons Covered Gas Utilities Monthly Price Performance vs. S&P 500—Daily Chart**



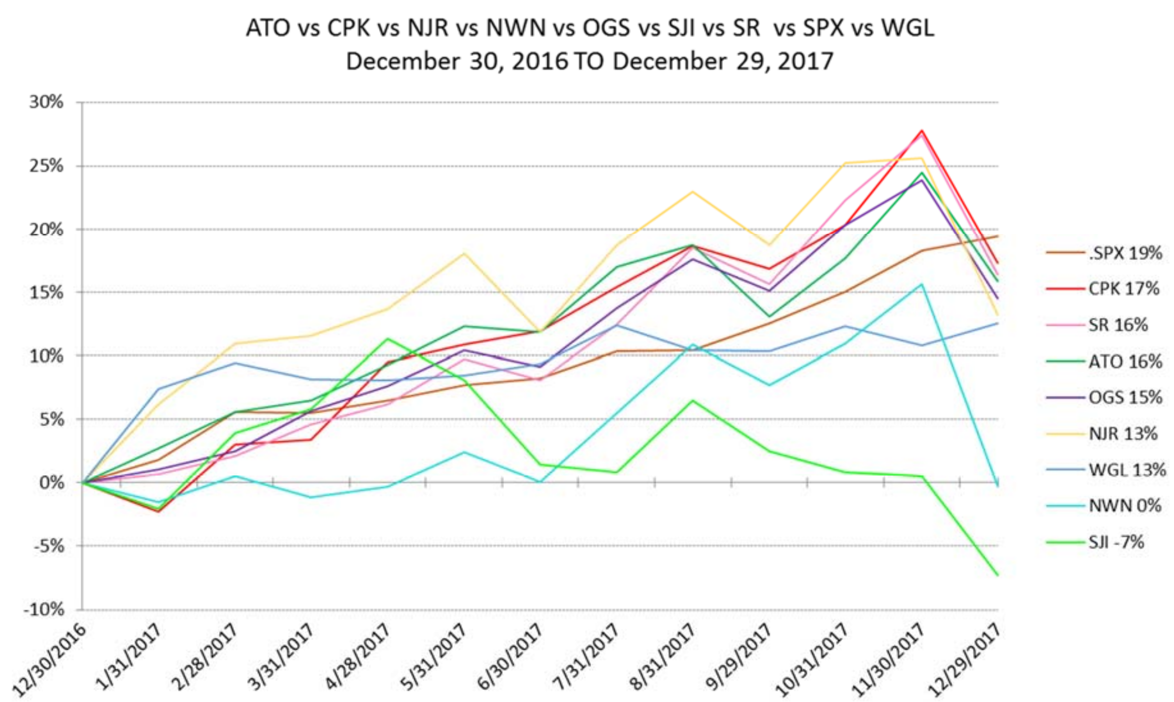

**Source: Thomson Reuters** SPX-S&P 500 Index; ATO-Atmos; CPK-Chesapeake Utils; SR-Spire Inc; NJR-New Jersey Resc; NWN-Northwest Ntrl; OGS-ONE Gas; PNY-Piedmont Nat Gas; SJI- South Jersey Indust; WGL-WGL Hldgs *Note: It is not possible to invest directly in an index*

**Exhibit 2**
**Hilliard Lyons Covered Gas Utilities YTD Price Performance vs. S&P 500—Daily Chart**




**Source: Thomson Reuters** SPX-S&P 500 Index; ATO-Atmos; CPK-Chesapeake Utils; SR-Spire Inc; NJR-New Jersey Resc; NWN-Northwest Ntrl; OGS-ONE Gas; PNY-Piedmont Nat Gas; SJI- South Jersey Indust; WGL-WGL Hldgs *Note: It is not possible to invest directly in an index*

**Exhibit 3**
**Hilliard Lyons Covered Gas Utilities One-Year Price Performance vs. S&P 500—Daily Chart**




**Source: Thomson Reuters** SPX-S&P 500 Index; ATO-Atmos; CPK-Chesapeake Utils; SR-Spire Inc; NJR-New Jersey Resc; NWN-Northwest Ntrl; OGS-ONE Gas; PNY-Piedmont Nat Gas; SJI- South Jersey Indust; WGL-WGL Hldgs *Note: It is not possible to invest directly in an index*

**COMMENTARY AND OUTLOOK**

The gas utility industry posted an extremely weak close to 2017, with our coverage group declining more than 7%, on average, in December. After more/less tracking the broader market for much of the year, performance diverged in late-2017, as the S&P 500 gained about 1% to finish out a year that saw the index rally nearly 20%. We expect the primary culprit of the turn in results was relative impact from the US Tax Cut and Jobs Act, which while seemingly a net positive for most sectors, brings some cash flow questions to the regulated utility space.

Follow through on late-year trends has persisted thus far in January, with gas utilities continuing to decline within a strong broader market, although the group has firmed somewhat on an absolute basis over the last week or so. Average valuation has improved, in our view, with the declining stock prices and little delta to our secular growth outlook for the space. Furthermore, we believe a material portion of the re-allocation that might be compelled as the economic outlook strengthens for other pockets of the market may have already taken place, and we suspect some of the macro concerns regarding tax changes for utilities may be in the market.

CPK and SR were ultimately the top two performers in our coverage. We expect relative valuation played a role in SR's performance, and believe a lack of further M&A (something we have been suggesting) helped improve sentiment over the course of 2H'17. We believe a unique growth outlook supported CPK throughout the year, and is a thesis we believe remains useful as we move into 2018. SJI was impacted by a Labor Day-announcement of transformative M&A, and while we anticipated new base rates in 2018 and a revamp of stretch targets could support the stock, this ultimately did not play out.

NWN posted a fractional decline for the year and, in our view, is positioned for negligible earnings growth (FY and Q4'17 results to be released in coming weeks). We remain relatively bearish entering 2018, based primarily on valuation, with the near-term growth outlook actually a bit stronger, in our view, based on the North Mist expansion that should be in service late this year, and a pending base rate case in Oregon.

We sit just ahead of calendar Q4 earnings season for the gas utility industry, with our fiscal Q1 reporters situated to be our first companies to report (ATO, NJR, SR and WGL). We expect to gain a great deal of clarity on implication from the tax plan as we move through the reporting cycle, which adds a whole extra layer of anticipation to the season versus the usual operational updates that can be material during the winter heating season. We anticipate that a range of one-time deferred asset/liability re-measurements may drive headlines, although more important for continuing operations, are likely to be any revisions to capital plans. Our fiscal Q4 reporters (CPK, NWN, OGS, and SJI) will likely be done reporting by late-February.

The core of our gas utility investment thesis continues to seek out the strongest and most attractively priced regulated growth stories; however, we reiterate a view that strong non-regulated business lines could see lasting positive impact from tax treatment (see above) are increasingly palatable for us. We continue to support major mid-stream investments by our local distribution utilities, but still see these items as slightly riskier than core system investment, despite what we view as a constructive pace of activity at the Federal Energy Regulatory Commission (FERC) since establishing a quorum.

We lowered our allocation recommendation for the gas utility industry to Underweight entering January on the back of the themes discussed above (i.e. tax, relative growth). Declines over the past couple of months have been constructive for valuation, in our view, although we believe timing is not yet right to suggest re-allocating to the industry.

Despite a mid-January bounce for Chesapeake Utilities Corp, the small-cap remains our top pick in the industry. Amongst our names, CPK has one of the most balanced regulated/non-regulated growth strategies, which we like in the context of tax changes; furthermore, we expect the premier growth profile of Chesapeake is likely to keep the company relatively attractive despite some broader concerns for the Utility sector. With respect to fundamentals, we are encouraged by recent performance in curbing operating expense growth, several projects continue to progress well, in our view, and we belive weather thus far in 2018 has likely been constructive. Our 2-yr price target is $97, which implies total return potential of ~31%.

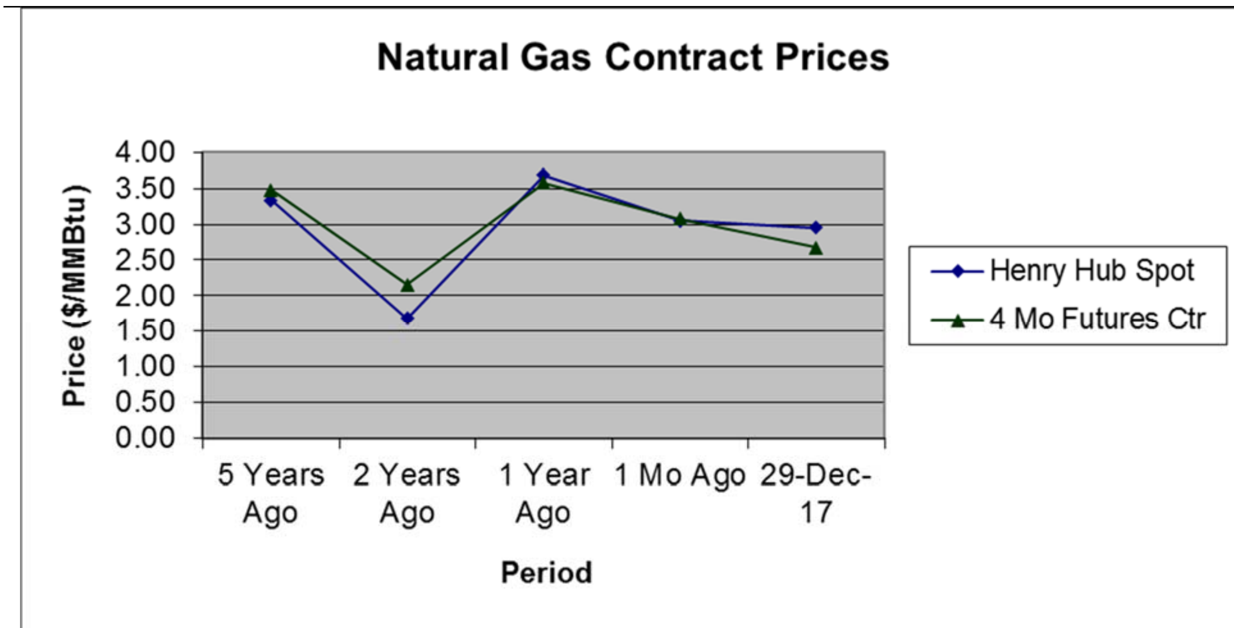
**NATURAL GAS NEWS & PRICES**

The spot price of natural gas ended the last week of December at $2.95/Mcf, a decrease of a dime from the end of November, but up significantly from just mid-month. The front month gas contract lost about $0.75 relative to year-end 2016, with the commodity spending much of the year range bound in the low-$3s. We expect normal (to below normal) summer demand and mostly still-low oil prices helped subdue both prices and volatility over much of 2017, with the complex seemingly well situated to handle a rise in export activity. A noteworthy Atlantic hurricane season ultimately did little do disturb the supply/demand balance across the year. Most recently, a cold snap affecting much of the Eastern US has helped keep prices above the $3 mark in early-2018, with several city-gates registering rates an order of magnitude above the oft-quoted Henry Hub rate.

The US rig count (oil + gas) averaged 930 in December, up 19 from the November average, but higher by 296 over December 2016. Taking a snapshot at the end of last month, the US natural gas rig count marked 182, which was +6 from the last week in November and +50 on a yr/yr basis. In our view, the US energy complex substantially stabilized across 2017.

From the perspective of utility-centric investing, low and stable natural gas prices are a positive for regulated segments. Increased demand (including from the secular shift in power generation and growth in exports) presents growth opportunities for distribution and transportation companies. We believe prices generally at or below $5/Mcf are sufficient to keep our demand growth thesis intact, even allowing for significant volatility below our 'bogey' price. See prices over the last few years below in **Exhibit 4.** As we look toward earnings season, we believe the early-2018 cold spell may be a notable positive driver at some point (mostly for non-reg ops), but we typically refrain from making trading calls based on weather.

**Exhibit 4**
**Natural Gas Prices**




| | 5 Years Ago | 2 Years Ago | 1 Year Ago | 1 Mo Ago | 29-Dec-17 |
|---|---|---|---|---|---|
| Henry Hub Spot | 3.34 | 1.68 | 3.69 | 3.05 | 2.95 |
| 4 Mo Futures Ctr | 3.48 | 2.16 | 3.58 | 3.07 | 2.67 |

Source: Energy Information Administration

**RECENT EVENTS -- Hilliard Lyons Coverage Universe** (reverse chronological order)

*For earnings announcements, quarterly results and rating actions, please consult our most recently published notes. Dividend announcements outside of raises and special items are omitted.*

**New Jersey Resources (NJR - $39.45, Neutral) & South Jersey Industries (SJI - $29.94, Neutral)** 1/19/18—Approval was announced for the PennEast Pipeline (20% NJR interest/ 20% SJI interest) by the Federal Energy Regulatory Commission—or FERC; the ~$1B project was announced back in 2014 and is expected to be in service in early 2019.

**South Jersey Industries, Inc. (SJI - $29.94, Neutral)** 1/19/18—SJI announced it would postpone its January 23rd investor day event until a later date (perhaps March). The company cited a desire to wait for more clarity on funding its pending M&A and ramifications of the US tax changes.

**WGL Holdings Inc. (WGL - $84.50, Neutral)** 1/9/18—WGL announced that it plans to file in all three of its utility territories (DC, MD and VA) to pass ~$34MM in tax savings to customers via rate reductions.

**One Gas Inc. (OGS) - $69.51, Neutral)** 1/7/18—OGS initiated 2018 guidance of $2.96 to $3.20 per share and 2018 Cap Ex of $375MM. Five year growth forecasts were also updated to include capital expenditures in the range of $375MM to $415MM per year, 5% to 7% EPS growth, and rate base growth of 6%+. EPS guidance for 2017 was revised to $3.06 to $3.10, with +$0.03 of special items.

**One Gas Inc. (OGS) - $69.51, Neutral)** 1/7/18—OGS increased its quarterly dividend by over 9% to an annualized $1.84.

**Northwest Natural Gas (NWN - $57.70, Underperform, $53 TP)** 12/29/17—NWN filed its first Oregon general rate case in six years; the net revenue request of $40.4MM has an expected effective date of 11/1/2018.

**Northwest Natural Gas (NWN - $57.70, Underperform, $53 TP)** 12/21/17—NWN announced agreements to acquire privately owned water utilities Salmon Valley Water Company in Oregon and Falls Water in Idaho; these companies serve ~975 and ~5,500 customers respectively. Financial terms of the deal were not disclosed.

**Chesapeake Utilities Corp. (CPK - $75.50, Long-term Buy, $97 TP)** 12/14/17—CPK's subsidiary Eastern Shore Natural Gas Company announced the filing of an uncontested rate case settlement agreement with FERC. If accepted, the agreement would increase base rates by $9.8MM.

**WGL Holdings Inc. (WGL - $84.50, Neutral)** 12/4/17—WGL announced a settlement agreement with the Maryland Energy Administration, Montgomery and Prince George's counties, as well as with local labor unions in the DC area in regards to its proposed acquisition.

**Atmos Energy Corp. (ATO -$82.26, Neutral)** 11/28/17—ATO priced a $400MM equity offering at about $87.75/share; proceeds are to be applied to short-term debt balances, and are aimed at facilitating ATO's long-term Cap Ex plans.

**New Jersey Resources (NJR - $39.45, Neutral)** 11/21/17—Management initiated fiscal 2018 NFE guidance in the range of $1.75 to $1.85 per share.

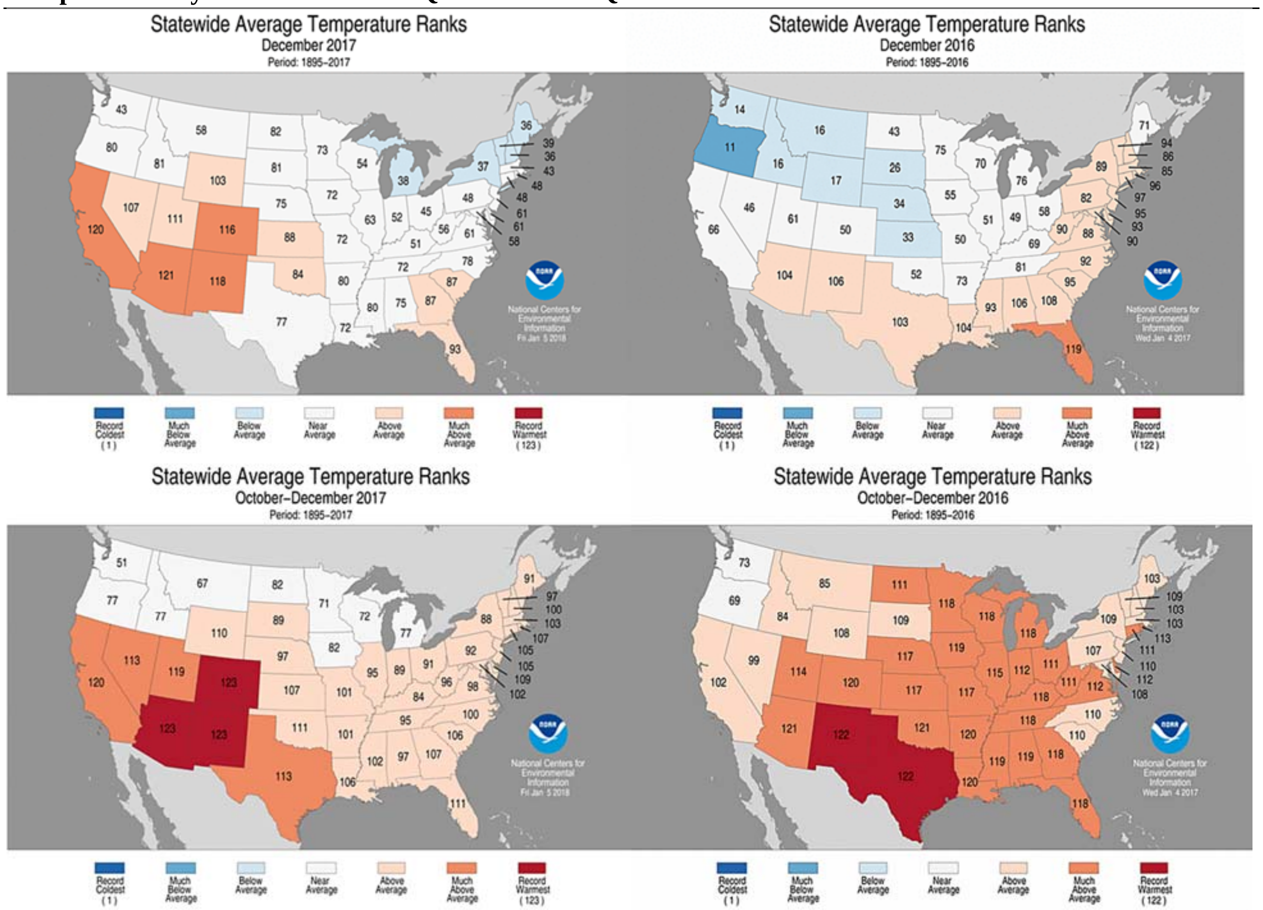
## TEMPERATURE DATA

December brought fairly average temperature across most of the country. Compared to December 2016, temperatures were cooler across most of the east coast, while temperatures across the western half of the country trended warmer. (**Exhibit 5)**. New England continued its shift to cooler weather from the record highs seen in October.

In total, Q4 finished with widespread temperatures conditions warmer than average, but not quite matching the extent of warmth we saw in Q4'16, allowing for some favorable comp cushion, in our view. The predicted winter storm / cold snap rumored prior to December seemed to predominantly fall in January, leaving hope for a colder second half of the heating season. While not necessarily affecting our coverage, WY, NM, and AZ all saw record heat in Q4 (NM topping its previous record set just last year).

From a broad investment standpoint, we look to capitalize on dislocations that might be weather influenced, but also remain of the opinion that this type of trade is less prevalent than in years past as investors increasingly focus on multi-year growth stories at most of our utilities.

**Exhibit 5**
**Temperatures by State—Months of Q3 2016 versus Q3 2017**




Source: National Climatic Data Center; NOAA Satellite and Information Service

## HILLIARD LYONS NATURAL GAS UTILITY COVERAGE COMPARABLES

Actual // *Estimate*

| Company | Ticker | Price 23-Jan-18 | Target Price | Rating | Mkt Cap ($MM) | Price/ Book | LTD / Cap. (%) | EPS FY'17E | EPS FY'18E | EPS FY'19E | FY'17E | FY'18E | FY'19E | 5-Yr Avg P/E | 5-Yr EPS CAGR | Curr EV / EBITDA | Div. Yld. | Div. Payout (%) | 30-day Avg. Vol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atmos Energy | ATO | $ 82.26 | -- | Neutral | 9,123.4 | 2.2x | 41% | $3.61 | *$3.83* | *$4.07* | 22.8x | 21.5x | 20.2x | 19.6x | 10.2% | 12.0x | 2.4% | 58% | 666,821 |
| Chesapeake Utilities | CPK | $ 75.50 | $ 97 | LT Buy | 1,234.0 | 2.7x | 17% | *$2.81* | *$3.43* | *$3.81* | 26.8x | 22.0x | 19.8x | 19.5x | 7.4% | 13.7x | 1.7% | 46% | 66,723 |
| New Jersey Resources | NJR | $ 39.45 | -- | Neutral | 3,428.7 | 2.8x | 37% | $1.72 | *$1.79* | *$1.89* | 23.0x | 22.0x | 20.9x | 18.6x | 5.1% | 19.4x | 2.8% | 67% | 575,461 |
| Northwest Natural | NWN | $ 57.70 | $ 53 | Underprf | 1,653.8 | 2.0x | 42% | *$2.20* | *$2.25* | *$2.53* | 26.3x | 25.6x | 22.8x | 22.4x | -1.2% | 8.8x | 3.3% | 85% | 184,456 |
| ONE Gas | OGS | $ 69.51 | -- | Neutral | 3,633.6 | 1.9x | 37% | *$3.07* | *$3.16* | *$3.34* | 22.6x | 22.0x | 20.8x | 23.4x | 10.5% | 11.4x | 2.6% | 63% | 225,181 |
| South Jersey Industries | SJI | $ 29.94 | | Neutral | 2,381.7 | 1.9x | 31% | *$1.21* | *$1.47* | *$1.61* | 24.7x | 20.4x | 18.6x | 20.5x | -5.3% | 21.8x | 3.7% | 84% | 422,494 |
| Spire Inc. | SR | $ 68.70 | $ 102 | LT Buy | 3,317.9 | 1.7x | 44% | $3.66 | *$3.48* | *$4.06* | 18.8x | 19.7x | 16.9x | 17.4x | 5.1% | 12.4x | 3.3% | 60% | 200,323 |
| WGL Holdings | WGL | $ 84.50 | -- | Neutral | 4,339.3 | 2.8x | 38% | $3.20 | *$3.75* | | 26.4x | 22.5x | | 19.9x | 2.9% | 13.3x | 2.4% | 53% | 237,253 |
| | | | | | | 2.2x | 36% | | | | 23.9x | 22.0x | 20.0x | 20.2x | 4.3% | 14.1x | 2.8% | 64% | |

*Source: Company reports, Thomson Reuters, and Hilliard Lyons estimates*

** ATO, NJR, SR and WGL (September fiscal year-end) **

## NATURAL GAS UTILITY INDUSTRY COMPARABLES

Actual // *Estimate*

| Company | Tkr | Price 23-Jan-18 | Mkt Cap ($MM) | Price/ Book | LTD / Cap. (%) | Consensus EPS FY'16 | FY'17E | FY'18E | FY'19E | FY'16 | FY'17E | FY'18E | FY'19E | 5-Yr Avg P/E | 5-Yr EPS CAGR | TTM EBITDA/ Share | Current EV / EBITDA | Div. Yld. | Div. Payout (%) | Short Interest Ratio | 30-day Avg. Vol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atmos Energy | ATO | $ 82.26 | 9,123.4 | 2.2x | 41% | $3.37 | $3.60 | *$3.82* | *$4.10* | 24.4x | 22.9x | 21.5x | 20.1x | 19.6x | 10.2% | $ 9.44 | 12.0x | 2.4% | 57.6% | 1.1% | 666,821 |
| Chesapeake Utilities | CPK | $ 75.50 | 1,234.0 | 2.7x | 17% | $2.86 | *$2.85* | *$3.41* | *$3.69* | 26.4x | 26.5x | 22.1x | 20.5x | 19.5x | 7.4% | $ 7.35 | 13.7x | 1.7% | 46.1% | 1.0% | 66,723 |
| National Fuel Gas | NFG | $ 56.45 | 4,831.1 | 2.8x | 51% | $3.09 | $3.30 | *$3.03* | *$3.24* | 18.3x | 17.1x | 18.6x | 17.4x | 19.0x | 5.0% | $ 9.08 | 8.6x | 2.9% | 49.1% | 5.5% | 398,298 |
| New Jersey Resources | NJR | $ 39.45 | 3,428.7 | 2.8x | 37% | $1.61 | $1.73 | *$1.82* | *$1.98* | 24.5x | 22.8x | 21.7x | 20.0x | 18.6x | 5.1% | $ 2.89 | 19.4x | 2.8% | 66.6% | 2.4% | 575,461 |
| Northwest Natural Gas | NWN | $ 57.70 | 1,653.8 | 2.0x | 42% | $2.19 | *$2.18* | *$2.27* | *$2.49* | 26.3x | 26.5x | 25.4x | 23.1x | 22.4x | -1.2% | $ 9.58 | 8.8x | 3.3% | 84.9% | 3.1% | 184,456 |
| ONE Gas | OGS | $ 69.51 | 3,633.6 | 1.9x | 37% | $2.65 | *$3.03* | *$3.15* | *$3.27* | 26.2x | 23.0x | 22.1x | 21.3x | 23.4x | 10.5% | $ 8.40 | 11.4x | 2.6% | 63.4% | 2.6% | 225,181 |
| South Jersey Industries | SJI | $ 29.94 | 2,381.7 | 1.9x | 31% | $1.34 | *$1.16* | *$1.48* | *$1.66* | 22.3x | 25.9x | 20.3x | 18.0x | 20.5x | -5.3% | $ 2.22 | 21.8x | 3.7% | 83.6% | 2.6% | 422,494 |
| Spire Inc. | SR | $ 68.70 | 3,317.9 | 1.7x | 44% | $3.42 | $3.56 | *$3.72* | *$3.86* | 20.1x | 19.3x | 18.5x | 17.8x | 17.4x | 5.1% | $ 9.85 | 12.4x | 3.3% | 59.7% | 2.7% | 200,323 |
| Southwest Gas | SWX | $ 75.46 | 3,592.5 | 2.1x | 47% | $3.18 | *$3.42* | *$3.64* | *$3.79* | 23.7x | 22.1x | 20.7x | 19.9x | 20.4x | 3.6% | $ 12.00 | 9.5x | 2.6% | 55.3% | 1.3% | 181,667 |
| UGI Corp. | UGI | $ 46.54 | 8,058.5 | 2.5x | 48% | $2.05 | *$2.54* | *$2.65* | *$2.67* | 22.7x | 18.3x | 17.5x | 17.4x | 18.4x | 15.8% | $ 7.60 | 9.6x | 2.1% | 38.3% | 0.6% | 861,187 |
| WGL | WGL | $ 84.50 | 4,339.3 | 2.8x | 38% | $3.27 | $3.11 | *$3.67* | *$4.03* | 25.8x | 27.2x | 23.0x | 21.0x | 19.9x | 2.9% | $ 9.64 | 13.3x | 2.4% | 53.0% | 4.5% | 237,253 |
| *Averages:* | | | | 2.3x | 39% | | | | | 23.7x | 22.9x | 21.0x | 19.7x | 19.9x | 5.4% | | 12.8x | 2.7% | 59.8% | 2.5% | |

*Source: Company reports and Thomson Reuters*

# Water Utilities

## PRICE PERFORMANCE

Our covered water faded a bit to close 2017, falling 4.06% on average; the S&P 500 gained 0.98% last month **(Exhibit 6)**. Stronger relative performance was weighted toward our large-cap names, with Aqua America (WTR) and American Water Works (AWK) both performing better than both peer water companies and the broader Utilities sector. WTR was our only name to post a positive return last month, gaining 3.26% in December; Connecticut Water Service Inc. (CTWS) fell 9.32% to lead on the downside.

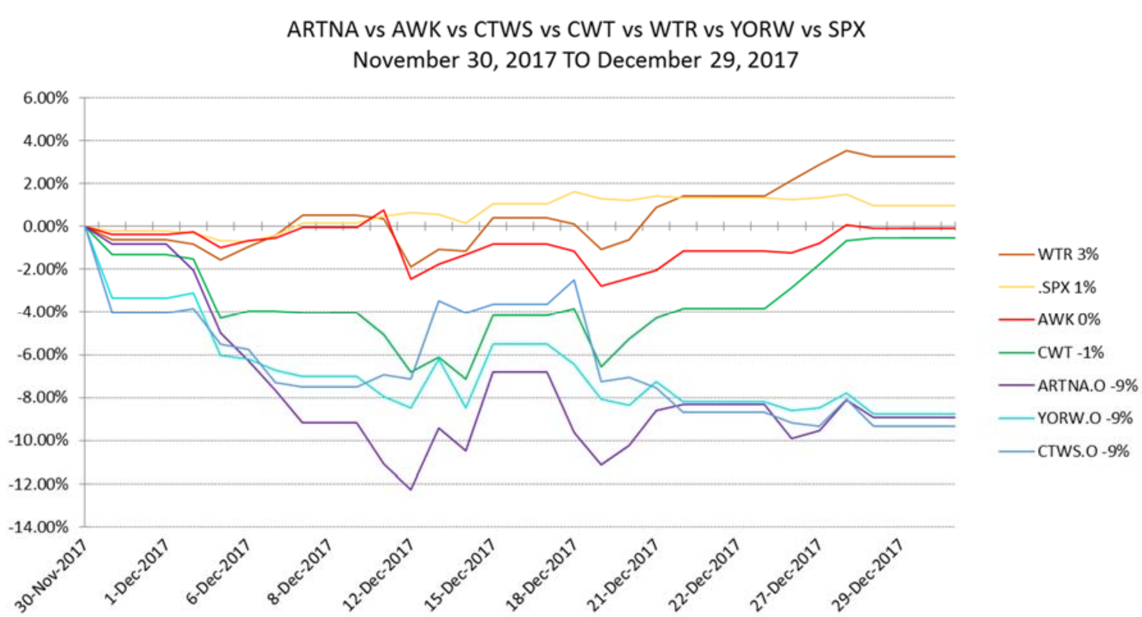
2017 returns for our coverage group are spread across a broad range of 45 percentage points, but with 4 out of 6 companies gaining 20%+. Overall our group improved 17.18% on average in 2017, with California Water Service Group (CWT) leading the way at +33.8% in 2017; the average was pulled lower by The York Water Company (YORW), with fell 11.30% in the same period. Our group trailed the broader market by just over 200bps; excluding YORW that number flips to a +300bps outperformance **(Exhibit 7)**.

Trailing 52-week performance matches the full-year commentary on 2017, which was a year of substantial volatility for the industry. We largely attribute this to periods of SMID-cap strength and weakness **(Exhibit 8)**. Returns for AWK and WTR over the TTM demonstrate a more "smooth" trend.

Past performance is no guarantee of future results.

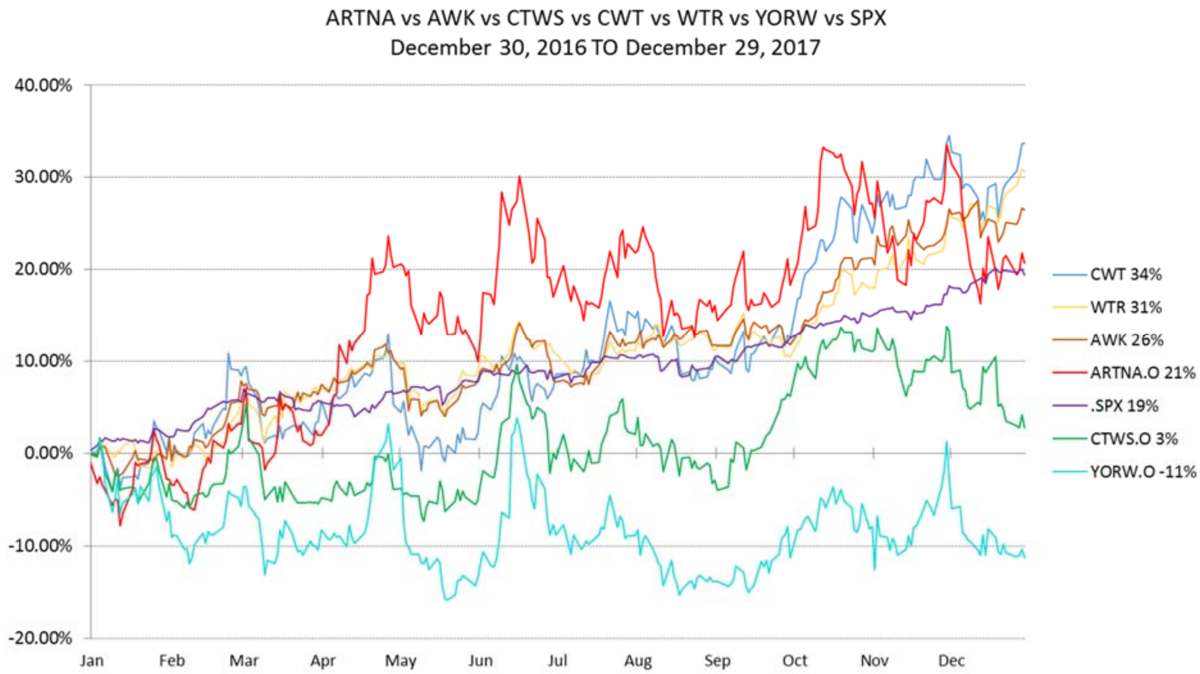
Since our last Utilities monthly we have published on small-caps CWT and ARTNA; perhaps more significantly, we added another name to our Underperform list in CWT, downgrading shares from Neutral citing the stock's valuation at its current point in the rate cycle. We reiterated our Neutral rating on ARTNA, initiating 2019 estimates. We continue to rate AWK as Long-term Buy, while ARTNA, CTWS, and WTR are rated at Neutral; CWT and YORW now carry our Underperform ratings.

**Exhibit 6**
**Hilliard Lyons Covered Water Utilities Monthly Price Performance vs. S&P 500—Daily Chart**



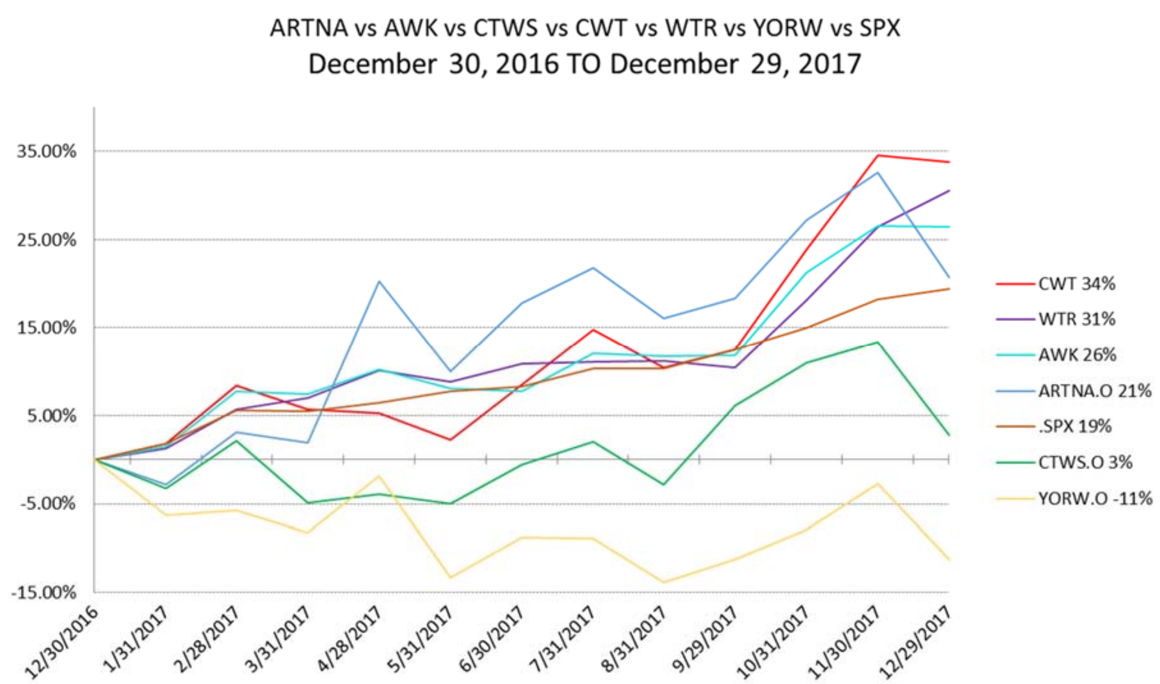

**Source: Thomson Reuters** SPX-S&P 500 Index; ARTNA-Artesian Resources; AWK-American Water Works; CTWS-CT Water Svc; CWT-California Water Svc Group; WTR-Aqua America; YORW-The York Water Company **Note: It is not possible to invest directly in an index**

**Exhibit 7**
**Hilliard Lyons Covered Water Utilities YTD Price Performance vs. S&P 500—Daily Chart**




**Source: Thomson Reuters** SPX-S&P 500 Index; ARTNA-Artesian Resources; AWK-American Water Works; CTWS-CT Water Svc; CWT-California Water Svc Group; WTR-Aqua America; YORW-The York Water Company **Note: It is not possible to invest directly in an index**

**Exhibit 8**
**Hilliard Lyons Covered Water Utilities One-Year Price Performance vs. S&P 500—Weekly Chart**




**Source: Thomson Reuters** SPX-S&P 500 Index; ARTNA-Artesian Resources; AWK-American Water Works; CTWS-CT Water Svc; CWT-California Water Svc Group; WTR-Aqua America; YORW-The York Water Company **Note: It is not possible to invest directly in an index**

**COMMENTARY AND OUTLOOK**

Water utilities were mixed in December to close out what we view as a mixed year of performance in 2017. Bifurcation of returns persisted across both periods, with resilient performance from AWK and WTR allowing for an average return from our water group of -4% to outpace the broader sector that fell sharply to close the year. During much of 2017 we believe style-based momentum (large vs small-cap) impacted performance, although to close out the year in December, we believe general pressure for utilities based on tax concerns was the most prescient issue.

Returns for water stocks last year were mixed. WTR was able to hold its valuation multiples ahead of material rate activity in Pennsylvania being a 2018/2019 item. Bellwether-AWK managed to just outpace the S&P and comfortably outpaced utility comp groups, while YORW significantly underperformed.

News flow over the past month has been highlighted, in our view, by AWK issuing tax-adjusted guidance for 2018. Although the prior-issued granular targets did not change, we see it as constructive that American Water's management explicitly guided to no new equity (under normal circumstances) across its 5-year planning horizon. Each of our covered water utilities closed the books on fiscal 2017 on December 31, and we expect the reporting cycle to stretch from late-February through mid-March.

Our core long-term investment thesis for the water space is to target names with robust regulated infrastructure investment opportunities, while tangentially supporting roll up acquisition activity. Much of the US water/wastewater infrastructure has surpassed its intended useful life, and we expect our companies can grow over a multi-decade time horizon by earning a return on their infrastructure investments. With guaranteed returns on equity, a primary focus of ours is determining what utilities have the best line of sight on deploying retained equity capital. We further look for rising earned-ROE scenarios (i.e. operational improvement) and/or special situations that may be misunderstood by the market. Federal policy shifts delivered by the Trump Administration have yet to materially shift our investment framework, although the recent US Tax Cuts and Jobs Act will likely drive some shifts to what normalized financials across the industry may look like.

We are reiterating our Underweight allocation recommendation to water stocks as we trade through January, which at this point flows in agreement with a skeptical tactical outlook for the Utility sector in general. Our somewhat negative stance across 2017 was not an easy one, but we were pleased with the outcome and we more/less keep our views intact into the New Year. Despite our persistent skepticism of water stocks over the past several quarters, we believe the long-term outlook for, and current health of, our coverage group is strong.

Our current top pick in the space remains Long-term Buy-rated American Water Works, and our call is somewhat strengthened by a mid-January sell off that we believe brings an opportunity to be aggressive. A long-favored core holding and the most geographically diverse investor-owned US water utility, we like AWK's robust stretch EPS guidance versus some inherent uncertainty for smaller peers. From a bottom-up perspective, we like adding the stock into what we expect will be a strong 2018-2019 of regulatory awards/activity. Our 2-year price target is $110, suggesting total return potential of ~35%.

**RECENT EVENTS -- Hilliard Lyons Coverage Universe** (reverse chronological order)
*For earnings announcements, quarterly results and rating actions, please consult our most recently published notes. Dividend announcements outside of raises and special items are omitted.*

**American Water Works (AWK – $84.20, Long-term Buy, $110 TP)** 1/16/18—AWK announced Paul J. Evanson would be resigning from the Board for personal reasons; Paul served as Chair of the Executive Development and Compensation Committees and was a member of the Finance and Risk committee.

**American Water Works (AWK - $84.20, Long-term Buy, $110 TP)** 1/16/18—AWK released guidance for 2018 that includes estimated impact from the Tax Cuts and Jobs Act (TCJA); 2017 GAAP EPS are now expected to fall in the wide range of $1.93 to $2.55, but adjusted 2017 EPS guidance remains $3.00-$3.06. All prior 2018 projections remain unchanged as well as a projection for no new outside equity over the planning horizon.

**California Water Service Group. (CWT - $44.70, Underperform, $37 TP)** 1/9/18—CWT announced that its Hawaii Water subsidiary filed a general rate case for its Waikoloa service areas. In total, the company is seeking $3.8MM in annualized revenue increases effective Q4'18.

**Aqua America, Inc. (WTR - $35.89, Neutral)** 1/4/18—WTR announced they would postpone a January 17th analyst/investor update event due to changes in the US tax situation.

**York Water Company (YORW - $32.20, Underperform, $27 TP)** 1/3/18—York appointed Matthew E. Poff, CPA, as the company's next CFO; he previously served as the company's controller since 2009. Poff replaces Kathleen Miller, who served as York's Chief Financial Officer from 2003 through 2017.

**California Water Service Group. (CWT - $44.70, Underperform, $37 TP)** 12/22/17—CWT entered into a settlement agreement with several large companies in the CA-area accused of contaminating the local water supply; plaintiffs CWT and the City of Bakersfield will receive $85MM.

**American Water Works (AWK - $84.20, Long-term Buy, $110 TP)** 12/19/17—AWK announced its McKeesport acquisition in Pennsylvania had closed; the 22,000 customer wastewater system ended up with a $159MM price tag.

**Aqua America, Inc. (WTR - $35.89, Neutral)** 12/14/17—Aqua America announced that Chris Franklin, current CEO, was elected as Chairman of the Board effective January 1, 2018. Franklin replaces former CEO Nicholas DeBenedictis, who is expected to continue to serve as chairman emeritus.

**Connecticut Water Service, Inc. (CTWS - $52.62, Neutral)** 12/14/17—CTWS announced the Maine Public Utility Commission approved its rate filing for an increase in revenue of $1.56MM effective retroactively to December 1, 2017.

**American Water Works (AWK - $84.20, Long-term Buy, $110 TP)** 12/8/17—The Pennsylvania Public Utility Commission (PUC) unanimously approved a settlement to Pennsylvania American Water's rate case, which includes $62MM in net revenue increases effective Jan. 1, 2018.

**PRECIPITATION DATA**

A dry November was followed by a dry December across a vast majority of the US, contrasting the year ago December where mostly average-to-wet conditions prevailed. To close out the year, only AR and MO saw above average precipitation. Nearly all of our important states saw below average conditions, with the most significant category shifts coming in WV, CA, NJ, PA, and DE **(Exhibit 9)**. Overall, Q4 proved drier when compared to Q4'16, especially across the West and mid-Atlantic.

Our drought monitor **(Exhibit 10)** showed improvement month/month in Montana and across the Dakotas; however, problem areas in the Southwest look to have mostly worsened, and drought conditions in some form now spread across nearly all the entirety of the Great Plains areas.

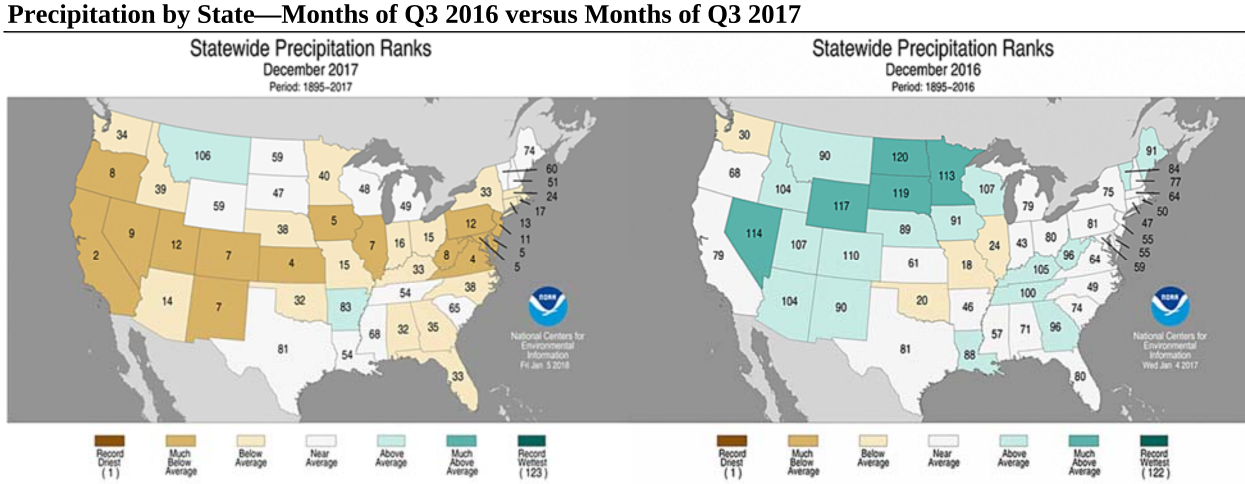
The most recent drought outlook, published on January 18th, largely corroborates the notes from above, with drought in Montana and the Dakotas potentially coming to an end **(Exhibit 11)**.

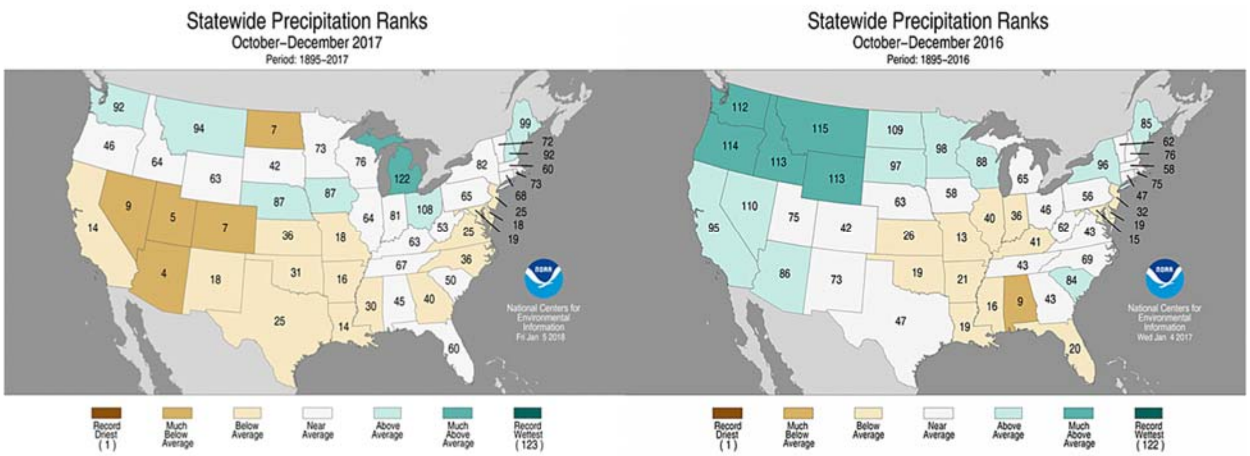
Revenue decoupling insulates CTWS and CWT (and the CA-subsidiary of AWK) from weather impact, and we mostly view rainfall as less of a concern than in years past with investors acclimating to 'extremes' becoming the norm. Having said that, all of our water utilities are levered to weather conditions to some extent, even if it is more from a cost perspective. From the standpoint of trading water stocks, we like capitalizing on weather fears and/or surprises to identify attractive long-term entry points.

| | Approx % of Water Rev from Important States | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NJ | PA | IN | IL | WV | MO | TX | CA | OH | NC | ME | CT | DE |
| AWK | 25% | 22% | 7% | 10% | 5% | 10% | | 7% | | | | | |
| WTR | | 52% | | 8% | | | 9% | | 13% | 7% | | | |
| ARTNA | | | | | | | | | | | | | 97% |
| YORW | | 100% | | | | | | | | | | | |
| CWT | | | | | | | | 94% | | | | | |
| CTWS | | | | | | | | | | | 15% | 85% | |

Source: Company filings and Hilliard Lyons estimates

**Exhibit 9**
**Precipitation by State—Months of Q3 2016 versus Months of Q3 2017**

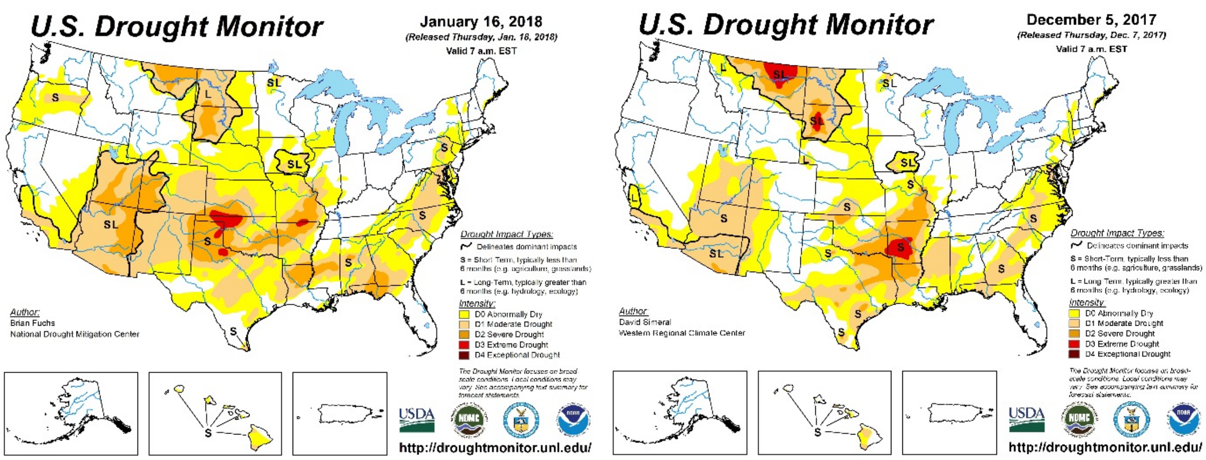





**Source: National Climatic Data Center**

**Exhibit 10**

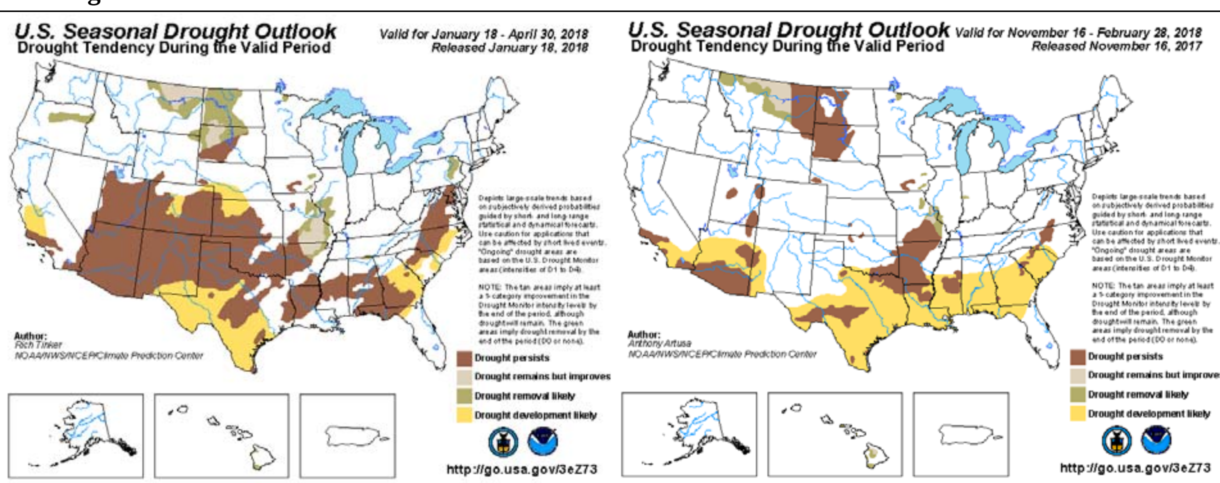
**US Drought Conditions—Most Recent versus ~1 Month Ago**




**Source: National Climatic Data Center**

**Exhibit 11**

**US Drought Outlook—Most Recent versus ~1 Months Prior**




**Source: National Weather Service—Climate Prediction Center**

## RAW PRECIPITATION TOTALS (SELECT LOCATIONS)

### October (month #1 of Q4) 2015-2017

***Note:** Data is color coded by company affected: AWK, WTR, AWK & WTR, CTWS, ARTNA, and YORW. *Data from NOAA Satellite and Info Svc.*

| Company | State | City | Station | Oct '17 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 15 | 5.20 | 13 | 72.0/49.1 | 1 | 2 | 1 | 0.02 | 0.02 | 0.04 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 14 | 4.39 | 11 | 69.5/47.1 | 0 | 3 | 0 | 0.00 | 1.29 | 1.29 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 7 | 2.90 | 0 | 70.9/54.4 | 0 | 1 | 0 | 0.00 | 0.13 | 0.13 |
| AWK | WV | Charleston | WSFO | 12 | 4.38 | 11 | 72.9/44.6 | 0 | 2 | 0 | 0.00 | 1.07 | 1.07 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | | | | | | | | | | |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 10 | 6.92 | 9 | 68.7/49.1 | 1 | 3 | 1 | 0.03 | 4.02 | 4.05 |
| AWK/WTR | IL | Kankakee | Kkee--WW | 8 | 5.45 | 5 | 68.1/48.6 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 9 | 3.09 | 7 | 76.9/50.2 | 0 | 2 | 0 | 0.00 | 0.44 | 0.44 |
| WTR | NC | Raleigh | Raleigh St Univ | 6 | 5.88 | 2 | 76.1/55.3 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 7 | 0.74 | 4 | 78.7/55.3 | 1 | 2 | 1 | 0.07 | 0.50 | 0.57 |
| WTR | TX | Houston | NWSO | 8 | 4.37 | 4 | 82.7/62.4 | 1 | 1 | 0 | 0.01 | 0.55 | 0.56 |
| CTWS | ME | Newcastle | Newcastle | 11 | 6.80 | 9 | 63.6/48.1 | 0 | 3 | 0 | 0.00 | 0.22 | 0.22 |
| CTWS | CT | Bakersville | Bakersville | 12 | 8.73 | 10 | 66.9/43.3 | 0 | 2 | 0 | 0.00 | 0.09 | 0.09 |
| CTWS | CT | Hampton | Hampton | 12 | 8.28 | 11 | 68.5/46.6 | 1 | 1 | 1 | 0.01 | 0.03 | 0.04 |
| ARTNA | DE | Newark | Wilmington Port | | | | | | | | | | |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 15 | 4.01 | 14 | 74.1/54.9 | 1 | 3 | 1 | 0.05 | 1.24 | 1.29 |
| YORW | PA | York | York Haven | 10 | 4.22 | 8 | - | 1 | 2 | 0 | 0.10 | 0.09 | 0.19 |

| Company | State | City | Station | Oct '16 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 11 | 3.06 | 8 | 67.5/45.7 | 2 | 3 | 2 | 1.03 | 0.64 | 1.67 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 16 | 7.37 | 14 | 67.8/44.9 | 4 | 3 | 3 | 3.07 | 1.04 | 4.11 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 6 | 2.03 | 2 | 75.2/55.5 | 1 | 0 | 0 | 0.07 | 0.00 | 0.07 |
| AWK | WV | Charleston | WSFO | 8 | 4.20 | 2 | 72.6/46.4 | 3 | 0 | 0 | 1.81 | 0.00 | 1.81 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 6 | 2.19 | 2 | 68.7/52.3 | 2 | 1 | 1 | 0.57 | 0.04 | 0.61 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 13 | 4.86 | 9 | 64.7/47.2 | 2 | 3 | 1 | 1.04 | 0.69 | 1.73 |
| AWK/WTR | IL | Kankakee | Kkee--WW | 9 | 3.76 | 6 | 68.0/48.8 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 3 | 3.10 | 3 | 77.8/50.0 | 1 | 1 | 1 | 1.30 | 1.76 | 3.06 |
| WTR | NC | Raleigh | Raleigh St Univ | 4 | 10.45 | 2 | 74.6/53.8 | 3 | 1 | 1 | 1.50 | 8.95 | 10.45 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 3 | 1.25 | 0 | 83.4/61.9 | 1 | 0 | 0 | 0.69 | 0.00 | 0.69 |
| WTR | TX | Houston | NWSO | 2 | 1.50 | 0 | 83.9/66.8 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| CTWS | ME | Newcastle | Newcastle | 12 | 3.26 | 11 | 57.9/42.8 | 3 | 3 | 2 | 0.64 | 0.79 | 1.43 |
| CTWS | CT | Bakersville | Bakersville | 11 | 5.16 | 6 | 61.0/39.2 | 2 | 2 | 2 | 0.47 | 0.56 | 1.03 |
| CTWS | CT | Hampton | Hampton | 11 | 5.71 | 6 | 62.7/41.4 | 2 | 2 | 1 | 2.54 | 0.32 | 2.86 |
| ARTNA | DE | Newark | Wilmington Port | 8 | 2.11 | 6 | 65.8/48.5 | 3 | 3 | 2 | 0.36 | 1.25 | 1.61 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 10 | 4.18 | 9 | 72.3/52.8 | 3 | 2 | 2 | 0.48 | 3.35 | 3.83 |
| YORW | PA | York | York Haven | 7 | 1.25 | 4 | - | 2 | 2 | 1 | 0.38 | 0.55 | 0.93 |

| Company | State | City | Station | Oct '15 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 7 | 4.30 | 4 | 66.97/42.68 | 2 | 2 | 1 | 2.44 | 0.05 | 2.49 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 12 | 3.56 | 8 | 64.35/43.19 | 3 | 2 | 1 | 1.54 | 0.54 | 2.08 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 5 | 1.14 | 2 | 70.16/51.03 | 1 | 0 | 0 | 0.16 | 0.00 | 0.16 |
| AWK | WV | Charleston | WSFO | 9 | 2.34 | 5 | 68.16/43.58 | 2 | 2 | 0 | 0.93 | 0.54 | 1.47 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 6 | 4.07 | 5 | 66.71/49.9 | 2 | 0 | 0 | 2.15 | 0.00 | 2.15 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 11 | 3.23 | 9 | 64.39/43.87 | 3 | 2 | 2 | 0.83 | 0.31 | 1.14 |
| AWK/WTR | IL | Kankakee | Kkee--WW Metro | 5 | 1.15 | 3 | 65/44.65 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 12 | 7.70 | 12 | 72.81/47.42 | 2 | 2 | 2 | 3.28 | 1.24 | 4.52 |
| WTR | NC | Raleigh | Raleigh St Univ | 8 | 5.41 | 7 | 69.94/50.45 | 2 | 1 | 1 | 2.41 | 1.33 | 3.74 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 7 | 9.59 | 6 | 80.32/59.81 | 2 | 1 | 0 | 1.26 | 0.05 | 1.31 |
| WTR | TX | Houston | NWSO | 7 | 13.84 | 7 | 81.94/64.94 | 2 | 1 | 1 | 10.11 | 3.36 | 13.47 |
| CTWS | ME | Newcastle | Newcastle | 11 | 3.67 | 6 | 55.32/38.65 | 2 | 1 | 0 | 0.17 | 0.05 | 0.22 |
| CTWS | CT | Bakersville | Bakersville | 12 | 4.25 | 8 | 59.9/35.39 | 3 | 2 | 1 | 0.46 | 0.07 | 0.53 |
| CTWS | CT | Hampton | Hampton | 8 | 4.94 | 5 | 61.42/37.77 | 1 | 0 | 0 | 0.42 | 0 | 0.42 |
| ARTNA | DE | Newark | Wilmington Port | 7 | 4.20 | 5 | 65.26/47.35 | 1 | 1 | 0 | 0.20 | 0.10 | 0.30 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 10 | 4.62 | 9 | 68.9/48.32 | 2 | 1 | 1 | 0.91 | 0.22 | 1.13 |
| YORW | PA | York | York Haven | 9 | 5.31 | 6 | - | 2 | 2 | 1 | 1.09 | 0.17 | 1.26 |

## November (month #2 of Q4) 2015-2017

***Note:** Data is color coded by company affected: AWK, WTR, AWK & WTR, CTWS, ARTNA, and YORW. *Data from NOAA Satellite and Info Svc.*

| Company | State | City | Station | Nov '17 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 10 | 2.10 | 4 | 55.2/33.8 | 0 | 2 | 0 | 0.00 | 0.84 | 0.84 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 15 | 3.95 | 12 | 51.3/30.4 | 2 | 2 | 2 | 0.15 | 1.61 | 1.76 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 8 | 0.73 | 6 | 59.5/39.0 | 1 | 1 | 1 | 0.01 | 0.19 | 0.20 |
| AWK | WV | Charleston | WSFO | 13 | 2.13 | 11 | 56.4/32.7 | 1 | 1 | 0 | 0.05 | 0.40 | 0.45 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 10 | 2.26 | 6 | 56.7/40.6 | 0 | 2 | 0 | 0.00 | 0.68 | 0.68 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 12 | 1.20 | 8 | 49.7/31.2 | 2 | 2 | 2 | 0.35 | 0.23 | 0.58 |
| AWK/WTR | IL | Kankakee | Kkee--WW | 7 | 2.77 | 4 | 48.7/30.6 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 7 | 1.60 | 4 | 63.8/37.1 | 1 | 2 | 1 | 0.01 | 0.05 | 0.06 |
| WTR | NC | Raleigh | Raleigh St Univ | 4 | 1.29 | 2 | 61.7/740.9 | 0 | 1 | 0 | 0.00 | 0.08 | 0.08 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 1 | 0.82 | 0 | 70.0/49.8 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | TX | Houston | NWSO | 4 | 1.26 | 2 | 76.8/57.7 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| CTWS | ME | Newcastle | Newcastle | 12 | 2.70 | 8 | 45.3/30.4 | 0 | 1 | 0 | 0.00 | 0.71 | 0.71 |
| CTWS | CT | Bakersville | Bakersville | 12 | 0.96 | 7 | 48.6/26.7 | 1 | 1 | 0 | 0.01 | 0.28 | 0.29 |
| CTWS | CT | Hampton | Hampton | 11 | 2.45 | 7 | 51.5/28.0 | 0 | 1 | 0 | 0.00 | 0.48 | 0.48 |
| ARTNA | DE | Newark | Wilmington Port | 6 | 1.34 | 0 | 54.6/36.7 | 0 | 2 | 0 | 0.00 | 0.61 | 0.61 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | | | | | | | | | | |
| YORW | PA | York | York Haven | 12 | 2.42 | 9 | - | 1 | 2 | 1 | 0.01 | 1.62 | 1.63 |

| Company | State | City | Station | Nov '16 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 6 | 2.90 | 4 | 58.2/35.9 | 0 | 1 | 0 | 0.00 | 0.49 | 0.49 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 9 | 2.27 | 5 | 55.8/31.3 | 1 | 0 | 0 | 0.32 | 0.00 | 0.32 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 7 | 3.36 | 4 | 63.3/43.1 | 1 | 0 | 0 | 0.25 | 0.00 | 0.25 |
| AWK | WV | Charleston | WSFO | 8 | 2.03 | 4 | 60.3/33.8 | 0 | 1 | 0 | 0.00 | 0.44 | 0.44 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 2 | 0.64 | 0 | 59.1/42.6 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 10 | 1.12 | 6 | 54.5/35.0 | 2 | 1 | 1 | 0.19 | 0.01 | 0.20 |
| AWK/WTR | IL | Kankakee | Kkee--WW | 7 | 2.92 | 4 | 58.1/37.3 | 1 | 0 | 0 | 0.22 | 0.00 | 0.22 |
| WTR | NC | Charlotte | Concord | 4 | 0.42 | 4 | 69.0/38.3 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Raleigh | Raleigh St Univ | 3 | 0.39 | 0 | 65.0/41.4 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 7 | 2.11 | 4 | 71.2/53.2 | 1 | 1 | 1 | 0.02 | 0.15 | 0.17 |
| WTR | TX | Houston | NWSO | 6 | 2.49 | 3 | 76.6/58.1 | 0 | 1 | 0 | 0.00 | 0.01 | 0.01 |
| CTWS | ME | Newcastle | Newcastle | 11 | 4.50 | 11 | 48.0/33.4 | 1 | 2 | 1 | 0.08 | 0.34 | 0.42 |
| CTWS | CT | Bakersville | Bakersville | 11 | 3.39 | 7 | 51.6/30.0 | 0 | 2 | 0 | 0.00 | 0.91 | 0.91 |
| CTWS | CT | Hampton | Hampton | 8 | 2.98 | 5 | 53.4/32.1 | 0 | 2 | 0 | 0 | 0.37 | 0.37 |
| ARTNA | DE | Newark | Wilmington Port | 3 | 2.07 | 2 | 55.1/38.2 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 9 | 0.47 | 6 | 62.2/38.7 | 0 | 1 | 0 | 0.00 | 0.05 | 0.05 |
| YORW | PA | York | York Haven | 6 | 1.44 | 4 | - | 0 | 1 | 0 | 0 | 0.25 | 0.25 |

| Company | State | City | Station | Nov '15 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 7 | 1.59 | 4 | 60.63/39.63 | 1 | 1 | 0 | 0.03 | 0.04 | 0.07 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 12 | 1.83 | 10 | 59.2/35.8 | 2 | 2 | 1 | 0.30 | 0.10 | 0.40 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 10 | 6.27 | 7 | 59.3/41.81 | 2 | 1 | 1 | 1.19 | 0.03 | 1.22 |
| AWK | WV | Charleston | WSFO | 7 | 1.69 | 2 | 62.87/36.37 | 1 | 1 | 0 | 0.11 | 0.40 | 0.51 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 7 | 2.76 | 4 | 60.7/45.97 | 0 | 1 | 0 | 0.00 | 0.07 | 0.07 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 7 | 1.96 | 5 | 57.83/37.97 | 1 | 0 | 0 | 0.09 | 0.00 | 0.09 |
| AWK/WTR | IL | Kankakee | Kkee--WW Metro | 8 | 7.54 | 3 | 54.2/35.23 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 12 | 9.12 | 10 | 65.17/42.9 | 1 | 2 | 1 | 0.85 | 0.17 | 1.02 |
| WTR | NC | Raleigh | Raleigh St Univ | 10 | 8.08 | 9 | 62.9/44.4 | 0 | 1 | 0 | 0.00 | 0.39 | 0.39 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 12 | 10.51 | 10 | 66.37/48.47 | 2 | 2 | 1 | 0.96 | 1.49 | 2.45 |
| WTR | TX | Houston | NWSO | 7 | 5.45 | 2 | 72.4/57.03 | 3 | 1 | 1 | 1.28 | 0.05 | 1.33 |
| CTWS | ME | Newcastle | Newcastle | 8 | 3.01 | 5 | 48.6/34.27 | 1 | 1 | 0 | 0.12 | 0.11 | 0.23 |
| CTWS | CT | Bakersville | Bakersville | 7 | 2.36 | 4 | 54.43/31.8 | 1 | 2 | 0 | 0.02 | 0.22 | 0.24 |
| CTWS | CT | Hampton | Hampton | 4 | 2.19 | 0 | 55.7/34.3 | 1 | 1 | 0 | 0.31 | 0.27 | 0.58 |
| ARTNA | DE | Newark | Wilmington Port | 7 | 2.69 | 5 | 59.4/43.7 | 2 | 1 | 1 | 0.06 | 0.14 | 0.20 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 14 | 3.85 | 14 | 63.45/43.47 | 2 | 3 | 2 | 0.17 | 0.25 | 0.42 |
| YORW | PA | York | York Haven | 7 | 0.97 | 4 | - | 0 | 1 | 0 | 0 | 0.02 | 0.02 |

## December (month #3 of Q4) 2015-2017

***Note:** Data is color coded by company affected: AWK, WTR, AWK & WTR, CTWS, ARTNA, and YORW. *Data from NOAA Satellite and Info Svc.*

| Company | State | City | Station | Dec '17 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 10 | 1.94 | 3 | 41.4/25.4 | 2 | 4 | 1 | 0.23 | 0.96 | 1.19 |
| AWK | PA | McKees (Pitbgh) | McKeesport | | | | | | | | | | |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 4 | 0.92 | 2 | 45.0/28.6 | 1 | 1 | 1 | 0.71 | 0.03 | 0.74 |
| AWK | WV | Charleston | WSFO | 9 | 2.58 | 3 | 44.3/24.8 | 1 | 3 | 1 | 0.94 | 0.98 | 1.92 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 9 | 1.12 | 5 | 44.2/30.5 | 2 | 1 | 1 | 0.25 | 0.45 | 0.7 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | | | | | | | | | | |
| AWK/WTR | IL | Kankakee | Kkee--WW | 3 | 0.33 | 0 | 36.5/19.1 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 9 | 1.88 | 7 | 54.6/32.0 | 2 | 2 | 1 | 0.84 | 0.04 | 0.88 |
| WTR | NC | Raleigh | Raleigh St Univ | | | | | | | | | | |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 6 | 3.95 | 2 | 56.3/38.0 | 1 | 0 | 0 | 0.59 | 0.00 | 0.59 |
| WTR | TX | Houston | NWSO | | | | | | | | | | |
| CTWS | ME | Newcastle | Newcastle | 17 | 4.33 | 14 | 27.6/15.6 | 4 | 2 | 2 | 0.90 | 0.57 | 1.47 |
| CTWS | CT | Bakersville | Bakersville | 12 | 2.76 | 8 | 33.7/17.8 | 2 | 4 | 2 | 0.11 | 1.11 | 1.22 |
| CTWS | CT | Hampton | Hampton | 11 | 3.28 | 4 | 35.4/20.2 | 2 | 4 | 1 | 0.04 | 1.01 | 1.05 |
| ARTNA | DE | Newark | Wilmington Port | 0 | 0.00 | 0 | 41.4/26.7 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | | | | | | | | | | |
| YORW | PA | York | York Haven | | | | | | | | | | |

| Company | State | City | Station | Dec '16 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 9 | 6.17 | 4 | 45.8/28.0 | 2 | 2 | 2 | 2.57 | 0.59 | 3.16 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 12 | 7.62 | 7 | 40.2/25.5 | 2 | 4 | 1 | 1.65 | 1.36 | 3.01 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 9 | 1.41 | 7 | 41.4/27.0 | 2 | 2 | 1 | 0.07 | 0.36 | 0.43 |
| AWK | WV | Charleston | WSFO | 15 | 6.82 | 14 | 45.8/28.2 | 3 | 2 | 2 | 0.64 | 1.49 | 2.13 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 10 | 6.58 | 2 | 46.7/33.9 | 2 | 1 | 1 | 1.32 | 0.66 | 1.98 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 14 | 11.86 | 12 | 39.3/26.6 | 2 | 2 | 1 | 0.63 | 2.03 | 2.66 |
| AWK/WTR | IL | Kankakee | Kkee--WW | 6 | 8.62 | 2 | 34.1/20.2 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 9 | 2.76 | 4 | 54.9/32.9 | 0 | 1 | 0 | 0.00 | 0.03 | 0.03 |
| WTR | NC | Raleigh | Raleigh St Univ | 5 | 1.78 | 2 | 54.2/35.6 | 0 | 1 | 0 | 0.00 | 0.12 | 0.12 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 6 | 0.54 | 6 | 58.3/39.0 | 2 | 1 | 1 | 0.38 | 0.02 | 0.40 |
| WTR | TX | Houston | NWSO | 13 | 8.93 | 12 | 67.2/52.1 | 3 | 1 | 1 | 7.16 | 0.68 | 7.84 |
| CTWS | ME | Newcastle | Newcastle | 14 | 23.23 | 7 | 33.6/19.5 | 2 | 1 | 1 | 4.10 | 0.57 | 4.67 |
| CTWS | CT | Bakersville | Bakersville | 14 | 19.76 | 11 | 38.9/20.2 | 2 | 2 | 1 | 2.89 | 6.35 | 9.24 |
| CTWS | CT | Hampton | Hampton | 13 | 10.21 | 9 | 40.8/22.6 | 1 | 2 | 1 | 1.95 | 4.08 | 6.03 |
| ARTNA | DE | Newark | Wilmington Port | 9 | 3.98 | 5 | 43.2/28.9 | 2 | 1 | 1 | .76+.40 | 0.04 | 0.04 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 14 | 3.13 | 11 | 50.0/31.6 | 2 | 2 | 2 | 0.78 | 0.05 | 0.83 |
| YORW | PA | York | York Haven | 11 | 4.17 | 5 | - | 2 | 1 | 1 | 1.03 | 0.04 | 1.07 |

| Company | State | City | Station | Dec '15 Days of Precip. | Total Inches | Continuous Precip. Days | Temp. range Avg. hi/lo °F | Saturday Precip. Days | Sunday Precip. Days | Tot. Weekends w/Precip. | Saturday Precip. In. | Sunday Precip. In. | Tot. Weekends w/ Precip. In. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AWK/WTR | NJ | New Brunswick | 3 SE | 13 | 4.67 | 11 | 56.65/40.52 | 1 | 1 | 1 | 0.10 | 0.05 | 0.15 |
| AWK | PA | McKees (Pitbgh) | McKeesport | 16 | 5.60 | 13 | 53.19/35.32 | 1 | 1 | 1 | 0.22 | 0.72 | 0.94 |
| AWK | MO/IL | St. Louis | St. Louis Sci Ctr | 10 | 10.25 | 6 | 51.31/37.58 | 1 | 2 | 1 | 0.50 | 4.03 | 4.53 |
| AWK | WV | Charleston | WSFO | 17 | 5.62 | 13 | 58.48/37 | 2 | 1 | 1 | 1.75 | 0.07 | 1.82 |
| AWK/WTR | PA | Philadelphia | Philly Frank Inst | 12 | 5.78 | 10 | 56.87/44.9 | 0 | 1 | 0 | 0.00 | 1.50 | 1.50 |
| AWK/WTR | PA | Williamsport | Williamsport 2 | 15 | 3.38 | 12 | 49.87/38.94 | 2 | 1 | 1 | 0.09 | 0.22 | 0.31 |
| AWK/WTR | IL | Kankakee | Kkee--WW Metro | 12 | 5.76 | 11 | 46.9/33.29 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | NC | Charlotte | Concord | 16 | 9.08 | 15 | 64.97/44.13 | 1 | 1 | 1 | 0.01 | 0.01 | 0.02 |
| WTR | NC | Raleigh | Raleigh St Univ | 8 | 6.97 | 4 | 64.23/46.61 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| WTR | TX | Dallas/Ft. Worth | Ft. Worth WSFO | 4 | 4.33 | 3 | 63.74/41.45 | 1 | 2 | 1 | 0.72 | 3.07 | 3.79 |
| WTR | TX | Houston | NWSO | 11 | 2.69 | 7 | 68.65/51.84 | 2 | 2 | 2 | 0.02 | 2.09 | 2.11 |
| CTWS | ME | Newcastle | Newcastle | 15 | 9.65 | 14 | 41.81/29.61 | 0 | 1 | 0 | 0.00 | 0.49 | 0.49 |
| CTWS | CT | Bakersville | Bakersville | 14 | 5.86 | 12 | 48.87/32.29 | 0 | 1 | 0 | 0.00 | 0.18 | 0.18 |
| CTWS | CT | Hampton | Hampton | 19 | 5.53 | 19 | 51.39/33.87 | 2 | 1 | 1 | 0.03 | 0.14 | 0.17 |
| ARTNA | DE | Newark | Wilmington Port | 12 | 5.11 | 11 | 57.61/42.68 | 0 | 0 | 0 | 0.00 | 0.00 | 0.00 |
| ~ARTNA | MD | Salisbury(~S.DE) | Salisbury 2N | 16 | 5.22 | 14 | 62.27/44.61 | 1 | 1 | 0 | 0.03 | 0.01 | 0.04 |
| YORW | PA | York | York Haven | 15 | 4.57 | 12 | - | 1 | 1 | 0 | 0.02 | 0.1 | 0.12 |

## HILLIARD LYONS WATER UTILITY COVERAGE COMPARABLES

Actual // *Estimate*

| Company | Ticker | Price 23-Jan-18 | Target Price | Rating | Mkt Cap ($MM) | Price/ Book | LTD / Cap. (%) | EPS FY'16 | EPS FY'17E | EPS FY'18E | EPS FY'19E | FY'16 | FY'17E | FY'18E | FY'19E | 5-Yr Avg P/E | 5-Yr EPS CAGR | Curr EV / EBITDA | Div. Yld. | Div. Payout (%) | 30-day Avg. Vol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| American Water Works | AWK | $ 84.20 | $ 110 | LT Buy | 15,019.2 | 2.7x | 46% | $2.85 | *$3.00* | *$3.34* | *$3.60* | 29.6x | 28.1x | 25.2x | 23.4x | 22.9x | 7.3% | 13.2x | 2.0% | 66% | 1,233,170 |
| Aqua America | WTR | $ 35.89 | -- | Neutral | 6,377.3 | 3.3x | 46% | $1.32 | *$1.35* | *$1.43* | *$1.50* | 27.3x | 26.6x | 25.1x | 23.9x | 23.2x | 9.3% | 18.3x | 2.3% | 59% | 725,255 |
| Artesian Resources | ARTNA | $ 38.29 | -- | Neutral | 318.1 | 2.4x | 41% | $1.41 | *$1.43* | *$1.56* | *$1.60* | 27.1x | 26.9x | 24.6x | 24.0x | 22.4x | 4.6% | 12.8x | 2.5% | 65% | 25,323 |
| California Water Svc Grp | CWT | $ 44.70 | $ 37 | Underprf | 2,146.3 | 3.1x | 40% | $0.97 | *$1.31* | *$1.43* | *$1.47* | 46.2x | 34.1x | 31.2x | 30.4x | 26.0x | 5.8% | 14.0x | 1.6% | 50% | 233,352 |
| CT Water Service Inc. | CTWS | $ 52.62 | -- | Neutral | 635.0 | 2.2x | 42% | $2.08 | *$2.05* | *$2.04* | *$2.18* | 25.3x | 25.7x | 25.8x | 24.1x | 21.3x | 7.6% | 19.3x | 2.3% | 56% | 47,585 |
| York Water Company | YORW | $ 32.20 | $ 27 | Underprf | 414.1 | 3.5x | 43% | $0.92 | *$0.99* | *$1.00* | *$1.05* | 35.0x | 32.7x | 32.2x | 30.7x | 29.2x | 6.6% | 17.5x | 2.1% | 66% | 26,018 |
| | | | | | | 2.9x | 43% | | | | | 31.7x | 29.0x | 27.3x | 26.1x | 24.2x | 6.9% | 15.8x | 2.1% | 60% | |

*Source: Company reports, Thomson Reuters, and Hilliard Lyons estimates*

## WATER UTILITY INDUSTRY COMPARABLES

Actual // *Estimate*

| Company | Ticker | Price 23-Jan-18 | Revenue TTM ($MM) | Mkt Cap ($MM) | Price/ Book | LTD / Cap. (%) | Consensus EPS FY'17E | Consensus EPS FY'18E | Consensus EPS FY'19E | FY'17E | FY'18E | FY'19E | 5-Yr Avg P/E | 5-Yr EPS CAGR | Curr EV / EBITDA | Div. Yld. | Div. Payout (%) | Short Interest Ratio | 30-day Avg. Vol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| American States | AWR | $ 57.49 | 443.2 | 2,108.7 | 4.0x | 35% | *$1.71* | *$1.79* | *$1.90* | 33.7x | 32.1x | 30.3x | 23.6x | 3.9% | 15.6x | 1.8% | 53.3% | 2.7% | 238,724 |
| American Water Works | AWK | $ 84.20 | 3,338.0 | 15,019.2 | 2.7x | 46% | *$3.02* | *$3.28* | *$3.53* | 27.9x | 25.6x | 23.8x | 22.9x | 7.3% | 13.2x | 2.0% | 65.9% | 2.9% | 1,233,170 |
| Aqua America | WTR | $ 35.89 | 803.0 | 6,377.3 | 3.3x | 46% | *$1.36* | *$1.44* | *$1.54* | 26.4x | 25.0x | 23.4x | 23.2x | 9.3% | 18.3x | 2.3% | 58.6% | 4.1% | 725,255 |
| Artesian Resources | ARTNA | $ 38.29 | 81.5 | 318.1 | 2.4x | 41% | *$1.43* | *$1.56* | *$1.56* | 26.8x | 24.5x | 24.5x | 22.4x | 4.6% | 12.8x | 2.5% | 64.8% | 0.6% | 25,323 |
| California Water Svc Grp | CWT | $ 44.70 | 655.8 | 2,146.3 | 3.1x | 40% | *$1.33* | *$1.42* | *$1.50* | 33.7x | 31.6x | 29.9x | 26.0x | 5.8% | 14.0x | 1.6% | 49.9% | 2.0% | 233,352 |
| Connecticut Water Service | CTWS | $ 52.62 | 103.7 | 635.0 | 2.2x | 42% | *$2.13* | *$2.20* | *$2.32* | 24.8x | 24.0x | 22.7x | 21.3x | 7.6% | 19.3x | 2.3% | 55.8% | 2.3% | 47,585 |
| Consolidated Water | CWCO | $ 13.15 | 61.5 | 196.0 | 1.3x | 0% | *$0.52* | *$0.73* | *$0.76* | 25.3x | 18.1x | 17.3x | 22.3x | -4.9% | 11.8x | 2.6% | 43.0% | 1.1% | 51,641 |
| Middlesex Water | MSEX | $ 39.12 | 131.1 | 639.5 | 2.8x | 36% | *$1.40* | *$1.71* | *$1.78* | 27.9x | 22.9x | 22.0x | 21.4x | 9.5% | 15.5x | 2.3% | 67.1% | 0.8% | 61,086 |
| SJW Corp | SJW | $ 60.56 | 375.0 | 1,242.7 | 2.7x | 50% | *$2.48* | *$2.52* | *$2.73* | 24.4x | 24.0x | 22.2x | 19.8x | 16.0% | 11.5x | 1.4% | 31.5% | 0.4% | 57,053 |
| York Water | YORW | $ 32.20 | 48.1 | 414.1 | 3.5x | 43% | *$0.99* | *$1.00* | *$1.05* | 32.5x | 32.2x | 30.7x | 29.2x | 6.6% | 17.5x | 2.1% | 66.0% | 1.6% | 26,018 |
| | | | *Averages:* | | 3.0x | 42% | | | | 28.7x | 26.9x | 25.5x | 23.3x | 7.9% | 15.3x | 2.0% | 57.0% | 1.9% | |

*Source: Company reports and Thomson Reuters* **All Averages Ex-CWCO*

**GLOSSARY**

**allowed rate of return-** the rate of return a regulatory commission allows on rate base in establishing reasonable rates for a utility; it is usually based on a blended cost of financing rate base via debt and equity

**decoupling-** breaks the link between earnings and revenues, allowing utilities to encourage conservation without being penalized from lower usage; also see 'WRAM'

**DSIC-** Distribution System Improvement Charge, revenue surcharge allowed in some states (incl. DE, IN, NJ, NY, & PA) that allows a portion of investment costs to be included in customer rates until a final award is agreed upon during the general rate case process

**Bcf-** one billion cubic feet

**Dekatherm-** (Dth) unit of heating value equivalent to 10 therms or 1,000,000 Btu's

**desalination-** removes salt and particulates from seawater, making it potable

**heating degree day-** based on extent to which the daily mean temperature falls below a reference temperature, usually 65°F

**IISM-** Infrastructure Investment Surcharge Mechanism, similar to DSIC in CA

**LDC-** local distribution company

**MCBA-** Modified Cost Balancing Account, tracks cost changes such as those for supply mix variations for later recovery or refund in rates and includes all wholesale costs, making balancing accounts more equitable in regards to changes in prices for purchased water, pump taxes, and mix for supply sources in California

**Mcf-** one thousand cubic feet

**MMcf-** one million cubic feet

**peak-shaving-** using sources of energy such as natural gas from storage to supplement the normal amounts delivered to customers during peak-use periods; using these supplemental sources prevents pipelines from having to expand their delivery facilities just to accommodate short periods of extremely high demand

**QIPS-** Qualifying Infrastructure Plant Surcharge, similar to DSIC in IL

**rate base-** the value established by a regulatory authority upon which a utility is permitted to earn a specified rate of return, generally representing the amount of property used in public service. Investment comprising rate base may be based on fair value, replacement cost or original cost; the rate base may provide for the inclusion of certain working capital items/allowances (i.e. gas in storage)

**therm-** unit of heating equivalent to 100,000 Btu's

**WNA-** weather normalization adjustment, the rate adjustment approved by certain regulatory commissions that allow a company to increase the base rate portion of customers' bills when weather is warmer than normal and decrease the base rate when weather is colder than normal

**WRAM-** Water Revenue Adjustment Mechanism, decouples water sales from revenues in CA and CT

**RECENTLY PUBLISHED RESEARCH** (listed reverse chronologically)

*South Jersey Industries* (SJI - $68.70, Neutral) 1/22/18: Cancelled Event Drives Downgrade to Neutral Rating.

*ONE Gas, Inc.* (OGS $69.51, Neutral) 1/18/18: Adjusting for 2018 Guidance and Impact of Tax Cuts; Reiterating Neutral Rating.

*Artesian Resources Corp.* (ARTNA - $38.29, Neutral) 1/18/18: Initiating 2019 Estimates, Reiterating Neutral Rating.

*California Water Service Group* (CWT - $44.70, Underperform, $37 TP) 1/17/18: Downgrading CWT to Underperform.

*Northwest Natural Gas Company* (NWN - $57.70, Underperform, $53 TP) 1/10/18: Rolling out 2019 Estimates and Adjusting for Rate Case Filings; Raising Price Target.

*Northwest Natural Gas Company* (NWN - $57.70, Underperform, $53 TP) 12/22/17: Agreements to Buy Water Companies in Oregon and Idaho; Reiterating Underperform Rating.

*Aqua America, Inc.* (WTR - $35.89, Neutral) 12/21/17: Waving the White Flag; Upgrading to Neutral.

*American Water Works* (AWK - $84.20, Long-term Buy, $110 TP) 12/11/17: Soft Guide for 2018 Offset by Positive Tweaks to the 5-Year Plan; Reiterating Long-term Buy.

*Atmos Energy Corp.* (ATO - $82.26, Neutral) 12/7/17: Model Update Reflecting New Equity; Reiterating Neutral Rating.

*WGL Holdings, Inc.* (WGL $84.50, Neutral) 11/21/17: Q4’17 Results from WGL; Reiterating Neutral.

*New Jersey Resources* (NJR - $39.45, Neutral) 11/21/17: Q4’17 Results for NJR; Guidance for 2018.

*Spire Inc.* (SR - $68.70, Long-term Buy, $102 TP) 11/17/17: Strong Q4’17 from SR; Reiterating LTB.

*Atmos Energy Corp.* (ATO - $82.26, Neutral) 11/15/17: Few Surprises at ATO’s November 15 Analyst Day; Tweaking Model.

*Chesapeake Utilities Corp.* (CPK - $75.50, Long-term Buy, $97 TP) 11/10/17: Strong Q3’17 EPS at CPK; Reiterating Long-term Buy.

*Connecticut Water Service, Inc.* (CTWS - $52.62, Neutral) 11/10/17: Somewhat Disappointing Q3’17 Results for CTWS in Light of M&A; Reiterating Neutral Rating.

*Additional information is available upon request.*

*Prices and all price sensitive data as of Tuesday, January 23, 2018, close*

## Analyst Certification

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

**Definitions of Ratings:** **Buy -** We believe the stock has significant total return potential in the coming 12 months. **Long-term Buy -** We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years. **Neutral -** We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise. **Underperform -** We believe the stock is vulnerable to a price decline in the next 12 months.

**Definitions of Suitabilities:** **1 -** A large cap, core holding with a solid history. **2 -** A historically secure company that could be cyclical, have a shorter history than a "1" or is subject to event driven setbacks. **3 -** An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage. **4 -** Speculative, due to small size, inconsistent profitability, erratic revenue, volatility, low trading volume or a narrow customer or product base.

| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 31 | 28% | 10% | 90% |
| **Hold/Neutral** | 75 | 67% | 9% | 91% |
| **Sell** | 6 | 5% | 0% | 100% |

*As of 8 January 2018*

## Other Disclosures

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February 23, 2017

COMPANY UPDATE / ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 2/22/17 | | $30.47 |
| Price Target | | | $27.00 |
| 52-Week Range | | $28.03 - | $35.83 |
| Shares Outstanding (mm) | | | 177.4 |
| Market Cap. ($mm) | | | $5,404.1 |
| 1-Mo. Average Daily Volume | | | 522,762 |
| Institutional Ownership | | | 52.9% |
| LTD / Total Capital | Q4'16 | | 48.4% |
| ROE--Adj | TTM | | 13.1% |
| Book Value / Share | Q4'16 | | $10.40 |
| Price / Book Value | | | 2.9x |
| Dividend Yield | | | 2.5% |
| LTM EBITDA Margin | | | - |

**EPS (continuing ops) FY 12/31**

| | 2016A | Prior 2017E | Current 2017E | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|
| 1Q | $0.29 | -- | $0.30 | -- | -- |
| 2Q | $0.33 | -- | $0.35 | -- | -- |
| 3Q | $0.41 | -- | $0.41 | -- | -- |
| 4Q | $0.28 | -- | $0.31 | -- | -- |
| Year | $1.32 | $1.37 | $1.37 | $1.41 | $1.41 |
| P/E | 23.1x | | 22.2x | | 21.6x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2016A | Prior 2017E | Current 2017E | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|
| 1Q | $193 | -- | $194 | -- | -- |
| 2Q | $204 | -- | $205 | -- | -- |
| 3Q | $227 | -- | $229 | -- | -- |
| 4Q | $197 | -- | $203 | -- | -- |
| Year | $820 | $831 | $831 | $859 | $861 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

## Q4 Punctuates Another Year of Subdued Growth; Reiterating Underperform Rating.

### Investment Highlights

- Aqua America reported Q4'16 EPS of $0.28, down fractionally from adjusted results in the prior year and missing our target by $0.02. FY 2016 EPS grew 4.8% to $1.32, marking a third consecutive year of growth in the 4% to 5% range.
- Revenue grew -0.1% in Q4 and +0.7% in FY 2016. A substantial pivot away from upwards of 10 non-regulated business lines at the end of 2015 created a revenue drag in 2016, although no rate activity in PA made topline growth difficult as well.
- By our count, Aqua closed on 18 individual regulated deals last year, but just Superior Water in PA (closed 1/4/16) represented more than a couple hundred customers. We believe the narrative for WTR shares would benefit from a sizable 'win' in the M&A arena.
- O&M expense fell 0.4% in Q4 and slipped 1.4% during the full year, a function of both non-reg divestitures, and in our view, good operational execution. Same system O&M guidance for +1% to +2% in 2017 is achievable, in our view.
- FY 2016 Cap Ex of $338MM was modestly above 2015 spend, although 2017 is projected to spike to $450MM. M&A spend would be additive to this.
- Aqua reiterated EPS guidance for 2017 in the range of $1.34 to $1.39. Our EPS estimates are unchanged, with 2017/2018 targets of $1.37/$1.41. Ramping Cap Ex should help alleviate over earning more quickly; however, with TTM ROE still at 13.1%, we believe the issue persists into 2018 at a minimum.
- We are reiterating our Underperform rating and 1-year $27 price target. At our target, WTR would trade ~20x our 2017E EPS, which we view as fair value given continued expectations for ROE compression.

**Note Important Disclosures on Pages 6-7**
**Note Analyst Certification on Page 6**

## ADDITIONAL DISCUSSION—Q4 RESULTS & FORWARD OUTLOOK

We view both the fourth quarter and (more so) the full year 2016 as adequate operationally for Aqua, highlighted by a string of non-regulated divestitures and good control of O&M costs. During the past year, WTR decided to liquidate or harvest its Field Service, Cross-Connect, and Consulting/Training businesses, while also deciding to flip Tri-State Grouting (sewer rehab), which was a strategic point of emphasis just ~18 months ago. We like the flexibility of management on this front, and like the read through that effort and resources are more likely to be focuses on core regulated growth, including pursuing M&A. Although difficult to pinpoint drivers at times, we remain impressed by the culture of efficiency at Aqua, which we assert at this point has thrived through the executive transition to current-CEO Christopher Franklin.

Projecting into 2017, we unfortunately do not see much potential for a material reacceleration of revenue growth, excluding the removal of divestitures that should anniversary over the course of this year. Although WTR has already received ~$4MM in regulatory awards thus far this year (NC and OH), we just do not see sufficient pipeline to drive a major uptick from a consolidated base of $800MM+. We would be remiss not mention management's expectation to file for a surcharge in PA this year; however, we expect it will be of little impact to 2017 results. The narrative gets a bit better for 2018, which in our view, is likely to be a bigger beneficiary of M&A, and could much more plausibly see material benefit from rate activity in Pennsylvania and/or benefit from the presumed spike in 2017 Cap Ex.

## ADDITIONAL DISCUSSION—M&A UPDATE

Aqua's Q4 release cited 4 pending municipal acquisitions, each of which is expected to close in 2017, although this is stable from guidance given back in January. The collective $114MM investment for ~9,000 customers (or 12,000 adjusted customer equivalents) would represent as much purchase consideration as the prior 5 years of WTR activity combined. Depending on certain other conditions (i.e. accretion timeline), this activity could be sufficient to reinvigorate the narrative, in our view, although our sense is a further build of the pipeline may be necessary, given what we view as long-term execution risk stemming from competition with the larger-American Water Works (AWK—$74.92, Long-term Buy, $84TP). AWK and WTR share a NJ/PA-centric footprint.

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| **Income Statements (000's)** | **FY'14** | **FY'15** | Q1'16 | Q2'16 | Q3'16 | Q4'16 | **FY'16** | Q1'17E | Q2'17E | Q3'17E | Q4'17E | **FY'17E** | **FY'18E** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$779,903** | **$814,204** | $192,607 | $203,876 | $226,593 | $196,799 | **$819,875** | $194,420 | $204,950 | $229,010 | $202,580 | **$830,960** | **$860,560** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **288,560** | **309,310** | 73,541 | 73,994 | 79,812 | 77,550 | **304,897** | 70,820 | 70,290 | 74,310 | 74,510 | **289,930** | **294,270** |
| Depreciation | **123,050** | **125,290** | 32,145 | 31,619 | 33,881 | 33,342 | **130,987** | 34,290 | 33,810 | 36,380 | 36,810 | **141,290** | **151,630** |
| Amortization | **3,480** | **3,447** | 450 | 528 | 389 | 654 | **2,021** | 560 | 520 | 390 | 660 | **2,130** | **2,130** |
| Taxes other than Income | **50,450** | **55,057** | 14,140 | 14,242 | 14,712 | 13,291 | **56,385** | 11,470 | 13,120 | 13,970 | 13,780 | **52,340** | **54,200** |
| Operating Income | **314,363** | **321,100** | 72,331 | 83,493 | 97,799 | 71,962 | **325,585** | 77,280 | 87,210 | 103,960 | 76,820 | **345,270** | **358,330** |
| % | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 39.7% | 42.6% | 45.4% | 37.9% | **41.6%** | **41.6%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **76,400** | **76,536** | 19,853 | 20,115 | 20,168 | 20,458 | **80,594** | 19,230 | 19,230 | 19,380 | 19,510 | **77,350** | **81,030** |
| AFUDC | **(5,130)** | **(6,219)** | (2,308) | (1,871) | (2,267) | (2,369) | **(8,815)** | (1,250) | (1,250) | (950) | (750) | **(4,200)** | **(4,200)** |
| (Gain) on Asset Sale | **0** | **(468)** | (207) | (121) | (62) | 12 | **(378)** | (100) | (100) | (100) | (110) | **(410)** | **(410)** |
| (Gain) on Debt Extinguish | **0** | **(678)** | | | | | | | | | | | |
| Equity (Earnings) / Loss from JV | **3,990** | **35,177** | 249 | 229 | (1,621) | 167 | **(976)** | 200 | 150 | 150 | 200 | **700** | **(200)** |
| Income Before Tax | **239,103** | **216,752** | 54,744 | 65,141 | 81,581 | 53,694 | **255,160** | 59,200 | 69,180 | 85,480 | 57,970 | **271,830** | **282,110** |
| Income Tax | **25,219** | **14,962** | 3,007 | 5,515 | 8,411 | 4,045 | **20,978** | 5,100 | 7,520 | 13,320 | 3,140 | **29,080** | **33,080** |
| % | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 8.6% | 10.9% | 15.6% | 5.4% | **10.7%** | **11.7%** |
| Net Income--Cont'd Ops | **213,884** | **201,790** | 51,737 | 59,626 | 73,170 | 49,649 | **234,182** | 54,100 | 61,660 | 72,160 | 54,830 | **242,750** | **249,030** |
| Net Income Avail to Common | **$233,239** | **$201,790** | $51,737 | $59,626 | $73,170 | $49,649 | **$234,182** | $54,100 | $61,660 | $72,160 | $54,830 | **$242,750** | **$249,030** |
| EPS Disc Ops | **$0.11** | | | | | | | | | | | | |
| EPS Continuing Ops | **$1.20** | **$1.14** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.30 | $0.35 | $0.41 | $0.31 | **$1.37** | **$1.41** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.20** | **$1.26** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.30 | $0.35 | $0.41 | $0.31 | **$1.37** | **$1.41** |
| Diluted Avg Shares | **177,763** | **177,763** | 177,819 | 178,084 | 177,817 | 177,880 | **177,846** | 177,778 | 177,675 | 177,573 | 177,471 | **177,624** | **177,215** |
| Dividend | **$0.634** | **$0.686** | $0.178 | $0.178 | $0.1913 | $0.1913 | **$0.739** | *$0.1913* | *$0.1913* | *$0.2000* | *$0.2000* | ***$0.7826*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **2.4%** | **4.4%** | 1.2% | -0.9% | 2.5% | -0.1% | **0.7%** | 0.9% | 0.5% | 1.1% | 2.9% | **1.4%** | **3.6%** |
| Op Income | **4.2%** | **2.1%** | 1.6% | 4.0% | 2.9% | -3.6% | **1.4%** | 6.8% | 4.5% | 6.3% | 6.8% | **6.0%** | **3.8%** |
| EPS--Cont'd Ops; Ex-Items | **4.8%** | **4.5%** | 6.6% | 3.8% | 8.3% | -0.7% | **4.8%** | 4.6% | 3.6% | -1.2% | 10.7% | **3.8%** | **2.8%** |
| EBITDA | **3.6%** | **2.0%** | 2.4% | 3.0% | 3.3% | -1.2% | **1.9%** | 6.9% | 5.1% | 6.6% | 7.9% | **6.6%** | **4.8%** |
| O&M Expense | **1.8%** | **7.2%** | 0.5% | -7.2% | 1.6% | -0.4% | **-1.4%** | -3.7% | -5.0% | -6.9% | -3.9% | **-4.9%** | **1.5%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **37.0%** | **38.0%** | 38.2% | 36.3% | 35.2% | 39.4% | **37.2%** | 36.4% | 34.3% | 32.4% | 36.8% | **34.9%** | **34.2%** |
| Taxes other than Income | **6.5%** | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | 5.9% | 6.4% | 6.1% | 6.8% | **6.3%** | **6.3%** |
| Op Income | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 39.7% | 42.6% | 45.4% | 37.9% | **41.6%** | **41.6%** |
| Net Income | **27.4%** | **24.8%** | 26.9% | 29.2% | 32.3% | 25.2% | **28.6%** | 27.8% | 30.1% | 31.5% | 27.1% | **29.2%** | **28.9%** |
| Tax Rate | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 8.6% | 10.9% | 15.6% | 5.4% | **10.7%** | **11.7%** |
| | | | | | | | ***FY 2016 EPS guide $1.30-$1.35** | | | | | ***FY 2017 EPS guide $1.34-$1.39** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16p | FY'16p | Q1'17E | Q2'17E | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$4,138** | **$3,229** | $3,981 | $4,923 | $3,712 | $2,000 | **$2,000** | $5,240 | $5,340 | $890 | $720 | **$720** | **$18,960** |
| A/R | **96,999** | **99,146** | 91,761 | 99,718 | 109,986 | 101,130 | **101,130** | 93,600 | 101,710 | 112,190 | 103,150 | **103,150** | **105,210** |
| Other | **51,385** | **25,995** | 26,991 | 27,791 | 27,703 | 25,520 | **25,520** | 27,530 | 28,350 | 28,260 | 26,030 | **26,030** | **26,550** |
| Total Current Assets | **152,522** | **128,370** | 122,733 | 132,432 | 141,401 | 128,650 | **128,650** | 126,370 | 135,400 | 141,340 | 129,900 | **129,900** | **150,720** |
| Net PP&E | **4,401,990** | **4,688,925** | 4,752,881 | 4,823,487 | 4,901,486 | 5,001,615 | **5,001,615** | 5,081,770 | 5,179,940 | 5,338,170 | 5,430,700 | **5,430,700** | **5,691,940** |
| Regulatory Assets | **725,591** | **830,118** | 859,830 | 887,135 | 911,455 | 911,460 | **911,460** | 913,460 | 913,460 | 913,460 | 913,460 | **913,460** | **915,460** |
| Goodwill | **31,184** | **33,866** | 42,304 | 42,234 | 41,921 | 41,920 | **41,920** | 42,020 | 42,020 | 42,020 | 42,020 | **42,020** | **42,120** |
| Other | **95,465** | **59,759** | 37,695 | 37,551 | 39,762 | 75,346 | **75,346** | 38,450 | 38,300 | 40,560 | 76,850 | **76,850** | **78,390** |
| **Total Assets** | **5,406,752** | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | **6,158,991** | 6,202,070 | 6,309,120 | 6,475,550 | 6,592,930 | **6,592,930** | **6,878,630** |
| CP of LTD | **58,615** | **35,593** | 29,096 | 38,212 | 83,777 | 79,216 | **79,216** | 103,092 | 103,092 | 103,092 | 54,051 | **54,051** | **94,797** |
| Loans Payable | **18,398** | **16,721** | 28,041 | 26,239 | 47,990 | 77,990 | **77,990** | 152,990 | 227,990 | 242,990 | 272,990 | **272,990** | **287,990** |
| A/P | **63,035** | **56,452** | 33,971 | 40,651 | 44,073 | 58,710 | **58,710** | 35,330 | 42,280 | 45,840 | 61,060 | **61,060** | **63,500** |
| Other | **85,287** | **84,433** | 83,235 | 74,118 | 76,158 | 85,620 | **85,620** | 84,900 | 75,600 | 77,680 | 87,330 | **87,330** | **89,080** |
| Total Current Liab | **225,335** | **193,199** | 174,343 | 179,220 | 251,998 | 301,536 | **301,536** | 376,312 | 448,962 | 469,602 | 475,431 | **475,431** | **535,367** |
| LTD | **1,560,655** | **1,743,612** | 1,744,108 | 1,775,874 | 1,726,493 | 1,737,605 | **1,737,605** | 1,713,729 | 1,713,729 | 1,663,729 | 1,712,770 | **1,712,770** | **1,692,024** |
| Shareholders' Equity | **1,655,383** | **1,725,930** | 1,760,707 | 1,791,163 | 1,832,200 | 1,850,068 | **1,850,068** | 1,915,910 | 1,946,240 | 2,137,870 | 2,155,140 | **2,155,140** | **2,422,650** |
| **Total Liab & SE** | **5,406,752** | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | **6,158,991** | 6,202,070 | 6,309,120 | 6,475,550 | 6,592,930 | **6,592,930** | **6,878,630** |

| Cash Flow Analysis | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | Q1'17E | Q2'17E | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$213,884** | **$201,790** | $51,737 | $59,626 | $73,170 | $49,649 | **$234,182** | $54,100 | $61,660 | $72,160 | $54,830 | **$242,750** | **$249,030** |
| D&A | **126,535** | **128,737** | 32,595 | 32,147 | 31,377 | 33,996 | **130,115** | 34,850 | 34,330 | 36,770 | 37,470 | **143,420** | **153,760** |
| Deferred Income Tax | **31,477** | **16,506** | 1,436 | 3,615 | 10,294 | 10,000 | **25,350** | 10,000 | 10,000 | 10,000 | 10,000 | **40,000** | **40,000** |
| (Inc) / Dec in Working Cap | **(25,333)** | **15,806** | (17,290) | (11,194) | (4,718) | 35,138 | **1,936** | (18,580) | (11,280) | (4,750) | 36,140 | **1,530** | **1,610** |
| Operating CF | **346,563** | **362,839** | 68,478 | 84,194 | 110,123 | 128,783 | **391,583** | 80,370 | 94,710 | 114,180 | 138,440 | **427,700** | **444,400** |
| Cap ex | **(328,605)** | **(364,689)** | (72,984) | (95,603) | (101,432) | (112,981) | **(383,000)** | (105,000) | (115,000) | (120,000) | (105,000) | **(445,000)** | **(395,000)** |
| JV Investment | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | **(112,106)** | **(121,248)** | (31,513) | (31,558) | (33,923) | (34,028) | **(131,022)** | (34,009) | (33,989) | (35,515) | (35,494) | **(139,007)** | **(138,687)** |
| Release (Addition) of Const Funds | - | **47** | - | - | - | - | - | - | - | - | - | - | - |
| Free Cash Flow | **(94,148)** | **(123,051)** | (36,019) | (42,967) | (25,232) | (18,226) | **(122,439)** | (58,639) | (54,279) | (41,335) | (2,054) | **(156,307)** | **(89,287)** |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | **(14,616)** | **(28,989)** | (4,461) | (1,165) | - | (2,000) | **(7,630)** | (10,000) | (17,500) | (75,000) | (25,000) | **(127,500)** | **(20,000)** |
| Divestitures | **558** | **648** | 2,853 | 3,586 | 106 | - | - | - | - | - | - | - | - |
| Proceeds from LT Debt | **317,699** | **560,544** | 96,314 | 72,983 | 64,991 | 35,903 | **270,190** | - | - | 172,000 | 105,000 | **277,000** | **179,000** |
| Repayments of LT Debt | **(253,192)** | **(400,407)** | (80,341) | (32,309) | (68,709) | (35,903) | **(217,260)** | - | - | (72,000) | (105,000) | **(177,000)** | **(54,000)** |
| Net Proceeds (Repayments) ST Debt | **(18,342)** | **(1,677)** | 11,320 | (1,802) | 21,751 | 30,000 | **61,270** | 75,000 | 75,000 | 15,000 | 30,000 | **195,000** | **15,000** |
| Net Change in Cash Overdraft | **(322)** | **(739)** | (17,250) | 1,912 | 2,752 | - | **(12,590.00)** | - | - | - | - | - | - |
| Repurchase of Common Stock | **(15,756)** | **(25,247)** | (2,827) | (32) | (46) | (7,618) | **(10,523)** | (7,618) | (7,618) | (7,618) | (7,618) | **(30,470)** | **(30,470)** |
| Net Cash Flow--Cont'd Ops | **(70,823)** | **(10,056)** | (25,911) | (55) | 739 | 6,656 | **(25,117)** | 3,244 | 103 | (4,452) | (172) | **(1,277)** | **18,243** |
| CF--Disc Ops | **48,634** | - | - | - | | | - | | | | | - | - |
| Net Cash Flow | **(22,189)** | **(10,056)** | (25,911) | (55) | 739 | 6,656 | **(25,117)** | 3,244 | 103 | (4,452) | (172) | **(1,277)** | **18,243** |
| EBITDA | **440,893** | **449,837** | 104,926 | 115,640 | 132,069 | 105,958 | **458,593** | 112,130 | 121,540 | 140,730 | 114,290 | **488,690** | **512,090** |
| EBITDA margin | **56.5%** | **55.2%** | 54.5% | 56.7% | 58.3% | 53.8% | **55.9%** | 57.7% | 59.3% | 61.5% | 56.4% | **58.8%** | **59.5%** |
| EV / TTM EBITDA | **14.4x** | **15.7x** | 16.4x | 17.9x | 15.7x | 15.8x | **15.8x** | 15.5x | 15.3x | 14.9x | 14.7x | **14.7x** | **14.0x** |

| Selected Financial Statistics | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17E | Q2'17E | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Book Value | **$9.32** | **$9.74** | $9.90 | $10.06 | $10.30 | $10.40 | **$10.40** | $10.78 | $10.95 | $12.04 | $12.14 | **$12.14** | **$13.68** |
| Tangible BV | **$9.14** | **$9.55** | $9.66 | $9.82 | $10.07 | $10.16 | **$10.16** | $10.54 | $10.72 | $11.80 | $11.91 | **$11.91** | **$13.44** |
| Cap Ex / Depreciation | **2.6x** | **2.8x** | 2.2x | 3.0x | 3.2x | 3.3x | **2.9x** | 3.0x | 3.3x | 3.3x | 2.8x | **3.1x** | **2.6x** |
| Price / Book | **2.9x** | **3.1x** | 3.2x | 3.5x | 3.0x | 2.9x | **2.9x** | 2.8x | 2.8x | 2.5x | 2.5x | **2.5x** | **2.2x** |
| Total Net Debt/ Total Capital | **49.7%** | **50.9%** | 50.5% | 50.6% | 50.3% | 50.6% | **50.6%** | 50.6% | 51.2% | 48.4% | 48.6% | **48.6%** | **45.9%** |
| LT Debt/Total Capital | **48.5%** | **50.3%** | 49.8% | 49.8% | 48.5% | 48.4% | **48.4%** | 47.2% | 46.8% | 43.8% | 44.3% | **44.3%** | **41.1%** |
| ROE (TTM)--*adj for Q4'15 JV chg* | **13.5%** | **13.1%** | 13.2% | 13.1% | 13.3% | 13.1% | **13.1%** | 12.9% | 12.8% | 12.3% | 12.1% | **12.1%** | **10.9%** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.


| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 36 | 30% | 17% | 83% |
| **Hold/Neutral** | 76 | 62% | 7% | 93% |
| **Sell** | 10 | 8% | 0% | 100% |

*As of 6 February 2017*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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February 28, 2018

COMPANY UPDATE / ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 2/27/18 | | $34.51 |
| Price Target | | | -- |
| 52-Week Range | | $30.38 - | $39.55 |
| Shares Outstanding (mm) | | | 177.7 |
| Market Cap. ($mm) | | | $6,132.1 |
| 1-Mo. Average Daily Volume | | | 767,557 |
| Institutional Ownership | | | 56.8% |
| LTD / Total Capital | Q3'17 | | 50.2% |
| ROE--Adj | TTM | | 12.6% |
| Book Value / Share | Q3'17 | | $10.88 |
| Price / Book Value | | | 3.2x |
| Dividend Yield | | | 2.4% |
| EBITDA Margin | FY'17 | | 57.5% |

**EPS (continuing ops) FY 12/31**

| | 2017A | Prior 2018E | Current 2018E | Prior 2019E | Current 2019E |
|---|---|---|---|---|---|
| 1Q | $0.28 | -- | $0.30 | -- | -- |
| 2Q | $0.34 | -- | $0.36 | -- | -- |
| 3Q | $0.43 | -- | $0.43 | -- | -- |
| 4Q | *$0.32 | -- | $0.32 | -- | -- |
| Year | $1.36 | $1.43 | $1.41 | $1.50 | $1.45 |
| P/E | 25.4x | | 24.5x | | 23.8x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2017A | Prior 2018E | Current 2018E | Prior 2019E | Current 2019E |
|---|---|---|---|---|---|
| 1Q | $188 | -- | $190 | -- | -- |
| 2Q | $203 | -- | $205 | -- | -- |
| 3Q | $215 | -- | $224 | -- | -- |
| 4Q | $203 | -- | $206 | -- | -- |
| Year | $810 | $855 | $826 | $891 | $861 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Neutral-2

**Good Q4 from WTR, but Soft Guide for 2018; Reiterating Neutral Rating.**

**Investment Highlights**

- Aqua America reported adjusted Q4'17 EPS of $0.32, up from $0.28 in the year-ago period. GAAP results include a $3.1MM charge compelled by the US Tax Cuts and Jobs Act (TCJA). FY 2017 EPS grew 3.6% to $1.36, marking a fourth consecutive year of growth in the 3% to 5% range.
- Revenue grew 3.3% in Q4 and -1.3% in FY 2017. Net consumption/weather was a drag on the full year, but the primary headwind to sales in 2017 was the wind down of certain market-based operations, which had negligible total effect on net income. We expect further revenue pressure in 2018 as WTR accrues monies to be refunded under the TCJA, but again this should have little impact on EPS due to lower taxes.
- Aqua closed just four acquisitions in 2017, posting customer growth short of initial guidance; that said, six deals are signed and pending, and WTR expects to spend $150MM on deals in 2018.
- O&M expense grew 2.2% in Q4 but slipped 5.8% during the full year, due to both the non-reg shift discussed above and a special gain in Q3. We expect O&M to more/less track customer growth this year.
- FY 2017 Cap Ex of nearly $480MM was well above 2016's spend; Aqua plans to invest $500MM in 2018, and a total of $1.4B from 2018-2020.
- Aqua initiated EPS guidance for 2018 in the range of $1.37 to $1.43. Our 2018 and 2019 EPS estimates fall $0.02 and $0.05, respectively, to $1.41 and $1.45. TTM ROE in the mid-12% range still represents a headwind near-term, but over-earning should be alleviated in PA later this year.
- We are reiterating our Neutral rating. Valuation has improved, in our view, but we remain patient.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## ADDITIONAL DISCUSSION—MULTIPLE ITEMS

In conjunction with releasing Q4/FY 2017 results, WTR hosted a relatively abbreviated analyst day event at the NYSE. The event keeps a bi-annual schedule for an elongated discussion intact, and fell at an opportune time, in our view, due to the recent TCJA passage. Although Aqua is in somewhat of a unique tax situation already due to heavy utilization of repair tax accounting, the company will still experience implications of the law that are more/less in line with utilities we have heard from thus far. A lower statutory rate will reduce revenue requirements across the regulated businesses, with benefit ultimately flowing back to ratepayers. Seemingly poised to effectively weather any cash flow implications of the tax plan, WTR related a suggestion that no new equity should be necessary over the 2018-2020 planning horizon, despite hiking both Cap Ex and M&A cash outlay expectations for the in-progress 2018

Following customer growth of about 1% in 2017, Aqua expects growth in the 2% to 3% range this year, heavily reliant on 6 pending M&A transactions, which in our view, can reasonably be expected to close. Despite a relatively full pipeline at this point, we still maintain that WTR's progress on this front has been somewhat disappointing over the past year or so, and believe a high profile 'win' could serve as a catalyst for the stock.

Aqua's prepared remarks alluded to the potential for M&A transactions outside of the core water utility business, which garnered considerable attention from analysts during the M&A portion of today's event. Management declined to comment on any specific target-type (i.e. electric utility), but pointed investors toward general strategic pillars that deals would leverage Aqua's core competencies, and/or be regulated businesses. Simply by our interpretation, we believe there are no imminent deals here.

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

| Aqua America, Inc. | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Income Statements (000's)** | **FY'15** | **FY'16** | Q1'17 | Q2'17 | Q3'17 | Q4'17 | **FY'17** | Q1'18E | Q2'18E | Q3'18E | Q4'18E | **FY'18E** | **FY'19E** |
| **Operating Revenues** | **$814,204** | **$819,875** | $187,787 | $203,418 | $215,008 | $203,312 | **$809,530** | $190,280 | $205,330 | $223,670 | $206,430 | **$825,710** | **$860,710** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **309,310** | **304,897** | 69,128 | 70,853 | 67,982 | 79,243 | **287,206** | 71,200 | 72,980 | 75,445 | 81,620 | **301,250** | **305,760** |
| Depreciation | **125,290** | **130,987** | 33,837 | 33,407 | 34,264 | 34,794 | **136,302** | 36,530 | 36,320 | 37,240 | 38,340 | **148,430** | **160,610** |
| Amortization | **3,447** | **2,021** | 189 | 127 | 42 | 64 | **422** | 190 | 130 | 40 | 60 | **420** | **420** |
| Taxes other than Income | **55,057** | **56,385** | 14,737 | 14,419 | 15,234 | 12,238 | **56,628** | 11,230 | 13,140 | 13,640 | 14,040 | **52,050** | **54,250** |
| Operating Income | **321,100** | **325,585** | 69,896 | 84,612 | 97,486 | 76,973 | **328,972** | 71,130 | 82,760 | 97,305 | 72,370 | **323,560** | **339,670** |
| % | **39.4%** | **39.7%** | 37.2% | 41.6% | 45.3% | 37.9% | **40.6%** | 37.4% | 40.3% | 43.5% | 35.1% | **39.2%** | **39.5%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **76,536** | **80,594** | 21,326 | 21,387 | 22,411 | 23,217 | **88,341** | 22,490 | 23,740 | 23,740 | 23,410 | **93,380** | **101,140** |
| AFUDC | **(6,219)** | **(8,815)** | (3,193) | (3,463) | (3,914) | (4,641) | **(15,211)** | (3,193) | (3,463) | (3,914) | (4,641) | **(15,210)** | **(15,210)** |
| (Gain) on Asset Sale | **(468)** | **(378)** | (269) | (10) | (43) | (162) | **(484)** | (100) | (100) | (100) | (110) | **(410)** | **(410)** |
| (Gain) on Debt Extinguish | **(678)** | | | | | | | | | | | | |
| Equity (Earnings) / Loss from JV | **35,177** | **(976)** | 30 | 161 | (593) | 71 | **(331)** | (50) | (50) | (50) | (50) | **(200)** | **(200)** |
| Income Before Tax | **216,752** | **255,160** | 52,002 | 66,537 | 79,625 | 58,488 | **256,657** | 51,983 | 62,633 | 77,629 | 53,761 | **246,000** | **254,350** |
| Income Tax | **14,962** | **20,978** | 2,930 | 5,569 | 3,400 | 5,015 | **16,914** | (2,230) | (1,640) | 770 | (3,050) | **(6,150)** | **(3,630)** |
| % | **6.9%** | **8.2%** | 5.6% | 8.4% | 4.3% | 8.6% | **6.6%** | -4.3% | -2.6% | 1.0% | -5.7% | **-2.5%** | **-1.4%** |
| Net Income--Cont'd Ops | **201,790** | **234,182** | 49,072 | 60,968 | 76,225 | 53,473 | **239,743** | 54,213 | 64,273 | 76,859 | 56,811 | **252,150** | **257,980** |
| Net Income Avail to Common | **$201,790** | **$234,182** | $49,072 | $60,968 | $76,225 | $53,473 | **$239,743** | $54,213 | $64,273 | $76,859 | $56,811 | **$252,160** | **$257,980** |
| EPS Disc Ops | | | | | | | | | | | | | |
| EPS Continuing Ops | **$1.14** | **$1.32** | $0.28 | $0.34 | $0.43 | $0.30 | **$1.35** | $0.30 | $0.36 | $0.43 | $0.32 | **$1.41** | **$1.45** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.26** | **$1.32** | $0.28 | $0.34 | $0.43 | $0.32 | **$1.36** | $0.30 | $0.36 | $0.43 | $0.32 | **$1.41** | **$1.45** |
| Diluted Avg Shares | **177,763** | **177,846** | 177,969 | 178,045 | 178,124 | 178,247 | **178,175** | 178,277 | 178,308 | 178,338 | 178,369 | **178,323** | **178,445** |
| Dividend | **$0.686** | **$0.739** | $0.1913 | $0.1913 | $0.2047 | $0.2047 | **$0.792** | *$0.2047* | *$0.2047* | *$0.2150* | *$0.2150* | ***$0.8394*** | ***$0.8800*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **4.4%** | **0.7%** | -2.5% | -0.2% | -5.1% | 3.3% | **-1.3%** | 1.3% | 0.9% | 4.0% | 1.5% | **2.0%** | **4.2%** |
| Op Income | **2.1%** | **1.4%** | -3.4% | 1.3% | -0.3% | 7.0% | **1.0%** | 1.8% | -2.2% | -0.2% | -6.0% | **-1.6%** | **5.0%** |
| EPS--Cont'd Ops; Ex-Items | **4.5%** | **4.8%** | -5.2% | 2.3% | 4.0% | 13.7% | **3.6%** | 10.3% | 5.3% | 0.7% | 0.4% | **3.7%** | **2.2%** |
| EBITDA | **2.0%** | **1.9%** | -1.0% | 2.2% | -0.2% | 5.5% | **1.5%** | 3.8% | 0.9% | 2.1% | -0.9% | **1.4%** | **6.0%** |
| O&M Expense | **7.2%** | **-1.4%** | -6.0% | -4.2% | -14.8% | 2.2% | **-5.8%** | 3.0% | 3.0% | 11.0% | 3.0% | **4.9%** | **1.5%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **38.0%** | **37.2%** | 36.8% | 34.8% | 31.6% | 39.0% | **35.5%** | 37.4% | 35.5% | 33.7% | 39.5% | **36.5%** | **35.5%** |
| Taxes other than Income | **6.8%** | **6.9%** | 7.8% | 7.1% | 7.1% | 6.0% | **7.0%** | 5.9% | 6.4% | 6.1% | 6.8% | **6.3%** | **6.3%** |
| Op Income | **39.4%** | **39.7%** | 37.2% | 41.6% | 45.3% | 37.9% | **40.6%** | 37.4% | 40.3% | 43.5% | 35.1% | **39.2%** | **39.5%** |
| Net Income | **24.8%** | **28.6%** | 26.1% | 30.0% | 35.5% | 26.3% | **29.6%** | 28.5% | 31.3% | 34.4% | 27.5% | **30.5%** | **30.0%** |
| Tax Rate | **6.9%** | **8.2%** | 5.6% | 8.4% | 4.3% | 8.6% | **6.6%** | -4.3% | -2.6% | 1.0% | -5.7% | **-2.5%** | **-1.4%** |
| | | ***FY 2016 EPS guide $1.30-$1.35** | | | | *Adj out $3.1MM tax chg from TCJA | ***FY 2017 EPS guide $1.34-$1.39** | | | | | ***FY 2018 EPS guide $1.37-$1.43** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'15 | FY'16 | Q1'17 | Q2'17 | Q3'17 | Q4'17p | FY'17p | Q1'18E | Q2'18E | Q3'18E | Q4'18E | FY'18E | FY'19E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$3,229** | **$3,763** | $4,425 | $7,811 | $4,139 | $8,000 | **$8,000** | $1,450 | $14,360 | $4,430 | $12,520 | **$12,520** | **$24,330** |
| A/R | **99,146** | **97,394** | 89,409 | 98,890 | 104,894 | 99,340 | **99,340** | 91,200 | 100,870 | 106,990 | 101,330 | **101,330** | **103,360** |
| Other | **25,995** | **27,493** | 28,629 | 31,390 | 29,309 | 23,906 | **23,906** | 29,200 | 32,020 | 29,900 | 24,380 | **24,380** | **24,870** |
| Total Current Assets | **128,370** | **128,650** | 122,463 | 138,091 | 138,342 | 131,246 | **131,246** | 121,850 | 147,250 | 141,320 | 138,230 | **138,230** | **152,560** |
| Net PP&E | **4,688,925** | **5,001,615** | 5,057,826 | 5,159,151 | 5,276,474 | 5,399,860 | **5,399,860** | 5,498,140 | 5,606,690 | 5,809,410 | 5,901,010 | **5,901,010** | **6,259,980** |
| Regulatory Assets | **830,118** | **948,647** | 974,853 | 1,003,808 | 1,044,787 | 731,353 | **731,353** | 733,350 | 733,350 | 733,350 | 733,350 | **733,350** | **733,350** |
| Goodwill | **33,866** | **42,208** | 42,266 | 42,266 | 42,230 | 42,230 | **42,230** | 42,330 | 42,330 | 42,330 | 42,330 | **42,330** | **42,330** |
| Other | **59,759** | **37,871** | 38,187 | 40,383 | 43,548 | 27,774 | **27,774** | 38,950 | 41,190 | 44,420 | 28,330 | **28,330** | **28,900** |
| **Total Assets** | **5,741,038** | **6,158,991** | 6,235,595 | 6,383,699 | 6,545,381 | 6,332,463 | **6,332,463** | 6,434,620 | 6,570,810 | 6,770,830 | 6,843,250 | **6,843,250** | **7,217,120** |
| CP of LTD | **35,593** | **150,671** | 119,296 | 143,567 | 84,704 | 29,424 | **29,424** | 154,051 | 154,051 | 154,051 | 94,797 | **94,797** | **94,797** |
| Loans Payable | **16,721** | **6,535** | 27,732 | 67,456 | 20,990 | 87,995 | **87,995** | 187,995 | 177,995 | 332,995 | 372,995 | **372,995** | **372,995** |
| A/P | **56,452** | **59,872** | 50,185 | 46,376 | 63,358 | 62,270 | **62,270** | 52,190 | 48,230 | 65,890 | 64,760 | **64,760** | **67,350** |
| Other | **84,433** | **84,458** | 80,387 | 75,148 | 83,898 | 104,799 | **104,799** | 81,990 | 76,650 | 85,580 | 106,890 | **106,890** | **109,030** |
| Total Current Liab | **193,199** | **301,536** | 277,600 | 332,547 | 252,950 | 284,488 | **284,488** | 476,226 | 456,926 | 638,516 | 639,442 | **639,442** | **644,172** |
| LTD | **1,743,612** | **1,737,605** | 1,797,511 | 1,822,581 | 1,952,473 | 2,007,753 | **2,007,753** | 1,883,126 | 2,008,126 | 2,008,126 | 2,067,380 | **2,067,380** | **2,317,380** |
| Shareholders' Equity | **1,725,930** | **1,850,068** | 1,867,227 | 1,896,530 | 1,938,265 | 1,957,621 | **1,957,621** | 2,023,470 | 2,057,550 | 2,057,340 | 2,089,090 | **2,089,090** | **2,244,320** |
| **Total Liab & SE** | **5,741,038** | **6,158,991** | 6,235,595 | 6,383,699 | 6,545,381 | 6,332,463 | **6,332,463** | 6,434,620 | 6,570,810 | 6,770,830 | 6,843,250 | **6,843,250** | **7,217,120** |

| Cash Flow Analysis | FY'15 | FY'16 | Q1'17 | Q2'17 | Q3'17 | Q4'17E | FY'17E | Q1'18E | Q2'18E | Q3'18E | Q4'18E | FY'18E | FY'19E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$201,790** | **$234,182** | $49,072 | $60,968 | $76,225 | $53,473 | **$239,743** | $54,213 | $64,273 | $76,859 | $56,811 | **$252,150** | **$257,980** |
| D&A | **128,737** | **133,008** | 34,026 | 33,534 | 34,306 | 34,858 | **136,724** | 36,720 | 36,450 | 37,280 | 38,400 | **148,850** | **161,030** |
| Deferred Income Tax | **16,506** | **17,250** | 2,681 | 3,618 | 3,475 | 3,000 | **12,770** | 3,000 | 3,000 | 3,000 | 3,000 | **12,000** | **12,000** |
| (Inc) / Dec in Working Cap | **15,806** | **3,699** | (6,909) | (21,290) | 21,809 | 30,770 | **24,380** | (30,043) | (25,360) | (4,780) | 37,180 | **(23,003)** | **3,630** |
| Operating CF | **362,839** | **388,139** | 78,870 | 76,830 | 135,815 | 122,101 | **413,617** | 63,890 | 78,363 | 112,359 | 135,391 | **389,997** | **434,640** |
| Cap ex | **(364,689)** | **(382,996)** | (94,562) | (113,910) | (129,259) | (140,000) | **(477,731)** | (120,000) | (130,000) | (130,000) | (120,000) | **(500,000)** | **(500,000)** |
| JV Investment | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | **(121,248)** | **(130,923)** | (33,945) | (33,975) | (36,366) | (36,487) | **(140,773)** | (36,493) | (36,500) | (38,343) | (38,349) | **(149,685)** | **(157,032)** |
| Release (Addition) of Const Funds | **47** | - | - | - | - | - | - | - | - | - | - | - | - |
| Free Cash Flow | **(123,051)** | **(125,780)** | (49,637) | (71,055) | (29,810) | (54,386) | **(204,887)** | (92,603) | (88,137) | (55,984) | (22,958) | **(259,688)** | **(222,392)** |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | **(28,989)** | **(9,423)** | (220) | (5,545) | (95) | (40) | **(5,900)** | (15,000) | (15,000) | (110,000) | (10,000) | **(150,000)** | **(20,000)** |
| Divestitures | **648** | **7,746** | 639 | 463 | 42 | - | - | - | - | - | - | - | - |
| Proceeds from LT Debt | **560,544** | **503,586** | 117,879 | 104,901 | 218,514 | 1,000 | **442,290** | - | 125,000 | - | 54,000 | **179,000** | **250,000** |
| Repayments of LT Debt | **(400,407)** | **(373,087)** | (89,666) | (55,833) | (147,771) | (1,000) | **(294,270)** | - | - | - | (54,000) | **(54,000)** | - |
| Net Proceeds (Repayments) ST Debt | **(1,677)** | **(10,186)** | 21,197 | 39,724 | (46,466) | 67,005 | **81,460** | 100,000 | (10,000) | 155,000 | 40,000 | **285,000** | **0** |
| Net Change in Cash Overdraft | **(739)** | **(8,076)** | (2,403) | (10,213) | 10,684 | - | **(1,930)** | - | - | - | - | - | - |
| Proceeds Stock/Option Issue | **8,217** | **5,648** | 1,896 | 1,145 | 4,500 | 2,000 | **9,541** | 4,500 | 4,500 | 4,500 | 4,500 | **18,000** | **18,000** |
| Repurchase of Common Stock | **(25,247)** | **(3,028)** | (2,053) | (40) | (23) | (3,451) | **(5,567)** | (3,451) | (3,451) | (3,451) | (3,451) | **(13,804)** | **(13,804)** |
| Net Cash Flow--Cont'd Ops | **(10,701)** | **(12,600)** | (2,368) | 3,547 | 9,575 | 11,128 | **20,737** | (6,554) | 12,912 | (9,935) | 8,091 | **4,508** | **11,804** |
| CF--Disc Ops | - | - | - | | | | - | | | | | - | - |
| Net Cash Flow | **(10,701)** | **(12,600)** | (2,368) | 3,547 | 9,575 | 11,128 | **20,737** | (6,554) | 12,912 | (9,935) | 8,091 | **4,508** | **11,804** |
| EBITDA | **449,837** | **458,593** | 103,922 | 118,146 | 131,792 | 111,831 | **465,696** | 107,850 | 119,210 | 134,585 | 110,770 | **472,410** | **500,700** |
| EBITDA margin | **55.2%** | **55.9%** | 55.3% | 58.1% | 61.3% | 55.0% | **57.5%** | 56.7% | 58.1% | 60.2% | 53.7% | **57.2%** | **58.2%** |
| EV / TTM EBITDA | **15.7x** | **15.8x** | 16.7x | 17.1x | 17.3x | 17.6x | **17.6x** | 17.4x | 17.6x | 17.6x | 17.6x | **17.6x** | **17.1x** |

| Selected Financial Statistics | FY'15 | FY'16 | Q1'17 | Q2'17 | Q3'17 | Q4'17E | FY'17E | Q1'18E | Q2'18E | Q3'18E | Q4'18E | FY'18E | FY'19E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Book Value | **$9.74** | **$10.40** | $10.49 | $10.65 | $10.88 | $10.98 | **$10.98** | $11.35 | $11.54 | $11.54 | $11.71 | **$11.71** | **$12.57** |
| Tangible BV | **$9.55** | **$10.16** | $10.25 | $10.41 | $10.64 | $10.75 | **$10.75** | $11.11 | $11.30 | $11.30 | $11.47 | **$11.47** | **$12.34** |
| Cap Ex/ Depreciation | **2.8x** | **2.9x** | 2.8x | 3.4x | 3.8x | 4.0x | **3.5x** | 3.3x | 3.6x | 3.5x | 3.1x | **3.4x** | **3.1x** |
| Price / Book | **3.1x** | **2.9x** | 3.1x | 3.1x | 3.1x | 3.1x | **3.1x** | 3.0x | 3.0x | 3.0x | 2.9x | **2.9x** | **2.7x** |
| Total Net Debt/ Total Capital | **50.9%** | **50.5%** | 51.0% | 51.6% | 51.4% | 52.0% | **52.0%** | 52.4% | 53.1% | 54.8% | 54.7% | **54.7%** | **55.2%** |
| LT Debt/Total Capital | **50.3%** | **48.4%** | 49.0% | 49.0% | 50.2% | 50.6% | **50.6%** | 48.2% | 49.4% | 49.4% | 49.7% | **49.7%** | **50.8%** |
| ROE (TTM)--*adj for Q4'15 JV chg* | **13.1%** | **13.1%** | 12.7% | 12.6% | 12.6% | 12.6% | **12.6%** | 12.6% | 12.6% | 12.4% | 12.4% | **12.4%** | **11.8%** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

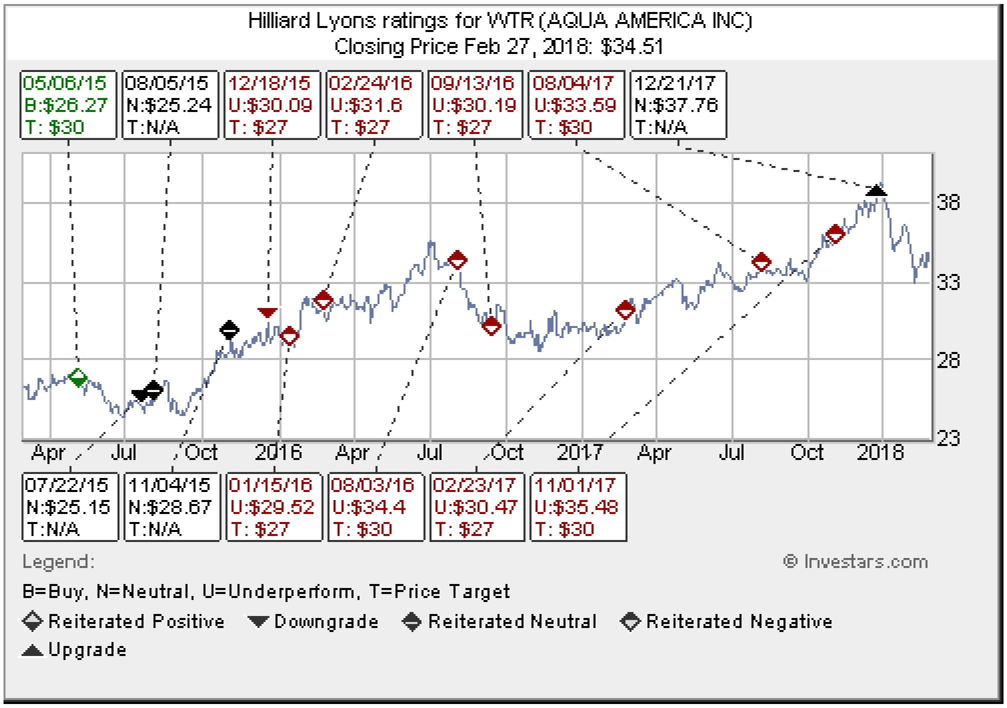
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 31 | 28% | 10% | 90% |
| **Hold/Neutral** | 74 | 66% | 9% | 91% |
| **Sell** | 7 | 6% | 0% | 100% |

*As of 7 February 2018*

## Other Disclosures

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HILLIARD LYONS

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December 21, 2017

COMPANY UPDATE / RATING CHANGE
ESTIMATE CHANGE / TARGET CHANGE

**Key Metrics**

| | | |
|---|---|---|
| WTR - NYSE - as of | 12/20/17 | $37.76 |
| Price Target | | -- |
| 52-Week Range | | $29.41 - $38.44 |
| Shares Outstanding (mm) | | 177.7 |
| Market Cap. ($mm) | | $6,709.6 |
| 1-Mo. Average Daily Volume | | 564,017 |
| Institutional Ownership | | 55.0% |
| LTD / Total Capital | Q3'17 | 50.2% |
| ROE--Adj | TTM | 12.6% |
| Book Value / Share | Q3'17 | $10.88 |
| Price / Book Value | | 3.5x |
| Dividend Yield | | 2.2% |
| LTM EBITDA Margin | | 57.1% |

**EPS (continuing ops) FY 12/31**

| | 2016A | Prior 2017E | Current 2017E | | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|---|
| 1Q | $0.29 | -- | $0.28 | A | -- | -- |
| 2Q | $0.33 | -- | $0.34 | A | -- | -- |
| 3Q | $0.41 | -- | $0.43 | A | -- | -- |
| 4Q | $0.28 | $0.31 | $0.30 | | -- | -- |
| Year | $1.32 | $1.35 | $1.35 | | $1.40 | $1.43 |
| P/E | 28.6x | | 28.0x | | | 26.4x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2016A | Prior 2017E | Current 2017E | | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|---|
| 1Q | $193 | -- | $188 | A | -- | -- |
| 2Q | $204 | -- | $203 | A | -- | -- |
| 3Q | $227 | -- | $215 | A | -- | -- |
| 4Q | $197 | $200 | $202 | | -- | -- |
| Year | $820 | $806 | $808 | | $841 | $855 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Neutral-2

## Waving the White Flag; Upgrading to Neutral.

### Investment Highlights

- We are upgrading our rating on shares of Aqua America to Neutral from Underperform; we are removing our prior price target of $30. Our suitability rating of '2' remains intact.
- Our rating change is substantially compelled by what we identify a more balanced set of positive/negative near term catalysts for the stock as we move toward the New Year, coupled with upside to our 2017-2019 financial estimates as we refine our expectations for the next couple of years.
- Earned-ROE compression at Aqua is still a concern for us relative to peers, but see this item as mostly understood by the market and further neutralized by the return of rate activity in Pennsylvania. Having implemented a DSIC surcharge for the in-progress Q4, Aqua PA is on pace to file a base rate case next year.
- We view the pace of M&A deals as somewhat disappointing over the course of our Underperform rating, but see risk here as having improved with progress on filling the pipeline. As of the most recently reported quarter (in early November), Aqua had 5 muni purchases pending, representing ~14k customers and purchase prices of ~$150MM.
- Aqua reiterated EPS guidance for 2017 in the range of $1.34 to $1.39 in early-November; we expect the range remains useful. Our 2017E EPS is unchanged at $1.35, but our 2018/2019 EPS estimates move +$0.03/+$0.04 as we refine our rate outlook for the out years and remove a small level of conservatism.
- Summarily, our Neutral rating reflects a positive view toward core operations and long-term fundamentals, offset somewhat by just average near-term growth prospects and what we view as 'full' valuation.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| **Income Statements (000's)** | **FY'14** | **FY'15** | Q1'16 | Q2'16 | Q3'16 | Q4'16 | **FY'16** | Q1'17 | Q2'17 | Q3'17 | Q4'17E | **FY'17E** | **FY'18E** | **FY'19E** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$779,903** | **$814,204** | $192,607 | $203,876 | $226,593 | $196,799 | **$819,875** | $187,787 | $203,418 | $215,008 | $201,890 | **$808,100** | **$855,280** | **$890,860** |
| **Operating Expenses** | | | | | | | | | | | | | | |
| O & M | **288,560** | **309,310** | 73,541 | 73,994 | 79,812 | 77,550 | **304,897** | 69,128 | 70,853 | 67,982 | 76,670 | **284,630** | **294,330** | **298,740** |
| Depreciation | **123,050** | **125,290** | 32,145 | 31,619 | 33,881 | 33,342 | **130,987** | 33,837 | 33,407 | 34,264 | 34,820 | **136,330** | **146,220** | **153,370** |
| Amortization | **3,480** | **3,447** | 450 | 528 | 389 | 654 | **2,021** | 189 | 127 | 42 | 660 | **1,020** | **1,020** | **1,020** |
| Taxes other than Income | **50,450** | **55,057** | 14,140 | 14,242 | 14,712 | 13,291 | **56,385** | 14,737 | 14,419 | 15,234 | 13,730 | **58,120** | **53,900** | **56,140** |
| Operating Income | **314,363** | **321,100** | 72,331 | 83,493 | 97,799 | 71,962 | **325,585** | 69,896 | 84,612 | 97,486 | 76,010 | **328,000** | **359,810** | **381,590** |
| % | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 37.2% | 41.6% | 45.3% | 37.6% | **40.6%** | **42.1%** | **42.8%** |
| Other Expense / (Income): | | | | | | | | | | | | | | |
| Interest, net | **76,400** | **76,536** | 19,853 | 20,115 | 20,168 | 20,458 | **80,594** | 21,326 | 21,387 | 22,411 | 21,590 | **86,710** | **89,780** | **90,040** |
| AFUDC | **(5,130)** | **(6,219)** | (2,308) | (1,871) | (2,267) | (2,369) | **(8,815)** | (3,193) | (3,463) | (3,914) | (3,500) | **(14,070)** | **(14,070)** | **(14,070)** |
| (Gain) on Asset Sale | **0** | **(468)** | (207) | (121) | (62) | 12 | **(378)** | (269) | (10) | (43) | (110) | **(430)** | **(410)** | **(410)** |
| (Gain) on Debt Extinguish | **0** | **(678)** | | | | | | | | | | | | |
| Equity (Earnings) / Loss from JV | **3,990** | **35,177** | 249 | 229 | (1,621) | 167 | **(976)** | 30 | 161 | (593) | 200 | **(200)** | **(200)** | **(200)** |
| Income Before Tax | **239,103** | **216,752** | 54,744 | 65,141 | 81,581 | 53,694 | **255,160** | 52,002 | 66,537 | 79,625 | 57,830 | **255,990** | **284,710** | **306,230** |
| Income Tax | **25,219** | **14,962** | 3,007 | 5,515 | 8,411 | 4,045 | **20,978** | 2,930 | 5,569 | 3,400 | 3,660 | **15,560** | **30,330** | **38,680** |
| % | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 5.6% | 8.4% | 4.3% | 6.3% | **6.1%** | **10.7%** | **12.6%** |
| Net Income--Cont'd Ops | **213,884** | **201,790** | 51,737 | 59,626 | 73,170 | 49,649 | **234,182** | 49,072 | 60,968 | 76,225 | 54,170 | **240,430** | **254,380** | **267,550** |
| Net Income Avail to Common | **$233,239** | **$201,790** | $51,737 | $59,626 | $73,170 | $49,649 | **$234,182** | $49,072 | $60,968 | $76,225 | $54,170 | **$240,440** | **$254,390** | **$267,550** |
| EPS Disc Ops | **$0.11** | | | | | | | | | | | | | |
| EPS Continuing Ops | **$1.20** | **$1.14** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.28 | $0.34 | $0.43 | $0.30 | **$1.35** | **$1.43** | **$1.50** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.20** | **$1.26** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.28 | $0.34 | $0.43 | $0.30 | **$1.35** | **$1.43** | **$1.50** |
| Diluted Avg Shares | **177,763** | **177,763** | 177,819 | 178,084 | 177,817 | 177,880 | **177,846** | 177,969 | 178,045 | 178,124 | 178,143 | **178,070** | **178,191** | **177,970** |
| Dividend | **$0.634** | **$0.686** | $0.178 | $0.178 | $0.1913 | $0.1913 | **$0.739** | $0.1913 | $0.1913 | $0.2047 | $0.2047 | ***$0.7920*** | ***$0.8394*** | ***$0.8800*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | | |
| Revenues | **2.4%** | **4.4%** | 1.2% | -0.9% | 2.5% | -0.1% | **0.7%** | -2.5% | -0.2% | -5.1% | 2.6% | **-1.4%** | **5.8%** | **4.2%** |
| Op Income | **4.2%** | **2.1%** | 1.6% | 4.0% | 2.9% | -3.6% | **1.4%** | -3.4% | 1.3% | -0.3% | 5.6% | **0.7%** | **9.7%** | **6.1%** |
| EPS--Cont'd Ops; Ex-Items | **4.8%** | **4.5%** | 6.6% | 3.8% | 8.3% | -0.7% | **4.8%** | -5.2% | 2.3% | 4.0% | 8.9% | **2.6%** | **5.7%** | **5.3%** |
| EBITDA | **3.6%** | **2.0%** | 2.4% | 3.0% | 3.3% | -1.2% | **1.9%** | -1.0% | 2.2% | -0.2% | 5.2% | **1.5%** | **9.0%** | **5.7%** |
| O&M Expense | **1.8%** | **7.2%** | 0.5% | -7.2% | 1.6% | -0.4% | **-1.4%** | -6.0% | -4.2% | -14.8% | -1.1% | **-6.6%** | **3.4%** | **1.5%** |
| **Margin Analysis:** | | | | | | | | | | | | | | |
| O&M | **37.0%** | **38.0%** | 38.2% | 36.3% | 35.2% | 39.4% | **37.2%** | 36.8% | 34.8% | 31.6% | 38.0% | **35.2%** | **34.4%** | **33.5%** |
| Taxes other than Income | **6.5%** | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | 7.8% | 7.1% | 7.1% | 6.8% | **7.2%** | **6.3%** | **6.3%** |
| Op Income | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 37.2% | 41.6% | 45.3% | 37.6% | **40.6%** | **42.1%** | **42.8%** |
| Net Income | **27.4%** | **24.8%** | 26.9% | 29.2% | 32.3% | 25.2% | **28.6%** | 26.1% | 30.0% | 35.5% | 26.8% | **29.8%** | **29.7%** | **30.0%** |
| Tax Rate | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 5.6% | 8.4% | 4.3% | 6.3% | **6.1%** | **10.7%** | **12.6%** |
| | | | | | | | ***FY 2016 EPS guide $1.30-$1.35** | | | | | ***FY 2017 EPS guide $1.34-$1.39** | | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17 | Q2'17 | Q3'17 | Q4'17E | FY'17E | FY'18E | FY'19E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | $4,138 | $3,229 | $3,981 | $4,923 | $3,712 | $3,763 | $3,763 | $4,425 | $7,811 | $4,139 | $6,030 | $6,030 | $3,860 | $17,710 |
| A/R | 96,999 | 99,146 | 91,761 | 99,718 | 109,986 | 97,394 | 97,394 | 89,409 | 98,890 | 104,894 | 99,340 | 99,340 | 101,330 | 103,360 |
| Other | 51,385 | 25,995 | 26,991 | 27,791 | 27,703 | 27,493 | 27,493 | 28,629 | 31,390 | 29,309 | 28,040 | 28,040 | 28,600 | 29,170 |
| Total Current Assets | 152,522 | 128,370 | 122,733 | 132,432 | 141,401 | 128,650 | 128,650 | 122,463 | 138,091 | 138,342 | 133,410 | 133,410 | 133,790 | 150,240 |
| Net PP&E | 4,401,990 | 4,688,925 | 4,752,881 | 4,823,487 | 4,901,486 | 5,001,615 | 5,001,615 | 5,057,826 | 5,159,151 | 5,276,474 | 5,395,990 | 5,395,990 | 5,663,750 | 5,924,360 |
| Regulatory Assets | 725,591 | 830,118 | 859,830 | 887,135 | 911,455 | 948,647 | 948,647 | 974,853 | 1,003,808 | 1,044,787 | 1,044,790 | 1,044,790 | 1,046,790 | 1,046,790 |
| Goodwill | 31,184 | 33,866 | 42,304 | 42,234 | 41,921 | 42,208 | 42,208 | 42,266 | 42,266 | 42,230 | 42,230 | 42,230 | 42,330 | 42,330 |
| Other | 95,465 | 59,759 | 37,695 | 37,551 | 39,762 | 37,871 | 37,871 | 38,187 | 40,383 | 43,548 | 38,630 | 38,630 | 39,400 | 40,190 |
| **Total Assets** | 5,406,752 | 5,741,038 | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | 6,158,991 | 6,235,595 | 6,383,699 | 6,545,381 | 6,655,050 | 6,655,050 | 6,926,060 | 7,203,910 |
| CP of LTD | 58,615 | 35,593 | 29,096 | 38,212 | 83,777 | 150,671 | 150,671 | 119,296 | 143,567 | 84,704 | 154,051 | 154,051 | 94,797 | 1,200,812 |
| Loans Payable | 18,398 | 16,721 | 28,041 | 26,239 | 47,990 | 6,535 | 6,535 | 27,732 | 67,456 | 20,990 | 105,990 | 105,990 | 99,090 | 234,090 |
| A/P | 63,035 | 56,452 | 33,971 | 40,651 | 44,073 | 59,872 | 59,872 | 50,185 | 46,376 | 63,358 | 62,270 | 62,270 | 64,760 | 67,350 |
| Other | 85,287 | 84,433 | 83,235 | 74,118 | 76,158 | 84,458 | 84,458 | 80,387 | 75,148 | 83,898 | 86,150 | 86,150 | 87,870 | 89,630 |
| Total Current Liab | 225,335 | 193,199 | 174,343 | 179,220 | 251,998 | 301,536 | 301,536 | 277,600 | 332,547 | 252,950 | 408,461 | 408,461 | 346,517 | 1,591,882 |
| LTD | 1,560,655 | 1,743,612 | 1,744,108 | 1,775,874 | 1,726,493 | 1,737,605 | 1,737,605 | 1,797,511 | 1,822,581 | 1,952,473 | 1,780,034 | 1,780,034 | 1,964,288 | 858,273 |
| Shareholders' Equity | 1,655,383 | 1,725,930 | 1,760,707 | 1,791,163 | 1,832,200 | 1,850,068 | 1,850,068 | 1,867,227 | 1,896,530 | 1,938,265 | 2,227,730 | 2,227,730 | 2,398,090 | 2,559,080 |
| **Total Liab & SE** | 5,406,752 | 5,741,038 | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | 6,158,991 | 6,235,595 | 6,383,699 | 6,545,381 | 6,655,050 | 6,655,050 | 6,926,060 | 7,203,910 |
| **Cash Flow Analysis** | **FY'14** | **FY'15** | Q1'16 | Q2'16 | Q3'16 | Q4'16 | **FY'16** | Q1'17 | Q2'17 | Q3'17 | Q4'17E | **FY'17E** | **FY'18E** | **FY'19E** |
| Net Income--Cont'd Ops | $213,884 | $201,790 | $51,737 | $59,626 | $73,170 | $49,649 | $234,182 | $49,072 | $60,968 | $76,225 | $54,170 | $240,430 | $254,380 | $267,550 |
| D&A | 126,535 | 128,737 | 32,595 | 32,147 | 31,377 | 36,889 | 133,008 | 34,026 | 33,534 | 34,306 | 35,480 | 137,346 | 147,240 | 154,390 |
| Deferred Income Tax | 31,477 | 16,506 | 1,436 | 3,615 | 10,294 | 1,905 | 17,250 | 2,681 | 3,618 | 3,475 | 10,000 | 19,770 | 40,000 | 40,000 |
| (Inc) / Dec in Working Cap | (25,333) | 15,806 | (17,290) | (11,194) | (4,718) | 36,901 | 3,699 | (6,909) | (21,290) | 21,809 | 7,987 | 1,597 | (220) | 3,630 |
| Operating CF | 346,563 | 362,839 | 68,478 | 84,194 | 110,123 | 125,344 | 388,139 | 78,870 | 76,830 | 135,815 | 107,637 | 399,143 | 441,400 | 465,570 |
| Cap ex | (328,605) | (364,689) | (72,984) | (95,603) | (101,432) | (112,977) | (382,996) | (94,562) | (113,910) | (129,259) | (130,000) | (467,731) | (395,000) | (400,000) |
| JV Investment | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | (112,106) | (121,248) | (31,513) | (31,558) | (33,923) | (33,929) | (130,923) | (33,945) | (33,975) | (36,366) | (36,466) | (140,752) | (149,574) | (156,611) |
| Release (Addition) of Const Funds | - | 47 | - | - | - | - | - | - | - | - | - | - | - | - |
| Free Cash Flow | (94,148) | (123,051) | (36,019) | (42,967) | (25,232) | (21,562) | (125,780) | (49,637) | (71,055) | (29,810) | (58,829) | (209,340) | (103,174) | (91,041) |
| FCF/Share | | | | | | | | | | | | | | |
| Acquisitions | (14,616) | (28,989) | (4,461) | (1,165) | - | (3,797) | (9,423) | (220) | (5,545) | (95) | (25,000) | (30,860) | (20,000) | (15,000) |
| Divestitures | 558 | 648 | 2,853 | 3,586 | 106 | 1,201 | 7,746 | 639 | 463 | 42 | - | - | - | - |
| Proceeds from LT Debt | 317,699 | 560,544 | 96,314 | 72,983 | 64,991 | 269,298 | 503,586 | 117,879 | 104,901 | 218,514 | 105,000 | 546,290 | 179,000 | 0 |
| Repayments of LT Debt | (253,192) | (400,407) | (80,341) | (32,309) | (68,709) | (191,728) | (373,087) | (89,666) | (55,833) | (147,771) | (105,000) | (398,270) | (54,000) | 0 |
| Net Proceeds (Repayments) ST Debt | (18,342) | (1,677) | 11,320 | (1,802) | 21,751 | (41,455) | (10,186) | 21,197 | 39,724 | (46,466) | 85,000 | 99,460 | (6,900) | 135,000 |
| Net Change in Cash Overdraft | (322) | (739) | (17,250) | 1,912 | 2,752 | 4,510 | (8,076) | (2,403) | (10,213) | 10,684 | - | (1,930) | - | - |
| Repurchase of Common Stock | (15,756) | (25,247) | (2,827) | (32) | (46) | (123) | (3,028) | (2,053) | (40) | (23) | (3,776) | (5,892) | (15,104) | (15,104) |
| Net Cash Flow--Cont'd Ops | (70,823) | (10,701) | (27,263) | 1,297 | (613) | 13,979 | (12,600) | (2,368) | 3,547 | 9,575 | 1,895 | 11,499 | (2,178) | 13,855 |
| CF--Disc Ops | 48,634 | - | - | - | | - | - | - | | | | - | - | - |
| Net Cash Flow | (22,189) | (10,701) | (27,263) | 1,297 | (613) | 13,979 | (12,600) | (2,368) | 3,547 | 9,575 | 1,895 | 11,499 | (2,178) | 13,855 |
| EBITDA | 440,893 | 449,837 | 104,926 | 115,640 | 132,069 | 105,958 | 458,593 | 103,922 | 118,146 | 131,792 | 111,490 | 465,350 | 507,050 | 535,980 |
| EBITDA margin | 56.5% | 55.2% | 54.5% | 56.7% | 58.3% | 53.8% | 55.9% | 55.3% | 58.1% | 61.3% | 55.2% | 57.6% | 59.3% | 60.2% |
| EV / TTM EBITDA | 14.4x | 15.7x | 16.4x | 17.9x | 15.7x | 15.8x | 15.8x | 16.7x | 17.1x | 17.3x | 18.6x | 18.6x | 17.3x | 16.3x |
| **Selected Financial Statistics** | **FY'14** | **FY'15** | Q1'16 | Q2'16 | Q3'16 | Q4'16 | **FY'16** | Q1'17 | Q2'17 | Q3'17 | Q4'17E | **FY'17E** | **FY'18E** | **FY'19E** |
| Book Value | $9.32 | $9.74 | $9.90 | $10.06 | $10.30 | $10.40 | $10.40 | $10.49 | $10.65 | $10.88 | $12.51 | $12.51 | $13.46 | $14.39 |
| Tangible BV | $9.14 | $9.55 | $9.66 | $9.82 | $10.07 | $10.16 | $10.16 | $10.25 | $10.41 | $10.64 | $12.27 | $12.27 | $13.22 | $14.15 |
| Cap Ex / Depreciation | 2.6x | 2.8x | 2.2x | 3.0x | 3.2x | 3.1x | 2.9x | 2.8x | 3.4x | 3.8x | 3.7x | 3.4x | 2.7x | 2.6x |
| Price / Book | 2.9x | 3.1x | 3.2x | 3.5x | 3.0x | 2.9x | 2.9x | 3.1x | 3.1x | 3.1x | 3.0x | 3.0x | 2.8x | 2.6x |
| Total Net Debt/ Total Capital | 49.7% | 50.9% | 50.5% | 50.6% | 50.3% | 50.5% | 50.5% | 51.0% | 51.6% | 51.4% | 47.7% | 47.7% | 47.3% | 47.1% |
| LT Debt/Total Capital | 48.5% | 50.3% | 49.8% | 49.8% | 48.5% | 48.4% | 48.4% | 49.0% | 49.0% | 50.2% | 44.4% | 44.4% | 45.0% | 25.1% |
| ROE (TTM)--*adj for Q4'15 JV chg* | 13.5% | 13.1% | 13.2% | 13.1% | 13.3% | 13.1% | 13.1% | 12.7% | 12.6% | 12.6% | 12.3% | 12.3% | 11.3% | 11.1% |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

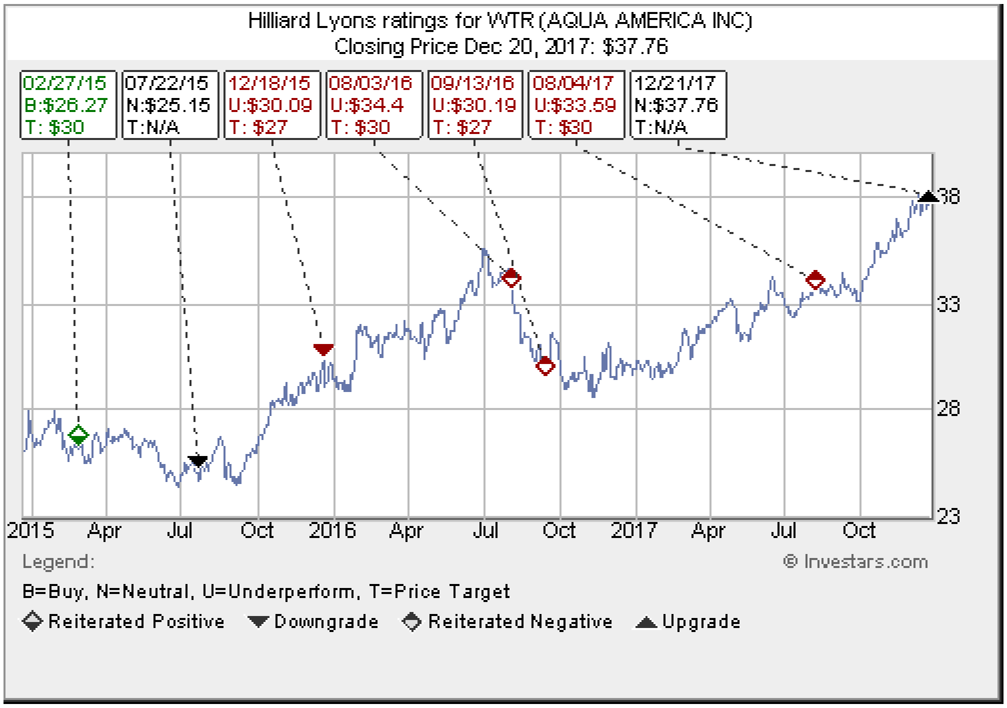
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 31 | 28% | 13% | 87% |
| **Hold/Neutral** | 74 | 66% | 9% | 91% |
| **Sell** | 7 | 6% | 0% | 100% |

*As of 6 December 2017*

## Other Disclosures

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**Water Utilities**
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January 10, 2017

COMPANY UPDATE / ESTIMATE CHANGE

**Key Metrics**

| | | |
|---|---|---|
| WTR - NYSE - as of | 1/9/17 | $29.97 |
| Price Target | | $27.00 |
| 52-Week Range | | $28.03 - $35.83 |
| Shares Outstanding (mm) | | 177.4 |
| Market Cap. ($mm) | | $5,315.4 |
| 1-Mo. Average Daily Volume | | 696,663 |
| Institutional Ownership | | 51.4% |
| LTD / Total Capital | Q3'16 | 48.5% |
| ROE--Adj | TTM | 13.3% |
| Book Value / Share | Q3'16 | $10.30 |
| Price / Book Value | | 2.9x |
| Dividend Yield | | 2.6% |
| LTM EBITDA Margin | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | -- | $0.41 | A | -- | -- |
| 4Q | *$0.28 | $0.30 | $0.30 | | -- | -- |
| Year | $1.26 | $1.33 | $1.34 | | $1.36 | $1.37 |
| P/E | 23.8x | | 22.4x | | | 21.9x |

*Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | -- | $227 | A | -- | -- |
| 4Q | $197 | $199 | $200 | | -- | -- |
| Year | $814 | $822 | $823 | | $849 | $851 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**Initiating 2018 Estimates Ahead of 2017 Guidance Call; Reiterating Underperform Rating.**

**Investment Highlights**

- Aqua is expected to initiate 2017 guidance before the market opens on Tuesday, January 17; a conference call to discuss expectations is scheduled for 10a ET.
- Our 2016/2017 EPS estimates both rise a penny to $1.34/$1.37; current consensus calls for 2016/2017 EPS of $1.32/$1.39.
- Relative to Aqua's winter event at the NYSE in January 2016, we expect a relatively abbreviated presentation next week. We do not expect the company to unveil a long-term EPS growth target, but believe management may discuss the Cap Ex outlook past 2017. Our base case for 2017 EPS guidance is the range of $1.35 to $1.40.
- We hope to receive an update on the M&A pipeline, particularly the outlook for larger and/or municipal deals that were a source of optimism across 2H'15. We believe a lack of deal flow contributed to WTR's flattish stock performance in 2016.
- Separately, we are initiating 2018E EPS of $1.41 on revenue of $874.4MM. We expect revenue growth in the out-year to be mostly driven by rate activity outside of core-Pennsylvania, and model O&M expense growth to approximate 1.5%-2%. We expect WTR's effective tax rate to rise to ~12%.
- We are reiterating our Underperform rating and 1-year $27 price target. At our target, WTR would trade ~20x our 2017E EPS, which we view as fair value given stagnation of the M&A narrative and our view that ROE-compression will continue to hamper earnings growth over the next few years.
- At this point, our Underperform rating continues to flow in agreement with our Underweight allocation recommendation for the water utility industry.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| Income Statements (000's) | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$761,893** | **$779,903** | $190,326 | $205,760 | $221,051 | $197,067 | **$814,204** | $192,607 | $203,876 | $226,593 | $199,980 | **$823,060** | **$851,060** | **$874,420** |
| **Operating Expenses** | | | | | | | | | | | | | | |
| O & M | **283,561** | **288,560** | 73,189 | 79,746 | 78,519 | 77,856 | **309,310** | 73,541 | 73,994 | 79,812 | 76,800 | **304,150** | **309,800** | **315,570** |
| Depreciation | **118,414** | **123,050** | 30,500 | 31,049 | 31,981 | 31,760 | **125,290** | 32,145 | 31,619 | 33,881 | 33,800 | **131,450** | **138,640** | **144,910** |
| Amortization | **5,571** | **3,480** | 849 | 924 | 816 | 858 | **3,447** | 450 | 528 | 389 | 1,060 | **2,430** | **2,530** | **2,530** |
| Taxes other than Income | **52,685** | **50,450** | 14,621 | 13,795 | 14,663 | 11,978 | **55,057** | 14,140 | 14,242 | 14,712 | 13,600 | **56,690** | **53,600** | **55,060** |
| Operating Income | **301,662** | **314,363** | 71,167 | 80,246 | 95,072 | 74,615 | **321,100** | 72,331 | 83,493 | 97,799 | 74,720 | **328,340** | **346,490** | **356,350** |
| % | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.2% | 37.4% | **39.9%** | **40.7%** | **40.8%** |
| Other Expense / (Income): | | | | | | | | | | | | | | |
| Interest, net | **77,316** | **76,400** | 18,665 | 18,900 | 19,239 | 19,732 | **76,536** | 19,853 | 20,115 | 20,168 | 19,430 | **79,570** | **78,150** | **78,080** |
| AFUDC | **(2,275)** | **(5,130)** | (1,182) | (1,040) | (1,708) | (2,289) | **(6,219)** | (2,308) | (1,871) | (2,267) | (700) | **(7,150)** | **(4,200)** | **(4,200)** |
| (Gain) on Asset Sale | **(148)** | **0** | (169) | (1) | (170) | (130) | **(468)** | (207) | (121) | (62) | (110) | **(500)** | **(410)** | **(410)** |
| (Gain) on Debt Extinguish | | **0** | | | | (678) | **(678)** | | | | | | | |
| Equity (Earnings) / Loss from JV | **2,665** | **3,990** | 714 | 84 | 698 | 33,681 | **35,177** | 249 | 229 | (1,621) | 300 | **(840)** | **700** | **(200)** |
| Income Before Tax | **224,104** | **239,103** | 53,139 | 62,303 | 77,013 | 24,299 | **216,752** | 54,744 | 65,141 | 81,581 | 55,800 | **257,260** | **272,250** | **283,080** |
| Income Tax | **21,233** | **25,219** | 4,594 | 4,919 | 9,584 | (4,135) | **14,962** | 3,007 | 5,515 | 8,411 | 2,300 | **19,230** | **29,240** | **33,460** |
| % | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 10.3% | 4.1% | **7.5%** | **10.7%** | **11.8%** |
| Net Income--Cont'd Ops | **202,871** | **213,884** | 48,545 | 57,384 | 67,429 | 28,434 | **201,790** | 51,737 | 59,626 | 73,170 | 53,500 | **238,030** | **243,010** | **249,620** |
| Net Income Avail to Common | **$215,347** | **$233,239** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $73,170 | $53,500 | **$238,030** | **$243,010** | **$249,620** |
| EPS Disc Ops | **$0.10** | **$0.11** | - | - | - | - | | | | | | | | |
| EPS Continuing Ops | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.16 | **$1.14** | $0.29 | $0.33 | $0.41 | $0.30 | **$1.34** | **$1.37** | **$1.41** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.28 | **$1.26** | $0.29 | $0.33 | $0.41 | $0.30 | **$1.34** | **$1.37** | **$1.41** |
| Diluted Avg Shares | **176,814** | **177,763** | 177,792 | 177,913 | 177,495 | 177,261 | **177,763** | 177,819 | 178,084 | 177,817 | 177,717 | **177,859** | **177,468** | **177,068** |
| Dividend | **$0.584** | **$0.634** | $0.165 | $0.165 | $0.178 | $0.178 | **$0.686** | $0.178 | $0.178 | $0.1913 | *$0.1913* | ***$0.7386*** | ***$0.7826*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | | |
| Revenues | **1.5%** | **2.4%** | 4.2% | 5.4% | 5.0% | 3.0% | **4.4%** | 1.2% | -0.9% | 2.5% | 1.5% | **1.1%** | **3.4%** | **2.7%** |
| Op Income | **-5.0%** | **4.2%** | 6.6% | 0.4% | 0.0% | 2.8% | **2.1%** | 1.6% | 4.0% | 2.9% | 0.1% | **2.3%** | **5.5%** | **2.8%** |
| EPS--Cont'd Ops; Ex-Items | **10.4%** | **4.8%** | 14.5% | 4.7% | -0.2% | 2.0% | **4.5%** | 6.6% | 3.8% | 8.3% | 7.1% | **6.5%** | **2.3%** | **3.0%** |
| EBITDA | **-1.9%** | **3.6%** | 3.7% | 0.3% | 2.0% | 2.4% | **2.0%** | 2.4% | 3.0% | 3.3% | 2.2% | **2.8%** | **5.5%** | **3.3%** |
| O&M Expense | **5.0%** | **1.8%** | 2.1% | 13.3% | 8.5% | 5.0% | **7.2%** | 0.5% | -7.2% | 1.6% | -1.4% | **-1.7%** | **1.9%** | **1.9%** |
| **Margin Analysis:** | | | | | | | | | | | | | | |
| O&M | **37.2%** | **37.0%** | 38.5% | 38.8% | 35.5% | 39.5% | **38.0%** | 38.2% | 36.3% | 35.2% | 38.4% | **37.0%** | **36.4%** | **36.1%** |
| Taxes other than Income | **6.9%** | **6.5%** | 7.7% | 6.7% | 6.6% | 6.1% | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | **6.3%** | **6.3%** |
| Op Income | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.2% | 37.4% | **39.9%** | **40.7%** | **40.8%** |
| Net Income | **26.6%** | **27.4%** | 25.5% | 27.9% | 30.5% | 14.4% | **24.8%** | 26.9% | 29.2% | 32.3% | 26.8% | **28.9%** | **28.6%** | **28.5%** |
| Tax Rate | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 10.3% | 4.1% | **7.5%** | **10.7%** | **11.8%** |
| | | | | | | *$21.4MM after tax Marcellus pipe JV impariment | | | | | | ***FY 2016 EPS guide $1.30-$1.35** | | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$5,058** | **$4,138** | $9,274 | $4,615 | $4,071 | $3,229 | **$3,229** | $3,981 | $4,923 | $3,712 | $3,070 | **$3,070** | **$2,800** | **$5,310** |
| A/R | **95,356** | **96,999** | 95,405 | 109,478 | 111,076 | 99,146 | **99,146** | 91,761 | 99,718 | 109,986 | 101,130 | **101,130** | **103,150** | **105,210** |
| Other | **71,255** | **51,385** | 59,546 | 61,267 | 53,160 | 25,995 | **25,995** | 26,991 | 27,791 | 27,703 | 26,510 | **26,510** | **27,040** | **27,580** |
| Total Current Assets | **171,669** | **152,522** | 164,225 | 175,360 | 168,307 | 128,370 | **128,370** | 122,733 | 132,432 | 141,401 | 130,710 | **130,710** | **132,990** | **138,100** |
| Net PP&E | **4,167,293** | **4,401,990** | 4,433,144 | 4,522,287 | 4,605,512 | 4,688,925 | **4,688,925** | 4,752,881 | 4,823,487 | 4,901,486 | 4,958,630 | **4,958,630** | **5,187,460** | **5,414,020** |
| Regulatory Assets | **585,600** | **725,591** | 748,911 | 771,561 | 799,858 | 830,118 | **830,118** | 859,830 | 887,135 | 911,455 | 911,460 | **911,460** | **913,460** | **915,460** |
| Goodwill | **28,223** | **31,184** | 33,954 | 33,942 | 33,907 | 33,866 | **33,866** | 42,304 | 42,234 | 41,921 | 41,920 | **41,920** | **42,020** | **42,120** |
| Other | **99,032** | **95,465** | 97,498 | 97,128 | 93,761 | 59,759 | **59,759** | 37,695 | 37,551 | 39,762 | 60,950 | **60,950** | **62,170** | **63,410** |
| **Total Assets** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,103,670 | **6,103,670** | **6,338,100** | **6,573,110** |
| CP of LTD | **86,288** | **58,615** | 47,042 | 38,503 | 47,599 | 35,593 | **35,593** | 29,096 | 38,212 | 83,777 | 175,092 | **175,092** | **54,051** | **94,797** |
| Loans Payable | **36,740** | **18,398** | 33,062 | 36,306 | 28,030 | 16,721 | **16,721** | 28,041 | 26,239 | 47,990 | 57,990 | **57,990** | **152,990** | **242,990** |
| A/P | **65,816** | **63,035** | 34,717 | 47,510 | 45,077 | 56,452 | **56,452** | 33,971 | 40,651 | 44,073 | 58,710 | **58,710** | **61,060** | **63,500** |
| Other | **78,066** | **85,287** | 90,298 | 81,076 | 95,316 | 84,433 | **84,433** | 83,235 | 74,118 | 76,158 | 86,120 | **86,120** | **87,840** | **89,600** |
| Total Current Liab | **266,910** | **225,335** | 205,119 | 203,395 | 216,022 | 193,199 | **193,199** | 174,343 | 179,220 | 251,998 | 377,912 | **377,912** | **355,941** | **490,887** |
| LTD | **1,468,583** | **1,560,655** | 1,594,980 | 1,660,526 | 1,681,114 | 1,743,612 | **1,743,612** | 1,744,108 | 1,775,874 | 1,726,493 | 1,664,258 | **1,664,258** | **1,735,299** | **1,589,553** |
| Shareholders' Equity | **1,535,043** | **1,655,383** | 1,676,294 | 1,702,927 | 1,728,681 | 1,725,930 | **1,725,930** | 1,760,707 | 1,791,163 | 1,832,200 | 1,920,470 | **1,920,470** | **2,127,710** | **2,396,240** |
| **Total Liab & SE** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,103,670 | **6,103,670** | **6,338,100** | **6,573,110** |

| Cash Flow Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$202,871** | **$213,884** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $73,170 | $53,500 | **$238,030** | **$243,010** | **$249,620** |
| D&A | **124,793** | **126,535** | 31,349 | 31,973 | 32,797 | 32,618 | **128,737** | 32,595 | 32,147 | 31,377 | 34,860 | **130,979** | **141,170** | **147,440** |
| Deferred Income Tax | **26,742** | **31,477** | 2,688 | 2,704 | 8,463 | 2,651 | **16,506** | 1,436 | 3,615 | 10,294 | 10,000 | **25,350** | **40,000** | **40,000** |
| (Inc) / Dec in Working Cap | **83,901** | **(25,333)** | (29,874) | (12,223) | 18,316 | 39,587 | **15,806** | (17,290) | (11,194) | (4,718) | 19,988 | **(13,214)** | **1,410** | **0** |
| Operating CF | **438,307** | **346,563** | 52,708 | 79,838 | 127,005 | 103,290 | **362,839** | 68,478 | 84,194 | 110,123 | 118,348 | **381,145** | **425,590** | **437,060** |
| Cap ex | **(308,171)** | **(328,605)** | (70,284) | (80,000) | (107,194) | (107,211) | **(364,689)** | (72,984) | (95,603) | (101,432) | (90,000) | **(360,019)** | **(350,000)** | **(354,000)** |
| JV Investment | **(14,700)** | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | **(102,889)** | **(112,106)** | (29,176) | (29,220) | (31,446) | (31,406) | **(121,248)** | (31,513) | (31,558) | (33,923) | (33,997) | **(130,991)** | **(138,884)** | **(138,572)** |
| Release (Addition) of Const Funds | **23,525** | - | 32 | - | 15 | - | **47** | - | - | - | - | - | - | - |
| Free Cash Flow | **36,072** | **(94,148)** | (46,720) | (29,382) | (11,620) | (35,327) | **(123,051)** | (36,019) | (42,967) | (25,232) | (5,649) | **(109,865)** | **(63,294)** | **(55,512)** |
| FCF/Share | | | | | | | | | | | | | | |
| Acquisitions | **(14,997)** | **(14,616)** | (788) | (25,131) | (408) | (2,662) | **(28,989)** | (4,461) | (1,165) | - | (2,000) | **(7,630)** | **(20,000)** | **(20,000)** |
| Divestitures | **5,315** | **558** | 232 | 58 | 223 | 135 | **648** | 2,853 | 3,586 | 106 | - | - | - | - |
| Proceeds from LT Debt | **263,834** | **317,699** | 52,629 | 185,828 | 74,983 | 247,104 | **560,544** | 96,314 | 72,983 | 64,991 | 35,903 | **270,190** | **177,000** | **54,000** |
| Repayments of LT Debt | **(300,323)** | **(253,192)** | (29,800) | (129,024) | (45,027) | (196,556) | **(400,407)** | (80,341) | (32,309) | (68,709) | (35,903) | **(217,260)** | **(177,000)** | **(54,000)** |
| Net Proceeds (Repayments) ST Debt | **(43,643)** | **(18,342)** | 14,664 | 3,244 | (8,276) | (11,309) | **(1,677)** | 11,320 | (1,802) | 21,751 | 10,000 | **41,270** | **95,000** | **90,000** |
| Net Change in Cash Overdraft | **9,872** | **(322)** | (21,431) | 5,384 | 1,129 | 14,179 | **(739)** | (17,250) | 1,912 | 2,752 | - | **(12,590.00)** | - | - |
| Repurchase of Common Stock | **(12,823)** | **(15,756)** | (3,754) | (4,203) | (12,311) | (4,979) | **(25,247)** | (2,827) | (32) | (46) | (7,493) | **(10,398)** | **(29,970)** | **(29,970)** |
| Net Cash Flow--Cont'd Ops | **(20,705)** | **(70,823)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (55) | 739 | (642) | **(32,418)** | **(264)** | **2,518** |
| CF--Disc Ops | **88,643** | **48,634** | - | - | - | - | - | - | - | | | - | - | - |
| Net Cash Flow | **67,938** | **(22,189)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (55) | 739 | (642) | **(32,418)** | **(264)** | **2,518** |
| EBITDA | **425,647** | **440,893** | 102,516 | 112,219 | 127,869 | 107,233 | **449,837** | 104,926 | 115,640 | 132,069 | 109,580 | **462,220** | **487,660** | **503,790** |
| EBITDA margin | **55.9%** | **56.5%** | 53.9% | 54.5% | 57.8% | 54.4% | **55.2%** | 54.5% | 56.7% | 58.3% | 54.8% | **56.2%** | **57.3%** | **57.6%** |
| EV / TTM EBITDA | **13.5x** | **14.4x** | 14.2x | 13.6x | 14.4x | 15.7x | **15.7x** | 16.4x | 17.9x | 15.7x | 15.5x | **15.5x** | **14.6x** | **13.9x** |

| Selected Financial Statistics | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Book Value | **$8.64** | **$9.32** | $9.43 | $9.57 | $9.74 | $9.74 | **$9.74** | $9.90 | $10.06 | $10.30 | $10.81 | **$10.81** | **$12.00** | **$13.54** |
| Tangible BV | **$8.48** | **$9.14** | $9.24 | $9.38 | $9.55 | $9.55 | **$9.55** | $9.66 | $9.82 | $10.07 | $10.57 | **$10.57** | **$11.76** | **$13.31** |
| Cap Ex / Depreciation | **2.5x** | **2.6x** | 2.2x | 2.5x | 3.3x | 3.3x | **2.8x** | 2.2x | 3.0x | 3.2x | 2.6x | **2.7x** | **2.5x** | **2.4x** |
| Price / Book | **2.7x** | **2.9x** | 2.8x | 2.6x | 2.7x | 3.1x | **3.1x** | 3.2x | 3.5x | 3.0x | 2.8x | **2.8x** | **2.5x** | **2.2x** |
| Total Net Debt/ Total Capital | **50.8%** | **49.7%** | 49.8% | 50.4% | 50.3% | 50.9% | **50.9%** | 50.5% | 50.6% | 50.3% | 49.7% | **49.7%** | **47.7%** | **44.5%** |
| LT Debt/Total Capital | **48.9%** | **48.5%** | 48.8% | 49.4% | 49.3% | 50.3% | **50.3%** | 49.8% | 49.8% | 48.5% | 46.4% | **46.4%** | **44.9%** | **39.9%** |
| ROE (TTM)--*adj for Q4'15 JV chg* | **14.0%** | **13.5%** | 13.6% | 13.5% | 13.3% | 13.1% | **13.1%** | 13.2% | 13.1% | 13.3% | 13.2% | **13.2%** | **12.3%** | **11.3%** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

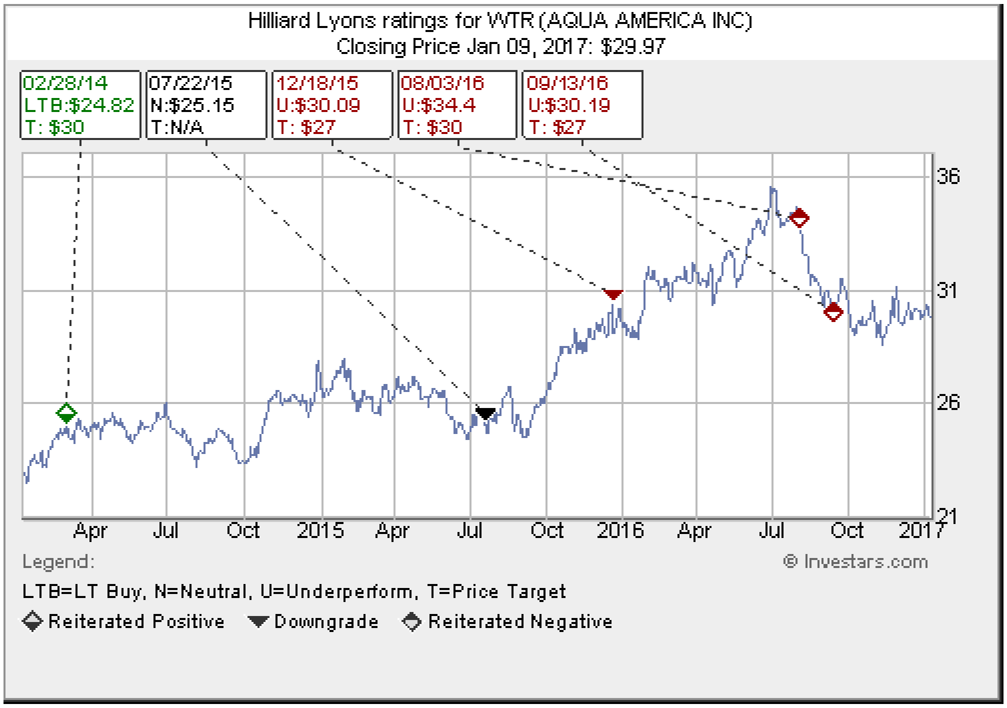
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 33 | 27% | 18% | 82% |
| **Hold/Neutral** | 76 | 62% | 7% | 93% |
| **Sell** | 13 | 11% | 0% | 100% |

*As of 6 January 2017*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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**Water Utilities**
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September 13, 2016

COMPANY UPDATE /
TARGET CHANGE

**Key Metrics**

| | | |
|---|---|---|
| WTR - NYSE - as of | 9/12/16 | $30.19 |
| Price Target | | $27.00 |
| 52-Week Range | | $25.00 - $35.83 |
| Shares Outstanding (mm) | | 177.3 |
| Market Cap. ($mm) | | $5,351.8 |
| 1-Mo. Average Daily Volume | | 675,948 |
| Institutional Ownership | | 51.6% |
| LTD / Total Capital | Q2'16 | 49.8% |
| ROE--Adj | TTM | 13.1% |
| Book Value / Share | Q2'16 | $10.06 |
| Price / Book Value | | 3.0x |
| Dividend Yield | | 2.5% |
| LTM EBITDA Margin | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | $0.39 | $0.39 | | -- | -- |
| 4Q | *$0.28 | $0.30 | $0.30 | | -- | -- |
| Year | $1.26 | $1.31 | $1.31 | | $1.35 | $1.35 |
| P/E | 24.0x | | 23.0x | | | 22.4x |

*Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | $223 | $223 | | -- | -- |
| 4Q | $197 | $199 | $199 | | -- | -- |
| Year | $814 | $818 | $818 | | $849 | $849 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**Lowering Price Target to $27; Reiterating Underperform Rating.**

**Investment Highlights**

- We are reiterating our Underperform rating, and are lowering our 1-year price target to $27. Shares closed yesterday just above our prior target of $30.
- At $27, WTR would trade ~20x our 2017E EPS which we view as fair value given peer multiples, and more importantly, just sector-average growth prospects over next few years. Our target multiple falls from ~22x.
- Our target cut is compelled by the noted revision to our valuation framework, a change we make in the face of waning momentum for Utility stocks with our financial projections unchanged. Fundamentally, our view toward negatively skewed interest rate risk (i.e. eventually a rise) flows in agreement with our valuation revision as well.
- We project Aqua to post a third consecutive year of sub-5% EPS growth in 2016 (and a 4$^{th}$ in 2017), which is even below higher-end stories we target in the slower growth gas and electric utility industries.
- We currently suggest an Underweight allocation to each Utility sector vertical (water, gas, electric), and recommend investors consolidate positons into ideas with a strong growth component. We still view WTR as one of the more at-risk stocks in the sector, and support rotating out of positions.
- A complementary thesis in WTR across 2016 has been an expectation for valuation compression driven by falling earned-ROE. We expect further declines in ROE, and believe this theme remains an important consideration.
- Our FY 2016/2017 EPS estimates remain unchanged at $1.31/$1.35, with little fundamental news gaining our attention over the last few weeks.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| Income Statements (000's) | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16E | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$761,893** | **$779,903** | $190,326 | $205,760 | $221,051 | $197,067 | **$814,204** | $192,607 | $203,876 | $222,810 | $199,120 | **$818,410** | **$849,340** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **283,561** | **288,560** | 73,189 | 79,746 | 78,519 | 77,856 | **309,310** | 73,541 | 73,994 | 76,520 | 76,800 | **300,860** | **309,880** |
| Depreciation | **118,414** | **123,050** | 30,500 | 31,049 | 31,981 | 31,760 | **125,290** | 32,145 | 31,619 | 34,110 | 33,690 | **131,560** | **138,200** |
| Amortization | **5,571** | **3,480** | 849 | 924 | 816 | 858 | **3,447** | 450 | 528 | 1,020 | 1,070 | **3,070** | **3,180** |
| Taxes other than Income | **52,685** | **50,450** | 14,621 | 13,795 | 14,663 | 11,978 | **55,057** | 14,140 | 14,242 | 13,590 | 13,540 | **55,510** | **53,500** |
| Operating Income | **301,662** | **314,363** | 71,167 | 80,246 | 95,072 | 74,615 | **321,100** | 72,331 | 83,493 | 97,570 | 74,020 | **327,410** | **344,580** |
| % | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.8% | 37.2% | **40.0%** | **40.6%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **77,316** | **76,400** | 18,665 | 18,900 | 19,239 | 19,732 | **76,536** | 19,853 | 20,115 | 19,860 | 19,770 | **79,600** | **79,590** |
| AFUDC | **(2,275)** | **(5,130)** | (1,182) | (1,040) | (1,708) | (2,289) | **(6,219)** | (2,308) | (1,871) | (900) | (700) | **(5,780)** | **(4,200)** |
| (Gain) on Asset Sale | **(148)** | **0** | (169) | (1) | (170) | (130) | **(468)** | (207) | (121) | (100) | (110) | **(540)** | **(410)** |
| (Gain) on Debt Extinguish | | **0** | | | | (678) | **(678)** | | | | | | |
| Equity (Earnings) / Loss from JV | **2,665** | **3,990** | 714 | 84 | 698 | 33,681 | **35,177** | 249 | 229 | 500 | 300 | **1,280** | **1,200** |
| Income Before Tax | **224,104** | **239,103** | 53,139 | 62,303 | 77,013 | 24,299 | **216,752** | 54,744 | 65,141 | 78,210 | 54,760 | **252,850** | **268,400** |
| Income Tax | **21,233** | **25,219** | 4,594 | 4,919 | 9,584 | (4,135) | **14,962** | 3,007 | 5,515 | 8,990 | 1,900 | **19,410** | **27,740** |
| % | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 11.5% | 3.5% | **7.7%** | **10.3%** |
| Net Income--Cont'd Ops | **202,871** | **213,884** | 48,545 | 57,384 | 67,429 | 28,434 | **201,790** | 51,737 | 59,626 | 69,220 | 52,860 | **233,440** | **240,660** |
| Net Income Avail to Common | **$215,347** | **$233,239** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $69,220 | $52,860 | **$233,440** | **$240,660** |
| EPS Disc Ops | **$0.10** | **$0.11** | - | - | - | - | | | | | | | |
| EPS Continuing Ops | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.16 | **$1.14** | $0.29 | $0.33 | $0.39 | $0.30 | **$1.31** | **$1.35** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.28 | **$1.26** | $0.29 | $0.33 | $0.39 | $0.30 | **$1.31** | **$1.35** |
| Diluted Avg Shares | **176,814** | **177,763** | 177,792 | 177,913 | 177,495 | 177,261 | **177,763** | 177,819 | 178,084 | 177,983 | 177,882 | **177,942** | **177,630** |
| Dividend | **$0.584** | **$0.634** | $0.165 | $0.165 | $0.178 | $0.178 | **$0.686** | $0.178 | $0.178 | $0.1913 | *$0.1913* | ***$0.7386*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **1.5%** | **2.4%** | 4.2% | 5.4% | 5.0% | 3.0% | **4.4%** | 1.2% | -0.9% | 0.8% | 1.0% | **0.5%** | **3.8%** |
| Op Income | **-5.0%** | **4.2%** | 6.6% | 0.4% | 0.0% | 2.8% | **2.1%** | 1.6% | 4.0% | 2.6% | -0.8% | **2.0%** | **5.2%** |
| EPS--Cont'd Ops; Ex-Items | **10.4%** | **4.8%** | 14.5% | 4.7% | -0.2% | 2.0% | **4.5%** | 6.6% | 3.8% | 2.4% | 5.7% | **4.4%** | **3.3%** |
| EBITDA | **-1.9%** | **3.6%** | 3.7% | 0.3% | 2.0% | 2.4% | **2.0%** | 2.4% | 3.0% | 3.8% | 1.4% | **2.7%** | **5.2%** |
| O&M Expense | **5.0%** | **1.8%** | 2.1% | 13.3% | 8.5% | 5.0% | **7.2%** | 0.5% | -7.2% | -2.5% | -1.4% | **-2.7%** | **3.0%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **37.2%** | **37.0%** | 38.5% | 38.8% | 35.5% | 39.5% | **38.0%** | 38.2% | 36.3% | 34.3% | 38.6% | **36.8%** | **36.5%** |
| Taxes other than Income | **6.9%** | **6.5%** | 7.7% | 6.7% | 6.6% | 6.1% | **6.8%** | 7.3% | 7.0% | 6.1% | 6.8% | **6.8%** | **6.3%** |
| Op Income | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.8% | 37.2% | **40.0%** | **40.6%** |
| Net Income | **26.6%** | **27.4%** | 25.5% | 27.9% | 30.5% | 14.4% | **24.8%** | 26.9% | 29.2% | 31.1% | 26.5% | **28.5%** | **28.3%** |
| Tax Rate | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 11.5% | 3.5% | **7.7%** | **10.3%** |
| | | | | | | *$21.4MM after tax Marcellus pipe JV impariment | ***FY 2015 EPS guide $1.25-$1.27** | | | | | ***FY 2016 EPS guide $1.30-$1.35** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16E | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | $5,058 | $4,138 | $9,274 | $4,615 | $4,071 | $3,229 | $3,229 | $3,981 | $4,923 | $4,500 | $4,990 | $4,990 | $2,240 |
| A/R | 95,356 | 96,999 | 95,405 | 109,478 | 111,076 | 99,146 | 99,146 | 91,761 | 99,718 | 113,300 | 101,130 | 101,130 | 103,150 |
| Other | 71,255 | 51,385 | 59,546 | 61,267 | 53,160 | 25,995 | 25,995 | 26,991 | 27,791 | 54,220 | 26,510 | 26,510 | 27,040 |
| Total Current Assets | 171,669 | 152,522 | 164,225 | 175,360 | 168,307 | 128,370 | 128,370 | 122,733 | 132,432 | 172,020 | 132,630 | 132,630 | 132,430 |
| Net PP&E | 4,167,293 | 4,401,990 | 4,433,144 | 4,522,287 | 4,605,512 | 4,688,925 | 4,688,925 | 4,752,881 | 4,823,487 | 4,885,360 | 4,942,600 | 4,942,600 | 5,171,220 |
| Regulatory Assets | 585,600 | 725,591 | 748,911 | 771,561 | 799,858 | 830,118 | 830,118 | 859,830 | 887,135 | 887,140 | 887,140 | 887,140 | 889,140 |
| Goodwill | 28,223 | 31,184 | 33,954 | 33,942 | 33,907 | 33,866 | 33,866 | 42,304 | 42,234 | 42,230 | 42,230 | 42,230 | 42,330 |
| Other | 99,032 | 95,465 | 97,498 | 97,128 | 93,761 | 59,759 | 59,759 | 37,695 | 37,551 | 95,640 | 60,950 | 60,950 | 62,170 |
| **Total Assets** | 5,051,817 | 5,406,752 | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | 5,741,038 | 5,815,443 | 5,922,839 | 6,082,390 | 6,065,550 | 6,065,550 | 6,297,290 |
| CP of LTD | 86,288 | 58,615 | 47,042 | 38,503 | 47,599 | 35,593 | 35,593 | 29,096 | 38,212 | 35,903 | 175,092 | 175,092 | 54,051 |
| Loans Payable | 36,740 | 18,398 | 33,062 | 36,306 | 28,030 | 16,721 | 16,721 | 28,041 | 26,239 | 56,239 | 62,239 | 62,239 | 157,239 |
| A/P | 65,816 | 63,035 | 34,717 | 47,510 | 45,077 | 56,452 | 56,452 | 33,971 | 40,651 | 46,880 | 58,710 | 58,710 | 61,060 |
| Other | 78,066 | 85,287 | 90,298 | 81,076 | 95,316 | 84,433 | 84,433 | 83,235 | 74,118 | 97,220 | 86,120 | 86,120 | 87,840 |
| Total Current Liab | 266,910 | 225,335 | 205,119 | 203,395 | 216,022 | 193,199 | 193,199 | 174,343 | 179,220 | 236,242 | 382,161 | 382,161 | 360,190 |
| LTD | 1,468,583 | 1,560,655 | 1,594,980 | 1,660,526 | 1,681,114 | 1,743,612 | 1,743,612 | 1,744,108 | 1,775,874 | 1,807,263 | 1,668,074 | 1,668,074 | 1,761,115 |
| Shareholders' Equity | 1,535,043 | 1,655,383 | 1,676,294 | 1,702,927 | 1,728,681 | 1,725,930 | 1,725,930 | 1,760,707 | 1,791,163 | 1,900,260 | 1,874,440 | 1,874,440 | 2,056,990 |
| **Total Liab & SE** | 5,051,817 | 5,406,752 | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | 5,741,038 | 5,815,443 | 5,922,839 | 6,082,390 | 6,065,550 | 6,065,550 | 6,297,290 |
| **Cash Flow Analysis** | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16E | Q4'16E | FY'16E | FY'17E |
| Net Income--Cont'd Ops | $202,871 | $213,884 | $48,545 | $57,384 | $67,429 | $28,434 | $201,790 | $51,737 | $59,626 | $69,220 | $52,860 | $233,440 | $240,660 |
| D&A | 124,793 | 126,535 | 31,349 | 31,973 | 32,797 | 32,618 | 128,737 | 32,595 | 32,147 | 35,130 | 34,760 | 134,632 | 141,380 |
| Deferred Income Tax | 26,742 | 31,477 | 2,688 | 2,704 | 8,463 | 2,651 | 16,506 | 1,436 | 3,615 | 10,000 | 10,000 | 25,050 | 40,000 |
| (Inc) / Dec in Working Cap | 83,901 | (25,333) | (29,874) | (12,223) | 18,316 | 39,587 | 15,806 | (17,290) | (11,194) | (10,680) | 25,950 | (13,214) | 1,410 |
| Operating CF | 438,307 | 346,563 | 52,708 | 79,838 | 127,005 | 103,290 | 362,839 | 68,478 | 84,194 | 103,670 | 123,570 | 379,908 | 423,450 |
| Cap ex | (308,171) | (328,605) | (70,284) | (80,000) | (107,194) | (107,211) | (364,689) | (72,984) | (95,603) | (95,000) | (90,000) | (353,587) | (350,000) |
| JV Investment | (14,700) | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | (102,889) | (112,106) | (29,176) | (29,220) | (31,446) | (31,406) | (121,248) | (31,513) | (31,558) | (34,048) | (34,029) | (131,148) | (139,011) |
| Release (Addition) of Const Funds | 23,525 | - | 32 | - | 15 | - | 47 | - | - | - | - | - | - |
| Free Cash Flow | 36,072 | (94,148) | (46,720) | (29,382) | (11,620) | (35,327) | (123,051) | (36,019) | (42,967) | (25,378) | (459) | (104,827) | (65,561) |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | (14,997) | (14,616) | (788) | (25,131) | (408) | (2,662) | (28,989) | (4,461) | (1,165) | (2,000) | (2,000) | (9,630) | (20,000) |
| Divestitures | 5,315 | 558 | 232 | 58 | 223 | 135 | 648 | 2,853 | 3,586 | | - | - | - |
| Proceeds from LT Debt | 263,834 | 317,699 | 52,629 | 185,828 | 74,983 | 247,104 | 560,544 | 96,314 | 72,983 | - | 35,903 | 205,200 | 177,000 |
| Repayments of LT Debt | (300,323) | (253,192) | (29,800) | (129,024) | (45,027) | (196,556) | (400,407) | (80,341) | (32,309) | | (35,903) | (148,550) | (177,000) |
| Net Proceeds (Repayments) ST Debt | (43,643) | (18,342) | 14,664 | 3,244 | (8,276) | (11,309) | (1,677) | 11,320 | (1,802) | 30,000 | 6,000 | 45,520 | 95,000 |
| Net Change in Cash Overdraft | 9,872 | (322) | (21,431) | 5,384 | 1,129 | 14,179 | (739) | (17,250) | 1,912 | - | - | (15,340.00) | - |
| Repurchase of Common Stock | (12,823) | (15,756) | (3,754) | (4,203) | (12,311) | (4,979) | (25,247) | (2,827) | (32) | (7,548) | (7,548) | (17,954) | (30,190) |
| Net Cash Flow--Cont'd Ops | (20,705) | (70,823) | (32,116) | 7,374 | 103 | 14,585 | (10,056) | (25,911) | (55) | (426) | 494 | (32,342) | (2,751) |
| CF--Disc Ops | 88,643 | 48,634 | - | - | - | - | - | - | - | | | - | - |
| Net Cash Flow | 67,938 | (22,189) | (32,116) | 7,374 | 103 | 14,585 | (10,056) | (25,911) | (55) | (426) | 494 | (32,342) | (2,751) |
| EBITDA | 425,647 | 440,893 | 102,516 | 112,219 | 127,869 | 107,233 | 449,837 | 104,926 | 115,640 | 132,700 | 108,780 | 462,040 | 485,960 |
| EBITDA margin | 55.9% | 56.5% | 53.9% | 54.5% | 57.8% | 54.4% | 55.2% | 54.5% | 56.7% | 59.6% | 54.6% | 56.5% | 57.2% |
| EV / TTM EBITDA | 13.5x | 14.4x | 14.2x | 13.6x | 14.4x | 15.7x | 15.7x | 16.4x | 17.9x | 15.7x | 15.6x | 15.6x | 14.8x |
| **Selected Financial Statistics** | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16E | Q4'16E | FY'16E | FY'17E |
| Book Value | $8.64 | $9.32 | $9.43 | $9.57 | $9.74 | $9.74 | $9.74 | $9.90 | $10.06 | $10.68 | $10.54 | $10.54 | $11.59 |
| Tangible BV | $8.48 | $9.14 | $9.24 | $9.38 | $9.55 | $9.55 | $9.55 | $9.66 | $9.82 | $10.44 | $10.30 | $10.30 | $11.35 |
| Cap Ex / Depreciation | 2.5x | 2.6x | 2.2x | 2.5x | 3.3x | 3.3x | 2.8x | 2.2x | 3.0x | 2.7x | 2.6x | 2.6x | 2.5x |
| Price / Book | 2.7x | 2.9x | 2.8x | 2.6x | 2.7x | 3.1x | 3.1x | 3.2x | 3.5x | 2.8x | 2.9x | 2.9x | 2.6x |
| Total Net Debt/ Total Capital | 50.8% | 49.7% | 49.8% | 50.4% | 50.3% | 50.9% | 50.9% | 50.5% | 50.6% | 49.9% | 50.3% | 50.3% | 48.9% |
| LT Debt/Total Capital | 48.9% | 48.5% | 48.8% | 49.4% | 49.3% | 50.3% | 50.3% | 49.8% | 49.8% | 48.7% | 47.1% | 47.1% | 46.1% |
| ROE (TTM)--*adj for Q4'15 JV chg* | 14.0% | 13.5% | 13.6% | 13.5% | 13.3% | 13.1% | 13.1% | 13.2% | 13.1% | 12.9% | 12.9% | 12.9% | 12.3% |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

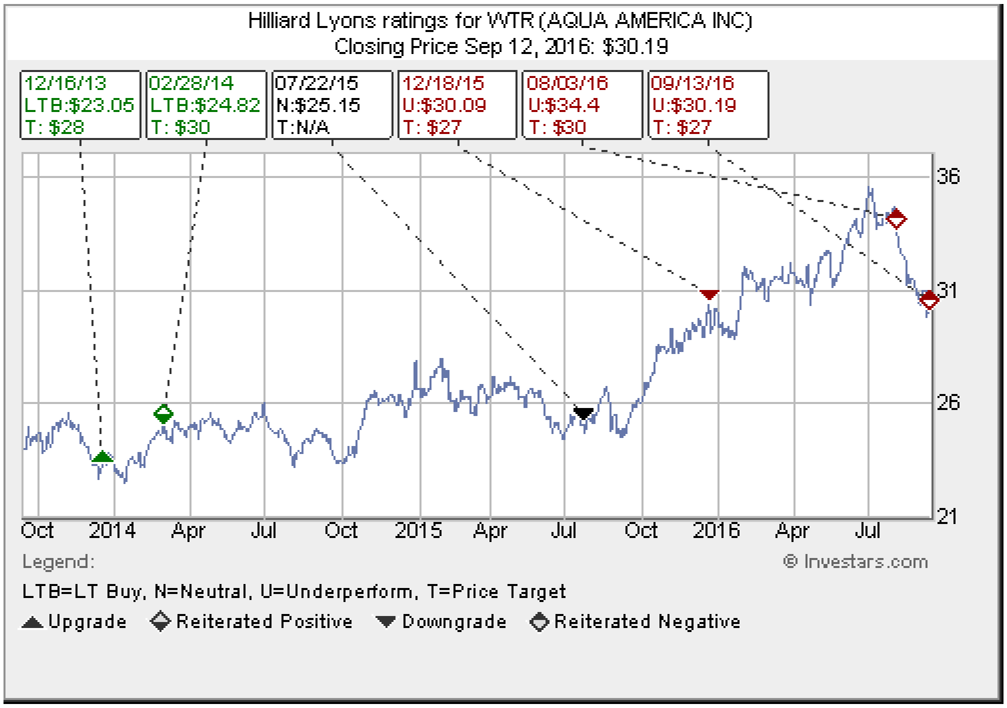
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| Rating | # of Stocks Covered | % of Stocks Covered | Banking | No Banking |
| **Buy** | 38 | 31% | 16% | 84% |
| **Hold/Neutral** | 71 | 59% | 3% | 97% |
| **Sell** | 12 | 10% | 0% | 100% |

*As of 8 September 2016*

## Other Disclosures

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HILLIARD LYONS

**Water Utilities**

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November 2, 2016

COMPANY UPDATE /
ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 11/1/16 | | $29.99 |
| Price Target | | | $27.00 |
| 52-Week Range | | $28.05 - | $35.83 |
| Shares Outstanding (mm) | | | 177.3 |
| Market Cap. ($mm) | | | $5,318.1 |
| 1-Mo. Average Daily Volume | | | 858,976 |
| Institutional Ownership | | | 51.0% |
| LTD / Total Capital | Q3'16 | | 48.5% |
| ROE--Adj | TTM | | 13.3% |
| Book Value / Share | Q3'16 | | $10.30 |
| Price / Book Value | | | 2.9x |
| Dividend Yield | | | 2.6% |
| LTM EBITDA Margin | | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | -- | $0.41 | A | -- | -- |
| 4Q | *$0.28 | $0.30 | $0.30 | | -- | -- |
| Year | $1.26 | $1.31 | $1.33 | | $1.35 | $1.36 |
| P/E | 23.8x | | 22.5x | | | 22.1x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | -- | $227 | A | -- | -- |
| 4Q | $197 | $199 | $199 | | -- | -- |
| Year | $814 | $818 | $822 | | $849 | $849 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

## Q3'16 Results from WTR; Reiterating Underperform.

### Investment Highlights

- Aqua America reported Q3'16 EPS of $0.41 versus $0.38 in the year-ago period. EPS in the quarter beat our estimate for $0.39, which equaled consensus. Core revenue/expense items were positive in Q3, although a $2.3MM swing in JV profit/loss helped growth too.
- Revenue grew 2.5% to $226.6MM in Q3, missing our estimate for fractional growth. Regulated revenues grew ~$9MM while non-reg fell ~$4MM, in a favorable trend we expect to persist in Q4.
- WTR has $8.1MM in rate and surcharge applications pending in IN, OH, and VA, with ~$4.4MM in net awards so far this year. We believe material rate activity in PA is still a couple years away, meaning dynamism to top line is likely to key off acquisitions.
- O&M expense grew 1.6% in Q2, which was ahead of our expectations but offset the revenue beat. Same system O&M is still expected to be +1% to +2% for 2016, although consolidated growth should remain subdued on non-reg divestitures.
- The effective tax rate in Q3 slipped to 10.3% from 12.4% in the year-ago period, as WTR continues to maximize its repair tax 'lever'.
- Management reiterated FY 2016 EPS guidance in the range of $1.30-$1.35. Reflecting upside to Q3, our FY 2016 estimate moves up $0.02 to $1.33; our 2017E rises $0.01 to $1.36.
- We are reiterating our Underperform rating and 1-year $27 price target. At our target, WTR would trade ~20x our 2017E EPS which we view as fair value given peer multiples, and more importantly, just sector-average growth prospects over the next few years.
- At this point, our Underperform continues to flow in agreement with our Underweight allocation suggestion to each utility vertical (gas, H20, electric).

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## ADDITIONAL DISCUSSION—Q3 RESULTS & FORWARD OUTLOOK

Q3 was another good quarter operationally, in our view, and a bit better quarter financially than we had seen yet this year. EPS growth of 8.3% marks the company's best growth rate since Q1 of 2014, a period over which most growth has been <5%. Revenue growth was perhaps our biggest surprise, although with Aqua citing increased usage to some extent, we believe there could be at least a hint of a tough comparison for next year.

Moving forward however, we believe the revenue environment remains challenging without rate activity in Pennsylvania being in the mix; however, we still like seeing the market-based businesses being either liquidated or disposed.

## ADDITIONAL DISCUSSION—FINAL THOUGHTS

Our negative thesis in Aqua for some time now has been multiple compression due to slowing earnings growth in conjunction with ROE-compression. Over the past couple of months however, we have been cultivating a complementary thesis that centers on M&A. Somewhat unfortunately, Aqua shares a footprint in two populous and important states (PA and NJ) with its primary rival for M&A transactions. Recently, we have seen a flurry of large deals 'won' by parties other than Aqua.

We believe much of the positive fervor across the back half of 2015 and into 2016 was tied to a refocused and revitalized M&A strategy, in which Aqua is pursuing larger deals. Should consensus wane from WTR's ability to consistently win these bigger deals long-term, we see risk for further re-rating lower.

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| Income Statements (000's) | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$761,893** | **$779,903** | $190,326 | $205,760 | $221,051 | $197,067 | **$814,204** | $192,607 | $203,876 | $226,593 | $199,120 | **$822,200** | **$849,340** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **283,561** | **288,560** | 73,189 | 79,746 | 78,519 | 77,856 | **309,310** | 73,541 | 73,994 | 79,812 | 76,800 | **304,150** | **310,230** |
| Depreciation | **118,414** | **123,050** | 30,500 | 31,049 | 31,981 | 31,760 | **125,290** | 32,145 | 31,619 | 33,881 | 33,800 | **131,450** | **138,640** |
| Amortization | **5,571** | **3,480** | 849 | 924 | 816 | 858 | **3,447** | 450 | 528 | 389 | 1,070 | **2,440** | **2,550** |
| Taxes other than Income | **52,685** | **50,450** | 14,621 | 13,795 | 14,663 | 11,978 | **55,057** | 14,140 | 14,242 | 14,712 | 13,540 | **56,630** | **53,500** |
| Operating Income | **301,662** | **314,363** | 71,167 | 80,246 | 95,072 | 74,615 | **321,100** | 72,331 | 83,493 | 97,799 | 73,910 | **327,530** | **344,420** |
| % | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.2% | 37.1% | **39.8%** | **40.6%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **77,316** | **76,400** | 18,665 | 18,900 | 19,239 | 19,732 | **76,536** | 19,853 | 20,115 | 20,168 | 19,770 | **79,910** | **79,590** |
| AFUDC | **(2,275)** | **(5,130)** | (1,182) | (1,040) | (1,708) | (2,289) | **(6,219)** | (2,308) | (1,871) | (2,267) | (700) | **(7,150)** | **(4,200)** |
| (Gain) on Asset Sale | **(148)** | **0** | (169) | (1) | (170) | (130) | **(468)** | (207) | (121) | (62) | (110) | **(500)** | **(410)** |
| (Gain) on Debt Extinguish | | **0** | | | | (678) | **(678)** | | | | | | |
| Equity (Earnings) / Loss from JV | **2,665** | **3,990** | 714 | 84 | 698 | 33,681 | **35,177** | 249 | 229 | (1,621) | 300 | **(840)** | **1,200** |
| Income Before Tax | **224,104** | **239,103** | 53,139 | 62,303 | 77,013 | 24,299 | **216,752** | 54,744 | 65,141 | 81,581 | 54,650 | **256,110** | **268,240** |
| Income Tax | **21,233** | **25,219** | 4,594 | 4,919 | 9,584 | (4,135) | **14,962** | 3,007 | 5,515 | 8,411 | 1,860 | **18,790** | **27,660** |
| % | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 10.3% | 3.4% | **7.3%** | **10.3%** |
| Net Income--Cont'd Ops | **202,871** | **213,884** | 48,545 | 57,384 | 67,429 | 28,434 | **201,790** | 51,737 | 59,626 | 73,170 | 52,790 | **237,320** | **240,580** |
| Net Income Avail to Common | **$215,347** | **$233,239** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $73,170 | $52,790 | **$237,320** | **$240,580** |
| EPS Disc Ops | **$0.10** | **$0.11** | - | - | - | - | | | | | | | |
| EPS Continuing Ops | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.16 | **$1.14** | $0.29 | $0.33 | $0.41 | $0.30 | **$1.33** | **$1.36** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.28 | **$1.26** | $0.29 | $0.33 | $0.41 | $0.30 | **$1.33** | **$1.36** |
| Diluted Avg Shares | **176,814** | **177,763** | 177,792 | 177,913 | 177,495 | 177,261 | **177,763** | 177,819 | 178,084 | 177,817 | 177,717 | **177,859** | **177,467** |
| Dividend | **$0.584** | **$0.634** | $0.165 | $0.165 | $0.178 | $0.178 | **$0.686** | $0.178 | $0.178 | $0.1913 | *$0.1913* | ***$0.7386*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **1.5%** | **2.4%** | 4.2% | 5.4% | 5.0% | 3.0% | **4.4%** | 1.2% | -0.9% | 2.5% | 1.0% | **1.0%** | **3.3%** |
| Op Income | **-5.0%** | **4.2%** | 6.6% | 0.4% | 0.0% | 2.8% | **2.1%** | 1.6% | 4.0% | 2.9% | -0.9% | **2.0%** | **5.2%** |
| EPS--Cont'd Ops; Ex-Items | **10.4%** | **4.8%** | 14.5% | 4.7% | -0.2% | 2.0% | **4.5%** | 6.6% | 3.8% | 8.3% | 5.7% | **6.2%** | **1.6%** |
| EBITDA | **-1.9%** | **3.6%** | 3.7% | 0.3% | 2.0% | 2.4% | **2.0%** | 2.4% | 3.0% | 3.3% | 1.4% | **2.6%** | **5.2%** |
| O&M Expense | **5.0%** | **1.8%** | 2.1% | 13.3% | 8.5% | 5.0% | **7.2%** | 0.5% | -7.2% | 1.6% | -1.4% | **-1.7%** | **2.0%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **37.2%** | **37.0%** | 38.5% | 38.8% | 35.5% | 39.5% | **38.0%** | 38.2% | 36.3% | 35.2% | 38.6% | **37.0%** | **36.5%** |
| Taxes other than Income | **6.9%** | **6.5%** | 7.7% | 6.7% | 6.6% | 6.1% | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | **6.3%** |
| Op Income | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.2% | 37.1% | **39.8%** | **40.6%** |
| Net Income | **26.6%** | **27.4%** | 25.5% | 27.9% | 30.5% | 14.4% | **24.8%** | 26.9% | 29.2% | 32.3% | 26.5% | **28.9%** | **28.3%** |
| Tax Rate | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 10.3% | 3.4% | **7.3%** | **10.3%** |
| | | | | | | *$21.4MM after tax Marcellus pipe JV impariment | ***FY 2015 EPS guide $1.25-$1.27** | | | | | ***FY 2016 EPS guide $1.30-$1.35** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16p | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$5,058** | **$4,138** | $9,274 | $4,615 | $4,071 | $3,229 | **$3,229** | $3,981 | $4,923 | $5,000 | $5,620 | **$5,620** | **$2,920** |
| A/R | **95,356** | **96,999** | 95,405 | 109,478 | 111,076 | 99,146 | **99,146** | 91,761 | 99,718 | 113,300 | 101,130 | **101,130** | **103,150** |
| Other | **71,255** | **51,385** | 59,546 | 61,267 | 53,160 | 25,995 | **25,995** | 26,991 | 27,791 | 23,101 | 26,510 | **26,510** | **27,040** |
| Total Current Assets | **171,669** | **152,522** | 164,225 | 175,360 | 168,307 | 128,370 | **128,370** | 122,733 | 132,432 | 141,401 | 133,260 | **133,260** | **133,110** |
| Net PP&E | **4,167,293** | **4,401,990** | 4,433,144 | 4,522,287 | 4,605,512 | 4,688,925 | **4,688,925** | 4,752,881 | 4,823,487 | 4,901,486 | 4,958,620 | **4,958,620** | **5,187,430** |
| Regulatory Assets | **585,600** | **725,591** | 748,911 | 771,561 | 799,858 | 830,118 | **830,118** | 859,830 | 887,135 | 887,140 | 887,140 | **887,140** | **889,140** |
| Goodwill | **28,223** | **31,184** | 33,954 | 33,942 | 33,907 | 33,866 | **33,866** | 42,304 | 42,234 | 42,230 | 42,230 | **42,230** | **42,330** |
| Other | **99,032** | **95,465** | 97,498 | 97,128 | 93,761 | 59,759 | **59,759** | 37,695 | 37,551 | 63,768 | 60,950 | **60,950** | **62,170** |
| **Total Assets** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,082,200 | **6,082,200** | **6,314,180** |
| CP of LTD | **86,288** | **58,615** | 47,042 | 38,503 | 47,599 | 35,593 | **35,593** | 29,096 | 38,212 | 80,000 | 175,092 | **175,092** | **54,051** |
| Loans Payable | **36,740** | **18,398** | 33,062 | 36,306 | 28,030 | 16,721 | **16,721** | 28,041 | 26,239 | 51,767 | 57,767 | **57,767** | **152,767** |
| A/P | **65,816** | **63,035** | 34,717 | 47,510 | 45,077 | 56,452 | **56,452** | 33,971 | 40,651 | 46,880 | 58,710 | **58,710** | **61,060** |
| Other | **78,066** | **85,287** | 90,298 | 81,076 | 95,316 | 84,433 | **84,433** | 83,235 | 74,118 | 73,351 | 86,120 | **86,120** | **87,840** |
| Total Current Liab | **266,910** | **225,335** | 205,119 | 203,395 | 216,022 | 193,199 | **193,199** | 174,343 | 179,220 | 251,998 | 377,689 | **377,689** | **355,718** |
| LTD | **1,468,583** | **1,560,655** | 1,594,980 | 1,660,526 | 1,681,114 | 1,743,612 | **1,743,612** | 1,744,108 | 1,775,874 | 1,726,493 | 1,668,074 | **1,668,074** | **1,761,115** |
| Shareholders' Equity | **1,535,043** | **1,655,383** | 1,676,294 | 1,702,927 | 1,728,681 | 1,725,930 | **1,725,930** | 1,760,707 | 1,791,163 | 1,832,200 | 1,895,560 | **1,895,560** | **2,078,350** |
| **Total Liab & SE** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,082,200 | **6,082,200** | **6,314,180** |

| Cash Flow Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16E | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$202,871** | **$213,884** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $73,170 | $52,790 | **$237,320** | **$240,580** |
| D&A | **124,793** | **126,535** | 31,349 | 31,973 | 32,797 | 32,618 | **128,737** | 32,595 | 32,147 | 34,270 | 34,870 | **133,882** | **141,190** |
| Deferred Income Tax | **26,742** | **31,477** | 2,688 | 2,704 | 8,463 | 2,651 | **16,506** | 1,436 | 3,615 | 10,000 | 10,000 | **25,050** | **40,000** |
| (Inc) / Dec in Working Cap | **83,901** | **(25,333)** | (29,874) | (12,223) | 18,316 | 39,587 | **15,806** | (17,290) | (11,194) | (10,680) | 25,950 | **(13,214)** | **1,410** |
| Operating CF | **438,307** | **346,563** | 52,708 | 79,838 | 127,005 | 103,290 | **362,839** | 68,478 | 84,194 | 106,760 | 123,610 | **383,038** | **423,180** |
| Cap ex | **(308,171)** | **(328,605)** | (70,284) | (80,000) | (107,194) | (107,211) | **(364,689)** | (72,984) | (95,603) | (95,000) | (90,000) | **(353,587)** | **(350,000)** |
| JV Investment | **(14,700)** | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | **(102,889)** | **(112,106)** | (29,176) | (29,220) | (31,446) | (31,406) | **(121,248)** | (31,513) | (31,558) | (34,016) | (33,997) | **(131,085)** | **(138,884)** |
| Release (Addition) of Const Funds | **23,525** | - | 32 | - | 15 | - | **47** | - | - | - | - | - | - |
| Free Cash Flow | **36,072** | **(94,148)** | (46,720) | (29,382) | (11,620) | (35,327) | **(123,051)** | (36,019) | (42,967) | (22,256) | (387) | **(101,634)** | **(65,704)** |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | **(14,997)** | **(14,616)** | (788) | (25,131) | (408) | (2,662) | **(28,989)** | (4,461) | (1,165) | (2,000) | (2,000) | **(9,630)** | **(20,000)** |
| Divestitures | **5,315** | **558** | 232 | 58 | 223 | 135 | **648** | 2,853 | 3,586 | | - | - | - |
| Proceeds from LT Debt | **263,834** | **317,699** | 52,629 | 185,828 | 74,983 | 247,104 | **560,544** | 96,314 | 72,983 | - | 35,903 | **205,200** | **177,000** |
| Repayments of LT Debt | **(300,323)** | **(253,192)** | (29,800) | (129,024) | (45,027) | (196,556) | **(400,407)** | (80,341) | (32,309) | | (35,903) | **(148,550)** | **(177,000)** |
| Net Proceeds (Repayments) ST Debt | **(43,643)** | **(18,342)** | 14,664 | 3,244 | (8,276) | (11,309) | **(1,677)** | 11,320 | (1,802) | 25,000 | 6,000 | **40,520** | **95,000** |
| Net Change in Cash Overdraft | **9,872** | **(322)** | (21,431) | 5,384 | 1,129 | 14,179 | **(739)** | (17,250) | 1,912 | - | - | **(15,340.00)** | - |
| Repurchase of Common Stock | **(12,823)** | **(15,756)** | (3,754) | (4,203) | (12,311) | (4,979) | **(25,247)** | (2,827) | (32) | (7,498) | (7,498) | **(17,854)** | **(29,990)** |
| Net Cash Flow--Cont'd Ops | **(20,705)** | **(70,823)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (55) | (2,254) | 615 | **(34,049)** | **(2,694)** |
| CF--Disc Ops | **88,643** | **48,634** | - | - | - | - | - | - | - | | | - | - |
| Net Cash Flow | **67,938** | **(22,189)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (55) | (2,254) | 615 | **(34,049)** | **(2,694)** |
| EBITDA | **425,647** | **440,893** | 102,516 | 112,219 | 127,869 | 107,233 | **449,837** | 104,926 | 115,640 | 132,069 | 108,780 | **461,420** | **485,610** |
| EBITDA margin | **55.9%** | **56.5%** | 53.9% | 54.5% | 57.8% | 54.4% | **55.2%** | 54.5% | 56.7% | 58.3% | 54.6% | **56.1%** | **57.2%** |
| EV / TTM EBITDA | **13.5x** | **14.4x** | 14.2x | 13.6x | 14.4x | 15.7x | **15.7x** | 16.4x | 17.9x | 15.5x | 15.5x | **15.5x** | **14.7x** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.


| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 39 | 32% | 21% | 79% |
| **Hold/Neutral** | 71 | 58% | 3% | 97% |
| **Sell** | 12 | 10% | 0% | 100% |

*As of 3 October 2016*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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J.J.B. Hilliard, W.L. Lyons, LLC
January 17, 2017

COMPANY UPDATE /
ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 1/13/17 | | $30.28 |
| Price Target | | | $27.00 |
| 52-Week Range | | $28.03 - | $35.83 |
| Shares Outstanding (mm) | | | 177.4 |
| Market Cap. ($mm) | | | $5,370.4 |
| 1-Mo. Average Daily Volume | | | 627,963 |
| Institutional Ownership | | | 51.4% |
| LTD / Total Capital | Q3'16 | | 48.5% |
| ROE--Adj | TTM | | 13.3% |
| Book Value / Share | Q3'16 | | $10.30 |
| Price / Book Value | | | 2.9x |
| Dividend Yield | | | 2.5% |
| LTM EBITDA Margin | | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | -- | $0.41 | A | -- | -- |
| 4Q | *$0.28 | $0.30 | $0.30 | | -- | -- |
| Year | $1.26 | $1.34 | $1.34 | | $1.37 | $1.37 |
| P/E | 24.0x | | 22.6x | | | 22.1x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | -- | $227 | A | -- | -- |
| 4Q | $197 | $200 | $200 | | -- | -- |
| Year | $814 | $823 | $823 | | $851 | $831 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**2017 Guidance; Reiterating Underperform Rating.**

**Investment Highlights**

- Aqua initiated EPS guidance for 2017 in the range of $1.34 to $1.39; consensus into the release was for $1.39. EPS guidance for 2016 remains $1.30 to $1.35, with a slight emphasis on the lower end.
- Our 2016/2017/2018 EPS estimates for $1.34/$1.37/$1.41 are unchanged at this point; we made slight revisions to our outlook early last week in conjunction with rolling out our 2018 forecast.
- Management unveiled a 3-year Cap Ex outlook (2017-2019) of $1.2B, up about $100MM from the year-ago forward outlook. Higher spend should help alleviate overearning more quickly; we now forecast 2018 earned ROE of 10.8% from a prior target of 11.3%.
- We like the M&A pipeline, which tabs four specific deals, expected to close in 2017, covering ~9,000 potential new customers at a price of ~$114MM.
- Tax reform has the potential to complicate the WTR narrative over the next couple of years, in our view. Specifically and simplistically, lower statutory rates and the resulting impact on the value of repair tax deductions could create earnings volatility before discrepancies might be eliminated via rate filings.
- Market-based revenue in '17 is expected to be $4MM, down from $35MM in '15 via a series of transactions we view in a very positive light. Divestitures should be complete in 2017, though we still want to see WTR bring its service line protection business in-house.
- We are reiterating our Underperform rating and 1-year $27 price target. At our target, WTR would trade ~20x our 2017E EPS, which we view as fair value given continued expectations for ROE compression.
- We expect WTR to report Q4/FY 2016 results in late-February.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## ADDITIONAL DISCUSSION—M&A

As noted in our opening bullet points, we are pleased with the magnitude of the M&A pipeline, which if fully consummated, would represent as much purchase consideration as the prior 5 years of WTR activity combined. Prospective customer additions are much more subdued; however, prospective rate base growth (more closely aligned with purchase price) is the most important factor in gauging potential profit growth.

Having said that, we still see some execution risk deal-wise in both 2017 and beyond; unfortunately, we still need to be convinced that Aqua is capable of winning against the larger-American Water Works (AWK—$70.82, Long-term Buy, $84TP) when it comes to competing for the most impactful muni deals in the shared states of NJ and PA. Furthermore on the M&A front, we sense that Aqua is still at least somewhat open to acquiring either gas or electric utility operations, an item we believe brings an element of negative headline risk.

## ADDITIONAL DISCUSSION—FINAL THOUGHTS

Overall, we hold a quite neutral bias toward today's guidance release, a scenario under which we are inclined to reiterate our Underperform rating. On the positive side, we almost always like to see plans for escalating Cap Ex at our regulated utilities, and we like the still-evolving trend of Aqua minimizing its non-regulated or market-based footprint. Offsetting this however, is the relatively straightforward fact that guidance missed consensus, and in guiding toward a 2019-impact for general rate activity in PA (assuming stable tax regime), we believe subdued EPS growth is very likely to extend to 2018 as well.

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| Income Statements (000's) | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$761,893** | **$779,903** | $190,326 | $205,760 | $221,051 | $197,067 | **$814,204** | $192,607 | $203,876 | $226,593 | $199,980 | **$823,060** | **$830,810** | **$859,170** |
| **Operating Expenses** | | | | | | | | | | | | | | |
| O & M | **283,561** | **288,560** | 73,189 | 79,746 | 78,519 | 77,856 | **309,310** | 73,541 | 73,994 | 79,812 | 76,800 | **304,150** | **289,170** | **293,500** |
| Depreciation | **118,414** | **123,050** | 30,500 | 31,049 | 31,981 | 31,760 | **125,290** | 32,145 | 31,619 | 33,881 | 33,800 | **131,450** | **140,470** | **150,060** |
| Amortization | **5,571** | **3,480** | 849 | 924 | 816 | 858 | **3,447** | 450 | 528 | 389 | 1,060 | **2,430** | **2,530** | **2,530** |
| Taxes other than Income | **52,685** | **50,450** | 14,621 | 13,795 | 14,663 | 11,978 | **55,057** | 14,140 | 14,242 | 14,712 | 13,600 | **56,690** | **52,330** | **54,120** |
| Operating Income | **301,662** | **314,363** | 71,167 | 80,246 | 95,072 | 74,615 | **321,100** | 72,331 | 83,493 | 97,799 | 74,720 | **328,340** | **346,310** | **358,960** |
| % | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.2% | 37.4% | **39.9%** | **41.7%** | **41.8%** |
| Other Expense / (Income): | | | | | | | | | | | | | | |
| Interest, net | **77,316** | **76,400** | 18,665 | 18,900 | 19,239 | 19,732 | **76,536** | 19,853 | 20,115 | 20,168 | 19,430 | **79,570** | **78,150** | **81,830** |
| AFUDC | **(2,275)** | **(5,130)** | (1,182) | (1,040) | (1,708) | (2,289) | **(6,219)** | (2,308) | (1,871) | (2,267) | (700) | **(7,150)** | **(4,200)** | **(4,200)** |
| (Gain) on Asset Sale | **(148)** | **0** | (169) | (1) | (170) | (130) | **(468)** | (207) | (121) | (62) | (110) | **(500)** | **(410)** | **(410)** |
| (Gain) on Debt Extinguish | | **0** | | | | (678) | **(678)** | | | | | | | |
| Equity (Earnings) / Loss from JV | **2,665** | **3,990** | 714 | 84 | 698 | 33,681 | **35,177** | 249 | 229 | (1,621) | 300 | **(840)** | **700** | **(200)** |
| Income Before Tax | **224,104** | **239,103** | 53,139 | 62,303 | 77,013 | 24,299 | **216,752** | 54,744 | 65,141 | 81,581 | 55,800 | **257,260** | **272,070** | **281,940** |
| Income Tax | **21,233** | **25,219** | 4,594 | 4,919 | 9,584 | (4,135) | **14,962** | 3,007 | 5,515 | 8,411 | 2,300 | **19,230** | **29,160** | **33,000** |
| % | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 10.3% | 4.1% | **7.5%** | **10.7%** | **11.7%** |
| Net Income--Cont'd Ops | **202,871** | **213,884** | 48,545 | 57,384 | 67,429 | 28,434 | **201,790** | 51,737 | 59,626 | 73,170 | 53,500 | **238,030** | **242,910** | **248,940** |
| Net Income Avail to Common | **$215,347** | **$233,239** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $73,170 | $53,500 | **$238,030** | **$242,910** | **$248,940** |
| EPS Disc Ops | **$0.10** | **$0.11** | - | - | - | - | | | | | | | | |
| EPS Continuing Ops | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.16 | **$1.14** | $0.29 | $0.33 | $0.41 | $0.30 | **$1.34** | **$1.37** | **$1.41** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.28 | **$1.26** | $0.29 | $0.33 | $0.41 | $0.30 | **$1.34** | **$1.37** | **$1.41** |
| Diluted Avg Shares | **176,814** | **177,763** | 177,792 | 177,913 | 177,495 | 177,261 | **177,763** | 177,819 | 178,084 | 177,817 | 177,716 | **177,859** | **177,462** | **177,057** |
| Dividend | **$0.584** | **$0.634** | $0.165 | $0.165 | $0.178 | $0.178 | **$0.686** | $0.178 | $0.178 | $0.1913 | *$0.1913* | ***$0.7386*** | ***$0.7826*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | | |
| Revenues | **1.5%** | **2.4%** | 4.2% | 5.4% | 5.0% | 3.0% | **4.4%** | 1.2% | -0.9% | 2.5% | 1.5% | **1.1%** | **0.9%** | **3.4%** |
| Op Income | **-5.0%** | **4.2%** | 6.6% | 0.4% | 0.0% | 2.8% | **2.1%** | 1.6% | 4.0% | 2.9% | 0.1% | **2.3%** | **5.5%** | **3.7%** |
| EPS--Cont'd Ops; Ex-Items | **10.4%** | **4.8%** | 14.5% | 4.7% | -0.2% | 2.0% | **4.5%** | 6.6% | 3.8% | 8.3% | 7.1% | **6.5%** | **2.3%** | **2.7%** |
| EBITDA | **-1.9%** | **3.6%** | 3.7% | 0.3% | 2.0% | 2.4% | **2.0%** | 2.4% | 3.0% | 3.3% | 2.2% | **2.8%** | **5.9%** | **4.5%** |
| O&M Expense | **5.0%** | **1.8%** | 2.1% | 13.3% | 8.5% | 5.0% | **7.2%** | 0.5% | -7.2% | 1.6% | -1.4% | **-1.7%** | **-4.9%** | **1.5%** |
| **Margin Analysis:** | | | | | | | | | | | | | | |
| O&M | **37.2%** | **37.0%** | 38.5% | 38.8% | 35.5% | 39.5% | **38.0%** | 38.2% | 36.3% | 35.2% | 38.4% | **37.0%** | **34.8%** | **34.2%** |
| Taxes other than Income | **6.9%** | **6.5%** | 7.7% | 6.7% | 6.6% | 6.1% | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | **6.3%** | **6.3%** |
| Op Income | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.2% | 37.4% | **39.9%** | **41.7%** | **41.8%** |
| Net Income | **26.6%** | **27.4%** | 25.5% | 27.9% | 30.5% | 14.4% | **24.8%** | 26.9% | 29.2% | 32.3% | 26.8% | **28.9%** | **29.2%** | **29.0%** |
| Tax Rate | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 10.3% | 4.1% | **7.5%** | **10.7%** | **11.7%** |
| | | | | | | *$21.4MM after tax Marcellus pipe JV impariment | | | | | | ***FY 2016 EPS guide $1.30-$1.35** | ***FY 2017 EPS guide $1.34-$1.39** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$5,058** | **$4,138** | $9,274 | $4,615 | $4,071 | $3,229 | **$3,229** | $3,981 | $4,923 | $3,712 | $2,990 | **$2,990** | **$1,650** | **$17,340** |
| A/R | **95,356** | **96,999** | 95,405 | 109,478 | 111,076 | 99,146 | **99,146** | 91,761 | 99,718 | 109,986 | 101,130 | **101,130** | **103,150** | **105,210** |
| Other | **71,255** | **51,385** | 59,546 | 61,267 | 53,160 | 25,995 | **25,995** | 26,991 | 27,791 | 27,703 | 26,510 | **26,510** | **27,040** | **27,580** |
| Total Current Assets | **171,669** | **152,522** | 164,225 | 175,360 | 168,307 | 128,370 | **128,370** | 122,733 | 132,432 | 141,401 | 130,630 | **130,630** | **131,840** | **150,130** |
| Net PP&E | **4,167,293** | **4,401,990** | 4,433,144 | 4,522,287 | 4,605,512 | 4,688,925 | **4,688,925** | 4,752,881 | 4,823,487 | 4,901,486 | 4,978,630 | **4,978,630** | **5,363,130** | **5,625,540** |
| Regulatory Assets | **585,600** | **725,591** | 748,911 | 771,561 | 799,858 | 830,118 | **830,118** | 859,830 | 887,135 | 911,455 | 911,460 | **911,460** | **913,460** | **915,460** |
| Goodwill | **28,223** | **31,184** | 33,954 | 33,942 | 33,907 | 33,866 | **33,866** | 42,304 | 42,234 | 41,921 | 41,920 | **41,920** | **42,020** | **42,120** |
| Other | **99,032** | **95,465** | 97,498 | 97,128 | 93,761 | 59,759 | **59,759** | 37,695 | 37,551 | 39,762 | 60,950 | **60,950** | **62,170** | **63,410** |
| **Total Assets** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,123,590 | **6,123,590** | **6,512,620** | **6,796,660** |
| CP of LTD | **86,288** | **58,615** | 47,042 | 38,503 | 47,599 | 35,593 | **35,593** | 29,096 | 38,212 | 83,777 | 175,092 | **175,092** | **54,051** | **94,797** |
| Loans Payable | **36,740** | **18,398** | 33,062 | 36,306 | 28,030 | 16,721 | **16,721** | 28,041 | 26,239 | 47,990 | 77,990 | **77,990** | **227,990** | **242,990** |
| A/P | **65,816** | **63,035** | 34,717 | 47,510 | 45,077 | 56,452 | **56,452** | 33,971 | 40,651 | 44,073 | 58,710 | **58,710** | **61,060** | **63,500** |
| Other | **78,066** | **85,287** | 90,298 | 81,076 | 95,316 | 84,433 | **84,433** | 83,235 | 74,118 | 76,158 | 86,120 | **86,120** | **87,840** | **89,600** |
| Total Current Liab | **266,910** | **225,335** | 205,119 | 203,395 | 216,022 | 193,199 | **193,199** | 174,343 | 179,220 | 251,998 | 397,912 | **397,912** | **430,941** | **490,887** |
| LTD | **1,468,583** | **1,560,655** | 1,594,980 | 1,660,526 | 1,681,114 | 1,743,612 | **1,743,612** | 1,744,108 | 1,775,874 | 1,726,493 | 1,664,258 | **1,664,258** | **1,735,299** | **1,714,553** |
| Shareholders' Equity | **1,535,043** | **1,655,383** | 1,676,294 | 1,702,927 | 1,728,681 | 1,725,930 | **1,725,930** | 1,760,707 | 1,791,163 | 1,832,200 | 1,920,390 | **1,920,390** | **2,227,230** | **2,494,790** |
| **Total Liab & SE** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,123,590 | **6,123,590** | **6,512,620** | **6,796,660** |

| Cash Flow Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$202,871** | **$213,884** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $73,170 | $53,500 | **$238,030** | **$242,910** | **$248,940** |
| D&A | **124,793** | **126,535** | 31,349 | 31,973 | 32,797 | 32,618 | **128,737** | 32,595 | 32,147 | 31,377 | 34,860 | **130,979** | **143,000** | **152,590** |
| Deferred Income Tax | **26,742** | **31,477** | 2,688 | 2,704 | 8,463 | 2,651 | **16,506** | 1,436 | 3,615 | 10,294 | 10,000 | **25,350** | **40,000** | **40,000** |
| (Inc) / Dec in Working Cap | **83,901** | **(25,333)** | (29,874) | (12,223) | 18,316 | 39,587 | **15,806** | (17,290) | (11,194) | (4,718) | 19,988 | **(13,214)** | **1,410** | **0** |
| Operating CF | **438,307** | **346,563** | 52,708 | 79,838 | 127,005 | 103,290 | **362,839** | 68,478 | 84,194 | 110,123 | 118,348 | **381,145** | **427,320** | **441,530** |
| Cap ex | **(308,171)** | **(328,605)** | (70,284) | (80,000) | (107,194) | (107,211) | **(364,689)** | (72,984) | (95,603) | (101,432) | (110,000) | **(380,019)** | **(400,000)** | **(395,000)** |
| JV Investment | **(14,700)** | **-** | - | - | - | - | **-** | - | - | - | - | **-** | **-** | **-** |
| Dividends | **(102,889)** | **(112,106)** | (29,176) | (29,220) | (31,446) | (31,406) | **(121,248)** | (31,513) | (31,558) | (33,923) | (33,997) | **(130,991)** | **(138,880)** | **(138,563)** |
| Release (Addition) of Const Funds | **23,525** | **-** | 32 | - | 15 | - | **47** | - | - | - | - | **-** | **-** | **-** |
| Free Cash Flow | **36,072** | **(94,148)** | (46,720) | (29,382) | (11,620) | (35,327) | **(123,051)** | (36,019) | (42,967) | (25,232) | (25,649) | **(129,865)** | **(111,560)** | **(92,033)** |
| FCF/Share | | | | | | | | | | | | | | |
| Acquisitions | **(14,997)** | **(14,616)** | (788) | (25,131) | (408) | (2,662) | **(28,989)** | (4,461) | (1,165) | - | (2,000) | **(7,630)** | **(127,500)** | **(20,000)** |
| Divestitures | **5,315** | **558** | 232 | 58 | 223 | 135 | **648** | 2,853 | 3,586 | 106 | - | **-** | **-** | **-** |
| Proceeds from LT Debt | **263,834** | **317,699** | 52,629 | 185,828 | 74,983 | 247,104 | **560,544** | 96,314 | 72,983 | 64,991 | 35,903 | **270,190** | **277,000** | **179,000** |
| Repayments of LT Debt | **(300,323)** | **(253,192)** | (29,800) | (129,024) | (45,027) | (196,556) | **(400,407)** | (80,341) | (32,309) | (68,709) | (35,903) | **(217,260)** | **(177,000)** | **(54,000)** |
| Net Proceeds (Repayments) ST Debt | **(43,643)** | **(18,342)** | 14,664 | 3,244 | (8,276) | (11,309) | **(1,677)** | 11,320 | (1,802) | 21,751 | 30,000 | **61,270** | **150,000** | **15,000** |
| Net Change in Cash Overdraft | **9,872** | **(322)** | (21,431) | 5,384 | 1,129 | 14,179 | **(739)** | (17,250) | 1,912 | 2,752 | - | **(12,590.00)** | **-** | **-** |
| Repurchase of Common Stock | **(12,823)** | **(15,756)** | (3,754) | (4,203) | (12,311) | (4,979) | **(25,247)** | (2,827) | (32) | (46) | (7,570) | **(10,475)** | **(30,280)** | **(30,280)** |
| Net Cash Flow--Cont'd Ops | **(20,705)** | **(70,823)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (55) | 739 | (719) | **(32,495)** | **(1,340)** | **15,687** |
| CF--Disc Ops | **88,643** | **48,634** | - | - | - | - | **-** | - | - | | | **-** | **-** | **-** |
| Net Cash Flow | **67,938** | **(22,189)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (55) | 739 | (719) | **(32,495)** | **(1,340)** | **15,687** |
| EBITDA | **425,647** | **440,893** | 102,516 | 112,219 | 127,869 | 107,233 | **449,837** | 104,926 | 115,640 | 132,069 | 109,580 | **462,220** | **489,310** | **511,550** |
| EBITDA margin | **55.9%** | **56.5%** | 53.9% | 54.5% | 57.8% | 54.4% | **55.2%** | 54.5% | 56.7% | 58.3% | 54.8% | **56.2%** | **58.9%** | **59.5%** |
| EV / TTM EBITDA | **13.5x** | **14.4x** | 14.2x | 13.6x | 14.4x | 15.7x | **15.7x** | 16.4x | 17.9x | 15.7x | 15.6x | **15.6x** | **14.6x** | **14.0x** |

| Selected Financial Statistics | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16E | FY'16E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Book Value | **$8.64** | **$9.32** | $9.43 | $9.57 | $9.74 | $9.74 | **$9.74** | $9.90 | $10.06 | $10.30 | $10.81 | **$10.81** | **$12.56** | **$14.10** |
| Tangible BV | **$8.48** | **$9.14** | $9.24 | $9.38 | $9.55 | $9.55 | **$9.55** | $9.66 | $9.82 | $10.07 | $10.57 | **$10.57** | **$12.32** | **$13.86** |
| Cap Ex / Depreciation | **2.5x** | **2.6x** | 2.2x | 2.5x | 3.3x | 3.3x | **2.8x** | 2.2x | 3.0x | 3.2x | 3.2x | **2.9x** | **2.8x** | **2.6x** |
| Price / Book | **2.7x** | **2.9x** | 2.8x | 2.6x | 2.7x | 3.1x | **3.1x** | 3.2x | 3.5x | 3.0x | 2.8x | **2.8x** | **2.4x** | **2.1x** |
| Total Net Debt/ Total Capital | **50.8%** | **49.7%** | 49.8% | 50.4% | 50.3% | 50.9% | **50.9%** | 50.5% | 50.6% | 50.3% | 49.9% | **49.9%** | **47.5%** | **44.9%** |
| LT Debt/Total Capital | **48.9%** | **48.5%** | 48.8% | 49.4% | 49.3% | 50.3% | **50.3%** | 49.8% | 49.8% | 48.5% | 46.4% | **46.4%** | **43.8%** | **40.7%** |
| ROE (TTM)--*adj for Q4'15 JV chg* | **14.0%** | **13.5%** | 13.6% | 13.5% | 13.3% | 13.1% | **13.1%** | 13.2% | 13.1% | 13.3% | 13.2% | **13.2%** | **12.0%** | **10.8%** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

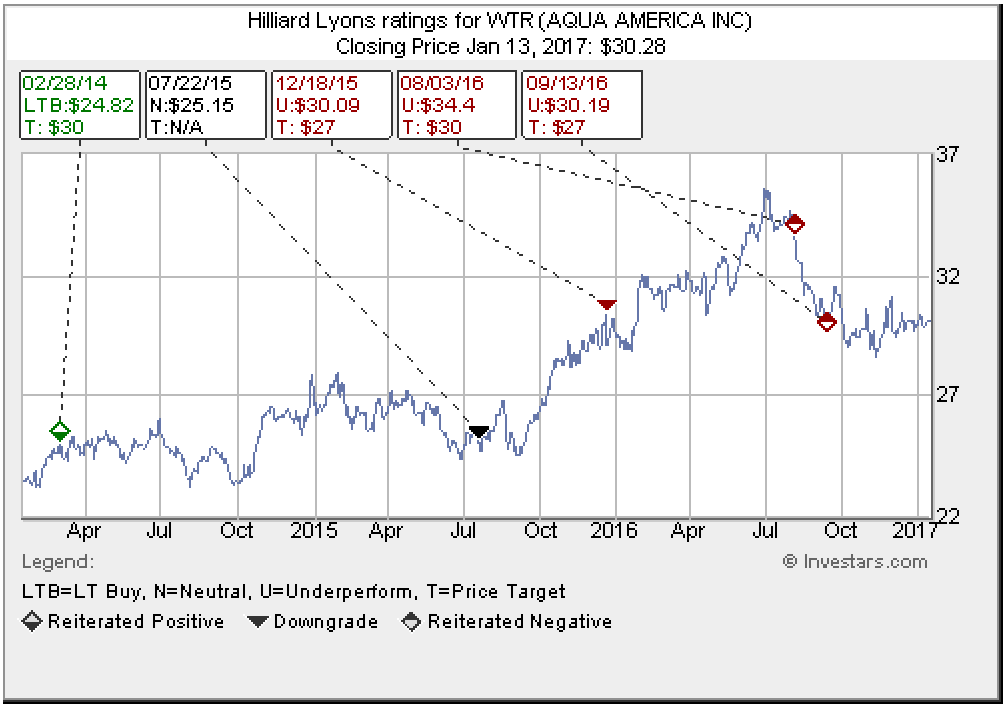
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| Rating | Hilliard Lyons Recommended Issues # of Stocks Covered | % of Stocks Covered | Investment Banking Provided in Past 12 Mo. Banking | No Banking |
|---|---|---|---|---|
| **Buy** | 33 | 27% | 18% | 82% |
| **Hold/Neutral** | 76 | 62% | 7% | 93% |
| **Sell** | 13 | 11% | 0% | 100% |

*As of 6 January 2017*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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HILLIARD LYONS

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May 4, 2017

COMPANY UPDATE /
ESTIMATE CHANGE

**Key Metrics**

| | | |
|---|---|---|
| WTR - NYSE - as of | 5/3/17 | $32.72 |
| Price Target | | $27.00 |
| 52-Week Range | | $28.03 - $35.83 |
| Shares Outstanding (mm) | | 177.4 |
| Market Cap. ($mm) | | $5,806.0 |
| 1-Mo. Average Daily Volume | | 693,471 |
| Institutional Ownership | | 52.8% |
| LTD / Total Capital | Q1'17 | 49.0% |
| ROE--Adj | TTM | 12.7% |
| Book Value / Share | Q1'17 | $10.49 |
| Price / Book Value | | 3.1x |
| Dividend Yield | | 2.3% |
| LTM EBITDA Margin | | 56.1% |

**EPS (continuing ops) FY 12/31**

| | 2016A | Prior 2017E | Current 2017E | | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|---|
| 1Q | $0.29 | -- | $0.28 | A | -- | -- |
| 2Q | $0.33 | $0.35 | $0.35 | | -- | -- |
| 3Q | $0.41 | $0.41 | $0.41 | | -- | -- |
| 4Q | $0.28 | $0.31 | $0.30 | | -- | -- |
| Year | $1.32 | $1.37 | $1.34 | | $1.41 | $1.39 |
| P/E | 24.8x | | 24.4x | | | 23.5x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2016A | Prior 2017E | Current 2017E | | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|---|
| 1Q | $193 | -- | $188 | A | -- | -- |
| 2Q | $204 | $205 | $201 | | -- | -- |
| 3Q | $227 | $229 | $224 | | -- | -- |
| 4Q | $197 | $203 | $200 | | -- | -- |
| Year | $820 | $831 | $812 | | $861 | $848 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**Down Q1 at WTR; Reiterating Underperform Rating.**

**Investment Highlights**

- Aqua America reported Q1'17 EPS of $0.28, down a penny from the year-ago period; results missed our estimate for $0.30, which was in line with consensus.
- Revenue slid 2.5% to $188MM in Q1, below our target of $194MM and consensus at $195MM. About $2.5MM of our miss is attributable to divesting market-based businesses, though this has little impact on overall profitability. A bit more impactful, we underestimated a $2MM headwind from usage trends.
- Four muni acquisitions representing ~8,800 customers and purchase consideration of $113.1MM remain in various pending stages. We maintain that a few 'wins' in the M&A arena would be positive for the narrative.
- O&M expense fell 6.0% in Q1, but similar to revenue, comparisons are a bit skewed by the exiting/divesture of market-based businesses. In our view, same system O&M growth of +1% to 2% in 2017 is achievable.
- Q1 Cap Ex at $95MM was below our model, but still well above Q1'16's $73MM spend. The 2017-2019 target for investment remains $1.2B, excluding M&A.
- Aqua reiterated EPS guidance for 2017 in the range of $1.34 to $1.39; given the downside to our Q1, our 2017E EPS now rests on the bottom bound of the range. Our 2018E EPS slides $0.02 to $1.41.
- We calculate TTM ROE at 12.7%, an (adjusted) low point since the Q4'12 implementation of 'repair tax' accounting. This bodes well for potential rate activity, with guidance firming around PA surcharge and general rate filings in 2017 and 2018, respectively.
- We are reiterating our Underperform rating and 1-year $27 price target. At our target, WTR would trade ~20x our 2017E EPS, which we view as fair value given continued expectations for ROE compression and projections for below-industry near-term EPS growth.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| **Income Statements (000's)** | **FY'14** | **FY'15** | Q1'16 | Q2'16 | Q3'16 | Q4'16 | **FY'16** | Q1'17 | Q2'17E | Q3'17E | Q4'17E | **FY'17E** | **FY'18E** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$779,903** | **$814,204** | $192,607 | $203,876 | $226,593 | $196,799 | **$819,875** | $187,787 | $200,940 | $223,800 | $199,660 | **$812,190** | **$847,600** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **288,560** | **309,310** | 73,541 | 73,994 | 79,812 | 77,550 | **304,897** | 69,128 | 67,790 | 71,810 | 73,510 | **282,240** | **286,470** |
| Depreciation | **123,050** | **125,290** | 32,145 | 31,619 | 33,881 | 33,342 | **130,987** | 33,837 | 33,650 | 36,220 | 36,150 | **139,860** | **150,020** |
| Amortization | **3,480** | **3,447** | 450 | 528 | 389 | 654 | **2,021** | 189 | 530 | 390 | 660 | **1,770** | **1,770** |
| Taxes other than Income | **50,450** | **55,057** | 14,140 | 14,242 | 14,712 | 13,291 | **56,385** | 14,737 | 12,860 | 13,650 | 13,580 | **54,830** | **53,370** |
| Operating Income | **314,363** | **321,100** | 72,331 | 83,493 | 97,799 | 71,962 | **325,585** | 69,896 | 86,110 | 101,730 | 75,760 | **333,490** | **355,970** |
| % | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 37.2% | 42.9% | 45.5% | 37.9% | **41.1%** | **42.0%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **76,400** | **76,536** | 19,853 | 20,115 | 20,168 | 20,458 | **80,594** | 21,326 | 19,230 | 19,380 | 19,510 | **79,450** | **81,030** |
| AFUDC | **(5,130)** | **(6,219)** | (2,308) | (1,871) | (2,267) | (2,369) | **(8,815)** | (3,193) | (1,250) | (950) | (750) | **(6,140)** | **(4,200)** |
| (Gain) on Asset Sale | **0** | **(468)** | (207) | (121) | (62) | 12 | **(378)** | (269) | (100) | (100) | (110) | **(580)** | **(410)** |
| (Gain) on Debt Extinguish | **0** | **(678)** | | | | | | | | | | | |
| Equity (Earnings) / Loss from JV | **3,990** | **35,177** | 249 | 229 | (1,621) | 167 | **(976)** | 30 | 150 | 150 | 200 | **530** | **(200)** |
| Income Before Tax | **239,103** | **216,752** | 54,744 | 65,141 | 81,581 | 53,694 | **255,160** | 52,002 | 68,080 | 83,250 | 56,910 | **260,230** | **279,750** |
| Income Tax | **25,219** | **14,962** | 3,007 | 5,515 | 8,411 | 4,045 | **20,978** | 2,930 | 5,850 | 9,950 | 3,300 | **22,030** | **32,170** |
| % | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 5.6% | 8.6% | 12.0% | 5.8% | **8.5%** | **11.5%** |
| Net Income--Cont'd Ops | **213,884** | **201,790** | 51,737 | 59,626 | 73,170 | 49,649 | **234,182** | 49,072 | 62,230 | 73,300 | 53,610 | **238,200** | **247,580** |
| Net Income Avail to Common | **$233,239** | **$201,790** | $51,737 | $59,626 | $73,170 | $49,649 | **$234,182** | $49,072 | $62,230 | $73,300 | $53,610 | **$238,210** | **$247,580** |
| EPS Disc Ops | **$0.11** | | | | | | | | | | | | |
| EPS Continuing Ops | **$1.20** | **$1.14** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.28 | $0.35 | $0.41 | $0.30 | **$1.34** | **$1.39** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.20** | **$1.26** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.28 | $0.35 | $0.41 | $0.30 | **$1.34** | **$1.39** |
| Diluted Avg Shares | **177,763** | **177,763** | 177,819 | 178,084 | 177,817 | 177,880 | **177,846** | 177,969 | 178,007 | 178,044 | 178,082 | **178,025** | **178,175** |
| Dividend | **$0.634** | **$0.686** | $0.178 | $0.178 | $0.1913 | $0.1913 | **$0.739** | $0.1913 | *$0.1913* | *$0.2000* | *$0.2000* | ***$0.7826*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **2.4%** | **4.4%** | 1.2% | -0.9% | 2.5% | -0.1% | **0.7%** | -2.5% | -1.4% | -1.2% | 1.5% | **-0.9%** | **4.4%** |
| Op Income | **4.2%** | **2.1%** | 1.6% | 4.0% | 2.9% | -3.6% | **1.4%** | -3.4% | 3.1% | 4.0% | 5.3% | **2.4%** | **6.7%** |
| EPS--Cont'd Ops; Ex-Items | **4.8%** | **4.5%** | 6.6% | 3.8% | 8.3% | -0.7% | **4.8%** | -5.2% | 4.4% | 0.0% | 7.9% | **1.6%** | **3.8%** |
| EBITDA | **3.6%** | **2.0%** | 2.4% | 3.0% | 3.3% | -1.2% | **1.9%** | -1.0% | 4.0% | 4.7% | 6.2% | **3.6%** | **6.9%** |
| O&M Expense | **1.8%** | **7.2%** | 0.5% | -7.2% | 1.6% | -0.4% | **-1.4%** | -6.0% | -8.4% | -10.0% | -5.2% | **-7.4%** | **1.5%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **37.0%** | **38.0%** | 38.2% | 36.3% | 35.2% | 39.4% | **37.2%** | 36.8% | 33.7% | 32.1% | 36.8% | **34.8%** | **33.8%** |
| Taxes other than Income | **6.5%** | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | 7.8% | 6.4% | 6.1% | 6.8% | **6.8%** | **6.3%** |
| Op Income | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 37.2% | 42.9% | 45.5% | 37.9% | **41.1%** | **42.0%** |
| Net Income | **27.4%** | **24.8%** | 26.9% | 29.2% | 32.3% | 25.2% | **28.6%** | 26.1% | 31.0% | 32.8% | 26.9% | **29.3%** | **29.2%** |
| Tax Rate | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 5.6% | 8.6% | 12.0% | 5.8% | **8.5%** | **11.5%** |
| | | | | | | | ***FY 2016 EPS guide $1.30-$1.35** | | | | | ***FY 2017 EPS guide $1.34-$1.39** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17p | Q2'17E | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$4,138** | **$3,229** | $3,981 | $4,923 | $3,712 | $3,763 | **$3,763** | $2,000 | $5,800 | $11,780 | $13,950 | **$13,950** | **$45,400** |
| A/R | **96,999** | **99,146** | 91,761 | 99,718 | 109,986 | 97,394 | **97,394** | 94,000 | 101,710 | 112,190 | 99,340 | **99,340** | **101,330** |
| Other | **51,385** | **25,995** | 26,991 | 27,791 | 27,703 | 27,493 | **27,493** | 26,463 | 28,350 | 28,260 | 28,040 | **28,040** | **28,600** |
| Total Current Assets | **152,522** | **128,370** | 122,733 | 132,432 | 141,401 | 128,650 | **128,650** | 122,463 | 135,860 | 152,230 | 141,330 | **141,330** | **175,330** |
| Net PP&E | **4,401,990** | **4,688,925** | 4,752,881 | 4,823,487 | 4,901,486 | 5,001,615 | **5,001,615** | 5,057,826 | 5,156,150 | 5,314,540 | 5,407,730 | **5,407,730** | **5,670,940** |
| Regulatory Assets | **725,591** | **830,118** | 859,830 | 887,135 | 911,455 | 948,647 | **948,647** | 951,000 | 951,000 | 951,000 | 951,000 | **951,000** | **953,000** |
| Goodwill | **31,184** | **33,866** | 42,304 | 42,234 | 41,921 | 42,208 | **42,208** | 42,300 | 42,300 | 42,300 | 42,300 | **42,300** | **42,400** |
| Other | **95,465** | **59,759** | 37,695 | 37,551 | 39,762 | 37,871 | **37,871** | 62,006 | 38,300 | 40,560 | 38,630 | **38,630** | **39,400** |
| **Total Assets** | **5,406,752** | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | **6,158,991** | 6,235,595 | 6,323,610 | 6,500,630 | 6,580,990 | **6,580,990** | **6,881,070** |
| CP of LTD | **58,615** | **35,593** | 29,096 | 38,212 | 83,777 | 150,671 | **150,671** | 147,028 | 103,092 | 103,092 | 54,051 | **54,051** | **94,797** |
| Loans Payable | **18,398** | **16,721** | 28,041 | 26,239 | 47,990 | 6,535 | **6,535** | 10,000 | 85,000 | 105,200 | 135,200 | **135,200** | **150,200** |
| A/P | **63,035** | **56,452** | 33,971 | 40,651 | 44,073 | 59,872 | **59,872** | 35,000 | 42,280 | 45,840 | 62,270 | **62,270** | **64,760** |
| Other | **85,287** | **84,433** | 83,235 | 74,118 | 76,158 | 84,458 | **84,458** | 85,572 | 75,600 | 77,680 | 86,150 | **86,150** | **87,870** |
| Total Current Liab | **225,335** | **193,199** | 174,343 | 179,220 | 251,998 | 301,536 | **301,536** | 277,600 | 305,972 | 331,812 | 337,671 | **337,671** | **397,627** |
| LTD | **1,560,655** | **1,743,612** | 1,744,108 | 1,775,874 | 1,726,493 | 1,737,605 | **1,737,605** | 1,797,511 | 1,713,729 | 1,663,729 | 1,712,770 | **1,712,770** | **1,692,024** |
| Shareholders' Equity | **1,655,383** | **1,725,930** | 1,760,707 | 1,791,163 | 1,832,200 | 1,850,068 | **1,850,068** | 1,867,227 | 2,071,580 | 2,268,600 | 2,281,610 | **2,281,610** | **2,564,140** |
| **Total Liab & SE** | **5,406,752** | **5,741,038** | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | **6,158,991** | 6,235,595 | 6,323,610 | 6,500,630 | 6,580,990 | **6,580,990** | **6,881,070** |

| Cash Flow Analysis | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17E | Q2'17E | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$213,884** | **$201,790** | $51,737 | $59,626 | $73,170 | $49,649 | **$234,182** | $49,072 | $62,230 | $73,300 | $53,610 | **$238,200** | **$247,580** |
| D&A | **126,535** | **128,737** | 32,595 | 32,147 | 31,377 | 36,889 | **133,008** | 34,026 | 34,180 | 36,610 | 36,810 | **141,626** | **151,790** |
| Deferred Income Tax | **31,477** | **16,506** | 1,436 | 3,615 | 10,294 | 1,905 | **17,250** | 10,000 | 10,000 | 10,000 | 10,000 | **40,000** | **40,000** |
| (Inc) / Dec in Working Cap | **(25,333)** | **15,806** | (17,290) | (11,194) | (4,718) | 36,901 | **3,699** | (19,334) | (12,289) | (4,750) | 36,140 | **(233)** | **1,610** |
| Operating CF | **346,563** | **362,839** | 68,478 | 84,194 | 110,123 | 125,344 | **388,139** | 73,764 | 94,121 | 115,160 | 136,560 | **419,593** | **440,980** |
| Cap ex | **(328,605)** | **(364,689)** | (72,984) | (95,603) | (101,432) | (112,977) | **(382,996)** | 95,000 | (115,000) | (120,000) | (105,000) | **(245,000)** | **(395,000)** |
| JV Investment | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | **(112,106)** | **(121,248)** | (31,513) | (31,558) | (33,923) | (33,929) | **(130,923)** | (34,045) | (34,053) | (35,609) | (35,616) | **(139,323)** | **(139,441)** |
| Release (Addition) of Const Funds | - | **47** | - | - | - | - | - | - | - | - | - | - | - |
| Free Cash Flow | **(94,148)** | **(123,051)** | (36,019) | (42,967) | (25,232) | (21,562) | **(125,780)** | 134,719 | (54,932) | (40,449) | (4,056) | **35,270** | **(93,461)** |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | **(14,616)** | **(28,989)** | (4,461) | (1,165) | - | (3,797) | **(9,423)** | (100) | (17,500) | (75,000) | (25,000) | **(117,600)** | **(20,000)** |
| Divestitures | **558** | **648** | 2,853 | 3,586 | 106 | 1,201 | **7,746** | - | - | - | - | - | - |
| Proceeds from LT Debt | **317,699** | **560,544** | 96,314 | 72,983 | 64,991 | 269,298 | **503,586** | - | - | 172,000 | 105,000 | **277,000** | **179,000** |
| Repayments of LT Debt | **(253,192)** | **(400,407)** | (80,341) | (32,309) | (68,709) | (191,728) | **(373,087)** | - | - | (72,000) | (105,000) | **(177,000)** | **(54,000)** |
| Net Proceeds (Repayments) ST Debt | **(18,342)** | **(1,677)** | 11,320 | (1,802) | 21,751 | (41,455) | **(10,186)** | 20,000 | 75,000 | 20,200 | 30,000 | **145,200** | **15,000** |
| Net Change in Cash Overdraft | **(322)** | **(739)** | (17,250) | 1,912 | 2,752 | 4,510 | **(8,076)** | - | - | - | - | - | - |
| Repurchase of Common Stock | **(15,756)** | **(25,247)** | (2,827) | (32) | (46) | (123) | **(3,028)** | (3,272) | (3,272) | (3,272) | (3,272) | **(13,088)** | **(13,088)** |
| Net Cash Flow--Cont'd Ops | **(70,823)** | **(10,701)** | (25,911) | (55) | 739 | 12,627 | **(12,600)** | 155,847 | 3,796 | 5,979 | 2,172 | **167,782** | **31,451** |
| CF--Disc Ops | **48,634** | - | - | - | | - | - | | | | | - | - |
| Net Cash Flow | **(22,189)** | **(10,701)** | (25,911) | (55) | 739 | 12,627 | **(12,600)** | 155,847 | 3,796 | 5,979 | 2,172 | **167,782** | **31,451** |
| EBITDA | **440,893** | **449,837** | 104,926 | 115,640 | 132,069 | 105,958 | **458,593** | 103,922 | 120,290 | 138,340 | 112,570 | **475,120** | **507,760** |
| EBITDA margin | **56.5%** | **55.2%** | 54.5% | 56.7% | 58.3% | 53.8% | **55.9%** | 55.3% | 59.9% | 61.8% | 56.4% | **58.5%** | **59.9%** |
| EV / TTM EBITDA | **14.4x** | **15.7x** | 16.4x | 17.9x | 15.7x | 16.8x | **16.8x** | 17.0x | 16.5x | 16.2x | 16.0x | **16.0x** | **14.9x** |

| Selected Financial Statistics | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17 | Q2'17E | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Book Value | **$9.32** | **$9.74** | $9.90 | $10.06 | $10.30 | $10.40 | **$10.40** | $10.49 | $11.64 | $12.74 | $12.81 | **$12.81** | **$14.39** |
| Tangible BV | **$9.14** | **$9.55** | $9.66 | $9.82 | $10.07 | $10.16 | **$10.16** | $10.25 | $11.40 | $12.50 | $12.57 | **$12.57** | **$14.15** |
| Cap Ex / Depreciation | **2.6x** | **2.8x** | 2.2x | 3.0x | 3.2x | 3.1x | **2.9x** | -2.8x | 3.4x | 3.3x | 2.9x | **1.7x** | **2.6x** |
| Price / Book | **2.9x** | **3.1x** | 3.2x | 3.5x | 3.0x | 3.1x | **3.1x** | 3.1x | 2.8x | 2.6x | 2.6x | **2.6x** | **2.3x** |
| Total Net Debt/ Total Capital | **49.7%** | **50.9%** | 50.5% | 50.6% | 50.3% | 50.5% | **50.5%** | 51.1% | 47.8% | 45.1% | 45.3% | **45.3%** | **42.5%** |
| LT Debt/Total Capital | **48.5%** | **50.3%** | 49.8% | 49.8% | 48.5% | 48.4% | **48.4%** | 49.0% | 45.3% | 42.3% | 42.9% | **42.9%** | **39.8%** |
| ROE (TTM)--*adj for Q4'15 JV chg* | **13.5%** | **13.1%** | 13.2% | 13.1% | 13.3% | 13.1% | **13.1%** | 12.7% | 12.4% | 11.8% | 11.5% | **11.5%** | **10.2%** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

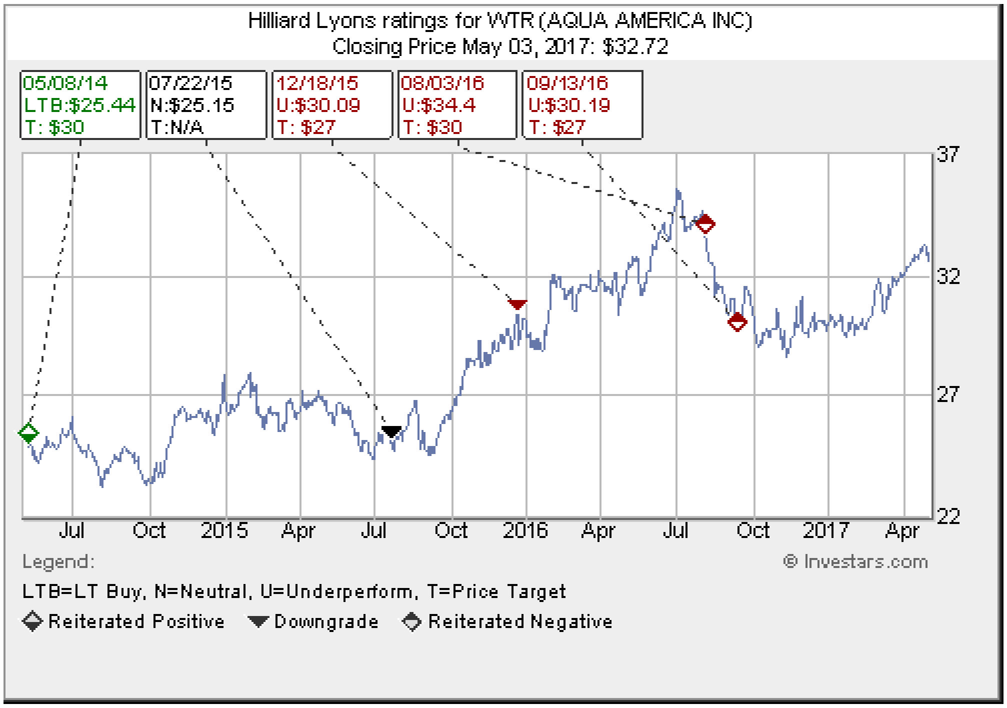
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 36 | 30% | 14% | 86% |
| **Hold/Neutral** | 71 | 58% | 6% | 94% |
| **Sell** | 15 | 12% | 7% | 93% |

*As of 5 April 2017*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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August 3, 2016

COMPANY UPDATE / TARGET CHANGE
ESTIMATE CHANGE

**Key Metrics**

| | | | |
|---|---|---|---|
| WTR - NYSE - as of | 8/2/16 | | $34.40 |
| Price Target | | | $30.00 |
| 52-Week Range | | $24.45 - | $35.83 |
| Shares Outstanding (mm) | | | 177.3 |
| Market Cap. ($mm) | | | $6,098.2 |
| 1-Mo. Average Daily Volume | | | 773,656 |
| Institutional Ownership | | | 51.5% |
| LTD / Total Capital | Q2'16 | | 49.8% |
| ROE--Adj | TTM | | 13.1% |
| Book Value / Share | Q2'16 | | $10.06 |
| Price / Book Value | | | 3.4x |
| Dividend Yield | | | 2.1% |
| LTM EBITDA Margin | | | - |

**EPS (continuing ops) FY 12/31**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $0.27 | -- | $0.29 | A | -- | -- |
| 2Q | $0.32 | -- | $0.33 | A | -- | -- |
| 3Q | $0.38 | $0.39 | $0.39 | | -- | -- |
| 4Q | *$0.28 | $0.29 | $0.30 | | -- | -- |
| Year | $1.26 | $1.31 | $1.31 | | $1.36 | $1.35 |
| P/E | 27.3x | | 26.3x | | | 25.5x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2015A | Prior 2016E | Current 2016E | | Prior 2017E | Current 2017E |
|---|---|---|---|---|---|---|
| 1Q | $190 | -- | $193 | A | -- | -- |
| 2Q | $206 | -- | $204 | A | -- | -- |
| 3Q | $221 | $228 | $223 | | -- | -- |
| 4Q | $197 | $202 | $199 | | -- | -- |
| Year | $814 | $836 | $818 | | $873 | $849 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

## Q2'16 Results from WTR; Reiterating Underperform but Raising Price Target.

### Investment Highlights

- Aqua America reported Q2'16 EPS of $0.33 versus $0.32 in the year-ago period. EPS in the quarter met consensus, falling a penny shy of our target. Lower operating expenses drove growth in the quarter.
- Revenue slipped 0.9% to $203.9MM in Q2, missing both our estimate and consensus. We expect nominal growth would have been positive if not for rationalization of market-based businesses, which weighed by ~$3MM in a trend we expect to persist across the balance of 2016.
- WTR has ~$10.5MM in rate and surcharge applications pending in NJ, IN, and OH, with ~$5MM extra in awards so far this year. Material rate activity in PA is still at least a couple years away, meaning dynamism to top line is likely to key off acquisitions.
- O&M expense fell 7.2% in Q2, driving our EPS beat; non recurrence of some executive severance and reduction on the market-based side were most impactful. Same system O&M is still expected to be +1% to +2% for 2016.
- The effective tax rate in Q1 ticked up to 8.5% from 7.9% in the year-ago period, as WTR continues to maximize its repair tax 'lever'.
- Management reiterated FY 2016 EPS guidance in the range of $1.30-$1.35. Our FY 2016 estimate is unchanged at $1.31; our 2017E slips $0.01 to $1.35.
- We are reiterating our Underperform rating, but raise our 1-year price target to $30, reflecting the current Utility sector valuation environment. At our $30, WTR would trade ~22x our 2016E EPS, in line with the stock's 5-yr average multiple. We still expect valuation compression on the grounds of slow growth in a falling earned-ROE environment.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## Additional Discussion—Q2 Results

Q2 was a good quarter operationally, in our view, but just a decent quarter financially. EPS growth of 3.8% marks the fifth quarter of the past six in which WTR has grown earnings per share at a rate <5%. Revenue growth remains challenging without rate activity in Pennsylvania being in the mix; however, we are actually pleased to see some of the market-based businesses being either liquidated or disposed. As has been a staple at WTR for years, Operations & Maintenance was strong, in our opinion. Market-based rationalization helped with the yr/yr decline versus an easy comp, but WTR nonetheless bettered our expectations as the company is seemingly able to efficiently search for M&A targets.

## Additional Discussion—Final Thoughts

As our hike in price target should imply, we are cognizant of the current valuation environment for the Utility sector; however, we continue to flag WTR as one of the more at-risk stocks, if/when the sector sees waning tactical and/or top down support. We identify essentially no new information that neutralizes our view that earned-ROE will fall moving forward, which could occur in tandem with what we view as only average EPS growth. We project Aqua to post a third consecutive year of sub-5% EPS growth in 2016 (and a 4th in 2017), which is not even competitive with the higher-end stories we target in the slower growth gas and electric utility arena. With our view toward likely multiple compression at some point, we are compelled to reiterate our Underperform rating.

## Suitability

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

| Aqua America, Inc. | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Income Statements (000's)** | **FY'13** | **FY'14** | Q1'15 | Q2'15 | Q3'15 | Q4'15 | **FY'15** | Q1'16 | Q2'16 | Q3'16E | Q4'16E | **FY'16E** | **FY'17E** |
| **Operating Revenues** | **$761,893** | **$779,903** | $190,326 | $205,760 | $221,051 | $197,067 | **$814,204** | $192,607 | $203,876 | $222,810 | $199,120 | **$818,410** | **$849,340** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **283,561** | **288,560** | 73,189 | 79,746 | 78,519 | 77,856 | **309,310** | 73,541 | 73,994 | 76,520 | 76,800 | **300,860** | **309,880** |
| Depreciation | **118,414** | **123,050** | 30,500 | 31,049 | 31,981 | 31,760 | **125,290** | 32,145 | 31,619 | 34,110 | 33,690 | **131,560** | **138,200** |
| Amortization | **5,571** | **3,480** | 849 | 924 | 816 | 858 | **3,447** | 450 | 528 | 1,020 | 1,070 | **3,070** | **3,180** |
| Taxes other than Income | **52,685** | **50,450** | 14,621 | 13,795 | 14,663 | 11,978 | **55,057** | 14,140 | 14,242 | 13,590 | 13,540 | **55,510** | **53,500** |
| Operating Income | **301,662** | **314,363** | 71,167 | 80,246 | 95,072 | 74,615 | **321,100** | 72,331 | 83,493 | 97,570 | 74,020 | **327,410** | **344,580** |
| % | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.8% | 37.2% | **40.0%** | **40.6%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **77,316** | **76,400** | 18,665 | 18,900 | 19,239 | 19,732 | **76,536** | 19,853 | 20,115 | 19,850 | 19,760 | **79,580** | **79,750** |
| AFUDC | **(2,275)** | **(5,130)** | (1,182) | (1,040) | (1,708) | (2,289) | **(6,219)** | (2,308) | (1,871) | (900) | (700) | **(5,780)** | **(4,200)** |
| (Gain) on Asset Sale | **(148)** | **0** | (169) | (1) | (170) | (130) | **(468)** | (207) | (121) | (100) | (110) | **(540)** | **(410)** |
| (Gain) on Debt Extinguish | | **0** | | | | (678) | **(678)** | | | | | | |
| Equity (Earnings) / Loss from JV | **2,665** | **3,990** | 714 | 84 | 698 | 33,681 | **35,177** | 249 | 229 | 500 | 300 | **1,280** | **1,200** |
| Income Before Tax | **224,104** | **239,103** | 53,139 | 62,303 | 77,013 | 24,299 | **216,752** | 54,744 | 65,141 | 78,220 | 54,770 | **252,870** | **268,240** |
| Income Tax | **21,233** | **25,219** | 4,594 | 4,919 | 9,584 | (4,135) | **14,962** | 3,007 | 5,515 | 8,990 | 1,910 | **19,420** | **27,670** |
| % | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 11.5% | 3.5% | **7.7%** | **10.3%** |
| Net Income--Cont'd Ops | **202,871** | **213,884** | 48,545 | 57,384 | 67,429 | 28,434 | **201,790** | 51,737 | 59,626 | 69,230 | 52,860 | **233,450** | **240,570** |
| Net Income Avail to Common | **$215,347** | **$233,239** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $69,230 | $52,860 | **$233,450** | **$240,570** |
| EPS Disc Ops | **$0.10** | **$0.11** | - | - | - | - | | | | | | | |
| EPS Continuing Ops | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.16 | **$1.14** | $0.29 | $0.33 | $0.39 | $0.30 | **$1.31** | **$1.35** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.15** | **$1.20** | $0.27 | $0.32 | $0.38 | $0.28 | **$1.26** | $0.29 | $0.33 | $0.39 | $0.30 | **$1.31** | **$1.35** |
| Diluted Avg Shares | **176,814** | **177,763** | 177,792 | 177,913 | 177,495 | 177,261 | **177,763** | 177,819 | 178,084 | 177,965 | 177,846 | **177,928** | **177,548** |
| Dividend | **$0.584** | **$0.634** | $0.165 | $0.165 | $0.178 | $0.178 | **$0.686** | $0.178 | $0.178 | $0.1913 | *$0.1913* | ***$0.7386*** | ***$0.7826*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **1.5%** | **2.4%** | 4.2% | 5.4% | 5.0% | 3.0% | **4.4%** | 1.2% | -0.9% | 0.8% | 1.0% | **0.5%** | **3.8%** |
| Op Income | **-5.0%** | **4.2%** | 6.6% | 0.4% | 0.0% | 2.8% | **2.1%** | 1.6% | 4.0% | 2.6% | -0.8% | **2.0%** | **5.2%** |
| EPS--Cont'd Ops; Ex-Items | **10.4%** | **4.8%** | 14.5% | 4.7% | -0.2% | 2.0% | **4.5%** | 6.6% | 3.8% | 2.4% | 5.7% | **4.4%** | **3.3%** |
| EBITDA | **-1.9%** | **3.6%** | 3.7% | 0.3% | 2.0% | 2.4% | **2.0%** | 2.4% | 3.0% | 3.8% | 1.4% | **2.7%** | **5.2%** |
| O&M Expense | **5.0%** | **1.8%** | 2.1% | 13.3% | 8.5% | 5.0% | **7.2%** | 0.5% | -7.2% | -2.5% | -1.4% | **-2.7%** | **3.0%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **37.2%** | **37.0%** | 38.5% | 38.8% | 35.5% | 39.5% | **38.0%** | 38.2% | 36.3% | 34.3% | 38.6% | **36.8%** | **36.5%** |
| Taxes other than Income | **6.9%** | **6.5%** | 7.7% | 6.7% | 6.6% | 6.1% | **6.8%** | 7.3% | 7.0% | 6.1% | 6.8% | **6.8%** | **6.3%** |
| Op Income | **39.6%** | **40.3%** | 37.4% | 39.0% | 43.0% | 37.9% | **39.4%** | 37.6% | 41.0% | 43.8% | 37.2% | **40.0%** | **40.6%** |
| Net Income | **26.6%** | **27.4%** | 25.5% | 27.9% | 30.5% | 14.4% | **24.8%** | 26.9% | 29.2% | 31.1% | 26.5% | **28.5%** | **28.3%** |
| Tax Rate | **9.5%** | **10.5%** | 8.6% | 7.9% | 12.4% | -17.0% | **6.9%** | 5.5% | 8.5% | 11.5% | 3.5% | **7.7%** | **10.3%** |
| | | | | | | *$21.4MM after tax Marcellus pipe JV impariment | ***FY 2015 EPS guide $1.25-$1.27** | | | | | ***FY 2016 EPS guide $1.30-$1.35** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16p | Q3'16E | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | **$5,058** | **$4,138** | $9,274 | $4,615 | $4,071 | $3,229 | **$3,229** | $3,981 | $200 | $3,460 | $2,910 | **$2,910** | **$2,920** |
| A/R | **95,356** | **96,999** | 95,405 | 109,478 | 111,076 | 99,146 | **99,146** | 91,761 | 111,670 | 113,300 | 101,130 | **101,130** | **103,150** |
| Other | **71,255** | **51,385** | 59,546 | 61,267 | 53,160 | 25,995 | **25,995** | 26,991 | 20,562 | 54,220 | 26,510 | **26,510** | **27,040** |
| Total Current Assets | **171,669** | **152,522** | 164,225 | 175,360 | 168,307 | 128,370 | **128,370** | 122,733 | 132,432 | 170,980 | 130,550 | **130,550** | **133,110** |
| Net PP&E | **4,167,293** | **4,401,990** | 4,433,144 | 4,522,287 | 4,605,512 | 4,688,925 | **4,688,925** | 4,752,881 | 4,823,487 | 4,885,360 | 4,942,600 | **4,942,600** | **5,171,220** |
| Regulatory Assets | **585,600** | **725,591** | 748,911 | 771,561 | 799,858 | 830,118 | **830,118** | 859,830 | 859,830 | 859,830 | 859,830 | **859,830** | **861,830** |
| Goodwill | **28,223** | **31,184** | 33,954 | 33,942 | 33,907 | 33,866 | **33,866** | 42,304 | 42,300 | 42,300 | 42,300 | **42,300** | **42,400** |
| Other | **99,032** | **95,465** | 97,498 | 97,128 | 93,761 | 59,759 | **59,759** | 37,695 | 64,790 | 95,640 | 60,950 | **60,950** | **62,170** |
| **Total Assets** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,054,110 | 6,036,230 | **6,036,230** | **6,270,730** |
| CP of LTD | **86,288** | **58,615** | 47,042 | 38,503 | 47,599 | 35,593 | **35,593** | 29,096 | 26,410 | 35,903 | 175,092 | **175,092** | **54,051** |
| Loans Payable | **36,740** | **18,398** | 33,062 | 36,306 | 28,030 | 16,721 | **16,721** | 28,041 | 38,041 | 68,041 | 74,041 | **74,041** | **176,041** |
| A/P | **65,816** | **63,035** | 34,717 | 47,510 | 45,077 | 56,452 | **56,452** | 33,971 | 49,410 | 46,880 | 58,710 | **58,710** | **61,060** |
| Other | **78,066** | **85,287** | 90,298 | 81,076 | 95,316 | 84,433 | **84,433** | 83,235 | 65,359 | 97,220 | 86,120 | **86,120** | **87,840** |
| Total Current Liab | **266,910** | **225,335** | 205,119 | 203,395 | 216,022 | 193,199 | **193,199** | 174,343 | 179,220 | 248,044 | 393,963 | **393,963** | **378,992** |
| LTD | **1,468,583** | **1,560,655** | 1,594,980 | 1,660,526 | 1,681,114 | 1,743,612 | **1,743,612** | 1,744,108 | 1,775,874 | 1,766,381 | 1,627,192 | **1,627,192** | **1,768,233** |
| Shareholders' Equity | **1,535,043** | **1,655,383** | 1,676,294 | 1,702,927 | 1,728,681 | 1,725,930 | **1,725,930** | 1,760,707 | 1,791,163 | 1,937,270 | 1,910,410 | **1,910,410** | **2,040,720** |
| **Total Liab & SE** | **5,051,817** | **5,406,752** | 5,477,732 | 5,600,278 | 5,701,345 | 5,741,038 | **5,741,038** | 5,815,443 | 5,922,839 | 6,054,110 | 6,036,230 | **6,036,230** | **6,270,730** |

| Cash Flow Analysis | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16E | Q3'16E | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Income--Cont'd Ops | **$202,871** | **$213,884** | $48,545 | $57,384 | $67,429 | $28,434 | **$201,790** | $51,737 | $59,626 | $69,230 | $52,860 | **$233,450** | **$240,570** |
| D&A | **124,793** | **126,535** | 31,349 | 31,973 | 32,797 | 32,618 | **128,737** | 32,595 | 32,147 | 35,130 | 34,760 | **134,632** | **141,380** |
| Deferred Income Tax | **26,742** | **31,477** | 2,688 | 2,704 | 8,463 | 2,651 | **16,506** | 1,436 | 10,000 | 10,000 | 10,000 | **31,440** | **40,000** |
| (Inc) / Dec in Working Cap | **83,901** | **(25,333)** | (29,874) | (12,223) | 18,316 | 39,587 | **15,806** | (17,290) | (15,917) | (5,957) | 25,950 | **(13,214)** | **1,410** |
| Operating CF | **438,307** | **346,563** | 52,708 | 79,838 | 127,005 | 103,290 | **362,839** | 68,478 | 85,856 | 108,403 | 123,570 | **386,308** | **423,360** |
| Cap ex | **(308,171)** | **(328,605)** | (70,284) | (80,000) | (107,194) | (107,211) | **(364,689)** | (72,984) | (95,216) | (95,000) | (90,000) | **(353,200)** | **(350,000)** |
| JV Investment | **(14,700)** | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | **(102,889)** | **(112,106)** | (29,176) | (29,220) | (31,446) | (31,406) | **(121,248)** | (31,513) | (31,699) | (34,045) | (34,022) | **(131,278)** | **(138,947)** |
| Release (Addition) of Const Funds | **23,525** | - | 32 | - | 15 | - | **47** | - | - | - | - | - | - |
| Free Cash Flow | **36,072** | **(94,148)** | (46,720) | (29,382) | (11,620) | (35,327) | **(123,051)** | (36,019) | (41,059) | (20,642) | (452) | **(98,170)** | **(65,587)** |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | **(14,997)** | **(14,616)** | (788) | (25,131) | (408) | (2,662) | **(28,989)** | (4,461) | (2,000) | (2,000) | (2,000) | **(10,460)** | **(20,000)** |
| Divestitures | **5,315** | **558** | 232 | 58 | 223 | 135 | **648** | 2,853 | 2,000 | | - | - | - |
| Proceeds from LT Debt | **263,834** | **317,699** | 52,629 | 185,828 | 74,983 | 247,104 | **560,544** | 96,314 | 32,000 | - | 35,903 | **164,220** | **177,000** |
| Repayments of LT Debt | **(300,323)** | **(253,192)** | (29,800) | (129,024) | (45,027) | (196,556) | **(400,407)** | (80,341) | (3,000) | | (35,903) | **(119,240)** | **(177,000)** |
| Net Proceeds (Repayments) ST Debt | **(43,643)** | **(18,342)** | 14,664 | 3,244 | (8,276) | (11,309) | **(1,677)** | 11,320 | 10,000 | 30,000 | 6,000 | **57,320** | **102,000** |
| Net Change in Cash Overdraft | **9,872** | **(322)** | (21,431) | 5,384 | 1,129 | 14,179 | **(739)** | (17,250) | 3,000 | - | - | **(14,250.00)** | - |
| Repurchase of Common Stock | **(12,823)** | **(15,756)** | (3,754) | (4,203) | (12,311) | (4,979) | **(25,247)** | (2,827) | (8,915) | (8,600) | (8,600) | **(28,942)** | **(34,400)** |
| Net Cash Flow--Cont'd Ops | **(20,705)** | **(70,823)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (3,474) | 3,258 | (552) | **(31,522)** | **13** |
| CF--Disc Ops | **88,643** | **48,634** | - | - | - | - | - | - | - | | | - | - |
| Net Cash Flow | **67,938** | **(22,189)** | (32,116) | 7,374 | 103 | 14,585 | **(10,056)** | (25,911) | (3,474) | 3,258 | (552) | **(31,522)** | **13** |
| EBITDA | **425,647** | **440,893** | 102,516 | 112,219 | 127,869 | 107,233 | **449,837** | 104,926 | 115,640 | 132,700 | 108,780 | **462,040** | **485,960** |
| EBITDA margin | **55.9%** | **56.5%** | 53.9% | 54.5% | 57.8% | 54.4% | **55.2%** | 54.5% | 56.7% | 59.6% | 54.6% | **56.5%** | **57.2%** |
| EV / TTM EBITDA | **13.5x** | **14.4x** | 14.2x | 13.6x | 14.4x | 15.7x | **15.7x** | 16.4x | 17.9x | 17.2x | 17.1x | **17.1x** | **16.3x** |

| Selected Financial Statistics | FY'13 | FY'14 | Q1'15 | Q2'15 | Q3'15 | Q4'15 | FY'15 | Q1'16 | Q2'16 | Q3'16E | Q4'16E | FY'16E | FY'17E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Book Value | **$8.64** | **$9.32** | $9.43 | $9.57 | $9.74 | $9.74 | **$9.74** | $9.90 | $10.06 | $10.89 | $10.74 | **$10.74** | **$11.51** |
| Tangible BV | **$8.48** | **$9.14** | $9.24 | $9.38 | $9.55 | $9.55 | **$9.55** | $9.66 | $9.82 | $10.65 | $10.50 | **$10.50** | **$11.27** |
| Cap Ex / Depreciation | **2.5x** | **2.6x** | 2.2x | 2.5x | 3.3x | 3.3x | **2.8x** | 2.2x | 3.0x | 2.7x | 2.6x | **2.6x** | **2.5x** |
| Price / Book | **2.7x** | **2.9x** | 2.8x | 2.6x | 2.7x | 3.1x | **3.1x** | 3.2x | 3.5x | 3.2x | 3.2x | **3.2x** | **3.0x** |
| Total Net Debt/ Total Capital | **50.8%** | **49.7%** | 49.8% | 50.4% | 50.3% | 50.9% | **50.9%** | 50.5% | 50.7% | 49.1% | 49.5% | **49.5%** | **49.4%** |
| LT Debt/Total Capital | **48.9%** | **48.5%** | 48.8% | 49.4% | 49.3% | 50.3% | **50.3%** | 49.8% | 49.8% | 47.7% | 46.0% | **46.0%** | **46.4%** |
| ROE (TTM)--*adj for Q4'15 JV chg* | **14.0%** | **13.5%** | 13.6% | 13.5% | 13.3% | 13.1% | **13.1%** | 13.2% | 13.1% | 12.9% | 12.8% | **12.8%** | **12.2%** |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

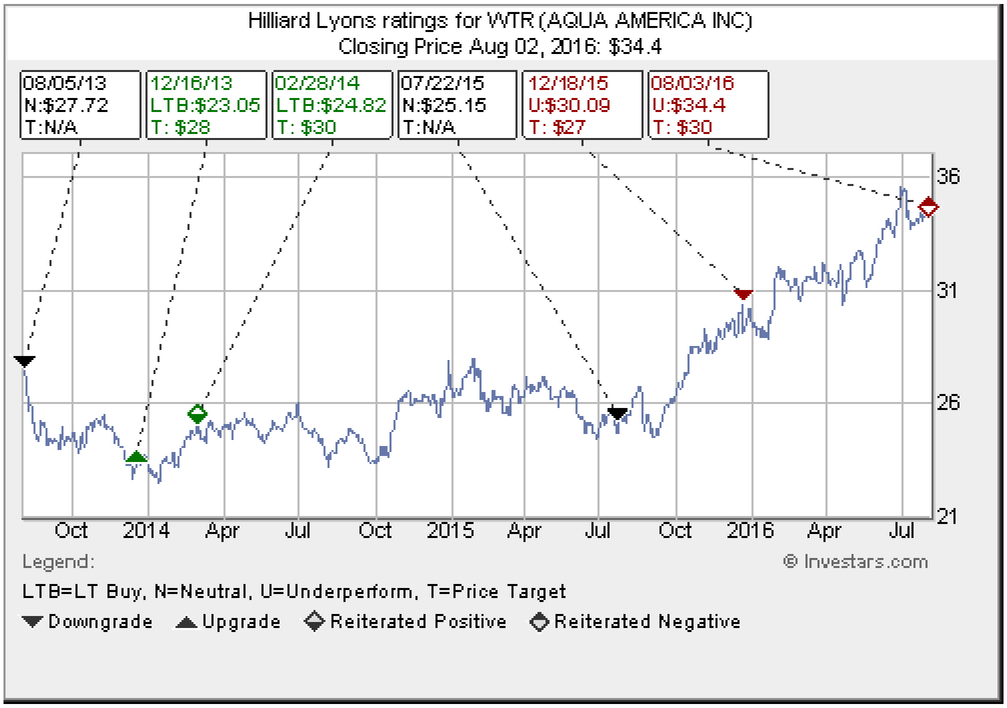
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 44 | 37% | 14% | 86% |
| **Hold/Neutral** | 66 | 55% | 5% | 95% |
| **Sell** | 9 | 8% | 0% | 100% |

*As of 6 July 2016*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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The information herein has been obtained from sources we believe to be reliable but is not guaranteed and does not purport to be a complete statement of all material factors. This is for informational purposes and is not a solicitation of orders to purchase or sell securities. 

HILLIARD LYONS

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August 4, 2017

COMPANY UPDATE / TARGET CHANGE
ESTIMATE CHANGE

**Key Metrics**

| | | |
|---|---|---|
| WTR - NYSE - as of | 8/3/17 | $33.58 |
| Price Target | | $30.00 |
| 52-Week Range | | $28.03 - $34.41 |
| Shares Outstanding (mm) | | 177.6 |
| Market Cap. ($mm) | | $5,963.9 |
| 1-Mo. Average Daily Volume | | 566,564 |
| Institutional Ownership | | 54.0% |
| LTD / Total Capital | Q2'17 | 49.0% |
| ROE--Adj | TTM | 12.6% |
| Book Value / Share | Q2'17 | $10.65 |
| Price / Book Value | | 3.2x |
| Dividend Yield | | 2.4% |
| LTM EBITDA Margin | | 56.4% |

**EPS (continuing ops) FY 12/31**

| | 2016A | Prior 2017E | Current 2017E | | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|---|
| 1Q | $0.29 | -- | $0.28 | A | -- | -- |
| 2Q | $0.33 | -- | $0.34 | A | -- | -- |
| 3Q | $0.41 | $0.41 | $0.42 | | -- | -- |
| 4Q | $0.28 | $0.30 | $0.29 | | -- | -- |
| Year | $1.32 | $1.34 | $1.34 | | $1.39 | $1.40 |
| P/E | 25.4x | | 25.1x | | | 24.0x |

**Adjusted for special items*

**Revenue ($MM)**

| | 2016A | Prior 2017E | Current 2017E | | Prior 2018E | Current 2018E |
|---|---|---|---|---|---|---|
| 1Q | $193 | -- | $188 | A | -- | -- |
| 2Q | $204 | -- | $203 | A | -- | -- |
| 3Q | $227 | $224 | $227 | | -- | -- |
| 4Q | $197 | $200 | $197 | | -- | -- |
| Year | $820 | $812 | $815 | | $848 | $847 |

**Company Description**: *Aqua America is a water and wastewater utility holding company with operating subsidiaries serving ~3MM people. WTR provides regulated service to customers in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana, Virginia. The company's history spans over 125 years.*

# Aqua America, Inc.

WTR – NYSE – Underperform-2

**Quiet Q2 at WTR; Reiterating Underperform Rating.**

**Investment Highlights**

- Aqua America reported Q2'17 EPS of $0.34, up a penny from the year-ago period; results missed our estimate for $0.35, but met consensus.
- Revenue slid 0.2% to $203.4MM in Q2; topline fell between our target for $200.9MM and consensus at $208.3MM. Market-based divestitures were a drag of about $4.4MM, although this has little impact on overall profitability.
- WTR firmed/reiterated its outlook for rate activity in PA, anticipating a DSIC (surcharge) filing to benefit Q4'17, with a base rate filing in 2018.
- Four muni deals representing ~11,000 customers and purchase consideration of $120.5MM remain in various pending stages. Included, WTR announced a first deal negotiated under PA Act 12 Fair Value legislation in Q2, marking investment of $29.5MM.
- O&M expense fell 4.2% in Q2, but comps are again skewed by the exiting of market-based businesses. As of Q2, WTR is essentially complete with its sales, retaining only limited O&M contracts and its service line protection royalties.
- YTD Cap Ex at $208MM versus $196MM in 1H'16 bodes well for eventual growth in our view, but we still site/calculate TTM ROE at 12.6% as somewhat of a limiting factor.
- Aqua reiterated EPS guidance for 2017 in the range of $1.34 to $1.39; our 2017E EPS continues to rest on the bottom bound of the range. Our 2018E EPS slides up $0.01 to $1.40.
- We are reiterating our Underperform rating but raise our 1-year price target to $30, allowing for a higher multiple based on market valuations across the water industry. We still see negative near-term risk/reward in WTR due to our relative growth outlook.

**Note Important Disclosures on Pages 5-6**
**Note Analyst Certification on Page 5**

## SUITABILITY

We assign WTR a suitability rating of '2.' A complete description of our suitability scale is on page 5. We view Aqua America as a strong operator in the water space, and flag consistent cash flow and earnings predictability due to entrenched regulated monopoly franchises. High sensitivity to a single state (PA) versus some larger utility peers is the primary factor that pushes WTR just below our most conservative '1' suitability rating. A strong history of returning capital to shareholders, low cyclicality and industry-appropriate leverage keep the company well above our more aggressive '3' rating.

## CONSIDERATIONS AND RISKS

We view all companies in the Water Utilities industry as being subject to significant regulatory and political risk. Utility operations are heavily regulated; negative rate-making climates and/or new environmental restrictions may affect the company's ability to earn a sufficient return on invested capital. Weather, natural disaster, and availability of water supplies could negatively impact sources of water, demand for water services, and a utility's ability to supply water to customers. Risks associated with the collection, treatment, and disposal of wastewater could also impose significant costs.

Significant Cap Ex are required to maintain infrastructure and expand rate base. Should WTR suffer from the lack of ability to secure appropriate funding to make investments, or if delays are incurred in completing projects, operating results could be negatively affected. Contamination of water could result in service interruptions or cause enforcement actions. Assets can be subject to condemnation through eminent domain. The company's non-reg businesses provide performance guarantees and have long-term contracts. Additionally, WTR is subject to all other risks that result from operating as a public company.

Our Suitability rating is 2 on a 1-to-4 scale (1 = most conservative, 4 = most aggressive).
*Additional information is available upon request.*

**Aqua America, Inc.**

| **Income Statements (000's)** | **FY'14** | **FY'15** | Q1'16 | Q2'16 | Q3'16 | Q4'16 | **FY'16** | Q1'17 | Q2'17 | Q3'17E | Q4'17E | **FY'17E** | **FY'18E** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Operating Revenues** | **$779,903** | **$814,204** | $192,607 | $203,876 | $226,593 | $196,799 | **$819,875** | $187,787 | $203,418 | $226,770 | $197,280 | **$815,260** | **$846,870** |
| **Operating Expenses** | | | | | | | | | | | | | |
| O & M | **288,560** | **309,310** | 73,541 | 73,994 | 79,812 | 77,550 | **304,897** | 69,128 | 70,853 | 74,310 | 74,510 | **288,800** | **293,130** |
| Depreciation | **123,050** | **125,290** | 32,145 | 31,619 | 33,881 | 33,342 | **130,987** | 33,837 | 33,407 | 36,240 | 36,000 | **139,480** | **149,170** |
| Amortization | **3,480** | **3,447** | 450 | 528 | 389 | 654 | **2,021** | 189 | 127 | 390 | 660 | **1,370** | **1,370** |
| Taxes other than Income | **50,450** | **55,057** | 14,140 | 14,242 | 14,712 | 13,291 | **56,385** | 14,737 | 14,419 | 13,830 | 13,420 | **56,410** | **53,330** |
| Operating Income | **314,363** | **321,100** | 72,331 | 83,493 | 97,799 | 71,962 | **325,585** | 69,896 | 84,612 | 102,000 | 72,690 | **329,200** | **349,870** |
| % | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 37.2% | 41.6% | 45.0% | 36.8% | **40.4%** | **41.3%** |
| Other Expense / (Income): | | | | | | | | | | | | | |
| Interest, net | **76,400** | **76,536** | 19,853 | 20,115 | 20,168 | 20,458 | **80,594** | 21,326 | 21,387 | 21,140 | 21,270 | **85,120** | **88,070** |
| AFUDC | **(5,130)** | **(6,219)** | (2,308) | (1,871) | (2,267) | (2,369) | **(8,815)** | (3,193) | (3,463) | (3,500) | (3,500) | **(13,660)** | **(13,660)** |
| (Gain) on Asset Sale | **0** | **(468)** | (207) | (121) | (62) | 12 | **(378)** | (269) | (10) | (100) | (110) | **(490)** | **(410)** |
| (Gain) on Debt Extinguish | **0** | **(678)** | | | | | | | | | | | |
| Equity (Earnings) / Loss from JV | **3,990** | **35,177** | 249 | 229 | (1,621) | 167 | **(976)** | 30 | 161 | 150 | 200 | **540** | **(200)** |
| Income Before Tax | **239,103** | **216,752** | 54,744 | 65,141 | 81,581 | 53,694 | **255,160** | 52,002 | 66,537 | 84,310 | 54,830 | **257,690** | **276,070** |
| Income Tax | **25,219** | **14,962** | 3,007 | 5,515 | 8,411 | 4,045 | **20,978** | 2,930 | 5,569 | 8,910 | 2,480 | **19,890** | **26,980** |
| % | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 5.6% | 8.4% | 10.6% | 4.5% | **7.7%** | **9.8%** |
| Net Income--Cont'd Ops | **213,884** | **201,790** | 51,737 | 59,626 | 73,170 | 49,649 | **234,182** | 49,072 | 60,968 | 75,400 | 52,350 | **237,800** | **249,090** |
| Net Income Avail to Common | **$233,239** | **$201,790** | $51,737 | $59,626 | $73,170 | $49,649 | **$234,182** | $49,072 | $60,968 | $75,400 | $52,350 | **$237,790** | **$249,090** |
| EPS Disc Ops | **$0.11** | | | | | | | | | | | | |
| EPS Continuing Ops | **$1.20** | **$1.14** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.28 | $0.34 | $0.42 | $0.29 | **$1.34** | **$1.40** |
| **EPS--Cont'd Ops; Ex-NonRecur** | **$1.20** | **$1.26** | $0.29 | $0.33 | $0.41 | $0.28 | **$1.32** | $0.28 | $0.34 | $0.42 | $0.29 | **$1.34** | **$1.40** |
| Diluted Avg Shares | **177,763** | **177,763** | 177,819 | 178,084 | 177,817 | 177,880 | **177,846** | 177,969 | 178,045 | 178,079 | 178,113 | **178,052** | **178,198** |
| Dividend | **$0.634** | **$0.686** | $0.178 | $0.178 | $0.1913 | $0.1913 | **$0.739** | $0.1913 | $0.1913 | *$0.2047* | *$0.2047* | ***$0.7920*** | ***$0.8394*** |
| **Rate of Change Analysis:** | | | | | | | | | | | | | |
| Revenues | **2.4%** | **4.4%** | 1.2% | -0.9% | 2.5% | -0.1% | **0.7%** | -2.5% | -0.2% | 0.1% | 0.2% | **-0.6%** | **3.9%** |
| Op Income | **4.2%** | **2.1%** | 1.6% | 4.0% | 2.9% | -3.6% | **1.4%** | -3.4% | 1.3% | 4.3% | 1.0% | **1.1%** | **6.3%** |
| EPS--Cont'd Ops; Ex-Items | **4.8%** | **4.5%** | 6.6% | 3.8% | 8.3% | -0.7% | **4.8%** | -5.2% | 2.3% | 2.9% | 5.3% | **1.5%** | **4.7%** |
| EBITDA | **3.6%** | **2.0%** | 2.4% | 3.0% | 3.3% | -1.2% | **1.9%** | -1.0% | 2.2% | 5.0% | 3.2% | **2.5%** | **6.5%** |
| O&M Expense | **1.8%** | **7.2%** | 0.5% | -7.2% | 1.6% | -0.4% | **-1.4%** | -6.0% | -4.2% | -6.9% | -3.9% | **-5.3%** | **1.5%** |
| **Margin Analysis:** | | | | | | | | | | | | | |
| O&M | **37.0%** | **38.0%** | 38.2% | 36.3% | 35.2% | 39.4% | **37.2%** | 36.8% | 34.8% | 32.8% | 37.8% | **35.4%** | **34.6%** |
| Taxes other than Income | **6.5%** | **6.8%** | 7.3% | 7.0% | 6.5% | 6.8% | **6.9%** | 7.8% | 7.1% | 6.1% | 6.8% | **6.9%** | **6.3%** |
| Op Income | **40.3%** | **39.4%** | 37.6% | 41.0% | 43.2% | 36.6% | **39.7%** | 37.2% | 41.6% | 45.0% | 36.8% | **40.4%** | **41.3%** |
| Net Income | **27.4%** | **24.8%** | 26.9% | 29.2% | 32.3% | 25.2% | **28.6%** | 26.1% | 30.0% | 33.2% | 26.5% | **29.2%** | **29.4%** |
| Tax Rate | **10.5%** | **6.9%** | 5.5% | 8.5% | 10.3% | 7.5% | **8.2%** | 5.6% | 8.4% | 10.6% | 4.5% | **7.7%** | **9.8%** |
| | | | | | | | ***FY 2016 EPS guide $1.30-$1.35** | | | | | ***FY 2017 EPS guide $1.34-$1.39** | |

*Source: Company reports and Hilliard Lyons estimates*

**Aqua America, Inc.**

| Balance Sheet Analysis | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17 | Q2'17 | Q3'17E | Q4'17E | FY'17E | FY'18E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cash | $4,138 | $3,229 | $3,981 | $4,923 | $3,712 | $3,763 | $3,763 | $4,425 | $7,811 | $18,360 | $3,190 | $3,190 | $420 |
| A/R | 96,999 | 99,146 | 91,761 | 99,718 | 109,986 | 97,394 | 97,394 | 89,409 | 98,890 | 112,190 | 99,340 | 99,340 | 101,330 |
| Other | 51,385 | 25,995 | 26,991 | 27,791 | 27,703 | 27,493 | 27,493 | 28,629 | 31,390 | 28,260 | 28,040 | 28,040 | 28,600 |
| Total Current Assets | 152,522 | 128,370 | 122,733 | 132,432 | 141,401 | 128,650 | 128,650 | 122,463 | 138,091 | 158,810 | 130,570 | 130,570 | 130,350 |
| Net PP&E | 4,401,990 | 4,688,925 | 4,752,881 | 4,823,487 | 4,901,486 | 5,001,615 | 5,001,615 | 5,057,826 | 5,159,151 | 5,292,520 | 5,385,860 | 5,385,860 | 5,650,320 |
| Regulatory Assets | 725,591 | 830,118 | 859,830 | 887,135 | 911,455 | 948,647 | 948,647 | 974,853 | 1,003,808 | 1,003,810 | 1,003,810 | 1,003,810 | 1,005,810 |
| Goodwill | 31,184 | 33,866 | 42,304 | 42,234 | 41,921 | 42,208 | 42,208 | 42,266 | 42,266 | 42,270 | 42,270 | 42,270 | 42,370 |
| Other | 95,465 | 59,759 | 37,695 | 37,551 | 39,762 | 37,871 | 37,871 | 38,187 | 40,383 | 40,560 | 38,630 | 38,630 | 39,400 |
| **Total Assets** | 5,406,752 | 5,741,038 | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | 6,158,991 | 6,235,595 | 6,383,699 | 6,537,970 | 6,601,140 | 6,601,140 | 6,868,250 |
| CP of LTD | 58,615 | 35,593 | 29,096 | 38,212 | 83,777 | 150,671 | 150,671 | 119,296 | 143,567 | 175,092 | 54,051 | 54,051 | 94,797 |
| Loans Payable | 18,398 | 16,721 | 28,041 | 26,239 | 47,990 | 6,535 | 6,535 | 27,732 | 67,456 | 69,456 | 84,456 | 84,456 | 75,456 |
| A/P | 63,035 | 56,452 | 33,971 | 40,651 | 44,073 | 59,872 | 59,872 | 50,185 | 46,376 | 45,840 | 62,270 | 62,270 | 64,760 |
| Other | 85,287 | 84,433 | 83,235 | 74,118 | 76,158 | 84,458 | 84,458 | 80,387 | 75,148 | 77,680 | 86,150 | 86,150 | 87,870 |
| Total Current Liab | 225,335 | 193,199 | 174,343 | 179,220 | 251,998 | 301,536 | 301,536 | 277,600 | 332,547 | 368,068 | 286,927 | 286,927 | 322,883 |
| LTD | 1,560,655 | 1,743,612 | 1,744,108 | 1,775,874 | 1,726,493 | 1,737,605 | 1,737,605 | 1,797,511 | 1,822,581 | 1,793,715 | 1,914,756 | 1,914,756 | 1,894,010 |
| Shareholders' Equity | 1,655,383 | 1,725,930 | 1,760,707 | 1,791,163 | 1,832,200 | 1,850,068 | 1,850,068 | 1,867,227 | 1,896,530 | 2,146,550 | 2,157,370 | 2,157,370 | 2,430,930 |
| **Total Liab & SE** | 5,406,752 | 5,741,038 | 5,815,443 | 5,922,839 | 6,036,025 | 6,158,991 | 6,158,991 | 6,235,595 | 6,383,699 | 6,537,970 | 6,601,140 | 6,601,140 | 6,868,250 |
| **Cash Flow Analysis** | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17 | Q2'17 | Q3'17E | Q4'17E | FY'17E | FY'18E |
| Net Income--Cont'd Ops | $213,884 | $201,790 | $51,737 | $59,626 | $73,170 | $49,649 | $234,182 | $49,072 | $60,968 | $75,400 | $52,350 | $237,800 | $249,090 |
| D&A | 126,535 | 128,737 | 32,595 | 32,147 | 31,377 | 36,889 | 133,008 | 34,026 | 33,534 | 36,630 | 36,660 | 140,850 | 150,540 |
| Deferred Income Tax | 31,477 | 16,506 | 1,436 | 3,615 | 10,294 | 1,905 | 17,250 | 2,681 | 3,618 | 10,000 | 10,000 | 26,300 | 40,000 |
| (Inc) / Dec in Working Cap | (25,333) | 15,806 | (17,290) | (11,194) | (4,718) | 36,901 | 3,699 | (6,909) | (21,290) | (8,174) | 36,140 | (233) | 1,610 |
| Operating CF | 346,563 | 362,839 | 68,478 | 84,194 | 110,123 | 125,344 | 388,139 | 78,870 | 76,830 | 113,856 | 135,150 | 404,717 | 441,240 |
| Cap ex | (328,605) | (364,689) | (72,984) | (95,603) | (101,432) | (112,977) | (382,996) | (94,562) | (113,910) | (120,000) | (105,000) | (433,472) | (395,000) |
| JV Investment | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dividends | (112,106) | (121,248) | (31,513) | (31,558) | (33,923) | (33,929) | (130,923) | (33,945) | (33,975) | (36,453) | (36,460) | (140,833) | (149,580) |
| Release (Addition) of Const Funds | - | 47 | - | - | - | - | - | - | - | - | - | - | - |
| Free Cash Flow | (94,148) | (123,051) | (36,019) | (42,967) | (25,232) | (21,562) | (125,780) | (49,637) | (71,055) | (42,597) | (6,310) | (169,588) | (103,340) |
| FCF/Share | | | | | | | | | | | | | |
| Acquisitions | (14,616) | (28,989) | (4,461) | (1,165) | - | (3,797) | (9,423) | (220) | (5,545) | (50,000) | (25,000) | (80,770) | (20,000) |
| Divestitures | 558 | 648 | 2,853 | 3,586 | 106 | 1,201 | 7,746 | 639 | 463 | - | - | - | - |
| Proceeds from LT Debt | 317,699 | 560,544 | 96,314 | 72,983 | 64,991 | 269,298 | 503,586 | 117,879 | 104,901 | 172,000 | 105,000 | 499,780 | 179,000 |
| Repayments of LT Debt | (253,192) | (400,407) | (80,341) | (32,309) | (68,709) | (191,728) | (373,087) | (89,666) | (55,833) | (72,000) | (105,000) | (322,500) | (54,000) |
| Net Proceeds (Repayments) ST Debt | (18,342) | (1,677) | 11,320 | (1,802) | 21,751 | (41,455) | (10,186) | 21,197 | 39,724 | 2,000 | 15,000 | 77,920 | (9,000) |
| Net Change in Cash Overdraft | (322) | (739) | (17,250) | 1,912 | 2,752 | 4,510 | (8,076) | (2,403) | (10,213) | - | - | (12,620) | - |
| Repurchase of Common Stock | (15,756) | (25,247) | (2,827) | (32) | (46) | (123) | (3,028) | (2,053) | (40) | (3,358) | (3,358) | (8,809) | (13,432) |
| Net Cash Flow--Cont'd Ops | (70,823) | (10,701) | (27,263) | 1,297 | (613) | 13,979 | (12,600) | (2,368) | 3,547 | 10,545 | (15,168) | (4,546) | (2,772) |
| CF--Disc Ops | 48,634 | - | - | - | | - | - | - | | | | - | - |
| Net Cash Flow | (22,189) | (10,701) | (27,263) | 1,297 | (613) | 13,979 | (12,600) | (2,368) | 3,547 | 10,545 | (15,168) | (4,546) | (2,772) |
| EBITDA | 440,893 | 449,837 | 104,926 | 115,640 | 132,069 | 105,958 | 458,593 | 103,922 | 118,146 | 138,630 | 109,350 | 470,050 | 500,410 |
| EBITDA margin | 56.5% | 55.2% | 54.5% | 56.7% | 58.3% | 53.8% | 55.9% | 55.3% | 58.1% | 61.1% | 55.4% | 57.7% | 59.1% |
| EV / TTM EBITDA | 14.4x | 15.7x | 16.4x | 17.9x | 15.7x | 15.8x | 15.8x | 16.7x | 17.1x | 17.0x | 16.9x | 16.9x | 15.9x |
| **Selected Financial Statistics** | FY'14 | FY'15 | Q1'16 | Q2'16 | Q3'16 | Q4'16 | FY'16 | Q1'17 | Q2'17 | Q3'17E | Q4'17E | FY'17E | FY'18E |
| Book Value | $9.32 | $9.74 | $9.90 | $10.06 | $10.30 | $10.40 | $10.40 | $10.49 | $10.65 | $12.05 | $12.11 | $12.11 | $13.64 |
| Tangible BV | $9.14 | $9.55 | $9.66 | $9.82 | $10.07 | $10.16 | $10.16 | $10.25 | $10.41 | $11.82 | $11.88 | $11.88 | $13.40 |
| Cap Ex / Depreciation | 2.6x | 2.8x | 2.2x | 3.0x | 3.2x | 3.1x | 2.9x | 2.8x | 3.4x | 3.3x | 2.9x | 3.1x | 2.6x |
| Price / Book | 2.9x | 3.1x | 3.2x | 3.5x | 3.0x | 2.9x | 2.9x | 3.1x | 3.1x | 2.8x | 2.8x | 2.8x | 2.5x |
| Total Net Debt/ Total Capital | 49.7% | 50.9% | 50.5% | 50.6% | 50.3% | 50.5% | 50.5% | 51.0% | 51.6% | 48.5% | 48.7% | 48.7% | 45.9% |
| LT Debt/Total Capital | 48.5% | 50.3% | 49.8% | 49.8% | 48.5% | 48.4% | 48.4% | 49.0% | 49.0% | 45.5% | 47.0% | 47.0% | 43.8% |
| ROE (TTM)--*adj for Q4'15 JV chg* | 13.5% | 13.1% | 13.2% | 13.1% | 13.3% | 13.1% | 13.1% | 12.7% | 12.6% | 12.3% | 12.0% | 12.0% | 11.0% |

*Source: Company reports and Hilliard Lyons estimates*

## Analyst Certifications

I, Spencer E. Joyce, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

## Important Disclosures

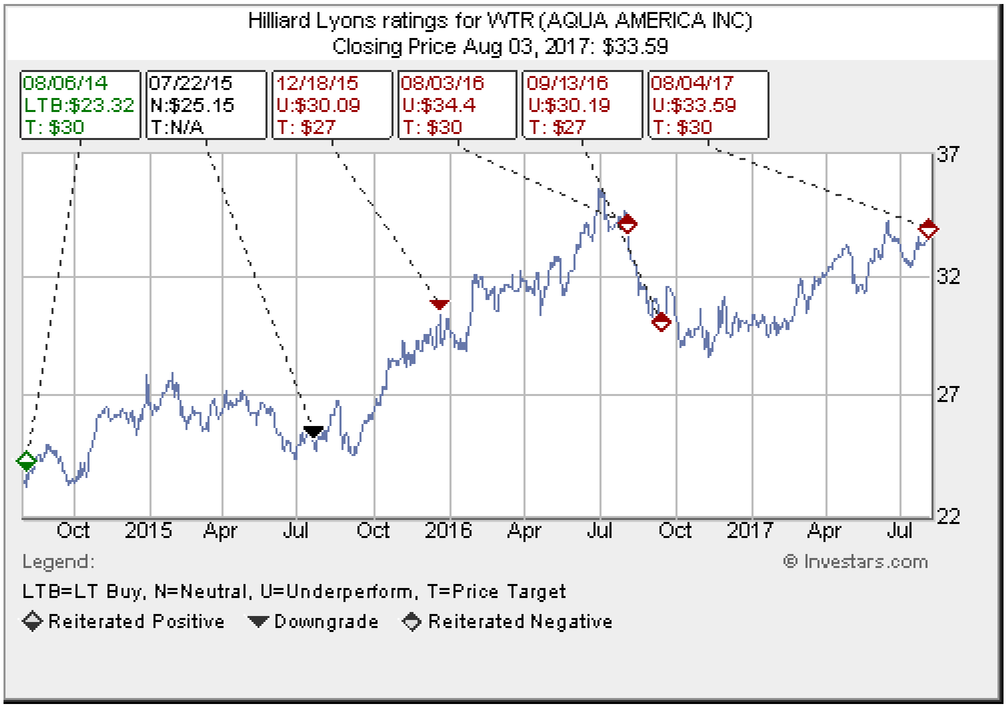
Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

### Suitability Ratings

**1** - A large cap, core holding with a solid history
**2** - A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks
**3** - An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage
**4** - Speculative, due to small size, inconsistent profitability, erratic revenues, volatility, low trading volume or a narrow customer or product base

### Investment Ratings

**Buy** - We believe the stock has significant total return potential in the coming 12 months.
**Long-term Buy** - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
**Neutral** - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
**Underperform** - We believe the stock is vulnerable to a price setback in the next 12 months.




| | Hilliard Lyons Recommended Issues | | Investment Banking Provided in Past 12 Mo. | |
|---|---|---|---|---|
| **Rating** | **# of Stocks Covered** | **% of Stocks Covered** | **Banking** | **No Banking** |
| **Buy** | 36 | 29% | 14% | 86% |
| **Hold/Neutral** | 79 | 63% | 5% | 95% |
| **Sell** | 10 | 8% | 0% | 100% |

*As of 7 July 2017*

## Other Disclosures

Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation or needs of individual investors. Employees of J.J.B. Hilliard, W.L. Lyons, LLC or its affiliates may, at times, release written or oral commentary, technical analysis or trading strategies that differ from the opinions expressed here.

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The information herein has been obtained from sources we believe to be reliable but is not guaranteed and does not purport to be a complete statement of all material factors. This is for informational purposes and is not a solicitation of orders to purchase or sell securities. 

27 January 2017

HSBC Global Research

# Aqua America (WTR US)

## Buy: A bright future; 2017 EPS guidance in line, more capex

**EQUITIES**
WATER UTILITIES

United States

- Earnings guidance for 2017 is in line with our expectations
- New tax implications, short-term uncertainty, but growth drivers remain
- Maintain Buy rating and USD36 target price

### Earnings guidance – capex target increased

Aqua America (WTR) hosted its earnings guidance call on 17 January 2017 wherein it reiterated its 2016 guidance of USD1.30-1.35 for 2016. Our estimate of USD1.33 is in the middle of the range. In addition, it confirmed its target of 1.5% to 2% customer growth. The company guided to a 2017 EPS in the range of USD1.34-USD1.39. Our EPS estimate for 2017 of USD1.38 is at the higher end of this range. The company reiterated its customer growth target of 1.5-2%, but it increased its capex target from USD1.1bn for 2016-18 to USD1.2bn for the period 2017-19. For 2017, it expects significantly higher capex of more than USD450m, in comparison to USD350m before.

**Growth:** The Company completed 19 acquisitions in 2016 and has 4 pending acquisitions totalling 8,761 customers that are expected to be closed by the end of 2017. In its regulated operations it received approval for an increase in rates in 6 states covering 10 rate cases. It is waiting for approval for 2 rate cases, which could increase its revenue by USD8m per year. It aims to grow its regulated rate base by 6-7% over the medium term.

### New administration – nothing concrete yet – but tax changes likely

A number of potential impacts from the new US government are being discussed in the market. The benefit of tax rate reductions would be passed back to customers, but in the view of management this would be deferred slightly unless each state made an immediate adjustment to rates. We discuss some of the resultant changes to the complex regulatory mechanisms in this report. These have developed precisely because of the relatively high corporate tax rate in the US. Changes would lead to a reclassification and simplification of some of these but we believe ultimately would not be detrimental to customers or investor-owned utilities as tax is essentially a pass through to customers.

### Maintain Buy rating and USD36 target price

We value Aqua America via three methodologies – DCF, dividend yield, and peer multiples. Under this methodology we take the average of the three methods to arrive at our fair value target price of USD36 (unchanged). We have rolled forward our estimates; reviewed our cost of capital; increased our medium-term assumptions in line with guidance; and increased our yield assumptions in line with the US water peer group.

**MAINTAIN BUY**

| TARGET PRICE (USD) | PREVIOUS TARGET (USD) |
|---|---|
| 36.00 | 36.00 |

| SHARE PRICE (USD) | UPSIDE/DOWNSIDE |
|---|---|
| 30.06 (as of 25 Jan 2017) | +19.8% |

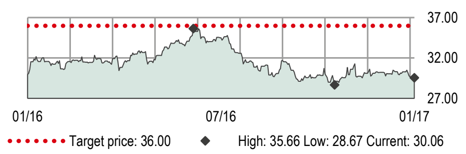
MARKET DATA

| | | | |
|---|---|---|---|
| Market cap (USDm) | 5,331 | Free float | 100% |
| Market cap (USDm) | 5,331 | BBG | WTR US |
| 3m ADTV (USDm) | 47 | RIC | WTR.N |

FINANCIALS AND RATIOS (USD)

| Year to | 12/2015a | 12/2016e | 12/2017e | 12/2018e |
|---|---|---|---|---|
| HSBC EPS | 1.26 | 1.33 | 1.38 | 1.42 |
| HSBC EPS (prev) | - | - | - | 1.45 |
| Change (%) | - | - | - | -2.1 |
| Consensus EPS | 1.26 | 1.32 | 1.38 | 1.46 |
| PE (x) | 23.9 | 22.7 | 21.8 | 21.2 |
| Dividend yield (%) | 2.3 | 2.5 | 2.7 | 2.9 |
| EV/EBITDA (x) | 15.8 | 14.5 | 14.0 | 13.6 |
| ROE (%) | 13.2 | 13.2 | 13.0 | 12.7 |

52-WEEK PRICE (USD)




Source: Thomson Reuters IBES, HSBC estimates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# Financials & valuation: Aqua America

**Buy**

## Financial statements

| Year to | 12/2015a | 12/2016e | 12/2017e | 12/2018e |
|---|---|---|---|---|
| **Profit & loss summary (USDm)** | | | | |
| Revenue | 814 | 858 | 903 | 951 |
| EBITDA | 450 | 496 | 530 | 557 |
| Depreciation & amortisation | -129 | -137 | -143 | -152 |
| Operating profit/EBIT | 321 | 359 | 386 | 404 |
| Net interest | -69 | -70 | -74 | -83 |
| PBT | 217 | 289 | 312 | 321 |
| HSBC PBT | 252 | 289 | 312 | 321 |
| Taxation | -15 | -55 | -69 | -71 |
| Net profit | 202 | 234 | 244 | 251 |
| HSBC net profit | 223 | 234 | 244 | 251 |
| **Cash flow summary (USDm)** | | | | |
| Cash flow from operations | 371 | 384 | 389 | 405 |
| Capex | -365 | -350 | -450 | -400 |
| Cash flow from investment | -394 | -350 | -450 | -400 |
| Dividends | -121 | -134 | -145 | -156 |
| Change in net debt | 159 | 99 | 205 | 151 |
| FCF equity | -9 | 34 | -61 | 5 |
| **Balance sheet summary (USDm)** | | | | |
| Intangible fixed assets | 34 | 34 | 34 | 34 |
| Tangible fixed assets | 5,519 | 5,732 | 6,039 | 6,286 |
| Current assets | 127 | 115 | 120 | 125 |
| Cash & others | 3 | 3 | 3 | 3 |
| Total assets | 5,739 | 5,940 | 6,252 | 6,505 |
| Operating liabilities | 1,100 | 1,101 | 1,108 | 1,116 |
| Gross debt | 1,796 | 1,895 | 2,101 | 2,252 |
| Net debt | 1,793 | 1,892 | 2,098 | 2,248 |
| Shareholders' funds | 1,726 | 1,827 | 1,926 | 2,020 |
| Invested capital | 4,576 | 4,776 | 5,081 | 5,326 |

## Ratio, growth and per share analysis

| Year to | 12/2015a | 12/2016e | 12/2017e | 12/2018e |
|---|---|---|---|---|
| **Y-o-y % change** | | | | |
| Revenue | 4.4 | 5.4 | 5.2 | 5.3 |
| EBITDA | 2.0 | 10.3 | 6.7 | 5.1 |
| Operating profit | 2.1 | 11.9 | 7.5 | 4.7 |
| PBT | -16.1 | 33.6 | 7.9 | 2.9 |
| HSBC EPS | 4.5 | 5.5 | 3.9 | 2.9 |
| **Ratios (%)** | | | | |
| Revenue/IC (x) | 0.2 | 0.2 | 0.2 | 0.2 |
| ROIC | 6.8 | 6.2 | 6.1 | 6.1 |
| ROE | 13.2 | 13.2 | 13.0 | 12.7 |
| ROA | 4.9 | 5.1 | 5.0 | 5.0 |
| EBITDA margin | 55.2 | 57.8 | 58.7 | 58.5 |
| Operating profit margin | 39.4 | 41.9 | 42.8 | 42.5 |
| EBITDA/net interest (x) | 6.5 | 7.1 | 7.2 | 6.7 |
| Net debt/equity | 103.9 | 103.6 | 108.9 | 111.3 |
| Net debt/EBITDA (x) | 4.0 | 3.8 | 4.0 | 4.0 |
| CF from operations/net debt | 20.7 | 20.3 | 18.6 | 18.0 |
| **Per share data (USD)** | | | | |
| EPS Rep (diluted) | 1.14 | 1.33 | 1.38 | 1.42 |
| HSBC EPS (diluted) | 1.26 | 1.33 | 1.38 | 1.42 |
| DPS | 0.69 | 0.76 | 0.82 | 0.88 |
| Book value | 9.76 | 10.33 | 10.89 | 11.43 |

## Valuation data

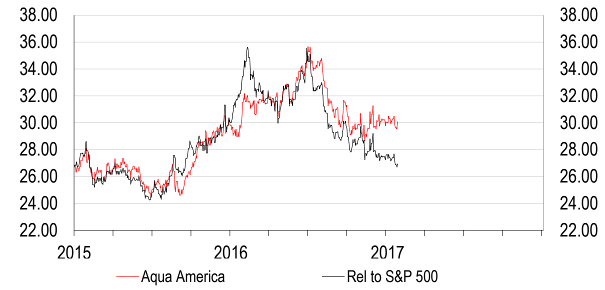
| Year to | 12/2015a | 12/2016e | 12/2017e | 12/2018e |
|---|---|---|---|---|
| EV/sales | 8.7 | 8.4 | 8.2 | 8.0 |
| EV/EBITDA | 15.8 | 14.5 | 14.0 | 13.6 |
| EV/IC | 1.6 | 1.5 | 1.5 | 1.4 |
| PE* | 23.9 | 22.7 | 21.8 | 21.2 |
| PB | 3.1 | 2.9 | 2.8 | 2.6 |
| FCF yield (%) | -0.2 | 0.6 | -1.1 | 0.1 |
| Dividend yield (%) | 2.3 | 2.5 | 2.7 | 2.9 |

* Based on HSBC EPS (diluted)

## Issuer information

| | | | |
|---|---|---|---|
| Share price (USD) | 30.06 | Free float | 100% |
| Target price (USD) | 36.00 | Sector | Water Utilities |
| Reuters (Equity) | WTR.N | Country | United States |
| Bloomberg (Equity) | WTR US | Analyst | Verity Mitchell |
| Market cap (USDm) | 5,331 | Contact | 44 20 7991 6840 |

## Price relative




Source: HSBC

Note: Priced at close of 25 Jan 2017

HSBC

# A bright future

- Earnings guidance for 2017 in line with our expectations
- New tax implications, short-term uncertainty, but growth drivers remain
- Maintain Buy rating and USD36 target price

## 2017 guidance unveiled

Aqua America (WTR) hosted its earnings guidance call on 17 January 2017 wherein it reiterated its 2016 guidance and introduced its guidance for 2017. Some of the key highlights are given below:

- **2016 guidance reiterated**: WTR reiterated its full-year EPS guidance range of USD1.30-1.35 for 2016. Our estimate of USD1.33 is in the middle of the range. In addition, it confirmed its other target of 1.5% to 2% customer growth.
- **2017 guidance unveiled**: The Company guided to a 2017 EPS in the range of USD1.34-USD1.39. Our EPS estimate for 2017 of USD1.38 is at the higher end of this range. The company reiterates its customer growth target of 1.5-2%. However, it increased its capex target from USD1.1bn for 2016-18 to USD1.2bn for the period 2017-19. For 2017, it expects significantly higher capex of more than USD450m in comparison to a cUSD350m target before.
- **Update on acquisitions**: The Company completed 19 acquisitions in 2016, adding 6,558 customers for USD22m. This represents customer growth of 1.6%. In addition, the company has 4 pending acquisitions totalling 8,761 customers, which are expected to be closed by the end of 2017.
- **Update on rate cases**: In 2016, the company received approval for rate increases in 6 states covering 10 rate cases. The total annualised revenue increase from these rate cases is USD5m, according to the company. In addition, it received an annualised revenue increase of USD1.8m in January 2017 and is waiting for approval for 2 rate cases, which could increase its revenue by USD8m per year.

## Positive elements for 2017

Both of the US water stocks under our coverage benefited from a decrease in US treasury yields in the first half of 2016, which reversed in H2. The reasons we remain confident for continued good relative performance in 2017 are slightly different: The fundamental need for water infrastructure rehabilitation remains, but a low US bond yield environment has been replaced, in our view, with optimism about the growth of the US economy driven by infrastructure investment. Water is regulated at a state, not federal level so current growth drivers remain.

**New administration nothing concrete yet – but tax changes afoot**
A number of potential impacts from the new US government are being discussed in the market but it is too early to determine the impact as yet for the water sector.

On the call, Aqua management discussed some of the implications from potential tax reform in the US including:

**Tax rate reductions** – the benefit of this would be passed back to customers, but in the view of management, this would be deferred slightly unless each state made an immediate adjustment to rates;

**Excess deferred taxes** post rate cuts would be reclassified as Regulatory Liabilities and returned to customers;

**Repair tax deduction would be reduced.** This has been a mechanism used by Aqua to increase below-the-line tax headroom in Pennsylvania, allowing it to maintain earnings without applying for rates to increased regulatory revenues. If this was reduced, Aqua would have to file for rates earlier than it otherwise would have.

**The increase in tax deductions** could slow long-term rate base growth.

These sometimes complex regulatory mechanisms have developed precisely because of the relatively high corporate tax rate in the US. Changes would lead to a reclassification and simplification of some of these but we believe ultimately would not be detrimental to customers or investor-owned utilities as tax is essentially a pass through to customers.

**Growth opportunities coupled with favourable regulatory developments in the US water sector**

We discussed in our report *UK-US Regulated Utilities: The end of the UK regulatory asset growth model* (15 January 2016) that the US water sector has significant investment needs for replacing aging infrastructure. The American Water Works Association estimates that USD40bn might be needed to meet America's Water Infrastructure Challenge.

What has emerged in the last few years are favourable regulatory developments such as infrastructure surcharges, tax incentives and the Fair Value Market legislation, which we discuss below.

As a result of these regulatory developments, earnings growth and cash flow generation have been more immediate compared to the UK, where network regulation leads to a lag between investment and earnings growth. Historically, US water companies have invested in infrastructure and waited to file rate cases in order to recover costs. This has meant a period of under-earning relative to a growing asset (rate) base. Because these initiatives speed up the recovery of regulated earnings, EPS growth is steady and the companies are able to fund their investments from FCF.

This is in contrast to the UK regulated system, which has a high degree of regulatory lag. Long-term rate plans are set on a real basis with revenue and asset indexation to RPI, which protects against inflation, but high levels of capitalisation and incentive targets are only reflected at best on a two-year forward basis or at the end of a five-year period (in the case of water). This means that earnings growth tends to lag investment growth.

**Fair value market legislation**

In particular, fair value market legislation – the ability for regulated asset systems to be sold at a fair value that is then eligible for regulated returns – has been adopted in a number of states. Increasing use of this will facilitate public authorities selling assets for a profit and private purchasers such as WTR being able to earn on the fair value to finance asset rehabilitation rather than under-earning on a regulated asset value.

This underpins our confidence in the earnings growth potential of the US water stocks, and its confidence in achieving medium term 6-7% rate base growth.

**Retrenchment from market-based activities**

Management confirmed that it would develop only two of its eight non-regulated activities – O&M activities and Home Services – the remainder will be divested in 2017.

## Valuation and risks

**Maintain Buy rating with an unchanged TP of USD36**

We value Aqua America via three methodologies – DCF, dividend yield and peer multiples. Under this methodology we take the average of the three methods to arrive at our fair value target price of USD36. Our target price implies upside of 19.8%. We maintain our Buy rating because we believe that with significant investment needs in water infrastructure in the US, future US water growth will be faster than in the UK. The stock further offers regulated stability and high levels of earnings visibility.

We have made the following changes to our valuation:

- We have rolled forward our valuation to 2017e from 2016e.
- In our DCF valuation, we have reduced our risk-free rate assumption from 3% to 2.5%, in line with our HSBC strategists' assumptions.
- We have used a weighted average PE of 21x for 2017 for our peer group valuation.
- We have increased our yield assumption from 2% to 2.5% with higher bond yields. American Water (AWK US; CP USD71.72; Buy) and Aqua America yield around 2.5% for 2017.
- We have marginally increased our capex assumption for 2017 and 2018, in line with the company's guidance. This has resulted in a slight change to our 2018 financial estimates

### Summary of valuation

| Particulars | New | Previous |
|---|---|---|
| DCF | 46.1 | 37.7 |
| Yield | 32.7 | 37.8 |
| Peer multiple | 29.0 | 31.8 |
| **Target price (average rounded)** | **36.0** | **36.0** |
| **Rating** | **Buy** | **Buy** |

Source: HSBC estimates

### WACC inputs and DCF valuation

| WACC inputs | | Equity Valuation | USDm |
|---|---|---|---|
| **Cost of debt** | | + DCF value | 9,221 |
| Pre-tax cost of debt | 4.3% | + ST marketable assets | - |
| Marginal tax rate | 19.0% | + Value of associates | - |
| **Cost of equity** | | + Other assets | 830 |
| Risk-free rate (previously 3.5%) | 2.5% | EV (asset side) | 10,051 |
| Equity risk premium | 3.5% | - Net debt (+ if Net cash) | (1,892) |
| Additional risk | | - Quasi debt (pension) | - |
| **Beta** | **0.68** | - Value of minorities | 0 |
| Debt - 27% | 3.5% | Total non-equity claims | (1,892) |
| Equity - 73% | 4.9% | **Value of equity** | **8,159** |
| **Cost of capital** | **4.5%** | **Value per share (USD)** | **46.1** |

Source: HSBC estimates

### Peer multiple valuation (USDm)

| | USD |
|---|---|
| **2017e EPS** | **1.38** |
| PE multiple | 21.0x |
| **Equity value per share (USD)** | **29.0** |

Source: HSBC estimates

### Key changes to our forecasts

| | 2016e | 2017e | 2018e |
|---|---|---|---|
| **EBIT** | | | |
| Revised | 359 | 386 | 404 |
| Previous | 359 | 386 | 407 |
| *Change* | *0%* | *0%* | *0%* |
| **Net income** | | | |
| Revised | 234 | 244 | 251 |
| Previous | 234 | 244 | 256 |
| *Change* | *0%* | *0%* | *-1%* |

Source: HSBC estimates

### Key downside risks

Aqua America fails to achieve the desired rate case revisions from rate cases; lack of organic growth from housing recovery and water usage; it grows its dividend at a lower rate than we estimate.

# Disclosure appendix

**Analyst Certification**

The following analyst(s), economist(s), and/or strategist(s) who is(are) primarily responsible for this report, certifies(y) that the opinion(s) on the subject security(ies) or issuer(s) and/or any other views or forecasts expressed herein accurately reflect their personal view(s) and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views contained in this research report: Verity Mitchell, Adam Dickens and Pablo Cuadrado

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**From 23rd March 2015 HSBC has assigned ratings on the following basis:**

The target price is based on the analyst's assessment of the stock's actual current value, although we expect it to take six to 12 months for the market price to reflect this. When the target price is more than 20% above the current share price, the stock will be classified as a Buy; when it is between 5% and 20% above the current share price, the stock may be classified as a Buy or a Hold; when it is between 5% below and 5% above the current share price, the stock will be classified as a Hold; when it is between 5% and 20% below the current share price, the stock may be classified as a Hold or a Reduce; and when it is more than 20% below the current share price, the stock will be classified as a Reduce.

Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation or resumption of coverage, change in target price or estimates).

Upside/Downside is the percentage difference between the target price and the share price.

**Prior to this date, HSBC's rating structure was applied on the following basis:**

For each stock we set a required rate of return calculated from the cost of equity for that stock's domestic or, as appropriate, regional market established by our strategy team. The target price for a stock represented the value the analyst expected the stock to reach over our performance horizon. The performance horizon was 12 months. For a stock to be classified as Overweight, the potential return, which equals the percentage difference between the current share price and the target price, including the forecast dividend yield when indicated, had to exceed the required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). For a stock to be classified as Underweight, the stock was expected to underperform its required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). Stocks between these bands were classified as Neutral.

*A stock was classified as volatile if its historical volatility had exceeded 40%, if the stock had been listed for less than 12 months (unless it was in an industry or sector where volatility is low) or if the analyst expected significant volatility. However, stocks which we did not consider volatile may in fact also have behaved in such a way. Historical volatility was defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility had to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

**Rating distribution for long-term investment opportunities**

**As of 26 January 2017, the distribution of all independent ratings published by HSBC is as follows:**

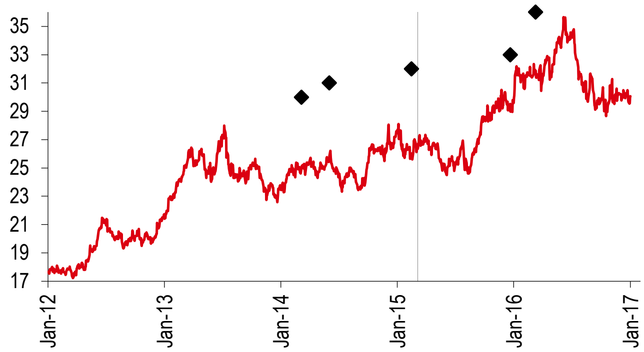
| | | |
|---|---|---|
| **Buy** | 44% | ( 25% of these provided with Investment Banking Services ) |
| **Hold** | 41% | ( 27% of these provided with Investment Banking Services ) |
| **Sell** | 15% | ( 20% of these provided with Investment Banking Services ) |

For the purposes of the distribution above the following mapping structure is used during the transition from the previous to current rating models: under our previous model, Overweight = Buy, Neutral = Hold and Underweight = Sell; under our current model Buy = Buy, Hold = Hold and Reduce = Sell. For rating definitions under both models, please see "Stock ratings and basis for financial analysis" above.

For the distribution of non-independent ratings published by HSBC, please see the disclosure page available at http://www.hsbcnet.com/gbm/financial-regulation/investment-recommendations-disclosures.

**Share price and rating changes for long-term investment opportunities**

**Aqua America (WTR.N) share price performance USD Vs HSBC rating history**




Source: HSBC

**Rating & target price history**

| From | To | Date | Analyst |
|---|---|---|---|
| Overweight | Buy | 31 Mar 2015 | Verity Mitchell |
| **Target price** | **Value** | **Date** | **Analyst** |
| Price 1 | 30.00 | 31 Mar 2014 | Verity Mitchell |
| Price 2 | 31.00 | 27 Jun 2014 | Verity Mitchell |
| Price 3 | 32.00 | 11 Mar 2015 | Verity Mitchell |
| Price 4 | 33.00 | 15 Jan 2016 | Verity Mitchell |
| Price 5 | 36.00 | 04 Apr 2016 | Verity Mitchell |

Source: HSBC

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7 As of 30 November 2016, this company was a client of HSBC or had during the preceding 12 month period been a client of and/or paid compensation to HSBC in respect of non-securities services.
8 A covering analyst/s has received compensation from this company in the past 12 months.
9 A covering analyst/s or a member of his/her household has a financial interest in the securities of this company, as detailed below.
10 A covering analyst/s or a member of his/her household is an officer, director or supervisory board member of this company, as detailed below.

11 At the time of publication of this report, HSBC is a non-US Market Maker in securities issued by this company and/or in securities in respect of this company

12 As of 23 January 2017, HSBC beneficially held a net long position of more than 0.5% of this company's total issued share capital, calculated according to the SSR methodology.

13 As of 15 December 2016, HSBC beneficially held a net short position of more than 0.5% of this company's total issued share capital, calculated according to the SSR methodology.

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2. All market data included in this report are dated as at close 25 January 2017, unless a different date and/or a specific time of day is indicated in the report.
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1. This report was produced and signed off by the author on 26 Jan 2017 20:16 GMT.
2. In order to see when this report was first disseminated please see the disclosure page available at https://www.research.hsbc.com/R/34/npjFvkh

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25 May 2017

HSBC Global Research

# Aqua America (WTR US)

## Buy: A reality check in Q1, but growth continues

**EQUITIES**
WATER UTILITIES

**United States**

- 2017Q1 results show 3.4% EPS growth – solid, not spectacular
- Underperformer despite steady growth story
- Maintain Buy rating and TP of USD35

**2017Q1 results 3.4% EPS growth – solid, not spectacular**

Aqua America (WTR) posted its 2017Q1 results on 3 May 2017, with earnings per share growth rate of 3.4%. It also posted dividend growth of 7.5%, in line with guidance. Aqua benefited from the sale of a utility system in North Carolina as well as a favourable tax settlement in Ohio during the first quarter of 2016, which impacted the year-on-year comparison.

**Underperformer**

WTR has underperformed its water peers over 1m and 3m. Over 1m, it is down 8% against our MSCI European utilities benchmark. We believe this is because of buoyant US bond yields, given that US water stocks have some negative correlation with US yields (chart below). Because of the many opportunities flagged for growth through the purchase of asset systems from municipalities, which has caught investors' imagination, the negative correlation has been limited. The reality, as set out in the American Water Q1 call (AWK US, USD76.6, Buy, TP USD79), is that municipal acquisitions take time to deliver. They do not have such a clearly defined process as corporate acquisitions. The municipality is responsible to a wider range of stakeholders and must be seen to be delivering long-term value and service to customers. There is growth from these acquisitions, but market sentiment must not get ahead of guidance, which it did for Q1, in our view.

**Growth, rate cases and outlook for 2017**

Year to date, Aqua has added approximately 262 customer connections through acquisitions in Indiana. These, together with organic growth, have increased the company's customer base by more than 0.2% so far in 2017. It has four municipal systems under negotiation for purchase. These represent a purchase price of USD113m and nearly 9,000 customers or 12,000 equivalent households. WTR is targeting earnings per diluted share in the range of USD1.34-1.39, with total customer growth of 1.5-2% in 2017. It has reiterated its target of USD450m of investments for 2017.

**Maintain Buy rating with unchanged TP of USD35**

We value Aqua America via three methodologies: DCF, dividend yield, and peer multiples, taking the average of the three methods to arrive at our fair value target price of USD35 (unchanged). Our TP implies 8.8% upside; we maintain our Buy rating as we believe the combination of regulated investment and earnings growth is attractive.

**BUY**

TARGET PRICE (USD)
**35.00**

PREVIOUS TARGET (USD)

SHARE PRICE (USD)
**32.17**
(as of 23 May 2017)

UPSIDE/DOWNSIDE
**+8.8%**

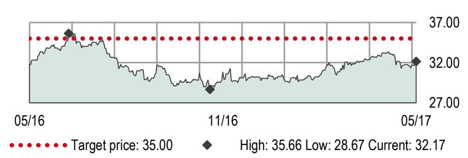
MARKET DATA

| | | | |
|---|---|---|---|
| Market cap (USDm) | 5,713 | Free float | 100% |
| Market cap (USDm) | 5,713 | BBG | WTR US |
| 3m ADTV (USDm) | 42 | RIC | WTR.N |

FINANCIALS AND RATIOS (USD)

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| HSBC EPS | 1.32 | 1.37 | 1.47 | 1.56 |
| HSBC EPS (prev) | - | - | - | - |
| Change (%) | - | - | - | - |
| Consensus EPS | 1.32 | 1.36 | 1.44 | 1.54 |
| PE (x) | 24.4 | 23.4 | 21.9 | 20.6 |
| Dividend yield (%) | 2.3 | 2.5 | 2.7 | 2.9 |
| EV/EBITDA (x) | 16.6 | 15.0 | 14.3 | 13.5 |
| ROE (%) | 13.1 | 12.8 | 13.0 | 13.1 |

52-WEEK PRICE (USD)




Source: Thomson Reuters IBES, HSBC estimates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HSBC

# Financials & valuation: Aqua America

Buy

## Financial statements

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| **Profit & loss summary (USDm)** | | | | |
| Revenue | 820 | 874 | 930 | 993 |
| EBITDA | 459 | 518 | 555 | 592 |
| Depreciation & amortisation | -133 | -146 | -155 | -162 |
| Operating profit/EBIT | 326 | 372 | 400 | 429 |
| Net interest | -71 | -71 | -80 | -89 |
| PBT | 255 | 300 | 320 | 341 |
| HSBC PBT | 254 | 300 | 320 | 341 |
| Taxation | -21 | -57 | -61 | -65 |
| Net profit | 234 | 243 | 259 | 276 |
| HSBC net profit | 234 | 243 | 259 | 276 |
| **Cash flow summary (USDm)** | | | | |
| Cash flow from operations | 396 | 398 | 417 | 441 |
| Capex | -383 | -450 | -400 | -350 |
| Cash flow from investment | -383 | -450 | -400 | -350 |
| Dividends | -131 | -143 | -155 | -167 |
| Change in net debt | 122 | 195 | 137 | 76 |
| FCF equity | -16 | -52 | 17 | 91 |
| **Balance sheet summary (USDm)** | | | | |
| Intangible fixed assets | 42 | 42 | 42 | 42 |
| Tangible fixed assets | 5,950 | 6,254 | 6,499 | 6,687 |
| Current assets | 127 | 118 | 125 | 132 |
| Cash & others | 4 | 4 | 4 | 4 |
| Total assets | 6,157 | 6,452 | 6,703 | 6,898 |
| Operating liabilities | 1,145 | 1,145 | 1,154 | 1,164 |
| Gross debt | 1,895 | 2,090 | 2,228 | 2,303 |
| Net debt | 1,891 | 2,086 | 2,224 | 2,300 |
| Shareholders' funds | 1,850 | 1,950 | 2,054 | 2,163 |
| Invested capital | 4,971 | 5,266 | 5,508 | 5,692 |

## Ratio, growth and per share analysis

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| **Y-o-y % change** | | | | |
| Revenue | 0.7 | 6.5 | 6.5 | 6.7 |
| EBITDA | 1.9 | 12.9 | 7.2 | 6.6 |
| Operating profit | 1.4 | 14.1 | 7.7 | 7.3 |
| PBT | 17.7 | 17.6 | 6.7 | 6.4 |
| HSBC EPS | 4.7 | 4.4 | 6.7 | 6.4 |
| **Ratios (%)** | | | | |
| Revenue/IC (x) | 0.2 | 0.2 | 0.2 | 0.2 |
| ROIC | 6.3 | 5.9 | 6.0 | 6.2 |
| ROE | 13.1 | 12.8 | 13.0 | 13.1 |
| ROA | 5.2 | 4.9 | 5.0 | 5.2 |
| EBITDA margin | 55.9 | 59.3 | 59.7 | 59.6 |
| Operating profit margin | 39.7 | 42.5 | 43.0 | 43.2 |
| EBITDA/net interest (x) | 6.4 | 7.3 | 7.0 | 6.7 |
| Net debt/equity | 102.2 | 107.0 | 108.2 | 106.3 |
| Net debt/EBITDA (x) | 4.1 | 4.0 | 4.0 | 3.9 |
| CF from operations/net debt | 20.9 | 19.1 | 18.8 | 19.2 |
| **Per share data (USD)** | | | | |
| EPS Rep (diluted) | 1.32 | 1.37 | 1.47 | 1.56 |
| HSBC EPS (diluted) | 1.32 | 1.37 | 1.47 | 1.56 |
| DPS | 0.74 | 0.81 | 0.88 | 0.95 |
| Book value | 10.46 | 11.03 | 11.62 | 12.23 |

## Valuation data

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| EV/sales | 9.3 | 8.9 | 8.5 | 8.1 |
| EV/EBITDA | 16.6 | 15.0 | 14.3 | 13.5 |
| EV/IC | 1.5 | 1.5 | 1.4 | 1.4 |
| PE* | 24.4 | 23.4 | 21.9 | 20.6 |
| PB | 3.1 | 2.9 | 2.8 | 2.6 |
| FCF yield (%) | -0.3 | -0.9 | 0.3 | 1.6 |
| Dividend yield (%) | 2.3 | 2.5 | 2.7 | 2.9 |

* Based on HSBC EPS (diluted)

## Issuer information

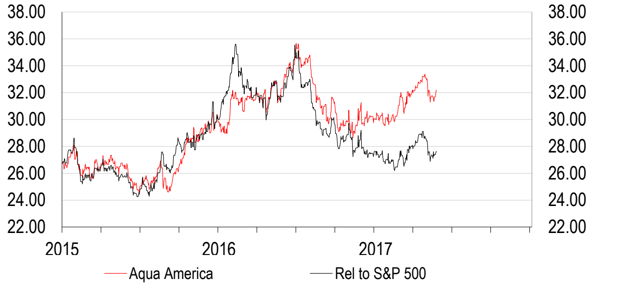
| | | | |
|---|---|---|---|
| Share price (USD) | 32.17 | Free float | 100% |
| Target price (USD) | 35.00 | Sector | Water Utilities |
| Reuters (Equity) | WTR.N | Country | United States |
| Bloomberg (Equity) | WTR US | Analyst | Verity Mitchell |
| Market cap (USDm) | 5,713 | Contact | 44 20 7991 6840 |

## ESG metrics

| **Environmental Indicators** | | **Governance Indicators** | |
|---|---|---|---|
| GHG Intensity (kg/USD) | NA | No. of board members | 8 |
| Energy Intensity (kWh/USD) | NA | Average board experience (years) | 10.24 |
| CO2 reduction policy | Yes | Female board members (%) | 25% |
| **Social Indicators** | | Board members Independence (%) | 63% |
| Employee costs as % of sales | NA | | |
| Employee turnover (%) | NA | | |
| Diversity policy | Yes | | |

Source: Company data, HSBC

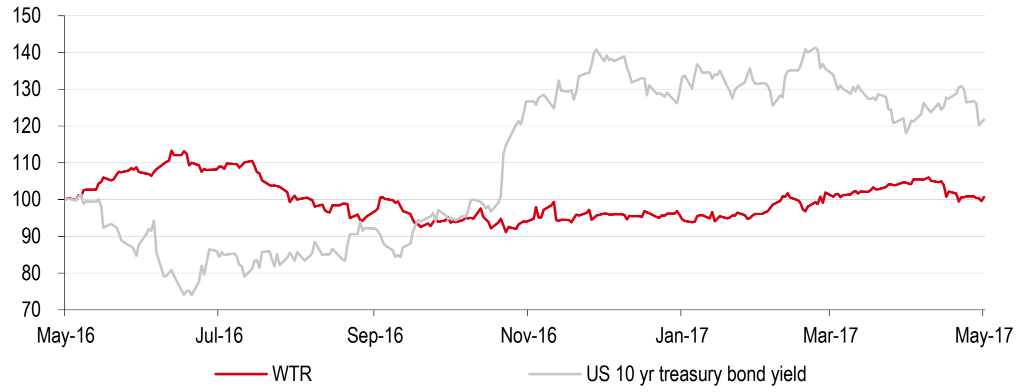
## Price relative




Source: HSBC

Note: Priced at close of 23 May 2017

**Macro issues – US 10-year treasuries against WTR over 12m**




Source: DataStream, Eikon

**Still driving growth through organic investment**
To date in 2017, the company's state subsidiaries in Indiana, Illinois, New Jersey, North Carolina and Ohio have received rate awards or infrastructure surcharges totalling USD10.7m. Additionally, the company currently has rate proceedings pending in Illinois and Virginia for USD12.2m.

**The big picture**
The US Environmental Protection Agency's (EPA) 2013 estimate of the National Need for Infrastructure Investment in water is USD384.2bn and USD298.2bn for waste water. This is a significant driver for investment in order to grow future regulated earnings for US water companies for the next 5-10 years. Fair value legislation was introduced as follows: Illinois 8/2013; New Jersey 5/2015; Indiana 5/2015; Pennsylvania 4/2016. Virginia already has a form of FV adjustment in place.

## Valuation and risks

We value Aqua America via three methodologies – DCF, dividend yield, and peer multiples. Under this methodology we take the average of the three methods to arrive at our fair value target price of USD35 (unchanged). We set out the details below. Our target price implies upside of 8.8%; we maintain our Buy rating for the stock because we believe the combination of regulated investment and earnings growth is attractive compared with the UK water stocks on similar PE multiples, but offering lower EPS growth.

**Key downside risks**
Aqua America fails to achieve the desired rate case revisions; lack of organic growth from asset replacement; it cannot take advantage of the FV market legislation opportunity; its dividend grows at a lower rate than estimated.

### Summary of valuation (USD)

| Particulars | New | Previous |
|---|---|---|
| **Current price as on 23-May-17** | **32.2** | **NA** |
| DCF | 40.8 | 40.5 |
| Yield (2.5%, unchanged) | 32.4 | 32.4 |
| Peer multiple | 33.0 | 33.0 |
| **Target price (average rounded)** | **35.0** | **35.0** |
| *Upside* | *8.8%* | *NA* |
| **Rating** | **Buy** | **Buy** |

Source: HSBC estimates

### WACC inputs and DCF valuation

| WACC inputs | | Equity Valuation | USDm |
|---|---|---|---|
| **Cost of debt** | | **+ DCF value** | **8,349** |
| Pre-tax cost of debt | 4.3% | + ST marketable assets | - |
| Marginal tax rate | 19.0% | + Value of associates | - |
| **Cost of equity** | | + Other assets | 949 |
| Risk-free rate | 2.5% | **EV (asset side)** | **9,298** |
| Equity risk premium | 3.5% | - Net debt (+ if Net cash) | (2,086) |
| Additional risk | | - Quasi debt (pension) | - |
| **Beta** | **0.49** | - Value of minorities | 0 |
| Debt - 25% | 3.5% | Total non-equity claims | (2,086) |
| Equity - 75% | 4.2% | **Value of equity** | **7,211** |
| **Cost of capital** | **4.0%** | **Value per share (USD)** | **40.8** |

Source: HSBC estimates

### Peer multiple valuation (USDm)

| | USD |
|---|---|
| **2017e EPS** | **1.37** |
| PE multiple | 24.0x |
| **Equity value per share (USD)** | **33.0** |

Source: HSBC estimates

# Disclosure appendix

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**From 23rd March 2015 HSBC has assigned ratings on the following basis:**

The target price is based on the analyst's assessment of the stock's actual current value, although we expect it to take six to 12 months for the market price to reflect this. When the target price is more than 20% above the current share price, the stock will be classified as a Buy; when it is between 5% and 20% above the current share price, the stock may be classified as a Buy or a Hold; when it is between 5% below and 5% above the current share price, the stock will be classified as a Hold; when it is between 5% and 20% below the current share price, the stock may be classified as a Hold or a Reduce; and when it is more than 20% below the current share price, the stock will be classified as a Reduce.

Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation or resumption of coverage, change in target price or estimates).

Upside/Downside is the percentage difference between the target price and the share price.

**Prior to this date, HSBC's rating structure was applied on the following basis:**

For each stock we set a required rate of return calculated from the cost of equity for that stock's domestic or, as appropriate, regional market established by our strategy team. The target price for a stock represented the value the analyst expected the stock to reach over our performance horizon. The performance horizon was 12 months. For a stock to be classified as Overweight, the potential return, which equals the percentage difference between the current share price and the target price, including the forecast dividend yield when indicated, had to exceed the required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). For a stock to be classified as Underweight, the stock was expected to underperform its required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). Stocks between these bands were classified as Neutral.

*A stock was classified as volatile if its historical volatility had exceeded 40%, if the stock had been listed for less than 12 months (unless it was in an industry or sector where volatility is low) or if the analyst expected significant volatility. However, stocks which we did not consider volatile may in fact also have behaved in such a way. Historical volatility was defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility had to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

**Rating distribution for long-term investment opportunities**

**As of 24 May 2017, the distribution of all independent ratings published by HSBC is as follows:**

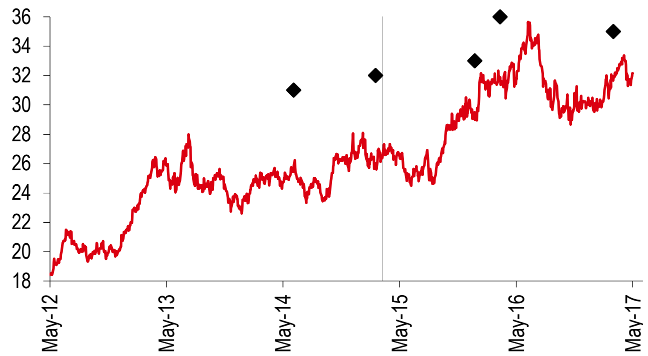
| | | |
|---|---|---|
| **Buy** | 45% | ( 25% of these provided with Investment Banking Services ) |
| **Hold** | 40% | ( 26% of these provided with Investment Banking Services ) |
| **Sell** | 15% | ( 16% of these provided with Investment Banking Services ) |

For the purposes of the distribution above the following mapping structure is used during the transition from the previous to current rating models: under our previous model, Overweight = Buy, Neutral = Hold and Underweight = Sell; under our current model Buy = Buy, Hold = Hold and Reduce = Sell. For rating definitions under both models, please see "Stock ratings and basis for financial analysis" above.

For the distribution of non-independent ratings published by HSBC, please see the disclosure page available at http://www.hsbcnet.com/gbm/financial-regulation/investment-recommendations-disclosures.

**Share price and rating changes for long-term investment opportunities**

**Aqua America (WTR.N) share price performance USD Vs HSBC rating history**




Source: HSBC

**Rating & target price history**

| From | To | Date | Analyst |
|---|---|---|---|
| Overweight | Buy | 31 Mar 2015 | Verity Mitchell |
| **Target price** | **Value** | **Date** | **Analyst** |
| Price 1 | 31.00 | 27 Jun 2014 | Verity Mitchell |
| Price 2 | 32.00 | 11 Mar 2015 | Verity Mitchell |
| Price 3 | 33.00 | 15 Jan 2016 | Verity Mitchell |
| Price 4 | 36.00 | 04 Apr 2016 | Verity Mitchell |
| Price 5 | 35.00 | 24 Mar 2017 | Verity Mitchell |

Source: HSBC

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8 A covering analyst/s has received compensation from this company in the past 12 months.

9 A covering analyst/s or a member of his/her household has a financial interest in the securities of this company, as detailed below.
10 A covering analyst/s or a member of his/her household is an officer, director or supervisory board member of this company, as detailed below.
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12 As of 19 May 2017, HSBC beneficially held a net long position of more than 0.5% of this company's total issued share capital, calculated according to the SSR methodology.
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8 August 2017

HSBC Global Research

# Aqua America (WTR US)

## Buy: Still some upside, raise TP to USD40

EQUITIES
WATER UTILITIES

United States

- Q2 2017: 2% regulated revenue growth; dividend growth 7%
- Promising growth potential; still some upside
- Maintain Buy rating, raise TP to USD40 from USD35

**Q2 2017 2.3% growth in net income; revenues weighed down by disposal**

Aqua America (WTR) reported its Q2 2017 results with 2% growth in regulated revenues due to an increase in rates, surcharges, consumption and customer growth. However, total revenues declined 0.2% due to the disposal of much of its market-based activities segment. Future market-based activities will be focused on limited O&M and home services segments with a smaller cUSD4m revenue and won't represent more than 10% of total earnings. EPS was USD0.62 compared to USD0.63 in 2016. It announced a dividend increase of 7%, in line with its guidance, and an improved O&M efficiency ratio that declined 4.2%.

**Water investors want growth: US water and Veolia best performers**

WTR has outperformed all the stocks in our water coverage universe y-t-d except American Water (AWK US, Hold, USD81.08) and Veolia (VIE FP, Buy, EUR19.06). Because of the many opportunities flagged for growth through the purchase of asset systems from municipalities and lack of regulatory risk, the US water stocks have done well. The challenge for the next leg up to our 2% assumed yield (compared to 2.4% at present) is an accelerated growth outlook.

**Rate case and outlook**

Year-to-date, Aqua has added more than 1,000 customer connections through acquisitions. These, together with organic growth, have increased the company's customer base by more than 0.5% so far in 2017. It has four municipal systems under negotiation for purchase. These represent a purchase price of USD121m and nearly 12,000 customers. It is also going to file for rate case in Pennsylvania in 2018 with the resolution expected in 2019. WTR is targeting earnings per diluted share in the range of USD1.34-1.39, with total customer growth of 1.5-2% in 2017. It has reiterated its target of USD450m of investments for 2017.

**Maintain Buy rating and raise TP to USD40 from USD35**

We value Aqua America via three methodologies: DCF, dividend yield, and peer multiples, taking the average of the three methods to arrive at our new fair value target price of USD40, which reflects our updated US water peer valuation multiple from 24x to 27.8x. We also consider the dividend yield of 2%, which is in line with its peers. Our target price implies c18.7% upside. We maintain our Buy rating as we believe the combination of regulated investment and earnings growth is attractive.

**MAINTAIN BUY**

| TARGET PRICE (USD) | PREVIOUS TARGET (USD) |
|---|---|
| **40.00** | **35.00** |

| SHARE PRICE (USD) | UPSIDE/DOWNSIDE |
|---|---|
| **33.71** | **+18.7%** |
| (as of 04 Aug 2017) | |

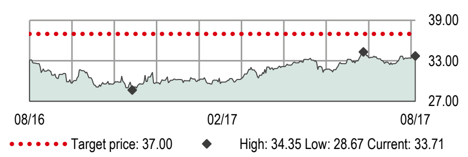
MARKET DATA

| | | | |
|---|---|---|---|
| Market cap (USDm) | 5,989 | Free float | 100% |
| Market cap (USDm) | 5,989 | BBG | WTR US |
| 3m ADTV (USDm) | 37 | RIC | WTR.N |

FINANCIALS AND RATIOS (USD)

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| HSBC EPS | 1.32 | 1.37 | 1.47 | 1.56 |
| HSBC EPS (prev) | - | - | - | - |
| Change (%) | - | - | - | - |
| Consensus EPS | 1.32 | 1.36 | 1.44 | 1.55 |
| PE (x) | 25.6 | 24.5 | 23.0 | 21.6 |
| Dividend yield (%) | 2.2 | 2.4 | 2.6 | 2.8 |
| EV/EBITDA (x) | 17.2 | 15.6 | 14.8 | 14.0 |
| ROE (%) | 13.1 | 12.8 | 13.0 | 13.1 |

52-WEEK PRICE (USD)




Source: Thomson Reuters IBES, HSBC estimates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# Financials & valuation: Aqua America

**Buy**

## Financial statements

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| **Profit & loss summary (USDm)** | | | | |
| Revenue | 820 | 874 | 930 | 993 |
| EBITDA | 459 | 518 | 555 | 592 |
| Depreciation & amortisation | -133 | -146 | -155 | -162 |
| Operating profit/EBIT | 326 | 372 | 400 | 429 |
| Net interest | -71 | -71 | -80 | -89 |
| PBT | 255 | 300 | 320 | 341 |
| HSBC PBT | 254 | 300 | 320 | 341 |
| Taxation | -21 | -57 | -61 | -65 |
| Net profit | 234 | 243 | 259 | 276 |
| HSBC net profit | 234 | 243 | 259 | 276 |
| **Cash flow summary (USDm)** | | | | |
| Cash flow from operations | 396 | 398 | 417 | 441 |
| Capex | -383 | -450 | -400 | -350 |
| Cash flow from investment | -383 | -450 | -400 | -350 |
| Dividends | -131 | -143 | -155 | -167 |
| Change in net debt | 122 | 195 | 137 | 76 |
| FCF equity | -16 | -52 | 17 | 91 |
| **Balance sheet summary (USDm)** | | | | |
| Intangible fixed assets | 42 | 42 | 42 | 42 |
| Tangible fixed assets | 5,950 | 6,254 | 6,499 | 6,687 |
| Current assets | 127 | 118 | 125 | 132 |
| Cash & others | 4 | 4 | 4 | 4 |
| Total assets | 6,157 | 6,452 | 6,703 | 6,898 |
| Operating liabilities | 1,145 | 1,145 | 1,154 | 1,164 |
| Gross debt | 1,895 | 2,090 | 2,228 | 2,303 |
| Net debt | 1,891 | 2,086 | 2,224 | 2,300 |
| Shareholders' funds | 1,850 | 1,950 | 2,054 | 2,163 |
| Invested capital | 4,971 | 5,266 | 5,508 | 5,692 |

## Ratio, growth and per share analysis

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| **Y-o-y % change** | | | | |
| Revenue | 0.7 | 6.5 | 6.5 | 6.7 |
| EBITDA | 1.9 | 12.9 | 7.2 | 6.6 |
| Operating profit | 1.4 | 14.1 | 7.7 | 7.3 |
| PBT | 17.7 | 17.6 | 6.7 | 6.4 |
| HSBC EPS | 4.7 | 4.4 | 6.7 | 6.4 |
| **Ratios (%)** | | | | |
| Revenue/IC (x) | 0.2 | 0.2 | 0.2 | 0.2 |
| ROIC | 6.3 | 5.9 | 6.0 | 6.2 |
| ROE | 13.1 | 12.8 | 13.0 | 13.1 |
| ROA | 5.2 | 4.9 | 5.0 | 5.2 |
| EBITDA margin | 55.9 | 59.3 | 59.7 | 59.6 |
| Operating profit margin | 39.7 | 42.5 | 43.0 | 43.2 |
| EBITDA/net interest (x) | 6.4 | 7.3 | 7.0 | 6.7 |
| Net debt/equity | 102.2 | 107.0 | 108.2 | 106.3 |
| Net debt/EBITDA (x) | 4.1 | 4.0 | 4.0 | 3.9 |
| CF from operations/net debt | 20.9 | 19.1 | 18.8 | 19.2 |
| **Per share data (USD)** | | | | |
| EPS Rep (diluted) | 1.32 | 1.37 | 1.47 | 1.56 |
| HSBC EPS (diluted) | 1.32 | 1.37 | 1.47 | 1.56 |
| DPS | 0.74 | 0.81 | 0.88 | 0.95 |
| Book value | 10.46 | 11.03 | 11.62 | 12.23 |

## Valuation data

| Year to | 12/2016a | 12/2017e | 12/2018e | 12/2019e |
|---|---|---|---|---|
| EV/sales | 9.6 | 9.2 | 8.8 | 8.3 |
| EV/EBITDA | 17.2 | 15.6 | 14.8 | 14.0 |
| EV/IC | 1.6 | 1.5 | 1.5 | 1.5 |
| PE* | 25.6 | 24.5 | 23.0 | 21.6 |
| PB | 3.2 | 3.1 | 2.9 | 2.8 |
| FCF yield (%) | -0.3 | -0.9 | 0.3 | 1.5 |
| Dividend yield (%) | 2.2 | 2.4 | 2.6 | 2.8 |

* Based on HSBC EPS (diluted)

## Issuer information

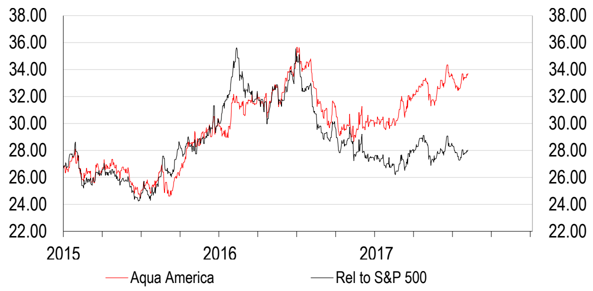
| | | | |
|---|---|---|---|
| Share price (USD) | 33.71 | Free float | 100% |
| Target price (USD) | 40.00 | Sector | Water Utilities |
| Reuters (Equity) | WTR.N | Country | United States |
| Bloomberg (Equity) | WTR US | Analyst | Verity Mitchell |
| Market cap (USDm) | 5,989 | Contact | 44 20 7991 6840 |

## ESG metrics

| | | | |
|---|---|---|---|
| **Environmental Indicators** | | **Governance Indicators** | |
| GHG Intensity (kg/USD) | NA | No. of board members | 8 |
| Energy Intensity (kWh/USD) | NA | Average board experience (years) | 10.24 |
| CO2 reduction policy | Yes | Female board members (%) | 25 |
| **Social Indicators** | | Board members Independence (%) | 63 |
| Employee costs as % of sales | NA | | |
| Employee turnover (%) | NA | | |
| Diversity policy | Yes | | |

Source: Company data, HSBC

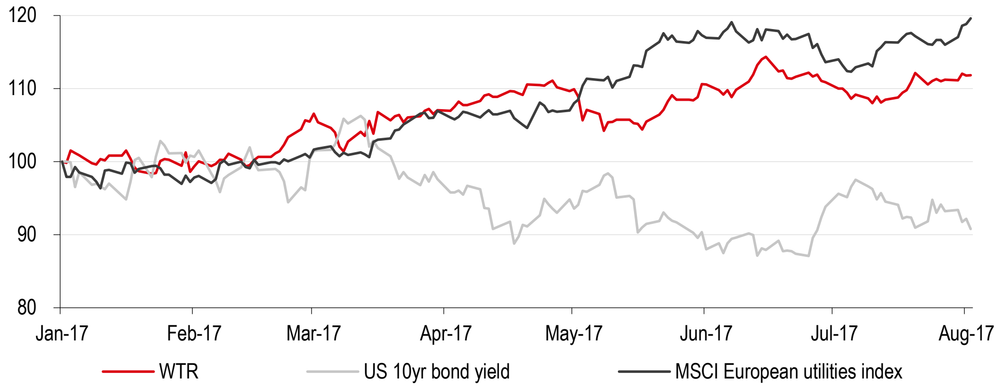
## Price relative




Source: HSBC

Note: Priced at close of 04 Aug 2017

**Y-t-d performance of WTR vs MSCI European utilities index vs US 10yr bond yield**




Source: MSCI, Thomson Reuters Datastream

**Less of a bond proxy**

We compare the performance of WTR against the US 10-year bond yield. We believe that because WTR is less liquid than AWK, it has been less perfectly correlated with rising US bond yields. It trade more in line with our European utility peers.

**Growth driver: Organic investment**

To date in 2017, the company's subsidiaries in Indiana, Illinois, New Jersey, North Carolina, Pennsylvania and Ohio have received rate awards or infrastructure surcharges totalling USD11.1m. Additionally, the company currently has rate proceedings pending in Illinois and Virginia for USD14m.

During conference call, the CEO mentioned that WTR will apply for a rate case in Pennsylvania in 2018. WTR has not filed for a rate case in the state since 2011, utilising deferred tax balances to fund its investments. It will apply for an infrastructure surcharge (DSIC) in 2017 for 7.6%. WTR will opt for a gradual rate increase, which will be beneficial for customers as it will smooth the bill increase over several quarters.

**The big picture**

The US Environmental Protection Agency's (EPA) 2013 estimate of the National Need for Infrastructure Investment in water is USD384.2bn, and USD298.2bn for waste water. This is a significant driver for investment in order to grow future regulated earnings for US water companies for the next five to ten years.

## Valuation and risks

**Maintain Buy rating, TP raised to USD40 from USD35**

We value Aqua America via three methodologies: DCF, dividend yield, and peer multiples. We take the average of the three methods to arrive at our new fair value target price of USD40, which reflects our updated US water peer valuation multiple from 24x to 27.8x. We also consider the dividend yield of 2%, which is in line with its peers. Our target price implies c18.7% upside. We maintain our Buy rating as we believe the combination of regulated investment and earnings growth is attractive and WTR has underperformed relative to its US peer, which offers a similar investment model. It is also not perfectly correlated to US bond yields.

### Summary of valuation (USD)

| Particulars | New | Previous |
|---|---|---|
| **Current price as on 4-Aug-17** | **33.7** | **NA** |
| DCF | 40.9 | 40.8 |
| Yield | 40.6 | 32.4 |
| Peer multiple | 38.2 | 33.0 |
| **Target price (average rounded)** | **40.0** | **35.0** |
| Upside | 18.7% | NA |
| **Rating** | **Buy** | **Buy** |

Source: HSBC estimates

### WACC inputs and DCF valuation

| WACC inputs | | Equity valuation | USDm |
|---|---|---|---|
| **Cost of debt** | | **+ DCF value** | **8,378** |
| Pre-tax cost of debt | 4.3% | + ST marketable assets | - |
| Marginal tax rate | 19.0% | + Value of associates | - |
| **Cost of equity** | | + Other assets | 949 |
| Risk-free rate | 2.5% | **EV (asset side)** | **9,326** |
| Equity risk premium | 3.5% | - Net debt (+ if Net cash) | (2,086) |
| Additional risk | | - Quasi debt (pension) | - |
| **Beta** | **0.49** | - Value of minorities | 0 |
| Debt - 24% | 3.5% | Total non-equity claims | (2,086) |
| Equity - 76% | 4.2% | Value of equity | 7,240 |
| **Cost of capital** | **4.0%** | **Value per share (USD)** | **40.9** |

Source: HSBC estimates

### Peer multiple valuation

| | USD |
|---|---|
| **2017e EPS** | **1.37** |
| PE multiple | 27.8x |
| **Equity value per share (USD)** | **38.2** |

Source: HSBC estimates

### Key downside risks

Aqua America fails to achieve the desired rate case revisions and infrastructure surcharges; it lacks organic growth from asset replacement; it cannot take advantage of the FV market legislation opportunity; its dividend grows at a lower rate than we assume.

# Disclosure appendix

**Analyst Certification**

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**From 23rd March 2015 HSBC has assigned ratings on the following basis:**

The target price is based on the analyst's assessment of the stock's actual current value, although we expect it to take six to 12 months for the market price to reflect this. When the target price is more than 20% above the current share price, the stock will be classified as a Buy; when it is between 5% and 20% above the current share price, the stock may be classified as a Buy or a Hold; when it is between 5% below and 5% above the current share price, the stock will be classified as a Hold; when it is between 5% and 20% below the current share price, the stock may be classified as a Hold or a Reduce; and when it is more than 20% below the current share price, the stock will be classified as a Reduce.

Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation or resumption of coverage, change in target price or estimates).

Upside/Downside is the percentage difference between the target price and the share price.

**Prior to this date, HSBC's rating structure was applied on the following basis:**

For each stock we set a required rate of return calculated from the cost of equity for that stock's domestic or, as appropriate, regional market established by our strategy team. The target price for a stock represented the value the analyst expected the stock to reach over our performance horizon. The performance horizon was 12 months. For a stock to be classified as Overweight, the potential return, which equals the percentage difference between the current share price and the target price, including the forecast dividend yield when indicated, had to exceed the required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). For a stock to be classified as Underweight, the stock was expected to underperform its required return by at least 5 percentage points over the succeeding 12 months (or 10 percentage points for a stock classified as Volatile*). Stocks between these bands were classified as Neutral.

*A stock was classified as volatile if its historical volatility had exceeded 40%, if the stock had been listed for less than 12 months (unless it was in an industry or sector where volatility is low) or if the analyst expected significant volatility. However, stocks which we did not consider volatile may in fact also have behaved in such a way. Historical volatility was defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility had to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

**Rating distribution for long-term investment opportunities**

**As of 07 August 2017, the distribution of all independent ratings published by HSBC is as follows:**

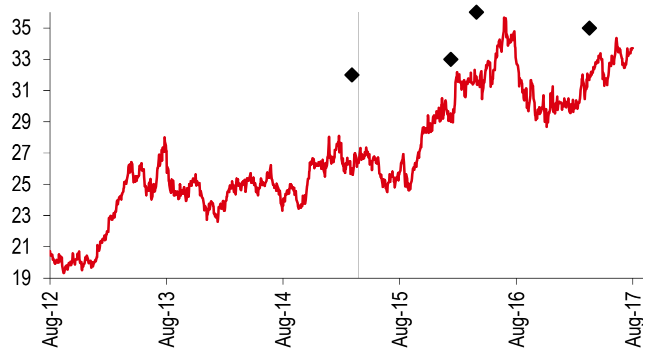
| | | |
|---|---|---|
| **Buy** | 45% | ( 25% of these provided with Investment Banking Services ) |
| **Hold** | 41% | ( 25% of these provided with Investment Banking Services ) |
| **Sell** | 14% | ( 16% of these provided with Investment Banking Services ) |

For the purposes of the distribution above the following mapping structure is used during the transition from the previous to current rating models: under our previous model, Overweight = Buy, Neutral = Hold and Underweight = Sell; under our current model Buy = Buy, Hold = Hold and Reduce = Sell. For rating definitions under both models, please see "Stock ratings and basis for financial analysis" above.

For the distribution of non-independent ratings published by HSBC, please see the disclosure page available at http://www.hsbcnet.com/gbm/financial-regulation/investment-recommendations-disclosures.

**Share price and rating changes for long-term investment opportunities**

**Aqua America (WTR.N) share price performance USD Vs HSBC rating history**




Source: HSBC

**Rating & target price history**

| From | To | Date | Analyst |
|---|---|---|---|
| Overweight | Buy | 31 Mar 2015 | Verity Mitchell |
| **Target price** | **Value** | **Date** | **Analyst** |
| Price 1 | 32.00 | 11 Mar 2015 | Verity Mitchell |
| Price 2 | 33.00 | 15 Jan 2016 | Verity Mitchell |
| Price 3 | 36.00 | 04 Apr 2016 | Verity Mitchell |
| Price 4 | 35.00 | 24 Mar 2017 | Verity Mitchell |

Source: HSBC

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January 8, 2018

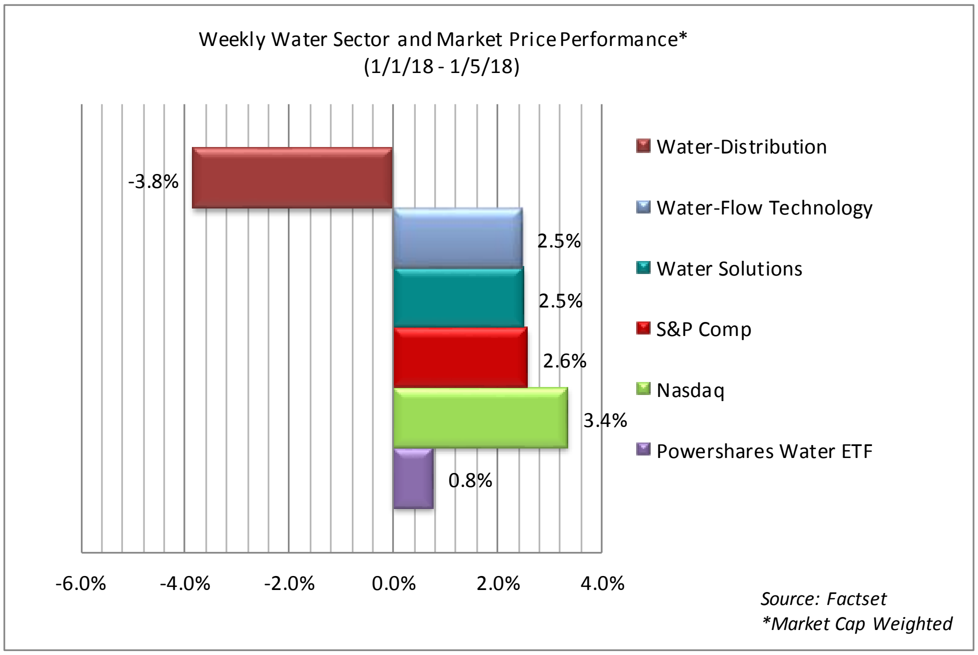
INFRASTRUCTURE

# Utilities & Infrastructure Weekly

| Janney Coverage Universe | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ticker | Name | Rating | Price | Fair Value | Upside | 17 EPS/ (P/E) | 18 EPS/ (P/E) | 19 EPS/ (P/E) |
| | WATER UTILITIES | | | | | | | |
| AWR | American States Water Company | Neutral | $55.52 | $48.00 | -14% | $1.89 (34.3) | $1.80 (29.4) | $1.92 (30.8) |
| AWK | American Water Works Company, Inc. | Neutral | $86.75 | $90.00 | 4% | $2.99 (30.4) | $3.25 (29.0) | $3.48 (26.7) |
| WTR | Aqua America, Inc. | Buy | $37.71 | $41.00 | 9% | $1.36 (28.4) | $1.44 (27.7) | $1.56 (26.2) |
| CWCO | Consolidated Water Co. Ltd. | Buy | $12.80 | $15.00 | 17% | $0.56 (22.1) | $0.76 (22.9) | $0.76 (16.8) |
| CWT | California Water Service Group | Neutral | $43.50 | $40.00 | -8% | $1.39 (43.1) | $1.47 (31.3) | $1.57 (29.6) |
| MSEX | Middlesex Water Company | Buy | $37.67 | $46.00 | 22% | $1.40 (25.5) | $1.71 (26.9) | $1.78 (22.0) |
| SBS | Companhia de Saneamento Basico do Estado de | Buy | $10.40 | $11.61 | 12% | $1.11 (7.9) | $1.18 (9.3) | $1.47 (8.8) |
| SBSP3-BR | Companhia de Saneamento Basico do Estado de | Buy | R$33.70 | R$38.00 | 13% | $3.65 (7.8) | $3.86 (9.2) | $4.80 (8.7) |
| SJW | SJW Group | Buy | $60.82 | $68.00 | 12% | $2.48 (23.7) | $2.52 (24.5) | $2.73 (24.1) |
| | INDUSTRIALS | | | | | | | |
| AME | AMETEK, Inc. | Buy | $73.79 | $71.00 | -4% | $2.57 (32.1) | $2.93 (28.7) | $3.21 (25.2) |
| AP | Ampco-Pittsburgh Corporation | Buy | $14.30 | $21.00 | 47% | ($0.62) (NM) | $0.95 (NM) | $1.29 (15.1) |
| CCC | Calgon Carbon Corporation | Sell | $21.35 | $21.50 | 1% | $0.51 (34.4) | $0.63 (41.9) | $0.78 (33.9) |
| IEX | IDEX Corporation | Neutral | $134.74 | $117.00 | -13% | $4.26 (NM) | $4.60 (31.6) | $4.89 (29.3) |
| MWA | Mueller Water Products, Inc. Class A | Buy | $12.59 | $16.00 | 27% | $0.44 (26.2) | $0.66 (28.6) | $0.79 (19.1) |
| RXN | Rexnord Corporation | Buy | $26.33 | $29.00 | 10% | $1.19 (NM) | $1.38 (22.1) | $1.60 (19.1) |
| WTS | Watts Water Technologies, Inc. Class A | Neutral | $76.45 | $69.00 | -10% | $3.04 (28.6) | $3.29 (25.1) | $3.45 (23.2) |
| XYL | Xylem Inc. | Buy | $69.23 | $70.00 | 1% | $2.40 (34.1) | $2.66 (28.8) | $3.05 (26.0) |
| | ELECTRIC & GAS UTILITIES | | | | | | | |
| AGR | Avangrid, Inc. | Buy | $48.73 | $55.00 | 13% | $2.14 (23.9) | $2.46 (22.8) | $2.63 (19.8) |
| CPK | Chesapeake Utilities Corporation | Buy | $76.00 | $88.00 | 16% | $2.74 (26.6) | $3.33 (27.7) | $3.95 (22.8) |
| ES | Eversource Energy | Buy | $61.82 | $71.00 | 15% | $3.14 (20.9) | $3.35 (19.7) | $3.53 (18.5) |
| NJR | New Jersey Resources Corporation | Buy | $39.40 | $50.00 | 27% | $1.73 (24.5) | $1.85 (22.8) | $2.07 (21.3) |
| RGCO | RGC Resources, Inc. | Neutral | $26.69 | $29.00 | 9% | N/A | $0.92 (NM) | $1.01 (29.0) |
| SJI | South Jersey Industries, Inc. | Buy | $30.68 | $38.00 | 24% | $1.14 (22.9) | $1.46 (26.9) | $1.79 (21.0) |
| UGI | UGI Corporation | Buy | $47.55 | $56.00 | 18% | $2.29 (NM) | $2.57 (20.8) | $2.79 (18.5) |
| UTL | Unitil Corporation | Buy | $44.73 | $50.00 | 12% | $2.03 (23.1) | $2.05 (22.0) | $2.25 (21.8) |
| WGL | WGL Holdings, Inc. | Neutral | $86.05 | $71.00 | -17% | $3.11 (26.3) | $3.68 (27.7) | $3.78 (22.7) |
| | MLPs | | | | | | | |
| APU | AmeriGas Partners, L.P. | Buy | $47.55 | $58.00 | 22% | $2.13 (22.3) | $3.13 (15.2) | $2.83 (16.8) |

Sources: FactSet (pricing, estimates), Janney Montgomery Scott, LLC Ratings/Fair Values

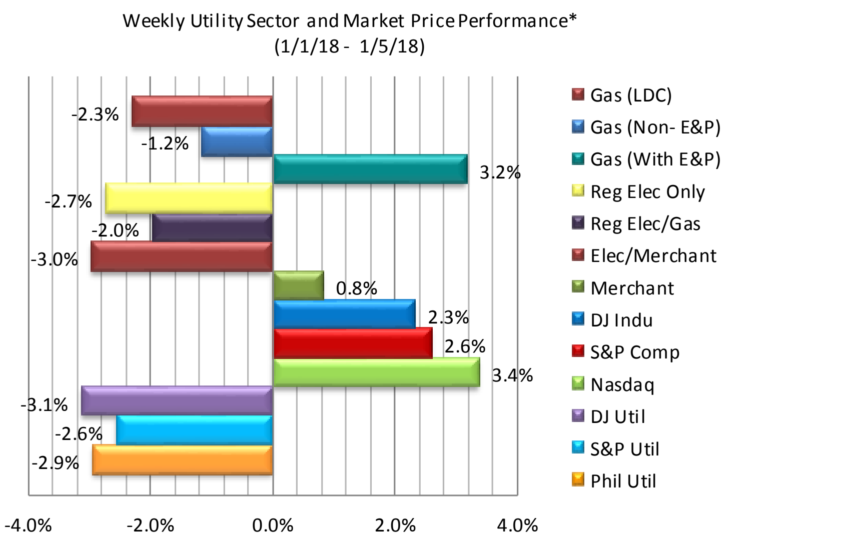
**2018 opened with notable selling in the utility space.** In a mostly positive opening to 2018 last week, utilities notably underperformed. The Water-Distribution segment fell -3.8%, with none of the utility names finishing in positive territory. The news was better in the Water-Flow Technology and Water Solutions segments, which each finished up +2.5%. The general market benchmarks also finished higher (The S&P Composite and NASDAQ gained +2.6 and +3.4%, respectively) as did the Powershares Water ETF +0.8%.




| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Water Distribution** | | | **Water Distribution** | | |
| | | | Connecticut Water Service, Inc. | CTWS | -6.8% |
| **Water Flow Technology** | | | **Water Flow Technology** | | |
| CIRCOR International, Inc. | CIR | 4.1% | Badger Meter, Inc. | BMI | -1.5% |
| **Water Solutions** | | | **Water Solutions** | | |
| Ashland Global Holdings, Inc. | ASH | 4.0% | Cadiz, Inc. | CDZI | -1.8% |

*Source:Factset*

**<u>Mixed performance greeted the utility sector in the opening week of 2018.</u>** The opening week of the new year brought uneven results to the utility sector, with a wide range of results. The best performance came from last year's laggard, the Gas (with E&P) segment, which finished up +3.2% (this was the only segment to finish down in 2017). The worst performance came from the Electric/Merchant segment, which fell -3.0%. The remaining segments finished in a range from +0.8% to -2.7%. Performance across the general market benchmarks was positive (the DJ Indu +2.3%, the S&P Composite +2.6% and the NASDAQ +3.4%), while the utility indexes all finished lower in a range of -2.6% to -3.1%.



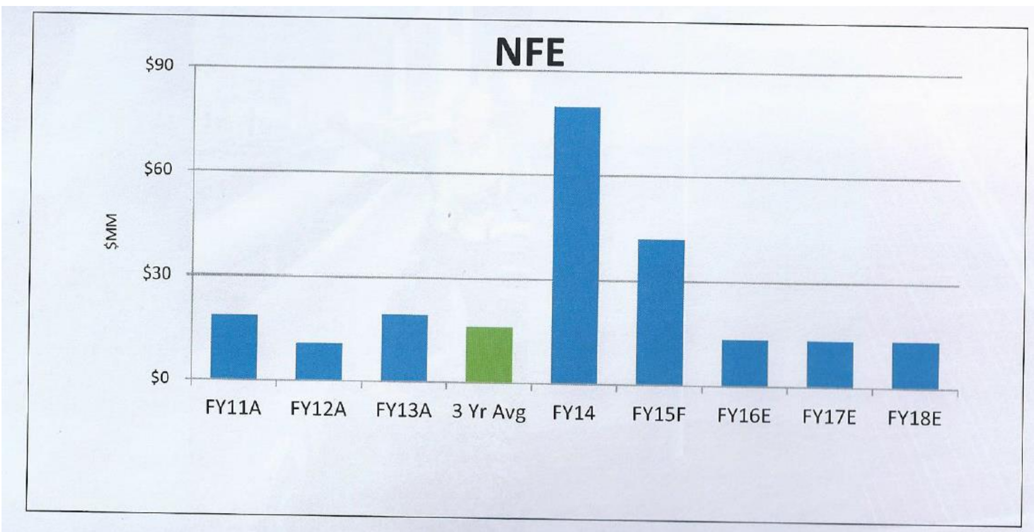
*Source: Factset*
**Market Cap Weighted*

| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Gas Distribution (LDC)** | | | **Gas Distribution (LDC)** | | |
| **WGL Holdings, Inc.** | **WGL** | **0.2%** | Spire, Inc. (Missouri) | LG | -4.6% |
| **Gas (Non-E&P)** | | | **Gas (Non-E&P)** | | |
| ONEOK, Inc. | OKE | 4.9% | Dominion Energy, Inc. | D | -5.2% |
| **Gas (With E&P)** | | | **Gas (With E&P)** | | |
| The Williams Cos., Inc. | WMB | 6.5% | Black Hills Corp. | BKH | -4.5% |
| **Regulated Electric Only** | | | **Regulated Electric Only** | | |
| | | | IDACORP, Inc. | IDA | -4.0% |
| **Regulated Electric/Gas** | | | **Regulated Electric/Gas** | | |
| SCANA Corp. | SCG | 13.2% | Vectren Corp. | VVC | -3.9% |
| **Electric/Merchant** | | | **Electric/Merchant** | | |
| | | | Dominion Energy, Inc. | D | 5.2% |
| **Merchant** | | | **Merchant** | | |
| Vistra Energy Corp. | VSTE | 2.0% | Covanta Holding Corp. | CVA | -2.1% |

*Source:Factset*

**Commentary** – The big news last week was the cold temperatures across our utility coverage universe, with Bloomberg reporting a daily peak record set on Monday, higher even than during the Polar Vortex in 2014. Beyond the increased usage benefits we'd expect to see show up in gas utility company financials for calendar 1Q18, we remembered the impact high prices had on New Jersey Resources Energy Services business. We dug through our old presentations, and came across this exhibit (#1), which displays the impact on earnings the Polar Vortex had on FY2014 and then the extremely cold weather in FY2015. It wouldn't surprise us to see NJR report outsized earnings again in its FY2018 (which began in October 2017). Bloomberg also reported natural gas prices surged to 60 times the going rate, to $175 per BTU, versus the $2.93 average price seen over the course of the winter prior to last week.

**Exhibit #1 – NJR Energy Services Net Financial Earnings, FY11 – FY15.**




*Source: NJR Presentation*

Beyond NJR, We noted the unit prices for AmeriGas picked up nicely; we'd expect the company to benefit as well from the cold temperatures gripping much of the company. APU is our chart of the week; the shares are now solidly above the 50 and 200 day moving average. Despite the move, the units still yield 7.99%.


*Source: FactSet*

**TOP IDEAS**

**Electric/Gas Utilities**

**SJI:** recently announced regulated utility acquisitions, ongoing midstream investment opportunities, a generous yield and favorable valuation all factor into our positive investment thesis on SJI shares.

**Industrials**

**MWA:** Ongoing cost-out activities and free cash flow capability to support future growth, coupled with an attractive valuation are the primary determinants for MWA's position as our #1 pick in our industrial coverage universe.

**Water Utilities**

**WTR**: Within the U.S. water utility group, Aqua America is our top pick. We see several future catalysts, including M&A transactions across its regulated business platforms, and a significant rate case filing in Pennsylvania (approximately two-thirds of total rate base) in 2H18. We consider the company's asset base to be very high quality, and we assign the shares the highest price-to-earnings multiple within its sector. Valuation remains favorable, with an attractive yield.

## COMPANY SNAPSHOTS

**Avangrid** | **AGR** | **$48.73**
**Buy/$55 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $15,061 | 2017E | $0.73 | $0.46 | $0.40 | $0.55 | $2.14 | 22.8x |
| Avg. Daily Vol (MM): | | 409,060 | 2018E | $0.81 | $0.48 | $0.47 | $0.70 | $2.46 | 19.8x |
| 52-wk Range: | $53.46 | $37.42 | 2019E | $0.86 | $0.50 | $0.49 | $0.78 | $2.63 | 18.5x |

Avangrid is a diversified energy and utility company. The company operates regulated utilities, electricity generation, and natural gas storage through three primary lines of business.

**Ametek** | **AME** | **$73.79**
**Buy/$71 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $17,054 | 2017E | $0.61 | $0.65 | $0.66 | $0.66 | $2.57 | 28.7x |
| Avg. Daily Vol (MM): | | 1,082,161 | 2018E | $0.69 | $0.74 | $0.78 | $0.71 | $2.93 | 25.2x |
| 52-wk Range: | $74.50 | $49.18 | 2019E | $0.75 | $0.82 | $0.85 | $0.79 | $3.21 | 23.0x |

Ametek is a global, diversified manufacturer of high technology products serving a diverse set of niche markets and applications. It reports results though two segments, Electronic Instruments Group (EIG) and Electromechanical Group (EMG).

**Ampco-Pittsburgh** | **AP** | **$14.30**
**Buy/$21 Fair Value**
**Michael Gaugler, 212.702.6539** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $177 | 2017E | ($0.39) | ($0.16) | ($0.18) | $0.11 | ($0.62) | NA |
| Avg. Daily Vol: | | 28,054 | 2018E | $0.07 | $0.22 | $0.24 | $0.43 | $0.95 | NA |
| 52-wk Range: | $18.60 | $12.15 | 2019E | $0.25 | $0.41 | $0.25 | $0.37 | $1.29 | 11.1x |

Ampco-Pittsburgh is a global manufacturer of cast and forged steel rolls, open-die forge products and air & liquid processing products. It reports results through two segments: Forged and Engineered Products and Air & Liquid Processing. The company is headquartered in Carnegie, Pennsylvania.

**AmeriGas Partners, LP** | **APU** | **$47.55**
**Buy/$58 Fair Value**
**Michael Gaugler, 212.702.6539** | mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $4,420 | 2017E | $0.95 | $1.33 | ($0.62) | ($0.62) | $1.04 | 45.7x |
| Avg. Daily Vol: | | 187,434 | 2018E | $1.06 | $2.10 | ($0.58) | $0.54 | $3.13 | 15.2x |
| 52-wk Range: | $50.00 | $42.00 | 2019E | N/A | N/A | N/A | N/A | N/A | |

AmeriGas Partners, L.P. is the largest retail marketer of propane in the United States, serving approximately 2 million customers from nearly 2000 distribution locations in all 50 states. UGI Corporation owns 26% of AmeriGas Partners, L.P.

*Source: Company data Janney Montgomery Scott, LLC estimates*

| **American Water Works Co.** | | | **AWK** | **$86.75** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$90 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $15,474 | 2017E | $0.52 | $0.73 | $1.08 | $0.65 | $2.99 | 29.0x |
| Avg. Daily Vol: | | 867,627 | 2018E | $0.53 | $0.77 | $1.17 | $0.78 | $3.25 | 26.7x |
| 52-wk Range: | $92.37 | $69.96 | 2019E | $0.57 | $0.84 | $1.24 | $0.84 | $3.48 | 24.9x |

American Water Works Co. provides water and wastewater services to residential, commercial, and industrial customers in the U.S. and Canada, servicing 20 states of the U.S. and Ontario, Canada. It also enters into public/private partnerships, including operation and maintenance contracts, design, build, and operate contracts for the provision of services to water and wastewater facilities.

| **American States Water Co.** | | | **AWR** | **$55.52** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$48 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,036 | 2017E | $0.34 | $0.62 | $0.57 | $0.36 | $1.89 | 29.4x |
| Avg. Daily Vol: | | 194,511 | 2018E | $0.37 | $0.48 | $0.58 | $0.37 | $1.80 | 30.8x |
| 52-wk Range: | $58.44 | $41.14 | 2019E | $0.39 | $0.52 | $0.61 | $0.39 | $1.92 | 28.9x |

American States Water Co. pumps, purchases, distributes and sells water and electricity primarily to residential and commercial customers. Approximately 90% of its business is conducted in the State of California. The company also manages water/wastewater systems on U.S. military

| **Calgon Carbon Corporation** | | | **CCC** | **$21.35** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sell/$21.50 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,085 | 2017E | $0.10 | $0.12 | $0.10 | $0.14 | $0.51 | 41.9x |
| Avg. Daily Vol: | | 1,209,881 | 2018E | $0.14 | $0.15 | $0.19 | $0.16 | $0.63 | 33.9x |
| 52-wk Range: | $22.10 | $12.00 | 2019E | $0.17 | $0.18 | $0.23 | $0.20 | $0.78 | 27.4x |

Calgon Carbon provides services and solutions for purifying water & air, food, beverage and industrial process streams. It operates three business segments: Activated Carbon, Advanced Water Purification and Alternative Materials. The Activated Carbon segment manufactures granular activated carbon (GAC), which is used to remove inorganic compounds from water, air, liquids and gases, and powdered activated carbon (PAC), used for mercury removal from coal-fired electric powerplant emissions (MATS compliance). The Advanced Water Purification segment designs and fabricates systems that provide solutions to water problems. The Alternative Materials segment manufactures and sells carbon cloth, diatomaceous earth and perlite

| **Chesapeake Utilities** | | | **CPK** | **$76.00** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$88 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,242 | 2017E | $1.23 | $0.37 | $0.42 | $0.73 | $2.74 | 27.7x |
| Avg. Daily Vol: | | 47,597 | 2018E | $1.34 | $0.50 | $0.52 | $1.03 | $3.33 | 22.8x |
| 52-wk Range: | $86.35 | $63.00 | 2019E | $1.48 | $0.65 | $0.65 | $1.17 | $3.95 | 19.2x |

CPK's regulated energy business delivers natural gas to customers located in central and southern Delaware, Maryland's Eastern Shore, and Florida and electricity to customers in northeast and northwest Florida. CPK's regulated energy business also offers natural gas transmission service primarily through a 400+-mile interstate pipeline from various points in Pennsylvania and northern Delaware to natural gas distribution affiliates in Delaware and Maryland as well as to other utility and industrial customers in Pennsylvania, Delaware and the Eastern Shore of Maryland. CPK's unregulated energy business includes propane distribution and propane wholesale marketing operations. The natural gas marketing operation sells natural gas supplies directly to commercial and industrial customers in Florida, Delaware and Maryland. CPK distributes propane to customers in Delaware, the Eastern Shore of Maryland and Virginia, southeastern Pennsylvania and Florida. The propane wholesale marketing operation markets propane to wholesale customers including large independent oil and petrochemical companies, resellers and propane distribution companies in the

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| Consolidated Water Co., Ltd. | CWCO | $12.80 |
| --- | --- | --- |
| **Buy/$15 Fair Value** | | |
| **Michael Gaugler, 215.665.1359** | mgaugler@janney.com | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Market Cap (MM): | | $191 | 2016 | $0.14 | $0.15 | $0.18 | $0.11 | $0.58 | 22.1x |
| Avg. Daily Vol: | | 53,516 | 2017E | $0.18 | $0.11 | $0.08 | $0.20 | $0.56 | 22.9x |
| 52-wk Range: | $13.95 | $10.00 | 2018E | $0.22 | $0.16 | $0.16 | $0.23 | $0.76 | 16.8x |

Consolidated Water processes and supplies water to public utilities, commercial & tourist properties, residential properties and government facilities. It uses reverse osmosis technology to produce freshwater from seawater. The Retail water segment produces and supplies water to end users, including residential, commercial and government customers in the Cayman Islands and the Bahamas. The Bulk water segment produces and supplies water to government owned distribution systems in the Cayman Islands, Belize, the British Virgin Islands and The Bahamas. the Services segment provides engineering and management services for desalination projects.

| California Water Service Group | CWT | $43.50 |
| --- | --- | --- |
| **Neutral/$40 Fair Value** | | |
| **Michael Gaugler, 215.665.1359** | mgaugler@janney.com | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Market Cap (MM): | | $2,087 | 2017E | 0.02 | 0.39 | 0.70 | 0.27 | 1.39 | 31.3x |
| Avg. Daily Vol: | | 194,468 | 2018E | 0.04 | 0.37 | 0.75 | 0.31 | 1.47 | 29.6x |
| 52-wk Range: | $46.15 | $32.45 | 2019E | 0.06 | 0.39 | 0.78 | 0.34 | 1.57 | 27.7x |

California Water Services Group provides water supply and related services through its subsidiaries. Its services include the production, purchase, storage, treatment, testing, distribution and sale of water for domestic, industrial, [public and irrigation uses. The company has operations in the states of California, Hawaii, New Mexico and Washington.

| Eversource Energy | ES | $61.82 |
| --- | --- | --- |
| **Buy/$71 Fair Value** | | |
| **Michael Gaugler, 215.665.1359** | mgaugler@janney.com | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Market Cap (MM): | | $19,590 | 2017E | $0.82 | $0.72 | $0.82 | $0.78 | $3.14 | 19.7x |
| Avg. Daily Vol: | | 1,824,964 | 2018E | $0.87 | $0.71 | $0.94 | $0.83 | $3.35 | 18.5x |
| 52-wk Range: | $66.15 | $54.08 | 2019E | $0.91 | $0.73 | $1.00 | $0.88 | $3.53 | 17.5x |

Eversource Energy is a diversified energy holding company that primarily comprises electric transmission, electric and gas distribution assets in the States of New Hampshire, Connecticut and Massachusetts.

| IDEX Corp. | IEX | $134.74 |
| --- | --- | --- |
| **Neutral/$117 Fair Value** | | |
| **Michael Gaugler, 212.702.6539** | mgaugler@janney.com | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Market Cap (MM): | | $10,294 | 2017E | $1.03 | $1.08 | $1.08 | $1.07 | $4.26 | 31.6x |
| Avg. Daily Vol: | | 239,824 | 2018E | $1.12 | $1.17 | $1.17 | $1.14 | $4.60 | 29.3x |
| 52-wk Range: | $135.70 | $88.29 | 2019E | $1.19 | $1.24 | $1.24 | $1.21 | $4.89 | 27.6x |

IDEX manufactures pump products and engineered equipment. It operates and reports through three segments: Fluid & Metering, Health & Science and Fire Safety/Diversified Products. The Fluid & Metering segment designs, produces and distributes positive displacement pumps and flow meters, compressors, injectors and other fluid handling equipment. The Health & Science segment designs, produces and distributes a wide range of precision fluidics solutions for a wide range of applications. The FireSafety/Diversified Products segment produces firefighting pumps and controls, rescue tools

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| Middlesex Water Company | | MSEX | $37.67 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Buy/$46 Fair Value | | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | mgaugler@janney.com | | | | | | | |
| | | EPS | Mar | Jun | Sep | Dec | FY | P/E | |
| Market Cap (MM): | $616 | 2017E | $0.27 | $0.32 | $0.46 | $0.33 | $1.40 | 26.9x | |
| Avg. Daily Vol: | 39,302 | 2018E | $0.30 | $0.40 | $0.60 | $0.40 | $1.71 | 22.0x | |
| 52-wk Range: $46.74 | $32.23 | 2019E | $0.32 | $0.43 | $0.62 | $0.42 | $1.78 | 21.2x | |

Middlesex Water Company conducts water, wastewater and contract service operations in New Jersey, Delaware and Pennsylvania. The current revenue mix is 95% regulated operations, 5% non-regulated.

| Mueller Water Products, Inc. | | MWA | $12.59 | | | | | |
|---|---|---|---|---|---|---|---|---|
| Buy/$16 Fair Value | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | mgaugler@janney.com | | | | | | |
| | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
| Market Cap (MM): | $1,996 | 2017E | $0.04 | $0.09 | $0.16 | $0.15 | $0.44 | 28.6x |
| Avg. Daily Vol: | 1,038,810 | 2018E | $0.06 | $0.12 | $0.20 | $0.20 | $0.58 | 21.7x |
| 52-wk Range: $14.02 | $10.84 | 2019E | $0.10 | $0.17 | $0.25 | $0.24 | $0.75 | 16.8x |

Mueller Water Products manufactures a broad range of water infrastructure and flow control products for use in water distribution networks, water and wastewater treatment facilities, gas distribution systems and fire protection piping systems. The company reports through through 2 segments: Mueller Co, and Mueller Technologies. The Mueller Co. segment primarily designs and manufactures fire hydrants and valves; the Mueller Technologies segment contains the metering, metering systems and leak detection operations.

| New Jersey Resources | | NJR | $39.40 | | | | | |
|---|---|---|---|---|---|---|---|---|
| Buy/$50 Fair Value | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | mgaugler@janney.com | | | | | | |
| | | Adj EPS | Dec | Mar | Jun | Sep | FY | P/E |
| Market Cap (MM): | $3,424 | 2017E | $0.47 | $1.21 | $0.20 | ($0.14) | $1.73 | 22.8x |
| Avg. Daily Vol: | 532,734 | 2018E | $0.59 | $1.02 | $0.17 | $0.07 | $1.85 | 21.3x |
| 52-wk Range: $45.45 | $33.70 | 2019E | $0.62 | $1.20 | $0.16 | $0.08 | $2.07 | 19.0x |

New Jersey Resources is an energy services holding company providing retail and wholesale energy services to customers in states from the Gulf Coast and Mid-Continent regions to the Appalachian and Northeast regions, the West Coast and Canada. The natural gas segment provides natural gas service to customers in central and northern New Jersey. Its energy services segment maintains and transacts around a portfolio of physical assets consisting of natural gas storage and transportation contracts. The company's clean energy ventures segment installs, operates, and maintains solar equipment on residential and commercial properties. Its midstream assets segment invests in natural gas midstream assets, such as natural gas

| Rexnord | | RXN | $26.33 | | | | | |
|---|---|---|---|---|---|---|---|---|
| Buy $29 Fair Value | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | mgaugler@janney.com | | | | | | |
| | | EPS ($R) | Jun | Sep | Dec | Mar | FY | P/E |
| Market Cap (MM): | $2,736 | 2018E | $0.27 | $0.32 | $0.26 | $0.34 | $1.19 | 22.1x |
| Avg. Daily Vol (MM): | 908,155 | 2019E | $0.30 | $0.36 | $0.31 | $0.41 | $1.38 | 19.1x |
| 52-wk Range: $26.52 | $20.41 | 2020E | $0.36 | $0.42 | $0.37 | $0.45 | $1.60 | 16.5x |

Rexnord is a global diversified manufacturer that reports results through two segments: Process & Motion Control and Water Infrastructure. The company sells its products into a wide variety of end markets, including material handling, water infrastructure, food & beverage and aerospace.

| RGC Resources | | RGCO | $26.69 | | | | | |
|---|---|---|---|---|---|---|---|---|
| Neutral $29 Fair Value | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | mgaugler@janney.com | | | | | | |
| | | EPS ($R) | Jun | Sep | Dec | Mar | FY | P/E |
| Market Cap (MM): | $192 | 2018E | $0.34 | $0.50 | $0.09 | $0.03 | $0.92 | 29.0x |
| Avg. Daily Vol (MM): | 13,030 | 2019E | $0.35 | $0.53 | $0.10 | $0.04 | $1.01 | 26.4x |
| 52-wk Range: $31.99 | $16.71 | 2020E | $0.38 | $0.57 | $0.12 | $0.06 | $1.11 | 24.0x |

RGC Resources is the local gas distribution utility serving the greater Roanoke, VA region. The company also has a 1% ownership interest in the Mountain Valley Pipeline.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Sabesp** | | | **SBSP3-BR** | **$33.70** | | | | | |
| **Buy/R$38 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS ($R)** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $23,034 | 2017E | $0.99 | $0.49 | $1.32 | $0.86 | $3.65 | 9.2x |
| Avg. Daily Vol (MM): | | 1,327,957 | 2018E | $0.95 | $0.85 | $0.99 | $1.07 | $3.86 | 8.7x |
| 52-wk Range: | $35.81 | $25.61 | 2019E | $1.19 | $1.08 | $1.24 | $1.29 | $4.80 | 7.0x |

Companhia de Saneamento Basico do Estado de Sao Paulo (aka SABESP) collects and distributes water and provides sewage treatment services. It operates in 367 counties in the State of Sao Paulo.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **South Jersey Industries** | | | **SJI** | **$30.68** | | | | | |
| **Buy/$38 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $2,438 | 2017E | $0.72 | $0.06 | ($0.05) | $0.41 | $1.14 | 26.9x |
| Avg. Daily Vol (MM): | | 334,816 | 2018E | $0.75 | $0.12 | $0.05 | $0.54 | $1.46 | 21.0x |
| 52-wk Range: | $38.40 | $30.62 | 2019E | $0.78 | $0.22 | $0.22 | $0.57 | $1.79 | 17.1x |

South Jersey Industries, Inc. is an energy services holding company that provides energy-related products and services through its subsidiaries, South Jersey Gas Company (SJG), South Jersey Resources Group (SJRG), Marina Energy (Marina), South Jersey Energy Company, and South Jersey Energy Service Plus. SJG distributes natural gas in the 7 southernmost counties of New Jersey. SJRG markets wholesale nautral gas storage, commodity and transportation in the mid-Atlantic, Appalachian and southern states. Marina develops and operates onsitge energy-related projects. SJE acquires and markets natural gas and electricity to retail end users and provides total energy management services to commercial and industrial customers. SJESP provides residential and light commercial service and installation of heating, ventilation, and air conditioning (HVAC) systems, plumbing services and

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **SJW Corp.** | | | **SJW** | **$60.82** | | | | | |
| **Buy/$68 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $1,248 | 2017E | $0.18 | $0.91 | $0.95 | $0.44 | $2.48 | 24.5x |
| Avg. Daily Vol (MM): | | 64,351 | 2018E | $0.23 | $0.75 | $1.00 | $0.54 | $2.52 | 24.1x |
| 52-wk Range: | $69.29 | $45.39 | 2019E | $0.27 | $0.77 | $1.11 | $0.58 | $2.73 | 22.3x |

SJW is not the typical water utility. Although the bulk of the company's revenues and earnings are derived from regulated water utility operations, other operations, including a real estate segment, add a non-regulated component to revenues. The company continues to look for external growth opportunities, and with its recent acquistion in Texas, has increased its geographic footprint.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **UGI Corp** | | | **UGI** | **$47.55** | | | | | |
| **Buy/$56 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
| Market Cap (MM): | | $8,233 | 2017E | $0.91 | $1.31 | $0.09 | ($0.02) | $2.29 | 20.8x |
| Avg. Daily Vol (MM): | | 863,046 | 2018E | $0.88 | $1.43 | $0.16 | $0.11 | $2.57 | 18.5x |
| 52-wk Range: | $52.00 | $45.03 | 2019E | $0.84 | $1.60 | $0.19 | $0.16 | $2.79 | 17.0x |

UGI Corp. is a distributor and marketer of energy products and services including natural gas, propane, butane and electricity. The company reports results in the following segments: AmeriGas Propane, Gas Utility, Midstream & Marketing, and UGI International.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Unitil Corp** | **UTL** | **$44.73**
**Buy/$50 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $659 | 2017E | $0.88 | $0.22 | $0.16 | $0.76 | $2.03 | 22.0x |
| Avg. Daily Vol (MM): | | 91,053 | 2018E | $0.88 | $0.26 | $0.15 | $0.76 | $2.05 | 21.8x |
| 52-wk Range: | $52.84 | $43.03 | 2019E | $0.95 | $0.31 | $0.21 | $0.80 | $2.25 | 19.9x |

UTL's regulated operating utilities serve approximately 109,900 electric and 70,800 gas customers in the states of Maine, New Hampshire and Massachusetts under various subsidiaries. The company also has non-regulated business operations (Usource) that provides energy brokering and management services.

**Watts Water Technologies** | **WTS** | **$76.45**
**Neutral/$69 Fair Value**
**Michael Gaugler, 212.702.6539** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,611 | 2017E | $0.65 | $0.83 | $0.80 | $0.76 | $3.04 | 25.1x |
| Avg. Daily Vol (MM): | | 112,129 | 2018E | $0.77 | $0.86 | $0.82 | $0.84 | $3.29 | 23.2x |
| 52-wk Range: | $78.05 | $59.15 | 2019E | $0.83 | $0.90 | $0.86 | $0.87 | $3.45 | 22.2x |

Watts Water Technologies is a global manufacturer of products and systems focused on the control, conservation and quality of water and the comfort and safety of people using it. Its strategy is to be the preferred supplier of differentiated products and systems that manage and conserve the flow of fluids and energy into, through and out of buildings in the residential and commercial markets of the Americas, EMEA, and Asia Pacific.

**WGL Holdings, Inc.** | **WGL** | **$86.05**
**Neutral/$71 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | Adj EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $4,419 | 2016 | $1.18 | $1.78 | $0.33 | ($0.01) | $3.27 | 26.3x |
| Avg. Daily Vol (MM): | | 265,331 | 2017E | $1.13 | $1.87 | $0.26 | ($0.17) | $3.11 | 27.7x |
| 52-wk Range: | $86.89 | $73.53 | 2018E | $1.28 | $2.16 | $0.38 | ($0.15) | $3.68 | 23.4x |

WGL Holdings is comprised of both regulated and non-regulated energy-related businesses. Its regulated public utility, Washington Gas, provides natural gas service to over one million customers in the Washington, D.C. metro region, Maryland and Virginia. Its unregulated operations provide energy-related services to residential and commercial customers.

**Aqua America, Inc.** | **WTR** | **$37.71**
**Buy/$41 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $6,701 | 2017E | $0.28 | $0.34 | $0.43 | $0.32 | $1.36 | 27.7x |
| Avg. Daily Vol (MM): | | 615,615 | 2018E | $0.31 | $0.37 | $0.44 | $0.32 | $1.44 | 26.2x |
| 52-wk Range: | $39.55 | $29.41 | 2019E | $0.34 | $0.41 | $0.47 | $0.34 | $1.56 | 24.2x |

Aqua America provides water and wastewater services to residential, commercial and industrial customers. The company serves approximately 3 million customers in Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana and North Carolina. The company also has a non-regulated business that are complementary to its core water services.

**Xylem, Inc.** | **XYL** | **$69.23**
**Buy/$70 Fair Value**
**Michael Gaugler, 212.702.6539** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $12,434 | 2017E | $0.39 | $0.59 | $0.65 | $0.77 | $2.40 | 28.8x |
| Avg. Daily Vol (MM): | | 773,737 | 2018E | $0.44 | $0.66 | $0.72 | $0.84 | $2.66 | 26.0x |
| 52-wk Range: | $69.88 | $46.67 | 2019E | $0.54 | $0.74 | $0.83 | $0.93 | $3.05 | 22.7x |

Xylem is a global leader in water application solutions that focuses on the technology-intensive equipment and services end market (a sector of the $500 billion global water market), and should see increasing long-term demand from a favorable end market environment for investment in water due to population growth, economic development, and increasing (and tighter) water quality regulations. The company has exposure to many different end markets, including industrial, public utility, commercial, residential, and agriculture.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

# Industry Valuation

## Water Utilities

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/5/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | AWR | $55.52 | Neutral | 4 | 48.00 | -14% |
| AMERICAN WATER WORKS | AWK | $86.75 | Neutral | 15 | 90.00 | 4% |
| AQUA AMERICA | WTR | $37.71 | Buy | 9 | 41.00 | 9% |
| ARTESIAN RESOURCES | ARTNA | $38.12 | NR | 0 | | |
| CALIFORNIA WATER | CWT | $43.50 | Neutral | 6 | 40.00 | -8% |
| CONNECTICUT WATER | CTWS | $53.52 | NR | 1 | | |
| MIDDLESEX WATER | MSEX | $37.67 | Buy | 1 | 46.00 | 22% |
| PURE CYCLE | PCYO | $8.35 | NR | 0 | | |
| SABESP | SBSP3-BR | R$ 33.70 | Buy | 10 | 38.00 | 13% |
| SJW | SJW | $60.82 | Buy | 1 | 68.00 | 12% |
| YORK WATER | YORW | $32.75 | NR | 1 | | |
| MEDIAN | | | | | | |

**Trading & Market Data**

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 152 | 2,036 | 58 | 41 | 37 | 36 | 1% | 67% | 5 | 0.7 | 2,407 |
| AMERICAN WATER WORKS | 1,141 | 15,474 | 92 | 70 | 178 | 178 | 0% | 86% | 5 | 0.5 | 22,878 |
| AQUA AMERICA | 987 | 6,701 | 40 | 29 | 178 | 177 | 0% | 54% | 14 | 0.6 | 8,771 |
| ARTESIAN RESOURCES | 29 | 350 | 43 | 29 | 8 | 8 | 4% | 43% | 2 | 0.5 | 469 |
| CALIFORNIA WATER | 197 | 2,087 | 46 | 32 | 48 | 47 | 1% | 72% | 6 | 0.7 | 2,810 |
| CONNECTICUT WATER | 54 | 646 | 65 | 51 | 12 | 12 | 2% | 48% | 7 | 0.6 | 919 |
| MIDDLESEX WATER | 75 | 616 | 47 | 32 | 16 | 16 | 4% | 53% | 3 | 0.7 | 788 |
| PURE CYCLE | 25 | 198 | 9 | 5 | 24 | 23 | 4% | 68% | 10 | 0.7 | 173 |
| SABESP | 689 | 23,034 | 36 | 26 | 684 | 340 | 50% | 16% | -- | 0.8 | 32,650 |
| SJW | 51 | 1,248 | 69 | 45 | 21 | 15 | 28% | 56% | 1 | 0.7 | 1,695 |
| YORK WATER | 28 | 421 | 40 | 32 | 13 | 13 | 1% | 35% | 8 | 0.8 | 511 |
| MEDIAN | 75 | 1,248 | | | | | N/A | 54% | 6 | 0.7 | |

**Valuation Statistics**

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 3.9 | 15.6 | 14.5 | 13.6 | 34.3 | 31.7 | 31.0 |
| AMERICAN WATER WORKS | 2.8 | 14.9 | 13.2 | 12.4 | 33.2 | 28.8 | 26.4 |
| AQUA AMERICA | 3.5 | 19.1 | 18.3 | 16.9 | 28.6 | 27.8 | 26.2 |
| ARTESIAN RESOURCES | 2.4 | 12.9 | 12.7 | 12.0 | 27.0 | NA | NA |
| CALIFORNIA WATER | 3.0 | 16.9 | 13.8 | 12.7 | 43.1 | 32.8 | 30.7 |
| CONNECTICUT WATER | 2.2 | 20.5 | 20.4 | 19.1 | 25.7 | 24.3 | 22.8 |
| MIDDLESEX WATER | 2.7 | 14.5 | NA | NA | 27.3 | 26.9 | 22.0 |
| PURE CYCLE | 2.9 | -98.2 | NA | NA | -151.0 | -119.3 | NA |
| SABESP | 1.3 | 7.2 | 6.1 | 5.5 | 7.8 | 9.2 | 8.1 |
| SJW | 2.8 | 12.2 | NA | NA | 23.7 | 24.5 | 24.1 |
| YORK WATER | 3.6 | 17.4 | 17.5 | 16.6 | 35.6 | NA | 32.8 |
| MEDIAN | 2.8 | 14.9 | 14.2 | 13.1 | 27.3 | 26.9 | 26.2 |



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Flow Technology

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| Company | Symbol | Price 1/5/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| 3M CORPORATION | MMM | $240.57 | NR | 13 | | |
| **AMETEK** | **AME** | **$73.79** | **Buy** | **15** | **71.00** | **-4%** |
| BADGER METER | BMI | $47.10 | NR | 6 | | |
| CIRCOR INTERNATIONAL | CIR | $50.68 | NR | 4 | | |
| CRANE COMPANY | CR | $91.35 | NR | 10 | | |
| DXP ENTERPRISES | DXPE | $30.31 | NR | 4 | | |
| EMERSON ELECTRIC | EMR | $72.43 | NR | 20 | | |
| ENERGY RECOVERY | ERII | $8.84 | NR | 4 | | |
| FLOWSERVE | FLS | $43.40 | NR | 16 | | |
| FRANKLIN ELECTRIC | FELE | $45.40 | NR | 6 | | |
| **IDEX** | **IEX** | **$134.74** | **Neutral** | **11** | **117.00** | **-13%** |
| ITRON | ITRI | $70.20 | NR | 9 | | |
| MUELLER INDUSTRIES | MLI | $36.45 | NR | 0 | | |
| **MUELLER WATER PRODUCTS** | **MWA** | **$12.59** | **Buy** | **12** | **16.00** | **27%** |
| NORTHWEST PIPE | NWPX | $19.63 | NR | 1 | | |
| PENTAIR | PNR | $72.66 | NR | 16 | | |
| **REXNORD** | **RXN** | **$26.33** | **Buy** | **9** | **29.00** | **10%** |
| ROPER INDUSTRIES | ROP | $267.02 | NR | 14 | | |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$76.45** | **Neutral** | **10** | **69.00** | **-10%** |
| **XYLEM** | **XYL** | **$69.23** | **Buy** | **17** | **70.00** | **1%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| Company | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 1,836 | 143,285 | 244 | 174 | 596 | 596 | 0% | 69% | 4 | 0.9 | 155,699 |
| **AMETEK** | **2,135** | **17,054** | **75** | **49** | **231** | **227** | **2%** | **87%** | **2** | **1.1** | **18,832** |
| BADGER METER | 74 | 1,371 | 52 | 34 | 29 | 28 | 3% | 85% | 11 | 1.1 | 1,403 |
| CIRCOR INTERNATIONAL | 87 | 836 | 73 | 42 | 17 | 13 | 21% | 104% | 12 | 1.4 | 1,040 |
| CRANE COMPANY | 280 | 5,422 | 91 | 68 | 59 | 51 | 15% | 70% | 1 | 1.2 | 5,702 |
| DXP ENTERPRISES | 70 | 527 | 42 | 25 | 17 | 16 | 10% | 76% | 6 | 1.5 | 772 |
| EMERSON ELECTRIC | 3,119 | 46,256 | 72 | 56 | 639 | 638 | 1% | 72% | 3 | 1.1 | 48,247 |
| ENERGY RECOVERY | 342 | 474 | 11 | 6 | 54 | 36 | 33% | 34% | 17 | 1.7 | 393 |
| FLOWSERVE | 911 | 5,670 | 52 | 38 | 131 | 130 | 0% | 109% | 8 | 1.3 | 6,806 |
| FRANKLIN ELECTRIC | 109 | 2,116 | 47 | 36 | 47 | 39 | 17% | 79% | 4 | 1.3 | 2,307 |
| **IDEX** | **171** | **10,294** | **136** | **88** | **76** | **76** | **0%** | **99%** | **5** | **1.1** | **11,017** |
| ITRON | 283 | 2,718 | 80 | 58 | 39 | 38 | 1% | 99% | 2 | 1.0 | 2,978 |
| MUELLER INDUSTRIES | 133 | 2,107 | 44 | 28 | 58 | 56 | 3% | 93% | 7 | 1.2 | 2,401 |
| **MUELLER WATER PRODUCTS** | **469** | **1,996** | **14** | **11** | **159** | **154** | **3%** | **91%** | **2** | **1.3** | **2,157** |
| NORTHWEST PIPE | 34 | 189 | 21 | 12 | 10 | 9 | 2% | 87% | 17 | 1.1 | 184 |
| PENTAIR | 738 | 13,186 | 73 | 57 | 181 | 181 | 0% | 88% | 3 | 1.3 | 14,728 |
| **REXNORD** | **850** | **2,736** | **27** | **20** | **104** | **103** | **1%** | **104%** | **3** | **1.3** | **3,863** |
| ROPER INDUSTRIES | 344 | 27,333 | 268 | 185 | 102 | 100 | 2% | 97% | 6 | 1.0 | 32,413 |
| **WATTS WATER TECHNOLOGIES** | **44** | **2,611** | **78** | **59** | **28** | **27** | **1%** | **100%** | **5** | **1.2** | **2,906** |
| **XYLEM** | **667** | **12,434** | **70** | **47** | **180** | **179** | **1%** | **91%** | **4** | **1.1** | **14,542** |
| **MEDIAN** | **312** | **2,727** | | | | | **2%** | **89%** | **4** | **1.2** | |

### Valuation Statistics

| Company | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 11.8 | 18.3 | 16.8 | 16.0 | 29.5 | 26.61 | 24.6 |
| **AMETEK** | **4.5** | **18.7** | **17.2** | **15.9** | **33.7** | **28.6** | **25.6** |
| BADGER METER | 5.0 | 19.2 | 19.3 | 17.2 | 42.4 | 39.9 | 35.0 |
| CIRCOR INTERNATIONAL | 1.9 | 18.0 | 16.8 | 10.3 | 83.1 | 31.4 | 21.0 |
| CRANE COMPANY | 3.9 | 12.3 | 11.5 | 10.3 | 44.1 | 20.2 | 18.0 |
| DXP ENTERPRISES | 2.0 | 15.7 | 12.8 | 10.4 | 62.5 | 49.9 | 30.3 |
| EMERSON ELECTRIC | 5.3 | 14.4 | 14.9 | 13.6 | 28.7 | 27.4 | 24.6 |
| ENERGY RECOVERY | 6.9 | 97.4 | 10.9 | 10.3 | 442.0 | 141.4 | 19.3 |
| FLOWSERVE | 3.2 | NA | NA | 13.0 | 43.0 | NA | 23.8 |
| FRANKLIN ELECTRIC | 3.0 | 16.1 | 15.3 | 13.3 | 27.5 | 23.9 | 21.4 |
| **IDEX** | **5.7** | **20.5** | **18.9** | **17.5** | **38.2** | **31.6** | **28.7** |
| ITRON | 3.5 | 13.9 | 12.7 | 10.5 | 85.6 | 23.6 | 21.1 |
| MUELLER INDUSTRIES | 4.1 | 12.5 | NA | NA | 20.9 | NA | NA |
| **MUELLER WATER PRODUCTS** | **4.1** | **10.9** | **13.1** | **11.6** | **32.3** | **28.6** | **23.3** |
| NORTHWEST PIPE | 0.9 | -18.5 | -53.9 | 12.7 | -20.3 | -19.6 | 56.1 |
| PENTAIR | 2.6 | 16.0 | 14.8 | 14.1 | 25.5 | 20.6 | 18.5 |
| **REXNORD** | **2.3** | **11.8** | **10.1** | **9.3** | **41.1** | **20.9** | **17.2** |
| ROPER INDUSTRIES | 4.2 | 24.9 | 20.2 | 18.6 | 41.5 | 28.6 | 26.3 |
| **WATTS WATER TECHNOLOGIES** | **3.1** | **14.9** | **13.0** | **12.2** | **31.3** | **25.5** | **23.3** |
| **XYLEM** | **5.0** | **22.0** | **16.9** | **15.1** | **47.9** | **28.9** | **24.6** |
| **MEDIAN** | **4.0** | **16.0** | **14.9** | **13.0** | **39.7** | **28.0** | **23.8** |

## Water Solutions
Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/5/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| AIR PRODUCTS & CHEM | APD | $168.45 | NR | 20 | | | 742 | 36,860 | 169 | 134 | 219 | NA | 0% | 90% | 2 | 1.0 | 37,410 | 3.6 | 12.2 | 13.5 | 12.4 | 24.9 | 26.7 | 23.9 |
| ASHLAND | ASH | $74.08 | NR | 11 | | | 351 | 4,610 | 128 | 60 | 62 | 62 | 1% | 93% | 4 | 1.0 | 6,816 | 1.3 | 9.2 | 8.2 | 10.2 | -163.5 | 30.4 | 22.0 |
| CADIZ | CDZI | $14.00 | NR | 0 | | | 45 | 319 | 16 | 10 | 23 | 22 | 4% | 53% | 19 | 0.6 | 426 | -4.1 | -47.8 | NA | NA | -9.9 | NA | NA |
| **CALGON CARBON** | **CCC** | **$21.35** | **Sell** | **2** | **21.50** | **1%** | **2,314** | **1,085** | **22** | **12** | **51** | **50** | **2%** | **98%** | **4** | **1.0** | **1,297** | **2.6** | **16.9** | **NA** | **NA** | **79.1** | **41.5** | **29.9** |
| CANTEL MEDICAL | CMD | $106.08 | NR | 4 | | | 78 | 4,435 | 108 | 69 | 42 | 37 | 11% | 87% | 4 | 1.1 | 4,542 | 8.2 | 37.3 | 29.7 | 25.4 | 73.7 | 51.0 | 44.2 |
| **CONSOLIDATED WATER** | **CWCO** | **$12.80** | **Buy** | **2** | **15.00** | **17%** | **58** | **191** | **14** | **10** | **15** | **14** | **3%** | **53%** | **5** | **0.8** | **155** | **1.3** | **12.1** | **NA** | **NA** | **47.4** | **23.9** | **17.7** |
| ECHOLAB | ECL | $137.18 | NR | 22 | | | 1,049 | 39,633 | 138 | 117 | 289 | 288 | 0% | 90% | 7 | 1.0 | 47,645 | 5.5 | 16.7 | 16.2 | 15.0 | 33.1 | 29.22 | 26.0 |
| FORTIVE | FTV | $73.40 | NR | 17 | | | 2,134 | 25,511 | 76 | 53 | 348 | 307 | 12% | 81% | 5 | 1.1 | 28,668 | 7.3 | 19.8 | 18.5 | 16.4 | 29.2 | 25.7 | 22.8 |
| LAYNE CHRISTENSEN | LAYN | $13.05 | NR | 1 | | | 85 | 259 | 14 | 7 | 20 | 19 | 4% | 112% | 25 | 1.3 | 398 | 4.8 | 146.5 | 10.8 | 7.5 | -4.9 | -25.6 | 36.3 |
| STANTEC, INC. | STN | $28.25 | NR | 11 | | | 25 | 3,219 | 29 | 22 | 114 | 113 | 1% | 62% | 20 | 0.9 | 3,711 | 2.1 | 13.8 | 11.8 | 10.3 | 30.7 | 18.9 | 16.1 |
| TETRA TECH | TTEK | $48.55 | NR | 7 | | | 265 | 2,705 | 51 | 39 | 56 | 55 | 2% | 90% | 2 | 1.0 | 2,976 | 2.9 | 13.9 | 12.9 | 11.9 | 34.2 | 23.8 | 20.8 |
| VEOLIA ENVIRONNEMENT | VE | $26.35 | NR | 19 | | | 54 | 14,480 | 26 | 16 | 563 | #VALUE! | N/A | 0% | -- | 0.8 | 27,672 | 2.0 | 129.4 | 48.2 | 53.9 | 28.6 | 12.8 | 11.1 |
| **MEDIAN** | | | | | | | **265** | **3,219** | | | | | **2%** | **90%** | **5** | **1** | | **2.9** | **13.9** | **13.2** | **12.1** | **30.7** | **26.2** | **23.3** |

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating (S&P) | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
| | % | % | % | % | % | | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| AIR PRODUCTS & CHEM | N/A | N/A | N/A | N/A | N/A | A | 3.80 | 2.3% | 67 | 2.4 | 2.2 | 20 | 6% | 15% | 4% | 5% | 46.19 | 3060 | 2768 | 3025 | 6.77 | 6.31 | 7.06 |
| ASHLAND | NA | NA | NA | NA | NA | BB | 0.90 | 1.2% | 7,640 | 2.0 | 1.3 | 2 | -3% | -9% | 2% | 0% | 54.94 | 739 | 833 | 666 | -0.45 | 2.44 | 3.37 |
| CADIZ | -113% | 0% | 0% | 212% | 0% | | 0.00 | 0.0% | N/A | 1.8 | 1.8 | -1 | -43% | N/A | -4% | -11% | -3.39 | -9 | - | - | -1.41 | - | N/A |
| **CALGON CARBON** | **63%** | **0%** | **0%** | **36%** | **1%** | | **0.20** | **0.9%** | **182** | **2.8** | **1.7** | **12** | **2%** | **4%** | **4%** | **2%** | **8.07** | **77** | **-** | **-** | **0.27** | **0.52** | **0.72** |
| CANTEL MEDICAL | 81% | 0% | 0% | 19% | 0% | | 0.17 | 0.2% | 8 | 2.4 | 1.5 | 34 | 9% | 14% | 2% | 2% | 12.98 | 122 | 153 | 179 | 1.44 | 2.08 | 2.40 |
| **CONSOLIDATED WATER** | **94%** | **0%** | **6%** | **0%** | **0%** | | **0.34** | **2.7%** | **73** | **9.4** | **9.1** | **675** | **2%** | **3%** | **3%** | **2%** | **9.87** | **13** | **-** | **-** | **0.27** | **0.53** | **0.73** |
| ECHOLAB | 51% | 0% | 1% | 45% | 4% | A- | 1.64 | 1.2% | 33 | 1.2 | 0.8 | 11 | 7% | 18% | 3% | 4% | 25.00 | 2858 | 2949 | 3175 | 4.14 | 4.69 | 5.27 |
| FORTIVE | NA | NA | NA | NA | NA | | 0.28 | 0.4% | 11 | 2.0 | 1.5 | 17 | 11% | 22% | 5% | 5% | 10.00 | 1445 | 1546 | 1743 | 2.51 | 2.85 | 3.23 |
| LAYNE CHRISTENSEN | 34% | 0% | 0% | 66% | 0% | | 0.00 | 0.0% | N/A | 1.5 | 1.3 | 1 | -11% | -50% | -4% | -25% | 2.72 | 3 | 37 | 53 | -2.64 | -0.51 | 0.36 |
| STANTEC, INC. | #VALUE! | #VALUE! | #VALUE! | #VALUE! | #VALUE! | | 0.39 | 1.4% | 48 | 1.5 | 1.5 | 10 | 4% | 8% | 6% | 4% | 13.21 | 268 | 314 | 360 | 0.92 | 1.50 | 1.75 |
| TETRA TECH | 5% | 0% | 7% | 58% | 30% | | 0.40 | 0.8% | 19 | 1.9 | 1.9 | 20 | 5% | 10% | 6% | 4% | 16.62 | 214 | 231 | 250 | 1.42 | 2.04 | 2.33 |
| VEOLIA ENVIRONNEMENT | 29% | 0% | 5% | 43% | 23% | BBB | 0.68 | 2.6% | N/A | N/A | N/A | N/A | 1% | 5% | 9% | 4% | N/A | 3183 | 3686 | 3893 | 0.63 | 1.21 | 1.42 |
| **MEDIAN** | **#VALUE!** | **#VALUE!** | **#VALUE!** | **#VALUE!** | **#VALUE!** | | **$0.34** | **0.9%** | | **2** | **2** | | **4%** | **9%** | **3%** | **2%** | **12.98** | 214 | 574 | 513 | 0.92 | 2.06 | 2.37 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Regulated Electrics/Gas)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/05/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ALLIANT | LNT | $41.08 | NR | 8 | | | 1,665 | 9,498 | 46 | 37 | 231 | 231 | 0% | 70% | 5 | 0.6 | 14,526 | 2.4 | 13.8 | 12.6 | 11.5 | 22.0 | 21.0 | 19.4 |
| **AVANGRID** | **AGR** | **$48.73** | **Buy** | **9** | **55.00** | **13%** | **538** | **15,061** | **53** | **37** | **309** | **56** | **82%** | **15%** | **12** | **0.7** | **20,802** | **1.0** | **10.2** | **10.1** | **9.4** | **23.5** | **22.0** | **20.3** |
| AVISTA | AVA | $51.79 | NR | 2 | | | 516 | 3,336 | 53 | 38 | 64 | 64 | 1% | 79% | 0 | 0.6 | 5,274 | 2.0 | 11.7 | 11.9 | 10.5 | 24.1 | 27.5 | 25.3 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$76.00** | **Buy** | **6** | **88.00** | **16%** | **52** | **1,242** | **86** | **63** | **16** | **16** | **4%** | **63%** | **3** | **0.7** | **1,657** | **5.0** | **0.8** | **0.8** | **0.7** | **37.6** | **35.0** | **32.6** |
| CMS ENERGY | CMS | $45.81 | NR | 15 | | | 2,598 | 12,919 | 51 | 41 | 282 | 280 | 1% | 90% | 3 | 0.5 | 23,099 | 3.0 | 11.0 | 10.5 | 9.8 | 22.7 | 21.1 | 19.7 |
| CONEDISON INC | ED | $81.74 | NR | 14 | | | 1,749 | 25,345 | 90 | 72 | 310 | 309 | 0% | 58% | 6 | 0.3 | 40,874 | 1.7 | 10.8 | 10.1 | 9.7 | 20.5 | 20.0 | 19.2 |
| DTE CORP | DTE | $106.20 | NR | 11 | | | 1,243 | 19,051 | 117 | 97 | 179 | 178 | 1% | 70% | 4 | 0.5 | 31,891 | 2.1 | 12.8 | 11.8 | 10.9 | 20.1 | 19.2 | 18.7 |
| **EVERSOURCE ENERGY** | **ES** | **$61.82** | **Buy** | **14** | **71.00** | **15%** | **2,265** | **19,590** | **66** | **54** | **317** | **315** | **1%** | **74%** | **4** | **0.5** | **31,130** | **1.8** | **11.7** | **11.2** | **10.7** | **20.9** | **19.7** | **18.6** |
| MGE ENERGY | MGEE | $61.45 | NR | 1 | | | 74 | 2,130 | 69 | 60 | 35 | 35 | 0% | 39% | 3 | 0.7 | 2,422 | 2.9 | NA | NA | NA | 28.2 | 27.9 | 26.7 |
| NORTHWESTERN | NWE | $57.41 | NR | 5 | | | 196 | 2,790 | 64 | 56 | 49 | 48 | 1% | 94% | 3 | 0.6 | 4,861 | 1.7 | 11.8 | 11.2 | 10.8 | 17.4 | 17.0 | 16.8 |
| PG&E CORP | PCG | $44.29 | NR | 15 | | | 6,407 | 22,713 | 72 | 42 | 513 | 512 | 0% | 84% | 1 | 0.5 | 41,096 | 1.3 | 7.3 | 6.6 | 6.4 | 11.8 | 12.0 | 11.6 |
| SCANA | SCG | $45.02 | NR | 10 | | | 5,796 | 6,434 | 73 | 37 | 143 | - | 0% | 69% | 2 | 0.6 | 13,081 | 1.1 | 8.4 | 8.4 | 9.7 | 10.8 | 11.1 | 14.1 |
| **UNITIL CORP** | **UTL** | **$44.73** | **Neutral** | **3** | **50.00** | **12%** | **68** | **659** | **53** | **43** | **15** | **14** | **2%** | **61%** | **4** | **0.6** | **1,074** | **2.1** | **9.6** | **9.0** | **8.4** | **23.1** | **22.1** | **21.4** |
| VECTREN CORP | VVC | $62.50 | NR | 5 | | | 365 | 5,188 | 70 | 52 | 83 | 83 | 0% | 66% | 2 | 0.7 | 7,225 | 2.9 | NA | 10.8 | 10.2 | 24.5 | 23.8 | 22.2 |
| WISCONSIN ENERGY | WEC | $64.87 | NR | 12 | | | 1,547 | 20,471 | 70 | 56 | 316 | 315 | 0% | 74% | 6 | 0.5 | 31,097 | 2.3 | 12.2 | 11.9 | 11.3 | 21.8 | 20.9 | 19.8 |
| XCEL ENERGY | XEL | $46.79 | NR | 12 | | | 3,728 | 23,758 | 40 | 508 | 508 | 507 | 0% | 74% | 4 | 0.5 | 38,977 | 2.2 | 11.0 | 10.4 | 9.9 | 21.2 | 20.3 | 19.1 |
| **MEDIAN** | | | | | | | | **11,208** | | | | | **44%** | **-** | **3** | **0.6** | **17664** | **2.1** | **NA** | **10.5** | **9.9** | **21.9** | **21.0** | **19.5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Electric Utilities (Regulated Electrics Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/05/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ALLETE | ALE | $73.55 | NR | 5 | | | 386 | 3,741 | 81 | 62 | 51 | 51 | 1% | 74% | 4 | 0.6 | 5,164 | 1.9 | 12.0 | 11.0 | 10.9 | 23.5 | 22.4 | 20.4 |
| CENTERPOINT ENERGY | CNP | $27.87 | NR | 15 | | | 4,535 | 12,013 | 30 | 25 | 431 | 409 | 5% | 80% | 0 | 0.8 | 19,390 | 3.5 | 9.6 | 9.3 | 8.8 | 24.0 | 21.0 | 19.5 |
| DUKE ENERGY | DUK | $81.94 | NR | 17 | | | 3,827 | 57,348 | 92 | 76 | 700 | 699 | 0% | 58% | 4 | 0.4 | 110,400 | 1.4 | 12.0 | 11.2 | 10.5 | 17.5 | 18.0 | 17.0 |
| EL PASO ELECTRIC | EE | $54.25 | NR | 4 | | | 179 | 2,202 | 61 | 45 | 41 | 40 | 1% | #### | 3 | 0.6 | 3,557 | 2.0 | 12.8 | 12.2 | 11.6 | 22.6 | 22.0 | 20.9 |
| GREAT PLAINS | GXP | $31.10 | NR | 5 | | | 1,350 | 6,707 | 35 | 27 | 216 | 215 | 0% | 87% | 5 | 0.6 | 9,639 | 1.3 | 9.9 | 10.3 | 9.3 | 16.8 | 18.3 | 18.1 |
| HAWAIIAN ELECTRIC | HE | $34.97 | NR | 6 | | | 522 | 3,804 | 39 | 32 | 109 | 108 | 1% | 51% | 12 | 0.6 | 5,426 | 1.8 | 9.7 | 9.8 | 9.3 | 20.0 | 21.4 | 19.2 |
| IDACORP | IDA | $87.69 | NR | 3 | | | 368 | 4,419 | 100 | 77 | 50 | 50 | 1% | 76% | 4 | 0.6 | 6,070 | 2.1 | 14.2 | NA | NA | 22.3 | 21.5 | 21.2 |
| PINNACLE WEST | PNW | $82.42 | NR | 14 | | | 907 | 9,209 | 92 | 76 | 112 | 111 | 0% | 85% | 4 | 0.5 | 14,218 | 1.9 | 10.6 | 9.9 | 9.2 | 20.9 | 19.3 | 18.5 |
| PNM RESOURCES | PNM | $39.40 | NR | 9 | | | 441 | 3,138 | 46 | 33 | 80 | 79 | 1% | 93% | 3 | 0.7 | 5,905 | 1.9 | 11.2 | 10.1 | 10.0 | 23.9 | 21.1 | 22.5 |
| PORTLAND GENERAL | POR | $43.86 | NR | 9 | | | 751 | 3,908 | 50 | 42 | 89 | 89 | 1% | 94% | 1 | 0.6 | 6,190 | 1.7 | 9.3 | 8.7 | 8.4 | 20.3 | 19.4 | 18.9 |
| SOUTHERN COMPANY | SO | $46.78 | NR | 18 | | | 6,120 | 46,950 | 54 | 46 | 1,004 | 1,003 | 0% | 56% | 5 | 0.4 | 97,810 | 1.9 | 13.1 | 11.0 | 10.6 | 16.2 | 15.9 | 15.5 |
| WESTAR ENERGY | WR | $51.66 | NR | 8 | | | 623 | 7,338 | 57 | 49 | 142 | 141 | 1% | 74% | 2 | 0.5 | 11,295 | 1.9 | 10.9 | 10.7 | 8.6 | 21.3 | 21.0 | 19.7 |
| **MEDIAN** | | | | | | | **687** | **5,563** | **55** | **46** | **110** | **109** | | **-** | **4** | **1** | **7,915** | **1.9** | **NA** | **10.3** | **9.3** | **21.1** | **21.0** | **19.3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics With Merchant)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/05/18 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| AMEREN | AEE | $57.39 | NR | 8 | | | 1,321 | 13,925 | 65 | 51 | 243 | 242 | 0% | 32% | 5 | 0.5 | 22,321 | 2.0 | 9.9 | 9.5 | 9.1 | 21.4 | 20.5 | 19.1 |
| AMERICAN ELECTRIC POWER | AEP | $70.80 | NR | 17 | | | 2,968 | 34,825 | 78 | 62 | 492 | 492 | 0% | 28% | 3 | 0.5 | 55,920 | 2.0 | 10.2 | 10.4 | 9.7 | 18.0 | 19.7 | 18.2 |
| DOMINION | D | $76.84 | NR | 17 | | | 5,758 | 49,529 | 85 | 71 | 645 | 641 | 0% | 35% | 6 | 0.5 | 88,099 | 3.3 | 15.6 | 13.8 | 11.9 | 20.2 | 21.5 | 19.1 |
| EDISON INTERNATIONAL | EIX | $62.98 | NR | 14 | | | 3,720 | 20,520 | 83 | 62 | 326 | 325 | 0% | 36% | 2 | 0.5 | 35,840 | 1.7 | 8.5 | 8.0 | 7.5 | 15.9 | 14.6 | 14.7 |
| ENTERGY | ETR | $79.92 | NR | 11 | | | 1,329 | 14,406 | 88 | 70 | 180 | 180 | 0% | 41% | 3 | 0.5 | 30,304 | 1.8 | 9.2 | 9.0 | 8.5 | 11.2 | 11.6 | 15.8 |
| EXELON | EXC | $38.19 | NR | 16 | | | 7,142 | 36,666 | 43 | 33 | 960 | 958 | 0% | 36% | 3 | 0.6 | 72,812 | 1.4 | 9.2 | 8.6 | 8.0 | 14.3 | 14.4 | 13.3 |
| FIRST ENERGY | FE | $30.11 | NR | 16 | | | 4,564 | 13,395 | 35 | 28 | 445 | 444 | 0% | 39% | 4 | 0.6 | 35,624 | 2.1 | 8.2 | 8.1 | 8.4 | 11.4 | 10.0 | 11.8 |
| NEXTERA ENERGY | NEE | $151.71 | NR | 17 | | | 2,580 | 71,364 | 159 | 117 | 470 | 469 | 0% | 33% | 4 | 0.5 | 105,894 | 2.9 | 12.9 | 11.5 | 10.9 | 24.5 | 22.5 | 20.9 |
| PPL CORP | PPL | $30.95 | NR | 15 | | | 7,203 | 21,144 | 40 | 30 | 683 | 683 | 0% | 32% | 4 | 0.6 | 41,353 | 2.1 | 9.9 | 10.6 | 9.8 | 12.6 | 14.2 | 13.3 |
| PUBLIC SERVICE ENT GROUP | PEG | $49.66 | NR | 13 | | | 5,762 | 25,130 | 53 | 42 | 506 | 505 | 0% | 30% | 3 | 0.6 | 37,542 | 1.9 | 10.1 | 9.9 | 9.5 | 17.1 | 17.0 | 16.6 |
| **MEDIAN** | | | | | | | **4,142** | **23,137** | | | | | | | **4** | **1** | **39,447** | **2.0** | **NA** | **9.7** | **9.3** | **16.5** | **15.8** | **16.2** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/05/18 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| CALPINE | CPN | $15.08 | NR | 5 | | | 8,875 | 5,437 | 15 | 15 | 361 | 341 | 5% | 35% | 3 | 1.0 | 16,312 | 1.7 | 9.0 | 8.9 | 8.2 | ##### | 77.6 | 17.0 |
| COVANTA | CVA | $16.55 | NR | 8 | | | 711 | 2,168 | 17 | 17 | 131 | 129 | 1% | 51% | 13 | 0.7 | 5,028 | 4.6 | 12.3 | 12.3 | 11.1 | ##### | -66.9 | 154.0 |
| DYNEGY | DYN | $11.97 | NR | 4 | | | 1,418 | 1,727 | 13 | 13 | 144 | 110 | 14% | 45% | 4 | 1.2 | 10,322 | 0.9 | 10.3 | 8.5 | 7.1 | -1.2 | -82.6 | 37.1 |
| NRG ENERGY | NRG | $28.73 | NR | 5 | | | 4,539 | 9,097 | 30 | 30 | 317 | 306 | 3% | 43% | 4 | 1.2 | 26,513 | 4.4 | 8.1 | 10.7 | 9.3 | 23.4 | 29.8 | 13.4 |
| ORMAT TECHNOLOGIES | ORA | $65.05 | NR | 5 | | | 172 | 3,291 | 66 | 66 | 51 | 36 | 28% | 35% | 3 | 0.9 | 4,180 | 3.0 | 12.9 | 12.2 | 11.3 | 34.8 | 28.0 | 25.7 |
| VISTA ENERGY | VSTE | $18.68 | NR | 4 | | | 2,766 | 8,002 | 21 | 21 | 428 | NA | 17% | 56% | NA | 0.5 | 11,285 | 1.2 | 7.0 | 8.0 | 8.0 | -49.2 | 19.2 | 23.6 |
| **MEDIAN** | | | | | | | **2,092** | **4,364** | **19** | **19** | **230** | **129** | **10** | **44** | **4** | **1** | **10,804** | **2.3** | **9.6** | **9.8** | **8.7** | **-25.2** | **23.6** | **24.7** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Gas Utilities - Downstream (Gas Distribution Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/5/2018 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ATMOS ENERGY | ATO | $83.19 | NR | 7 | | | 378 | 9,231 | 94 | 73 | 111 | 105 | 1.3% | 73% | 4 | 0.6 | 12,312 | 2.3 | 12.2 | 11.8 | 10.8 | 24.6 | 23.1 | 21.6 |
| LACLEDE GROUP | LG | $71.70 | NR | 9 | | | 230 | 3,463 | 83 | 62 | 48 | N/A | 3.0% | 81% | 3 | 0.5 | 5,929 | 1.7 | 14.5 | 12.4 | 11.2 | 22.1 | 20.1 | 19.3 |
| **NEW JERSEY RESOURCES** | **NJR** | **$39.40** | **Buy** | 6 | **$50.00** | **27%** | **405** | **3,424** | **45** | **34** | **87** | **86** | **1.3%** | **65%** | **5** | **0.7** | **4,804** | **2.8** | **23.0** | **19.3** | **15.7** | **25.9** | **22.8** | **21.7** |
| NORTHWEST NATURAL GAS | NWN | $58.65 | NR | 7 | | | 188 | 1,684 | 70 | 57 | 29 | 28 | 1.4% | 67% | 11 | 0.6 | 2,444 | 2.0 | 9.6 | 10.7 | 10.2 | 27.7 | 26.8 | 25.7 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$30.68** | **Buy** | 7 | **$38.00** | **24%** | **310** | **2,438** | **38** | **31** | **79** | **79** | **0.7%** | **72%** | **3** | **0.7** | **3,856** | **2.0** | **14.5** | **18.0** | **11.0** | **19.7** | **26.5** | **21.3** |
| **RGC RESOURCES** | **RGCO** | **$26.69** | **Neutral** | 1 | **$29.00** | **9%** | **11** | **192** | **32** | **17** | **7** | **6** | **13.3%** | **24%** | **94** | **0.1** | **255** | **3.2** | **15.1** | **NA** | **NA** | **32.8** | **NA** | **29.0** |
| SOUTHWEST GAS | SWX | $78.84 | NR | 5 | | | 159 | 3,763 | 87 | 72 | 48 | 47 | 1.1% | 80% | 6 | 0.7 | 5,593 | 2.2 | 9.7 | 10.3 | 9.8 | 24.8 | 22.7 | 21.7 |
| **WGL HOLDINGS, INC.** | **WGL** | **$86.05** | **Neutral** | 5 | **$71.00** | **-17%** | **324** | **4,419** | **87** | **74** | **51** | **51** | **1.1%** | **73%** | **13** | **0.7** | **6,681** | **2.9** | **17.5** | **12.9** | **11.6** | **26.0** | **27.7** | **23.4** |
| **MEDIAN** | | | | | | | **270** | **3,444** | | | | | **1.27%** | **72%** | **6** | **0.6** | | **2.2** | **14.5** | **12.4** | **11.0** | **25.4** | **23.1** | **21.7** |

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Dividend | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| ATMOS ENERGY | -- | -- | -- | -- | -- | A | $1.94 | 2.3% | 49 | 0.5 | 0.3 | 9 | 3% | 10.4% | -4% | 5% | 36.74 | 1,007 | 1,043 | 1,142 | 3.38 | 3.60 | 3.85 |
| LACLEDE GROUP | -- | -- | -- | -- | -- | | $2.25 | 3.1% | 61 | 0.7 | 0.5 | 5 | 3% | 8.6% | 1% | 5% | 41.26 | 410 | 479 | 530 | 3.24 | 3.56 | 3.72 |
| **NEW JERSEY RESOURCES** | -- | -- | -- | -- | -- | | $1.09 | 2.8% | **68** | 0.7 | **0.5** | **5** | **4%** | **11.6%** | **-5%** | **5%** | **14.3** | **209** | **249** | **307** | **1.52** | **1.73** | **1.82** |
| NORTHWEST NATURAL GAS | -- | -- | -- | -- | -- | A+ | $1.89 | 3.2% | 85 | 1.0 | 0.7 | 4 | 2% | 7.2% | 5% | 4% | 29.5 | 254 | 229 | 240 | 2.12 | 2.19 | 2.28 |
| **SOUTH JERSEY INDUSTRIES** | -- | -- | -- | -- | -- | **BBB+** | $1.12 | 3.7% | **221** | 0.5 | **0.4** | **3** | **3%** | **10.2%** | **-1%** | **5%** | **15.4** | **267** | **215** | **351** | **1.55** | **1.16** | **1.44** |
| **RGC RESOURCES** | -- | -- | -- | -- | -- | | $0.62 | 2.3% | **67** | 1.1 | **0.5** | **9** | **4%** | **10.7%** | **-3%** | **5%** | **8.3** | 17 | **N/A** | **N/A** | **0.81** | **N/A** | **0.92** |
| SOUTHWEST GAS | -- | -- | -- | -- | -- | BBB+ | $1.98 | 2.5% | 56 | 0.8 | 0.8 | 7 | 3% | 9.3% | 2% | 4% | 35.9 | 578 | 544 | 569 | 3.18 | 3.47 | 3.64 |
| **WGL HOLDINGS, INC.** | **40%** | **1%** | **0%** | **38%** | **21%** | **A** | $2.04 | 2.4% | **54** | **0.7** | **0.48** | **5** | **3%** | **12.6%** | **-9%** | **5%** | **29.3** | **381** | **517** | **574** | **3.31** | **3.11** | **3.67** |
| **MEDIAN** | **40%** | **1%** | **0%** | **38%** | **21%** | | **$1.92** | **2.6%** | **64** | **0.7** | **0.5** | 5 | **3%** | **10.3%** | **-2%** | **5%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/5/2018 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| | | $ | | | | |
| BLACK HILLS CORP | BKH | $57.41 | NR | 8 | | |
| ENERGEN | EGN | $58.38 | NR | 25 | | |
| EQUITABLE RESOURCES | EQT | $57.81 | NR | 18 | | |
| MDU RESOURCES, INC. | MDU | $26.41 | NR | 2 | | |
| NATIONAL FUEL GAS | NFG | $56.08 | NR | 6 | | |
| WILLIAMS COMPANIES | WMB | $32.46 | NR | 10 | | |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| BLACK HILLS CORP | 465 | 3,071 | 72 | 57 | 53 | 53 | 0.95% | 96.1% | 8 | 0.8 | 6,619 |
| ENERGEN | 892 | 5,675 | 60 | 46 | 97 | 96 | 0.83% | 95.8% | 1 | 1.6 | 6,436 |
| EQUITABLE RESOURCES | 3,174 | 14,899 | 68 | 50 | 258 | 254 | 1.47% | 73.7% | 1 | 1.0 | 16,225 |
| MDU RESOURCES, INC. | 611 | 5,158 | 30 | 25 | 195 | 194 | 0.92% | 65.5% | 2 | 1.1 | 6,874 |
| NATIONAL FUEL GAS | 363 | 4,799 | 61 | 53 | 86 | 80 | 6.41% | 73.4% | 3 | 0.9 | 6,650 |
| WILLIAMS COMPANIES | 6,367 | 26,836 | 33 | 27 | 827 | 825 | 0.23% | 86.6% | 1 | 1.7 | 53,591 |
| **MEDIAN** | **752** | **5,416** | | | | | **0.94%** | **80%** | **2** | **1.1** | |

**Valuation Statistics**

| | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| BLACK HILLS CORP | 1.8 | 12.0 | 10.6 | 10.3 | 41.9 | 17.0 | 16.5 |
| ENERGEN | 1.8 | 20.7 | 10.5 | 7.0 | -32.9 | 111.6 | 28.9 |
| EQUITABLE RESOURCES | 1.6 | 17.8 | 9.0 | 4.7 | -21.3 | 62.7 | 27.6 |
| MDU RESOURCES, INC. | 2.2 | 10.9 | NA | NA | 80.0 | 22.2 | 20.5 |
| NATIONAL FUEL GAS | 2.8 | 9.5 | 8.4 | 8.8 | 17.0 | 17.0 | 19.3 |
| WILLIAMS COMPANIES | 3.3 | 15.3 | 12.0 | 11.4 | -57.5 | 45.2 | 35.5 |
| **MEDIAN** | **2.0** | **13.6** | **10.5** | **8.8** | **-2.2** | **33.7** | **24.1** |

**Balance Sheet and Credit Ratings**

| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | (S&P) |
| BLACK HILLS CORP | -- | -- | -- | -- | -- | BBB |
| ENERGEN | -- | -- | -- | -- | -- | BB |
| EQUITABLE RESOURCES | -- | -- | -- | -- | -- | BBB |
| MDU RESOURCES, INC. | -- | -- | -- | -- | -- | BBB+ |
| NATIONAL FUEL GAS | -- | -- | -- | -- | -- | BBB |
| WILLIAMS COMPANIES | -- | -- | -- | -- | -- | BB+ |
| **MEDIAN** | **--** | **--** | **--** | **--** | **--** | |

**Liquidity and Profitability Ratios**

| | Annual Dividend | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield |
|---|---|---|---|---|---|---|---|---|---|---|
| | $ | % | % | X | X | X | % | % | % | % |
| BLACK HILLS CORP | $1.90 | 3.31% | 67.0 | 0.695 | 0.5 | 4 | 1% | 5% | (5%) | 2% |
| ENERGEN | $0.00 | 0.00% | N/A | 0.578 | 0.5 | 13 | (4%) | (6%) | (3%) | (3%) |
| EQUITABLE RESOURCES | $0.12 | 0.21% | 63.2 | 0.598 | 0.6 | 9 | (3%) | (8%) | (14%) | (4%) |
| MDU RESOURCES, INC. | $0.79 | 2.99% | 65 | 1.283 | 1.0 | 8 | 4% | 10% | 1% | NA |
| NATIONAL FUEL GAS | $1.66 | 2.96% | 49.7 | 1.267 | 1.2 | 6 | (5%) | (16%) | (0%) | (6%) |
| WILLIAMS COMPANIES | $1.20 | 3.70% | 193 | 0.974 | 0.9 | 3 | (1%) | (8%) | 9% | (2%) |
| **MEDIAN** | **$1.00** | **2.98%** | **65** | **0.8** | **0.8** | **7** | | | | |

**Financial Statistics/Estimates**

| | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
|---|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ | $ |
| BLACK HILLS CORP | 31.42 | 553 | 624 | 644 | 1.37 | 3.38 | 3.49 |
| ENERGEN | 32.67 | 311 | 614 | 921 | -1.77 | 0.52 | 2.02 |
| EQUITABLE RESOURCES | 35.12 | 911 | 1,793 | 3,436 | -2.71 | 0.92 | 2.09 |
| MDU RESOURCES, INC. | 12.05 | 629 | N/A | N/A | 0.33 | 1.19 | 1.29 |
| NATIONAL FUEL GAS | 19.92 | 702 | 790 | 752 | 3.30 | 3.30 | 2.90 |
| WILLIAMS COMPANIES | 9.82 | 3,513 | 4,470 | 4,721 | -0.56 | 0.72 | 0.91 |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/5/2018 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| OGE ENERGY CORP | OGE | $32.50 | NR | 5 | | | 1,368 | 6,490 | 37 | 32 | 200 | 199 | 0.24% | 63.8% | 1 | 0.8 | 9,749 | 1.8 | 11.8 | 11.5 | 11.5 | 19.2 | 16.9 | 16.9 |
| ONEOK, INC. | OKE | $56.06 | NR | 13 | | | 10,160 | 21,495 | 59 | 47 | 383 | 381 | 0.64% | 74.1% | 1 | 1.4 | 30,985 | 4.0 | 18.9 | 15.7 | 15.7 | 33.8 | 32.2 | 32.1 |
| NISOURCE | NI | $24.79 | NR | 14 | | | 3,340 | 8,349 | 28 | 22 | 337 | 335 | 0.62% | 84.5% | 1 | 0.7 | 16,863 | 1.9 | 12.0 | 11.0 | 11.0 | 24.3 | 20.9 | 20.9 |
| SEMPRA ENERGY | SRE | $108.45 | NR | 10 | | | 12,608 | 27,260 | 123 | 100 | 251 | 251 | 0.16% | 83.7% | 3 | 0.7 | 48,016 | 2.1 | 16.0 | 12.9 | 12.9 | 19.9 | 20.5 | 20.5 |
| **UGI CORP** | **UGI** | **$47.55** | **Buy** | **5** | **56.00** | **18%** | **642** | **8,233** | **52** | **45** | **173** | **172** | **0.58%** | **79.3%** | **1** | **0.8** | **12,909** | **2.6** | **10.5** | **8.5** | **8.4** | **19.3** | **19.2** | **19.0** |
| **MEDIAN** | | | | | | | **3,340** | **8,349.1** | | | | | **N/A** | **79%** | **1** | **0.8** | | **2.1** | **12.0** | **11.5** | **11.5** | **19.9** | **20.5** | **20.5** |

**covered by Janney Research*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | FCF | EPS | | | | | | | |
| | Common | Pref | Minority | LT | ST | Credit | Annual | Div | Div | Current | Quick | Interest | 2016 | 2016 | 2016 | 2016 | Book | EBITDA | | | EPS | | |
| | Equity | Stock | Interest | Debt | Debt | Rating | Dividend | Yield | Payout | Ratio | Ratio | Coverage | ROA | ROE | Yield | Yield | Value | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| OGE ENERGY CORP | -- | -- | -- | -- | -- | A- | $1.33 | 4.09% | 64.92 | 0.629 | 0.46 | 5.08 | 3% | 10% | (0%) | 5% | 18.11 | 826 | 848 | 848 | 1.69 | 1.93 | 1.92 |
| ONEOK, INC. | 36% | 0% | 1% | 54% | 9% | BBB | $2.98 | 5.32% | 158.90 | 0.554 | 0.41 | 3.84 | 2% | 135% | 6% | 3% | 14.06 | 1,642 | 1,973 | 1,977 | 1.66 | 1.74 | 1.75 |
| NISOURCE | -- | -- | -- | -- | -- | BBB+ | $0.70 | 2.82% | 84.15 | 0.519 | 0.32 | 4.05 | 2% | 8% | (9%) | 5% | 12.96 | 1,404 | 1,530 | 1,530 | 1.02 | 1.19 | 1.19 |
| SEMPRA ENERGY | 39% | 0% | 6% | 43% | 11% | BBB+ | $3.29 | 3.03% | 71.38 | 0.4 | 0.36 | 4.33 | 3% | 11% | (7%) | NA | 52.85 | 3,001 | 3,736 | 3,736 | 5.45 | 5.29 | 5.29 |
| **UGI CORP** | **--** | **--** | **--** | **--** | **--** | | **$1.00** | **2.10%** | **39.63** | **1.004** | **0.84** | **5.59** | 3% | 13% | 5% | 5% | **18.27** | **1,228** | **1,512** | **1,539** | **2.46** | **2.48** | **2.50** |
| **MEDIAN** | **37%** | **0%** | **4%** | **49%** | **10%** | | **$1.33** | **3.03%** | **71** | **0.55** | **0.4** | 4 | | | | | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Industry Historicals

## Utilities
Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/5/18 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| **AMERICAN STATES WATER** | **AWR** | **$55.52** | **$58.44** | **$41.14** | **152** | **0.74** | **-4.1** | **-0.8** | **7.4** | **-4.1** | **26.6** | **155.1** | **277.2** | **23.0** | **34.7** | **13.9** | **11.0** | **29.8** |
| **AMERICAN WATER WORKS** | **AWK** | **$86.75** | **$92.37** | **$69.96** | **1141** | **0.48** | **-5.2** | **-4.3** | **5.1** | **-5.2** | **21.4** | **154.0** | **N/A** | **16.1** | **29.4** | **14.9** | **23.6** | **29.0** |
| **AQUA AMERICA** | **WTR** | **$37.71** | **$39.55** | **$29.41** | **987** | **0.62** | **-3.9** | **0.8** | **10.6** | **-3.9** | **27.1** | **102.7** | **187.9** | **18.8** | **16.1** | **14.5** | **3.2** | **33.8** |
| ARTESIAN RESOURCES | ARTNA | $38.12 | $43.22 | $29.37 | 29 | 0.55 | -1.1 | -5.3 | -5.3 | -1.1 | 26.9 | 100.5 | 193.8 | 6.1 | 2.4 | 27.5 | 18.9 | 23.9 |
| **CALIFORNIA WATER** | **CWT** | **$43.50** | **$46.15** | **$32.45** | **197** | **0.70** | **-4.1** | **-0.3** | **7.7** | **-4.1** | **30.4** | **166.7** | **221.4** | **29.7** | **9.7** | **-2.7** | **49.2** | **36.4** |
| CONNECTICUT WATER | CTWS | $53.52 | $65.04 | $50.75 | 54 | 0.57 | -6.8 | -10.5 | -12.9 | -6.8 | -1.8 | 104.3 | 208.9 | 23.1 | 5.3 | 7.8 | 50.4 | 5.0 |
| **MIDDLESEX WATER** | **MSEX** | **$37.67** | **$46.74** | **$32.23** | **75** | **0.67** | **-5.6** | **-13.5** | **-10.3** | **-5.6** | **-6.6** | **123.7** | **188.9** | **11.1** | **14.2** | **19.0** | **65.6** | **-4.9** |
| PURE CYCLE | PCYO | $8.35 | $8.73 | $5.00 | 25 | 0.71 | 0.0 | 21.0 | 9.2 | 0.0 | 56.1 | 169.4 | 7.2 | 123.7 | -36.8 | 20.0 | 14.6 | 51.8 |
| **SABESP** | **SBSP3-BR** | **$33.70** | **$35.81** | **$25.61** | **689** | **0.82** | **-1.8** | **2.0** | **-0.6** | **-1.8** | **18.1** | **34.0** | **228.8** | **-6.3** | **-33.2** | **13.5** | **53.6** | **23.7** |
| **SJW** | **SJW** | **$60.82** | **$69.29** | **$45.39** | **51** | **0.74** | **-4.7** | **-7.3** | **2.7** | **-4.7** | **15.1** | **160.8** | **141.4** | **15.1** | **10.8** | **-5.3** | **92.9** | **16.2** |
| YORK WATER | YORW | $32.75 | $39.86 | $31.70 | 28 | 0.78 | -3.4 | -5.7 | -7.3 | -3.4 | -13.0 | 104.7 | 177.9 | 22.5 | 14.0 | 10.2 | 56.2 | -9.6 |
| **Average** | | | | | **312** | **0.67** | **-3.7** | **-2.2** | **0.6** | **-3.7** | **18.2** | **125.1** | **183.3** | **25.7** | **6.1** | **12.1** | **39.9** | **21.4** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2743.15 | 2743.45 | 2254.25 | ----- | 1.03 | 2.6 | 4.3 | 7.5 | 2.6 | 20.9 | 87.1 | 94.3 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25295.87 | 25299.79 | 19677.94 | ----- | 1.00 | 2.3 | 4.6 | 11.1 | 2.3 | 27.1 | 88.3 | 97.6 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7136.56 | 7137.04 | 5482.81 | ----- | 1.06 | 3.4 | 5.5 | 8.4 | 3.4 | 30.0 | 130.1 | 184.9 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | 30.51 | $30.55 | $24.61 | ----- | NA | 0.8 | 1.1 | 5.2 | 0.8 | 22.9 | 47.7 | 56.5 | 27.1 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Symbol** | **1/5/18** | **High** | **Low** | **Volume** | **Beta** | **Week** | **Month** | **Qtr** | **YTD** | **LTM** | **5 Yrs** | **10 Yrs** | **2014** | **2015** | **2016** | **2017** |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % |
| 3M CORP | MMM | $240.57 | $244.23 | $173.55 | 1836 | 0.89 | 2.2 | 1.0 | 11.7 | 2.2 | 38.6 | 185.0 | 282.0 | 20.0 | -5.9 | 21.7 | 34.9 |
| **AMETEK** | **AME** | **$73.79** | **$74.50** | **$49.18** | **2135** | **1.12** | **1.8** | **3.9** | **10.5** | **1.8** | **50.9** | **95.7** | **291.2** | **0.6** | **2.5** | **-8.6** | **50.0** |
| BADGER METER | BMI | $47.10 | $52.10 | $34.40 | 74 | 1.11 | -1.5 | 3.4 | -6.0 | -1.5 | 27.9 | 103.3 | 157.5 | 10.4 | 0.0 | 27.7 | 30.9 |
| CIRCOR INT'L | CIR | $50.68 | $72.96 | $42.25 | 87 | 1.39 | 4.1 | 7.4 | -8.5 | 4.1 | -20.7 | 28.6 | 21.9 | -25.2 | -29.9 | 54.4 | -24.8 |
| CRANE COMPANY | CR | $91.35 | $91.39 | $67.62 | 280 | 1.18 | 2.4 | 10.7 | 13.6 | 2.4 | 26.6 | 113.5 | 180.9 | -11.1 | -16.6 | 54.1 | 25.9 |
| EMERSON ELECTRIC | EMR | $72.43 | $72.48 | $56.00 | 3119 | 1.13 | 3.9 | 12.0 | 14.1 | 3.9 | 33.2 | 54.1 | 83.4 | -9.6 | -19.7 | 21.0 | 29.0 |
| ENERGY RECOVERY | ERII | $8.84 | $11.30 | $6.13 | 342 | 1.72 | 1.0 | -14.8 | 6.6 | 1.0 | -20.1 | 158.5 | N/A | -5.0 | 34.2 | 46.4 | -15.5 |
| FLOWSERVE | FLS | $43.40 | $52.10 | $37.51 | 911 | 1.33 | 3.5 | 3.7 | 0.9 | 3.5 | -9.2 | -9.3 | 58.8 | -23.4 | -28.6 | 16.0 | -11.2 |
| FRANKLIN ELECTRIC | FELE | $45.40 | $47.20 | $36.00 | 109 | 1.32 | -1.1 | -0.5 | -0.9 | -1.1 | 17.0 | 47.5 | 184.9 | -15.1 | -27.1 | 45.7 | 19.2 |
| **IDEX** | **IEX** | **$134.74** | **$135.70** | **$88.29** | **171** | **1.06** | **2.1** | **1.4** | **9.2** | **2.1** | **50.4** | **202.7** | **362.6** | **7.0** | **0.0** | **19.5** | **48.5** |
| ITRON | ITRI | $70.20 | $79.95 | $57.80 | 283 | 1.02 | 2.9 | 6.6 | -9.9 | 2.9 | 10.2 | 53.8 | -24.1 | 2.1 | -14.4 | 73.7 | 8.5 |
| LYDALL INC | LDL | $51.25 | $63.20 | $45.45 | 44 | 1.29 | 1.0 | -2.6 | -11.2 | 1.0 | -17.5 | 236.5 | 419.8 | 86.3 | 8.1 | 74.3 | -17.9 |
| MUELLER INDUSTRIES | MLI | $36.45 | $43.96 | $27.72 | 133 | 1.18 | 2.9 | 2.1 | 3.4 | 2.9 | 14.7 | 86.8 | 284.2 | 9.4 | -19.9 | 49.2 | 11.4 |
| **MUELLER WATER PRODUCTS** | **MWA** | **$12.59** | **$14.02** | **$10.84** | **469** | **1.35** | **0.5** | **2.9** | **-0.8** | **0.5** | **-4.9** | **126.6** | **60.2** | **10.1** | **-15.3** | **56.4** | **-4.6** |
| NORTHWEST PIPE | NWPX | $19.63 | $21.11 | $12.41 | 34 | 1.15 | 2.6 | 11.9 | -1.4 | 2.6 | 12.7 | -19.2 | -45.8 | -20.2 | -62.8 | 53.9 | 11.1 |
| PENTAIR | PNR | $72.66 | $72.78 | $56.53 | 738 | 1.29 | 2.9 | 6.0 | 4.9 | 2.9 | 27.8 | 60.6 | 172.7 | -13.2 | -23.8 | 16.0 | 28.6 |
| **REXNORD** | **RXN** | **$26.33** | **$26.52** | **$20.41** | **850** | **1.31** | **1.2** | **5.6** | **2.7** | **1.2** | **28.3** | **24.3** | **N/A** | **4.4** | **-35.8** | **8.1** | **32.8** |
| ROPER INDUSTRIES | ROP | $267.02 | $267.83 | $184.55 | 344 | 1.05 | 3.1 | 3.4 | 6.4 | 3.1 | 44.8 | 137.9 | 391.9 | 13.4 | 22.1 | -2.9 | 42.4 |
| SPX | SPW | $32.50 | $33.18 | $21.97 | 266 | 1.48 | 3.5 | 4.9 | 12.0 | 3.5 | 34.8 | 88.6 | 45.8 | -12.4 | -56.5 | 154.2 | 32.3 |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$76.45** | **$78.05** | **$59.15** | **44** | **1.20** | **0.7** | **4.5** | **10.9** | **0.7** | **17.1** | **81.2** | **206.2** | **3.6** | **-20.8** | **32.8** | **17.8** |
| **XYLEM** | **XYL** | **$69.23** | **$69.88** | **$46.67** | **667** | **1.11** | **1.5** | **2.0** | **7.7** | **1.5** | **40.4** | **172.2** | **N/A** | **11.6** | **-2.6** | **37.6** | **39.5** |
| **Average** | | | | | **616** | **1.22** | **2.0** | **3.6** | **3.3** | **2.0** | **19.2** | **96.6** | **174.1** | **2.1** | **-14.9** | **40.5** | **18.5** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2743.15 | 2743.45 | 2254.25 | ----- | 1.03 | 2.6 | 4.3 | 7.5 | 2.6 | 20.9 | 87.1 | 94.3 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25295.87 | 25299.79 | 19677.94 | ----- | 1.00 | 2.3 | 4.6 | 11.1 | 2.3 | 27.1 | 88.3 | 97.6 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7136.56 | 7137.04 | 5482.81 | ----- | 1.06 | 3.4 | 5.5 | 8.4 | 3.4 | 30.0 | 130.1 | 184.9 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | $30.51 | $30.55 | $24.61 | ----- | NA | 0.8 | 1.1 | 5.2 | 0.8 | 22.9 | 47.7 | 56.5 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Symbol** | **1/5/18** | **High** | **Date** | **Low** | **Date** | **Volume** | **Beta** | **Week** | **Month** | **Qtr** | **YTD** | **LTM** | **5 Yrs** | **10 Yrs** | **2013** | **2014** | **2015** | **2016** | **2017** |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AIR PRODUCTS & CHEM | APD | $168.45 | $168.97 | 01/05/18 | $133.63 | 03/27/17 | 742 | 1.04 | 2.7 | 4.6 | 11.2 | 2.7 | 20.7 | 138.3 | 144.9 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| ASHLAND | ASH | $74.08 | $128.19 | 04/25/17 | $59.80 | 08/11/17 | 351 | 0.99 | 4.0 | 3.5 | 10.9 | 4.0 | 37.7 | 91.2 | 290.3 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| BARNWELL INDUSTRIES | CDZI | $14.00 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | 45 | 0.64 | -1.8 | 3.7 | 12.4 | -1.8 | 12.4 | 80.6 | -26.7 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |
| **CALGON CARBON** | **CCC** | **$21.35** | **$22.10** | **10/05/17** | **$12.00** | **08/24/17** | **2314** | **1.02** | **0.2** | **-0.5** | **-0.7** | **0.2** | **24.7** | **50.3** | **44.8** | **45.1** | **1.0** | **-16.1** | **-0.1** | **27.0** |
| CANTEL MEDICAL | CMN | $106.08 | $108.00 | 12/04/17 | $69.21 | 05/17/17 | 78 | 1.15 | 3.1 | 5.6 | 9.3 | 3.1 | 35.6 | 412.4 | 1643.7 | 71.3 | 27.9 | 43.9 | 27.0 | 30.9 |
| **CONSOLIDATED WATER** | **CWCO** | **$12.80** | **$13.95** | **11/27/17** | **$10.00** | **02/03/17** | **58** | **0.83** | **2.3** | **-2.0** | **-0.7** | **2.3** | **21.0** | **84.8** | **-31.7** | **95.3** | **-22.3** | **17.6** | **-9.1** | **18.3** |
| FORTIVE | FTV | $73.40 | $75.69 | 12/01/17 | $53.26 | 01/11/17 | 2134 | 1.07 | 1.5 | 0.6 | 2.7 | 1.5 | 36.7 | N/A | N/A | N/A | N/A | N/A | N/A | 35.5 |
| LAYNE CHRISTENSEN | LAYN | $13.05 | $13.64 | 10/26/17 | $6.98 | 05/31/17 | 85 | 1.32 | 4.0 | 1.2 | 0.9 | 4.0 | 16.7 | -45.1 | -72.4 | -29.6 | -44.1 | -44.9 | 106.7 | 15.5 |
| STANTEC INC | STN | $28.25 | $28.90 | 10/27/17 | $22.25 | 05/18/17 | 25 | 0.94 | 1.1 | 5.0 | 0.9 | 1.1 | 11.3 | 43.6 | 60.9 | 56.6 | -10.6 | -8.4 | 3.3 | 12.3 |
| TETRA TECH | TTEK | $48.55 | $50.90 | 11/29/17 | $38.85 | 03/17/17 | 265 | 1.05 | 0.8 | -0.7 | 1.6 | 0.8 | 15.2 | 78.7 | 142.4 | 5.7 | -3.8 | -1.4 | 67.7 | 12.6 |
| VEOLIA ENVIRONNEMENT | VE | $26.35 | $26.35 | 01/05/18 | $15.99 | 02/24/17 | 54 | 0.76 | 3.1 | 4.9 | 14.5 | 3.1 | 63.1 | 167.7 | -56.0 | 41.9 | 12.1 | 38.9 | -26.2 | 55.2 |
| **Average** | | | | | | | **559** | **0.98** | **1.9** | **2.4** | **5.7** | **1.9** | **26.8** | **110.3** | **214.0** | **33.4** | **7.8** | **-4.4** | **33.7** | **24.8** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2743.15 | 2743.45 | 01/05/18 | 2254.25 | 01/12/17 | ----- | 1.00 | 2.6 | 4.3 | 7.5 | 2.6 | 20.9 | 87.1 | 94.3 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 168.45 | 168.97 | 01/05/18 | 133.63 | 03/27/17 | ----- | 1.04 | 2.7 | 4.6 | 11.2 | 2.7 | 20.7 | 138.3 | 144.9 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| Nasdaq Composite | COMP | 74.08 | 128.19 | 04/25/17 | 59.80 | 08/11/17 | ----- | 0.99 | 4.0 | 3.5 | 10.9 | 4.0 | 37.7 | 91.2 | 290.3 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| Powershares Dyn Water | PHO-US | $14.00 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | ----- | 0.64 | -1.8 | 3.7 | 12.4 | -1.8 | 12.4 | 80.6 | -26.7 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Regulated Electrics/Gas)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | Symbol | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1/5/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLIANT | LNT | $41.08 | $45.55 | $36.56 | 1665 | 0.58 | -3.6 | -7.4 | -1.2 | -3.6 | 11.2 | 114.9 | 206.9 | 21.9 | 33.4 | -2.6 | 23.5 | 15.1 |
| **AVANGRID** | **AGR** | **$48.73** | **$53.46** | **$37.42** | **538** | **0.66** | **-3.7** | **-4.6** | **1.7** | **-3.7** | **32.2** | **109.4** | **181.5** | **13.2** | **17.7** | **18.0** | **3.4** | **38.5** |
| AVISTA | AVA | $51.79 | $52.83 | $37.78 | 516 | 0.61 | 0.6 | 0.2 | 0.2 | 0.6 | 34.0 | 154.1 | 274.9 | 22.3 | 30.5 | 4.2 | 15.0 | 32.2 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$76.00** | **$86.35** | **$63.00** | **52** | **0.70** | **-3.2** | **-8.5** | **-3.3** | **-3.2** | **17.3** | **172.0** | **394.5** | **36.1** | **27.1** | **16.9** | **13.3** | **18.9** |
| CMS ENERGY | CMS | $45.81 | $50.85 | $41.26 | 2598 | 0.51 | -3.2 | -7.1 | -0.9 | -3.2 | 12.3 | 115.3 | 285.7 | 13.9 | 34.6 | 7.3 | 16.9 | 16.6 |
| CONEDISON | ED | $81.74 | $89.70 | $72.13 | 1749 | 0.34 | -3.8 | -7.1 | 0.7 | -3.8 | 14.7 | 75.0 | 167.5 | 3.8 | 24.8 | 1.4 | 17.1 | 18.6 |
| DTE CORPORATION | DTE | $106.20 | $116.74 | $96.56 | 1243 | 0.53 | -3.0 | -6.4 | -0.7 | -3.0 | 11.1 | 105.0 | 278.1 | 14.9 | 34.7 | -3.7 | 24.8 | 14.1 |
| **EVERSOURCE ENERGY** | **ES** | **$61.82** | **$66.15** | **$54.08** | **2265** | **0.50** | **-2.2** | **-4.0** | **2.7** | **-2.2** | **15.3** | **84.3** | **184.4** | **12.4** | **30.6** | **-1.3** | **10.1** | **17.2** |
| MGE ENERGY | MGEE | $61.45 | $68.70 | $60.30 | 74 | 0.72 | -2.6 | -4.3 | -6.0 | -2.6 | -2.9 | 101.1 | 271.2 | 16.7 | 21.9 | 4.6 | 42.6 | -1.8 |
| NORTHWESTERN | NWE | $57.41 | $64.47 | $55.65 | 196 | 0.60 | -3.8 | -7.4 | 0.3 | -3.8 | 3.9 | 91.4 | 209.1 | 29.5 | 35.0 | -0.5 | 6.6 | 8.4 |
| PG&E CORPORATION | PCG | $44.29 | $71.57 | $41.61 | 6407 | 0.51 | -1.2 | -17.4 | -35.9 | -1.2 | -25.1 | 27.6 | 49.3 | 4.6 | 37.4 | 3.5 | 16.3 | -24.9 |
| SCANA | SCG | $45.02 | $72.89 | $37.10 | 5796 | 0.56 | 13.2 | 5.0 | -5.7 | 13.2 | -35.1 | 17.6 | 69.1 | 7.2 | 34.0 | 4.3 | 23.5 | -43.6 |
| TECO ENERGY | TE | - | - | - | - | 0.55 | - | - | - | - | - | - | - | 8.1 | 24.9 | 35.6 | - | - |
| **UNITIL CORP** | **UTL** | **$44.73** | **$52.84** | **$43.03** | **68** | **0.59** | **-2.0** | **-11.8** | **-10.8** | **-2.0** | **1.2** | **103.8** | **159.5** | **23.2** | **25.4** | **1.8** | **29.5** | **3.5** |
| VECTREN CORP | VVC | $62.50 | $69.86 | $51.99 | 365 | 0.66 | -3.9 | -8.5 | -4.6 | -3.9 | 22.9 | 144.8 | 241.3 | 25.8 | 35.1 | -4.9 | 24.1 | 27.6 |
| WISCONSIN ENERGY | WEC | $64.87 | $70.09 | $56.05 | 1547 | 0.50 | -2.3 | -4.9 | 2.0 | -2.3 | 13.6 | 104.3 | 277.6 | 16.1 | 32.1 | 0.8 | 16.1 | 16.7 |
| XCEL ENERGY | XEL | $46.79 | $52.22 | $40.04 | 3728 | 0.48 | -2.7 | -7.2 | -0.9 | -2.7 | 18.3 | 104.1 | 217.3 | 8.8 | 33.5 | 3.8 | 15.6 | 21.2 |
| **Average** | | | | | **1800** | **0.56** | **-1.7** | **-6.3** | **-3.9** | **-1.7** | **9.1** | **101.5** | **216.7** | **16.4** | **30.1** | **5.3** | **18.7** | **11.2** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2743.15 | 2743.45 | 2254.25 | ----- | 1.03 | 2.6 | 4.5 | 8.0 | 2.6 | 23.3 | 107.7 | 141.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25295.87 | 25299.79 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7136.56 | 7137.04 | 5482.81 | ----- | 1.06 | 3.4 | 5.6 | 8.6 | 3.4 | 31.5 | 144.3 | 218.4 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | $654.68 | $726.43 | $608.61 | ----- | NA | 0.8 | 1.1 | 5.2 | 0.8 | 22.9 | 47.7 | 56.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Regulated Electrics Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/5/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLETE | ALE | $73.55 | $81.24 | $61.64 | 386 | 0.61 | -1.1 | -6.5 | -5.7 | -1.1 | 18.8 | 105.6 | 198.2 | 26.5 | 15.0 | -4.1 | 29.0 | 19.1 |
| CENTERPOINT ENERGY | CNP | $27.87 | $30.45 | $24.74 | 4535 | 0.79 | -1.7 | -3.6 | -3.2 | -1.7 | 16.7 | 73.9 | 168.2 | 24.8 | 5.1 | -17.6 | 41.3 | 19.2 |
| CLECO | CNL | - | - | - | - | 0.43 | - | - | - | - | - | - | - | 20.1 | 20.6 | -1.4 | - | - |
| DUKE ENERGY | DUK | $81.94 | $91.80 | $76.14 | 3827 | 0.44 | -2.6 | -6.8 | -1.8 | -2.6 | 9.9 | 56.1 | 124.1 | 13.0 | 26.4 | -10.8 | 12.2 | 12.4 |
| EL PASO ELECTRIC | EE | $54.25 | $61.15 | $44.70 | 179 | 0.64 | -2.0 | -7.4 | -3.9 | -2.0 | 18.4 | 91.5 | 168.8 | 13.4 | 17.6 | -0.7 | 21.7 | 21.2 |
| EMPIRE DISTRICT ELECTRIC | EDE | - | - | - | - | 0.54 | - | - | - | - | - | - | - | 16.6 | 36.5 | -1.3 | 23.1 | - |
| GREAT PLAINS | GXP | $31.10 | $34.72 | $26.72 | 1350 | 0.57 | -3.5 | -8.2 | 2.1 | -3.5 | 16.3 | 80.2 | 70.2 | 24.1 | 21.6 | -0.2 | 2.2 | 21.1 |
| HAWAIIAN ELECTRIC | HE | $34.97 | $38.72 | $31.71 | 522 | 0.58 | -3.3 | -7.7 | 4.4 | -3.3 | 10.3 | 66.1 | 159.5 | 8.6 | 34.9 | -10.0 | 18.1 | 12.4 |
| IDACORP | IDA | $87.69 | $100.04 | $77.49 | 368 | 0.64 | -4.0 | -8.9 | -0.5 | -4.0 | 12.4 | 132.9 | 258.1 | 23.4 | 31.8 | 5.9 | 19.2 | 16.1 |
| PINNACLE WEST | PNW | $82.42 | $92.48 | $75.79 | 907 | 0.53 | -3.2 | -7.7 | -2.9 | -3.2 | 8.5 | 88.9 | 217.3 | 7.9 | 34.5 | -2.0 | 23.9 | 12.3 |
| PNM RESOURCES | PNM | $39.40 | $46.00 | $33.35 | 441 | 0.66 | -2.6 | -12.0 | -2.8 | -2.6 | 18.1 | 112.9 | 170.9 | 21.0 | 26.3 | 6.1 | 13.4 | 21.1 |
| PORTLAND GENERAL | POR | $43.86 | $50.11 | $42.41 | 751 | 0.59 | -3.8 | -8.7 | -4.6 | -3.8 | 3.9 | 83.7 | 145.8 | 14.5 | 29.4 | -0.6 | 19.9 | 7.9 |
| SOUTHERN COMPANY | SO | $46.78 | $53.51 | $46.44 | 6120 | 0.38 | -2.7 | -7.1 | -4.1 | -2.7 | -0.3 | 33.5 | 93.9 | 0.5 | 25.2 | -0.1 | 8.8 | 2.0 |
| WESTAR ENERGY | WR | $51.66 | $57.32 | $49.20 | 623 | 0.52 | -2.2 | -7.7 | 2.8 | -2.2 | -3.3 | 110.0 | 224.2 | 17.4 | 33.2 | 6.9 | 34.4 | -3.3 |
| **Average** | | | | | **1667** | **0.56** | **-2.7** | **-7.7** | **-1.7** | **-2.7** | **10.8** | **86.3** | **166.6** | **16.6** | **25.6** | **-2.1** | **20.6** | **13.5** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2743.15 | 2743.45 | 2254.25 | ----- | 1.03 | 2.6 | 4.5 | 8.0 | 2.6 | 23.3 | 107.7 | 141.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25295.87 | 25299.79 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7136.56 | 7137.04 | 5482.81 | ----- | 1.06 | 3.4 | 5.6 | 8.6 | 3.4 | 31.5 | 144.3 | 218.4 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 654.68 | 726.43 | 608.61 | ----- | NA | 0.8 | 1.1 | 5.2 | 0.8 | 22.9 | 47.7 | 56.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics with Merchant)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/5/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AMEREN | AEE | $57.39 | $64.89 | $51.35 | 1321 | 0.55 | -2.7 | -7.5 | -1.7 | -2.7 | 12.3 | 123.1 | 75.6 | 23.3 | 32.7 | -2.4 | 23.5 | 15.7 |
| AMERICAN ELECTRIC POWER | AEP | $70.80 | $78.07 | $61.82 | 2968 | 0.53 | -3.8 | -7.2 | -0.2 | -3.8 | 16.0 | 96.2 | 135.6 | 14.2 | 35.1 | -0.3 | 10.7 | 20.3 |
| DOMINION | D | $76.84 | $85.30 | $70.87 | 5758 | 0.52 | -5.2 | -7.6 | 1.0 | -5.2 | 4.6 | 72.9 | 147.7 | 29.8 | 23.0 | -8.8 | 15.9 | 9.3 |
| EDISON INTERNATIONAL | EIX | $62.98 | $83.38 | $62.03 | 3720 | 0.48 | -0.4 | -9.2 | -18.2 | -0.4 | -10.0 | 54.1 | 60.3 | 5.4 | 45.0 | -6.9 | 22.7 | -9.8 |
| ENTERGY | ETR | $79.92 | $87.95 | $69.63 | 1329 | 0.53 | -1.8 | -3.9 | 2.1 | -1.8 | 14.5 | 56.6 | 4.8 | 4.3 | 44.8 | -18.2 | 11.1 | 15.9 |
| EXELON | EXC | $38.19 | $42.67 | $33.30 | 7142 | 0.62 | -3.1 | -7.4 | 0.4 | -3.1 | 11.5 | 53.7 | -28.8 | -3.5 | 40.6 | -22.2 | 33.2 | 14.3 |
| FIRST ENERGY | FE | $30.11 | $35.22 | $27.93 | 4564 | 0.57 | -1.7 | -6.9 | -2.8 | -1.7 | 2.2 | -9.8 | -35.2 | -16.5 | 23.5 | -15.2 | 0.1 | 3.1 |
| NEXTERA ENERGY | NEE | $151.71 | $159.40 | $117.33 | 2580 | 0.54 | -2.9 | -2.5 | 3.3 | -2.9 | 31.0 | 148.8 | 207.5 | 28.0 | 27.9 | 0.7 | 17.3 | 33.6 |
| PPL CORP | PPL | $30.95 | $40.20 | $30.44 | 7203 | 0.57 | 0.0 | -11.3 | -16.1 | 0.0 | -5.9 | 43.0 | 2.4 | 10.3 | 26.2 | 6.2 | 3.5 | -5.8 |
| PUBLIC SERVICE ENT GROUP | PEG | $49.66 | $53.28 | $41.67 | 5762 | 0.59 | -3.6 | -5.0 | 5.5 | -3.6 | 17.7 | 94.8 | 52.5 | 9.4 | 34.4 | -2.8 | 16.9 | 21.3 |
| **Average** | | | | | **4235** | **0.55** | **-2.5** | **-6.8** | **-2.7** | **-2.5** | **9.4** | **73.3** | **62.2** | **10.5** | **33.3** | **-7.0** | **15.5** | **11.8** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2743.15 | 2743.45 | 2254.25 | ----- | 1.03 | 2.6 | 4.5 | 8.0 | 2.6 | 23.3 | 107.7 | 141.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25295.87 | 25299.79 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7136.56 | 7137.04 | 5482.81 | ----- | 1.06 | 3.4 | 5.6 | 8.6 | 3.4 | 31.5 | 144.3 | 218.4 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 654.68 | 726.43 | 608.61 | ----- | NA | 0.8 | 1.1 | 5.2 | 0.8 | 22.9 | 47.7 | 56.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/5/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| CALPINE | CPN | $15.08 | $15.16 | $9.30 | 8875 | 0.96 | -0.3 | 0.2 | 1.4 | -0.3 | 29.3 | -16.6 | - | 7.6 | 13.4 | -34.6 | -19.6 | 30.0 |
| DYNEGY | DYN | $11.97 | $12.84 | $5.84 | 1418 | 1.21 | 1.0 | 5.4 | 25.7 | 1.0 | 33.7 | -40.6 | -99.5 | 12.5 | 41.0 | -55.8 | -33.9 | 38.8 |
| GENON | GEN | $0.81 | $4.66 | $0.60 | 288 | 1.36 | 5.5 | 5.9 | -28.8 | 5.5 | -82.6 | -86.6 | -94.5 | -24.5 | 78.2 | -59.5 | 15.8 | -81.6 |
| COVANTA | CVA | $16.55 | $17.30 | $13.00 | 711 | 0.73 | -2.1 | 13.1 | 11.6 | -2.1 | 10.9 | 13.7 | -8.2 | -0.3 | 29.4 | -25.8 | 7.1 | 17.3 |
| NRG | NRG | $28.73 | $29.78 | $12.96 | 4539 | 1.17 | 0.9 | 5.2 | 12.5 | 0.9 | 117.6 | 35.7 | -23.4 | 27.0 | -4.5 | -55.0 | 12.9 | 131.2 |
| ORMAT TECHNOLOGIES | ORA | $65.05 | $66.46 | $51.44 | 172 | 0.92 | 1.7 | 3.3 | 7.8 | 1.7 | 24.6 | 238.2 | 28.1 | 41.6 | 0.7 | 35.1 | 48.5 | 19.9 |
| **Average** | | | | | **2388** | **1.01** | **0.7** | **6.6** | **6.0** | **0.7** | **20.6** | **22.5** | **-34.3** | **9.1** | **26.8** | **-31.6** | **5.4** | **24.7** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2743.15 | 2743.45 | 2254.25 | ----- | 1.03 | 2.6 | 4.5 | 8.0 | 2.6 | 23.3 | 107.7 | 141.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25295.87 | 25299.79 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7136.56 | 7137.04 | 5482.81 | ----- | 1.06 | 3.4 | 5.6 | 8.6 | 3.4 | 31.5 | 144.3 | 218.4 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 654.68 | 726.43 | 608.61 | ----- | NA | 0.8 | 1.1 | 5.2 | 0.8 | 22.9 | 47.7 | 56.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/5/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AGL RESOURCES, INC. | GAS | N/A | N/A | N/A | N/A | N/A | N/A | 0.25 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 23.3 | 20.0 | 21.7 | N/A | N/A |
| ATMOS ENERGY | ATO | $83.19 | $93.56 | 4-Dec-17 | $72.54 | 10-Jan-17 | 378 | 0.61 | -3.1 | -9.0 | -1.4 | -3.1 | 14.0 | 165.6 | 334.6 | 33.8 | 26.5 | 16.3 | 20.4 | 18.4 |
| LACLEDE GROUP | LG | $71.70 | $82.85 | 4-Dec-17 | $62.33 | 7-Feb-17 | 230 | 0.53 | -4.6 | -10.1 | -4.5 | -4.6 | 13.1 | 120.7 | 218.5 | 22.6 | 21.2 | 15.7 | 12.0 | 19.9 |
| **NEW JERSEY RESOURCES** | **NJR** | **$39.40** | **$45.45** | **15-Nov-17** | **$33.70** | **9-Jan-17** | **405** | **0.69** | **-2.0** | **-8.4** | **-8.0** | **-2.0** | **15.0** | **127.9** | **238.1** | **21.1** | **36.8** | **11.3** | **10.7** | **16.2** |
| NORTHWEST NATURAL GAS | NWN | $58.65 | $69.50 | 30-Nov-17 | $56.53 | 9-Mar-17 | 188 | 0.57 | -1.7 | -13.8 | -9.1 | -1.7 | 0.6 | 55.4 | 77.9 | 0.9 | 21.5 | 5.5 | 22.2 | 2.8 |
| **RGC RESOURCES** | **RGCO** | **$26.69** | **$31.99** | **13-Jun-17** | **$16.71** | **10-Jan-17** | **11** | **0.15** | **-1.4** | **2.5** | **-7.5** | **-1.4** | **63.5** | **156.2** | **315.4** | **7.0** | **20.3** | **0.5** | **21.4** | **66.7** |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$30.68** | **$38.40** | **27-Apr-17** | **$30.62** | **5-Jan-18** | **310** | **0.67** | **-1.8** | **-7.1** | **-12.4** | **-1.8** | **-6.3** | **41.2** | **136.3** | **14.8** | **8.9** | **-16.7** | **48.4** | **-4.3** |
| SOUTHWEST GAS | SWX | $78.84 | $86.87 | 4-Dec-17 | $72.32 | 29-Jun-17 | 159 | 0.65 | -2.0 | -5.5 | 2.2 | -2.0 | 3.7 | 106.2 | 264.2 | 35.3 | 13.5 | -8.2 | 42.5 | 7.6 |
| **WGL HOLDINGS, INC.** | **WGL** | **$86.05** | **$86.89** | **2-Aug-17** | **$73.53** | **10-Jan-17** | **324** | **0.68** | **0.2** | **0.9** | **2.1** | **0.2** | **15.7** | **151.7** | **290.5** | **6.3** | **42.2** | **19.1** | **24.7** | **15.4** |
| **Average** | | | | | | | **251** | **0.53** | **-2.0** | **-6.3** | **-4.8** | **-2.0** | **15** | **115.61** | **234** | **18** | **23** | **7.25** | **25** | **17.82** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2,743.15 | 2,743.45 | 5-Jan-18 | 2,254.25 | 12-Jan-17 | ----- | 1.00 | 2.6 | 4.3 | 7.5 | 2.6 | 20.9 | 87.1 | 94.3 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25,295.87 | 25,299.79 | 5-Jan-18 | 19,677.94 | 19-Jan-17 | ----- | 0.93 | 2.3 | 4.6 | 11.1 | 2.3 | 27.1 | 88.3 | 97.6 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,136.56 | 7,137.04 | 5-Jan-18 | 5,482.81 | 6-Jan-17 | ----- | 1.10 | 3.4 | 5.5 | 8.4 | 3.4 | 30.0 | 130.1 | 184.9 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $654.68 | $726.43 | 15-Nov-17 | 608.61 | 10-Jan-17 | ----- | 0.51 | -2.9 | -6.7 | -3.7 | -2.9 | 5.8 | 39.4 | 15.7 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Symbol** | 1/5/2018 | **High** | **Date** | **Low** | **Date** | **Volume** | **Beta** | **Week** | **Month** | **Qtr** | **YTD** | **LTM** | **5 Yrs** | **10 Yrs** | **2013** | **2014** | **2015** | **2016** | **2017** |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| BLACK HILLS CORP | BKH | $57.41 | $72.02 | 19-Jun-17 | $57.01 | 6-Dec-17 | 465 | 0.85 | -4.5 | -0.1 | -16.3 | -4.5 | -2.9 | 75.9 | 104.7 | 49.1 | 4.0 | -9.3 | 36.1 | 0.8 |
| ENERGEN | EGN | $58.38 | $60.21 | 6-Jan-17 | $46.16 | 7-Jul-17 | 892 | 1.60 | 1.4 | 6.3 | 8.9 | 1.4 | -1.7 | 23.5 | -2.4 | 58.5 | -9.3 | -35.6 | 40.7 | -0.2 |
| EQUITABLE RESOURCES | EQT | $57.81 | $67.84 | 28-Jul-17 | $49.63 | 21-Jun-17 | 3,174 | 1.02 | 1.6 | -2.1 | -11.1 | 1.6 | -12.1 | -3.5 | 20.0 | 52.5 | -15.6 | -31.0 | 25.7 | -12.8 |
| MDU RESOURCES, INC. | MDU | $26.41 | $29.74 | 30-Jan-17 | $25.14 | 3-Aug-17 | 611 | 1.09 | -1.7 | -3.8 | -0.4 | -1.7 | -7.4 | 41.2 | 32.4 | 47.7 | -21.2 | -18.9 | 62.2 | -3.8 |
| NATIONAL FUEL GAS | NFG | $56.08 | $61.25 | 15-Mar-17 | $53.03 | 18-Apr-17 | 363 | 0.88 | 2.1 | -3.0 | -2.3 | 2.1 | 0.9 | 25.4 | 60.7 | 44.1 | -0.5 | -36.6 | 36.5 | -0.2 |
| WILLIAMS COMPANIES | WMB | $32.46 | $32.69 | 6-Jan-17 | $26.82 | 17-Nov-17 | 6,367 | 1.69 | 6.5 | 12.8 | 8.1 | 6.5 | 6.6 | 24.0 | 66.5 | 22.8 | 21.4 | -39.2 | 31.4 | 2.0 |
| **Average** | | | | | | | **1978** | **1.19** | **0.9** | **1.7** | **-2.2** | **0.9** | **-2.7** | **31.1** | **47.0** | **45.8** | **-3.5** | **-28.4** | **38.8** | **-2.4** |
| S&P 500 | SPX | 2,743.15 | 2,743.45 | 5-Jan-18 | 2,254.25 | 12-Jan-17 | ----- | 1.00 | 2.6 | 4.3 | 7.5 | 2.6 | 20.9 | 87.1 | 94.3 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25,295.87 | 25,299.79 | 5-Jan-18 | 19,677.94 | 19-Jan-17 | ----- | 0.93 | 2.3 | 4.6 | 11.1 | 2.3 | 27.1 | 88.3 | 97.6 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,136.56 | 7,137.04 | 5-Jan-18 | 5,482.81 | 6-Jan-17 | ----- | 1.10 | 3.4 | 5.5 | 8.4 | 3.4 | 30.0 | 130.1 | 184.9 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $654.68 | $726.43 | 15-Nov-17 | 608.61 | 10-Jan-17 | ----- | 0.51 | -2.9 | -6.7 | -3.7 | -2.9 | 5.8 | 39.4 | 15.7 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/5/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| OGE ENERGY CORP | OGE | $32.50 | $37.41 | 1-Mar-17 | $32.47 | 5-Jan-18 | 1,368 | 0.78 | -1.2 | -5.2 | -9.7 | -1.2 | -0.3 | 31.8 | 163.3 | 23.5 | 7.4 | -23.4 | 32.3 | 2.0 |
| ONEOK, INC. | OKE | $56.06 | $59.30 | 1-Feb-17 | $47.14 | 20-Jun-17 | 10,160 | 1.40 | 4.9 | 7.1 | 0.3 | 4.9 | 0.2 | 84.0 | 345.4 | 49.6 | -5.3 | -47.4 | 149.4 | -2.1 |
| NISOURCE | NI | $24.79 | $27.76 | 15-Nov-17 | $21.65 | 30-Jan-17 | 3,340 | 0.70 | -3.4 | -7.5 | -3.0 | -3.4 | 12.4 | 187.0 | 415.0 | 36.5 | 32.6 | 20.5 | 16.7 | 19.3 |
| QUESTAR, INC. | STR | N/A | N/A | N/A | N/A | N/A | N/A | 0.61 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 19.9 | 13.5 | -19.8 | N/A | N/A |
| SEMPRA ENERGY | SRE | $108.45 | $122.98 | 15-Nov-17 | $99.71 | 30-Jan-17 | 12,608 | 0.67 | 1.4 | -6.0 | -2.4 | 1.4 | 9.8 | 73.5 | 144.2 | 30.3 | 27.3 | -13.2 | 10.1 | 9.4 |
| **UGI CORP** | **UGI** | **$47.55** | **$52.00** | **2-Jun-17** | **$45.03** | **10-Jan-17** | **642** | **0.75** | **1.3** | **-2.1** | **2.2** | **1.3** | **4.4** | **138.8** | **258.9** | **30.5** | **40.8** | **-8.7** | **39.5** | **4.0** |
| SPECTRA ENERGY | SE | $13.89 | $16.99 | 20-Oct-17 | $10.79 | 29-Nov-17 | 683 | 1.85 | 4.2 | 9.1 | N/A | 4.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| **Average** | | | | | | | **4800** | **0.96** | **1.2** | **-0.7** | **-2.5** | **1.2** | **5.3** | **103.0** | **265.3** | **31.7** | **19.4** | **-15.3** | **49.6** | **6.5** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2,743.15 | 2,743.45 | 5-Jan-18 | 2,254.25 | 12-Jan-17 | ----- | 1.00 | 2.6 | 4.3 | 7.5 | 2.6 | 20.9 | 87.1 | 94.3 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25,295.87 | 25,299.79 | 5-Jan-18 | 19,677.94 | 19-Jan-17 | ----- | 0.93 | 2.3 | 4.6 | 11.1 | 2.3 | 27.1 | 88.3 | 97.6 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,136.56 | 7,137.04 | 5-Jan-18 | 5,482.81 | 6-Jan-17 | ----- | 1.10 | 3.4 | 5.5 | 8.4 | 3.4 | 30.0 | 130.1 | 184.9 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $654.68 | $726.43 | 15-Nov-17 | 608.61 | 10-Jan-17 | ----- | 0.51 | -2.9 | -6.7 | -3.7 | -2.9 | 5.8 | 39.4 | 15.7 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Short Interest Analysis

# Water Utilities

Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| **AMERICAN STATES WATER** | **AWR** | **870,080** | **952,796** | **942,848** | **851,432** | **693,156** | **710,608** | **615,654** | **570,128** | **770,311** | **937,632** | **959,428** | **194,511** | **5** |
| **AMERICAN WATER WORKS** | **AWK** | **4,931,704** | **4,066,020** | **4,652,422** | **3,911,499** | **3,937,971** | **3,533,813** | **3,516,181** | **3,834,363** | **3,922,123** | **4,791,649** | **4,745,403** | **867,627** | **5** |
| **AQUA AMERICA** | **WTR** | **6,375,600** | **6,916,987** | **7,989,370** | **7,315,021** | **7,074,672** | **7,037,294** | **6,947,532** | **6,737,429** | **7,156,442** | **6,856,908** | **7,321,666** | **615,615** | **12** |
| ARTESIAN RESOURCES | ARTNA | 49,224 | 65,918 | 81,240 | 96,103 | 97,693 | 91,398 | 105,398 | 70,302 | 61,305 | 62,843 | 49,719 | 23,142 | 2 |
| **CALIFORNIA WATER** | **CWT** | **981,206** | **847,003** | **906,581** | **910,728** | **701,897** | **1,137,562** | **887,333** | **879,195** | **827,776** | **1,017,607** | **931,332** | **194,468** | **5** |
| CONNECTICUT WATER | CTWS | 212,224 | 220,556 | 210,148 | 216,555 | 261,172 | 284,124 | 264,771 | 257,771 | 248,946 | 252,728 | 271,904 | 43,293 | 6 |
| **MIDDLESEX WATER** | **MSEX** | **130,417** | **169,824** | **171,256** | **169,910** | **226,424** | **246,976** | **253,461** | **191,538** | **158,957** | **132,669** | **133,494** | **39,302** | **3** |
| PURE CYCLE | PCYO | 59,369 | 72,402 | 74,549 | 124,772 | 667,673 | 628,093 | 741,772 | 576,577 | 583,311 | 583,495 | 486,569 | 43,610 | 11 |
| **SABESP** | **SBS** | **753,485** | **900,521** | **1,451,181** | **5,281,984** | **5,056,851** | **3,528,671** | **1,283,127** | **1,790,382** | **853,797** | **2,496,187** | **3,437,163** | **1,219,022** | **3** |
| **SJW** | **SJW** | **125,048** | **127,238** | **113,748** | **130,299** | **141,752** | **134,239** | **163,388** | **129,372** | **117,855** | **115,081** | **92,610** | **64,351** | **1** |
| YORK WATER | YORW | 146,716 | 179,867 | 181,363 | 160,975 | 220,139 | 207,237 | 198,634 | 163,494 | 157,889 | 168,552 | 199,986 | 29,506 | 7 |
| **MEDIAN** | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| 3M COMPANY | MMM | 7,060,241 | 7,991,822 | 8,115,913 | 8,700,072 | 8,453,661 | 8,033,770 | 8,166,891 | 8,372,423 | 6,879,576 | 6,196,511 | 7,279,191 | 1,981,503 | 4 |
| **AMETEK** | **AME** | **6,008,002** | **4,640,428** | **5,756,651** | **5,785,745** | **4,015,506** | **2,755,300** | **2,974,705** | **2,190,704** | **2,211,752** | **3,285,049** | **2,456,937** | **1,082,161** | **2** |
| BADGER METER | BMI | 1,348,369 | 1,418,807 | 1,737,265 | 1,649,292 | 1,539,559 | 1,400,535 | 1,374,378 | 1,399,327 | 1,523,037 | 1,501,582 | 1,434,606 | 107,014 | 13 |
| CIRCOR INT'L | CIR | 1,029,159 | 1,245,319 | 1,301,177 | 1,339,803 | 1,334,092 | 1,279,463 | 1,358,578 | 1,262,950 | 1,213,659 | 1,112,866 | 1,084,984 | 84,632 | 13 |
| CRANE COMPANY | CR | 373,832 | 356,022 | 300,823 | 247,795 | 378,337 | 380,251 | 611,864 | 476,296 | 475,499 | 248,274 | 286,335 | 287,341 | 1 |
| DXP ENTERPRISES | DXPE | 595,679 | 569,261 | 544,173 | 440,356 | 530,801 | 494,781 | 504,017 | 552,078 | 457,900 | 517,701 | 560,111 | 93,380 | 6 |
| EMERSON ELECTRIC | EMR | 9,338,410 | 10,689,037 | 9,423,388 | 10,093,391 | 12,331,903 | 12,292,291 | 10,912,723 | 9,168,764 | 9,899,094 | 6,496,944 | 8,345,432 | 3,317,324 | 3 |
| ENERGY RECOVERY | ERII | 3,540,863 | 4,543,898 | 5,271,394 | 5,665,089 | 6,069,327 | 6,111,623 | 7,540,770 | 7,869,263 | 7,937,256 | 7,626,452 | 7,925,249 | 467,759 | 17 |
| FLOWSERVE | FLS | 8,469,450 | 10,195,773 | 10,681,323 | 10,282,725 | 9,840,089 | 9,601,983 | 9,325,164 | 8,660,318 | 8,147,318 | 10,491,400 | 10,324,441 | 1,097,147 | 9 |
| FRANKLIN ELECTRIC | FELE | 898,169 | 877,467 | 798,183 | 977,987 | 532,078 | 623,483 | 644,133 | 569,372 | 762,472 | 626,169 | 634,632 | 138,351 | 5 |
| **IDEX** | **IEX** | **1,774,073** | **1,589,033** | **1,598,363** | **2,023,395** | **2,045,446** | **1,695,968** | **1,812,624** | **1,524,056** | **1,417,596** | **1,435,747** | **1,353,559** | **239,824** | **6** |
| ITRON | ITRI | 672,061 | 719,772 | 775,355 | 647,437 | 454,344 | 243,650 | 364,484 | 344,625 | 233,561 | 417,029 | 574,159 | 372,640 | 2 |
| LYDALL | LDL | 111,619 | 150,883 | 209,013 | 128,237 | 104,682 | 129,693 | 164,250 | 105,006 | 116,911 | 126,926 | 159,591 | 55,853 | 3 |
| MUELLER INDUSTRIES | MLI | 545,073 | 507,365 | 565,846 | 672,420 | 441,980 | 500,098 | 632,443 | 659,552 | 766,612 | 780,434 | 1,022,662 | 143,931 | 7 |
| **MUELLER WATER PRODUCTS** | **MWA** | **2,497,680** | **1,651,893** | **2,012,601** | **2,315,005** | **2,216,528** | **1,693,026** | **2,320,152** | **1,961,379** | **1,911,692** | **1,583,011** | **2,250,937** | **1,038,810** | **2** |
| NORTHWEST PIPE | NWPX | 360,230 | 271,752 | 253,727 | 298,029 | 527,802 | 506,427 | 556,642 | 589,226 | 619,874 | 609,873 | 610,063 | 28,903 | 21 |
| PENTAIR | PNR | 5,149,425 | 4,768,789 | 3,882,106 | 4,355,636 | 2,789,645 | 2,898,693 | 1,610,699 | 1,657,527 | 2,456,559 | 2,925,363 | 2,340,069 | 949,057 | 2 |
| **REXNORD** | **RXN** | **5,394,645** | **5,846,206** | **5,881,331** | **5,226,577** | **6,196,141** | **5,514,131** | **5,128,239** | **4,183,640** | **3,557,460** | **2,945,598** | **2,654,266** | **908,155** | **3** |
| ROPER INDUSTRIES | ROP | 2,980,370 | 2,895,527 | 3,001,494 | 2,479,680 | 2,003,001 | 2,006,101 | 1,754,208 | 1,835,095 | 1,940,004 | 2,328,990 | 2,243,080 | 415,759 | 5 |
| **WATTS WATER TECH** | **WTS** | **832,524** | **826,260** | **664,627** | **653,092** | **710,635** | **771,218** | **763,117** | **825,097** | **962,792** | **874,103** | **555,068** | **112,129** | **5** |
| **XYLEM** | **XYL** | **4,265,010** | **4,167,410** | **5,285,429** | **5,300,282** | **6,421,238** | **6,220,619** | **5,433,356** | **4,143,245** | **4,085,866** | **3,385,470** | **3,451,789** | **773,737** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | **6.3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| AIR PRODUCTS & CHEM | APD | 3,797,416 | 3,344,957 | 2,782,034 | 2,861,809 | 2,854,313 | 2,373,474 | 2,177,366 | 2,361,939 | 2,427,163 | 2,203,956 | 2,143,958 | 845,188 | 3 |
| ASHLAND | ASH | 1,959,211 | 1,787,667 | 1,646,723 | 2,671,828 | 3,094,775 | 2,781,073 | 2,404,418 | 2,599,338 | 2,143,664 | 2,004,011 | 2,288,244 | 610,710 | 4 |
| BARNWELL INDUSTRIES | BRN | 29,603 | 21,450 | 26,469 | 24,987 | 16,405 | 4,744 | 5,443 | 5,138 | 2,043 | 6,277 | 6,184 | 31,224 | 0 |
| **CALGON CARBON** | **CCC** | **522,521** | **868,350** | **712,094** | **1,027,245** | **984,990** | **1,573,723** | **1,593,148** | **4,837,563** | **4,548,875** | **5,378,243** | **5,361,344** | **1,209,881** | **4** |
| CANTEL MEDICAL | CMN | 947,003 | 963,167 | 1,057,166 | 1,076,278 | 1,106,028 | 1,098,519 | 1,184,947 | 1,175,114 | 731,860 | 628,264 | 608,782 | 154,810 | 4 |
| **CONSOLIDATED WATER** | **CWCO** | **244,548** | **267,212** | **250,504** | **326,135** | **241,999** | **256,986** | **288,445** | **268,093** | **227,333** | **249,844** | **219,728** | **53,516** | **4** |
| ECHOLAB | ECL | 5,569,238 | 4,904,398 | 4,322,535 | 4,816,198 | 3,852,231 | 4,287,351 | 4,668,295 | 4,726,957 | 5,228,558 | 6,169,021 | 6,841,745 | 1,031,187 | 7 |
| FORTIVE | FTV | 1,139,385 | 1,617,188 | 2,064,897 | 2,131,077 | 2,793,149 | 2,337,385 | 2,084,376 | 3,535,942 | 4,855,830 | 6,005,448 | 6,282,169 | 1,125,063 | 6 |
| LAYNE CHRISTENSEN | LAYN | 3,130,509 | 3,156,754 | 3,263,580 | 3,302,461 | 3,227,324 | 3,207,864 | 3,357,098 | 3,514,975 | 3,719,639 | 3,696,505 | 3,722,899 | 156,674 | 24 |
| STANTEC, INC. | STN | 337,202 | 420,859 | 470,870 | 324,778 | 352,097 | 338,854 | 793,114 | 660,883 | 606,555 | 412,544 | 412,813 | 18,130 | 23 |
| TETRA TECH | TTEK | 925,508 | 1,005,039 | 1,185,072 | 925,648 | 671,846 | 623,254 | 1,091,115 | 873,277 | 810,805 | 596,094 | 664,793 | 269,201 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | **7** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| ALLIANT | LNT | 5,409,345 | 4,566,482 | 3,645,885 | 4,342,726 | 3,513,512 | 2,899,307 | 3,159,484 | 3,975,745 | 5,378,873 | 5,928,608 | 7,528,290 | 7,089,148 | 1,259,743 | 6 |
| **AVANGRID** | **AGR** | **2,149,170** | **1,637,777** | **1,929,679** | **1,453,776** | **1,801,384** | **1,660,426** | **1,374,446** | **1,347,442** | **2,567,954** | **4,702,306** | **4,950,129** | **4,862,961** | **409,060** | **12** |
| AVISTA | AVA | 1,409,708 | 1,525,533 | 1,580,040 | 1,569,496 | 1,686,391 | 1,715,671 | 1,933,013 | 3,291,609 | 3,343,721 | 3,092,739 | 3,338,423 | 3,932,055 | 430,986 | 9 |
| **CHESAPEAKE UTILITIES** | **CPK** | **233,478** | **262,773** | **264,080** | **239,420** | **251,742** | **192,332** | **240,501** | **278,329** | **216,129** | **172,718** | **166,885** | **154,867** | **47,597** | **3** |
| CMS ENERGY | CMS | 4,877,715 | 4,147,871 | 3,311,656 | 4,131,055 | 4,928,316 | 5,333,775 | 4,634,626 | 4,875,954 | 5,589,775 | 5,878,501 | 5,000,479 | 6,102,223 | 1,853,120 | 3 |
| CONEDISON | ED | 10,295,176 | 10,226,704 | 11,182,177 | 10,306,460 | 11,016,473 | 11,080,156 | 10,486,678 | 10,783,195 | 9,740,969 | 9,967,953 | 9,413,607 | 9,286,045 | 1,571,010 | 6 |
| DTE CORP | DTE | 3,528,022 | 3,886,211 | 3,225,916 | 3,193,239 | 3,475,283 | 4,310,239 | 3,824,650 | 4,099,232 | 4,834,270 | 4,044,631 | 3,108,937 | 3,784,494 | 928,824 | 4 |
| **EVERSOURCE ENERGY** | **ES** | **3,907,531** | **4,127,245** | **6,018,776** | **5,131,876** | **4,770,610** | **4,461,304** | **3,445,193** | **4,582,399** | **4,457,768** | **4,944,028** | **5,409,923** | **5,874,654** | **1,824,964** | **3** |
| MGE ENERGY | MGEE | 485,353 | 344,716 | 387,046 | 493,046 | 304,509 | 254,303 | 397,535 | 414,763 | 358,462 | 246,161 | 267,706 | 300,314 | 108,232 | 3 |
| NORTHWESTERN | NWE | 1,457,184 | 1,362,452 | 1,148,403 | 1,010,991 | 1,136,951 | 1,141,000 | 1,246,942 | 1,182,741 | 927,547 | 1,097,612 | 878,905 | 852,890 | 321,800 | 3 |
| PG&E CORP | PCG | 4,897,045 | 4,586,203 | 5,851,355 | 6,330,839 | 6,404,365 | 5,783,070 | 6,826,275 | 6,328,202 | 6,261,203 | 6,120,553 | 9,187,359 | 7,690,225 | 7,077,220 | 1 |
| SCANA | SCG | 4,346,492 | 5,317,636 | 6,352,230 | 6,255,402 | 5,098,031 | 4,923,704 | 4,572,666 | 3,588,508 | 3,798,159 | 3,375,158 | 5,004,371 | 5,149,655 | 3,476,500 | 1 |
| **UNITIL CORP** | **UTL** | **266,528** | **216,642** | **181,586** | **144,622** | **146,510** | **130,306** | **143,194** | **160,952** | **120,185** | **100,468** | **242,378** | **262,023** | **91,053** | **3** |
| VECTREN CORP | VVC | 1,059,831 | 1,044,273 | 651,262 | 733,242 | 589,207 | 779,635 | 363,789 | 462,301 | 1,016,032 | 650,093 | 592,791 | 922,140 | 318,180 | 3 |
| WISCONSIN ENERGY | WEC | 12,231,228 | 9,192,076 | 8,760,561 | 8,868,864 | 7,714,249 | 7,539,614 | 8,257,052 | 8,033,126 | 7,445,885 | 7,527,488 | 9,086,165 | 9,683,643 | 1,660,764 | 6 |
| XCEL ENERGY | XEL | 10,023,854 | 8,685,773 | 10,603,959 | 12,027,677 | 12,211,867 | 10,463,422 | 11,633,439 | 12,663,254 | 12,538,128 | 10,873,280 | 12,700,090 | 12,035,574 | 2,988,324 | 4 |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | | Short Interest | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| ALLETE | ALE | 1,115,994 | 881,360 | 965,111 | 725,494 | 516,265 | 654,632 | 791,051 | 768,040 | 839,027 | 762,541 | 955,842 | 228,469 | 4 |
| CENTERPOINT ENERGY | CNP | 8,612,470 | 10,111,969 | 12,483,776 | 7,630,157 | 7,744,874 | 8,745,790 | 14,073,575 | 8,621,283 | 5,239,680 | 7,647,101 | 9,234,812 | 2,863,668 | 3 |
| DUKE ENERGY | DUK | 9,753,550 | 10,540,986 | 10,914,102 | 12,673,350 | 11,006,808 | 10,377,598 | 10,400,623 | 9,949,927 | 9,029,066 | 7,311,625 | 8,747,231 | 2,712,312 | 3 |
| EL PASO ELECTRIC | EE | 394,243 | 370,106 | 437,501 | 582,511 | 332,765 | 311,243 | 420,431 | 352,717 | 468,227 | 575,595 | 689,098 | 243,547 | 3 |
| GREAT PLAINS | GXP | 8,889,673 | 7,636,648 | 5,722,006 | 6,816,518 | 5,830,269 | 7,373,200 | 6,296,938 | 6,184,183 | 5,115,012 | 6,192,697 | 6,742,150 | 1,136,515 | 6 |
| HAWAIIAN ELECTRIC | HE | 3,305,063 | 4,254,164 | 4,400,640 | 4,738,841 | 4,342,411 | 3,621,742 | 3,276,486 | 3,158,482 | 5,687,461 | 5,241,557 | 5,157,973 | 396,218 | 13 |
| IDACORP | IDA | 1,050,865 | 828,083 | 1,009,862 | 941,326 | 881,708 | 890,037 | 857,947 | 706,377 | 596,488 | 590,778 | 769,555 | 214,110 | 4 |
| PINNACLE WEST | PNW | 2,519,950 | 2,854,378 | 3,630,631 | 3,920,359 | 3,189,290 | 2,989,754 | 2,533,351 | 2,442,849 | 2,203,539 | 2,539,516 | 2,594,468 | 599,666 | 4 |
| PNM RESOURCES | PNM | 3,299,198 | 2,959,507 | 2,635,769 | 3,191,323 | 2,004,069 | 2,068,319 | 2,449,370 | 1,934,545 | 1,553,172 | 1,756,204 | 1,746,943 | 630,600 | 3 |
| PORTLAND GENERAL | POR | 1,552,707 | 1,940,728 | 2,011,685 | 1,855,791 | 1,273,088 | 1,273,355 | 1,323,565 | 1,091,394 | 951,097 | 828,240 | 861,274 | 588,680 | 1 |
| SOUTHERN COMPANY | SO | 22,557,114 | 24,271,529 | 19,172,442 | 22,185,758 | 20,983,957 | 24,011,404 | 21,347,185 | 21,231,835 | 21,701,897 | 22,431,431 | 22,476,645 | 5,322,571 | 4 |
| WESTAR ENERGY | WR | 1,617,176 | 1,503,389 | 1,896,950 | 1,594,058 | 1,211,804 | 1,137,106 | 1,185,547 | 1,195,571 | 1,302,071 | 1,184,282 | 1,530,373 | 596,058 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics With Merchant)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg. Vol** | **SIR** |
| AMEREN | AEE | 6,616,420 | 7,191,279 | 8,036,282 | 7,662,727 | 6,558,632 | 5,310,411 | 5,175,354 | 8,159,133 | 7,914,491 | 6,431,806 | 6,909,765 | 6,912,244 | 1,397,876 | 5 |
| AMERICAN ELECTRIC POWER | AEP | 4,959,061 | 6,028,096 | 5,569,001 | 5,907,106 | 7,079,343 | 6,742,651 | 6,698,363 | 7,975,185 | 6,281,152 | 5,846,064 | 6,061,533 | 7,038,320 | 2,319,131 | 3 |
| DOMINION | D | 17,513,374 | 19,845,221 | 20,816,617 | 18,808,504 | 20,677,436 | 20,045,461 | 13,926,442 | 14,446,396 | 13,393,722 | 12,930,154 | 14,791,027 | 14,945,885 | 2,982,885 | 5 |
| EDISON INTERNATIONAL | EIX | 5,887,214 | 5,821,026 | 4,846,557 | 4,596,357 | 4,820,943 | 4,439,686 | 3,862,212 | 3,887,172 | 3,905,069 | 3,864,737 | 4,182,479 | 4,767,939 | 4,347,563 | 1 |
| ENTERGY | ETR | 6,044,081 | 5,949,562 | 4,627,930 | 5,672,944 | 4,580,172 | 3,362,524 | 3,200,009 | 3,337,890 | 2,925,352 | 3,275,675 | 3,768,372 | 4,475,765 | 1,362,118 | 3 |
| EXELON | EXC | 14,470,087 | 15,671,760 | 16,535,402 | 14,492,733 | 22,764,138 | 11,923,333 | 12,992,968 | 13,021,851 | 12,796,336 | 13,879,272 | 12,661,197 | 14,652,089 | 5,317,714 | 3 |
| FIRST ENERGY | FE | 7,077,948 | 8,717,118 | 9,670,222 | 7,788,907 | 7,808,568 | 11,513,982 | 12,031,084 | 11,580,120 | 13,572,934 | 14,779,336 | 15,388,419 | 15,583,507 | 4,105,689 | 4 |
| NEXTERA ENERGY | NEE | 5,684,692 | 11,012,068 | 10,817,723 | 11,388,891 | 10,912,637 | 6,533,446 | 6,949,002 | 7,239,465 | 6,333,172 | 6,483,212 | 6,014,445 | 6,253,272 | 1,846,090 | 3 |
| PPL CORP | PPL | 11,308,934 | 10,784,419 | 11,478,638 | 10,441,674 | 10,562,779 | 9,515,443 | 6,373,595 | 7,853,542 | 9,315,783 | 8,632,942 | 12,061,035 | 15,467,162 | 6,397,282 | 2 |
| PUBLIC SERVICE ENT GROUP | PEG | 9,020,650 | 7,988,900 | 8,325,899 | 8,732,216 | 7,765,149 | 6,172,778 | 7,764,136 | 6,896,227 | 7,903,726 | 8,951,766 | 8,259,093 | 8,072,237 | 3,655,935 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | **3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| CALPINE | CPN | 28,771,379 | 27,743,654 | 28,117,884 | 31,406,984 | 29,236,409 | 22,388,843 | 20,689,060 | 12,412,637 | 8,581,513 | 9,445,678 | 11,634,251 | 17,728,993 | 5,396,789 | 3 |
| COVANTA | CVA | 12,069,855 | 12,163,837 | 12,520,510 | 12,670,673 | 14,793,868 | 18,867,258 | 17,329,973 | 16,624,697 | 16,432,324 | 15,770,544 | 12,430,455 | 12,429,285 | 959,149 | 13 |
| DYNERGY | DYN | 18,153,185 | 17,049,127 | 20,385,768 | 20,771,130 | 20,303,380 | 22,532,771 | 20,500,812 | 19,405,468 | 20,354,821 | 21,669,181 | 23,015,480 | 22,540,907 | 4,872,464 | 5 |
| NRG ENERGY | NRG | 15,853,043 | 13,016,231 | 12,848,957 | 13,234,169 | 16,655,481 | 13,260,349 | 21,717,853 | 20,487,685 | 15,864,456 | 21,767,034 | 21,796,149 | 20,751,077 | 5,160,801 | 4 |
| ORMAT TECHNOLOGIES | ORA | 876,947 | 635,189 | 596,787 | 592,572 | 528,923 | 513,203 | 318,691 | 474,961 | 411,204 | 367,678 | 336,031 | 486,068 | 165,860 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Downstream (Gas Distribution Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| ATMOS ENERGY | ATO | 891,329 | 879,310 | 1,224,711 | 944,101 | 782,821 | 874,210 | 922,806 | 642,008 | 730,106 | 700,794 | 860,615 | 1,143,367 | 645,888 | 1 |
| LACLEDE GROUP | LG | 773,830 | 886,008 | 1,343,875 | 909,387 | 755,155 | 588,216 | 423,462 | 556,576 | 772,291 | 897,395 | 1,124,149 | 1,434,175 | 178,247 | 5 |
| **NEW JERSEY RESOURCES** | **NJR** | **3,570,296** | **4,675,510** | **4,262,104** | **4,484,868** | **3,846,891** | **3,125,675** | **2,703,452** | **2,406,915** | **2,328,469** | **2,602,464** | **2,289,053** | **2,479,972** | **532,734** | **9** |
| NORTHWEST NATURAL GAS | NWN | 937,071 | 921,642 | 1,070,206 | 1,247,218 | 1,289,283 | 1,144,690 | 1,021,318 | 1,034,393 | 670,492 | 968,567 | 821,751 | 956,438 | 159,383 | 6 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **2,687,074** | **2,739,222** | **3,181,251** | **2,983,179** | **3,198,941** | **2,367,331** | **2,205,944** | **2,075,551** | **1,882,462** | **1,883,598** | **2,156,510** | **2,169,796** | **334,816** | **8** |
| SOUTHWEST GAS | SWX | 917,894 | 1,012,872 | 541,515 | 296,021 | 296,957 | 265,152 | 739,734 | 485,210 | 483,679 | 591,548 | 672,821 | 711,373 | 210,333 | 5 |
| **WGL HOLDINGS, INC.** | **WGL** | **1,035,527** | **1,035,562** | **1,263,546** | **1,256,904** | **1,247,446** | **1,017,413** | **1,179,588** | **1,646,717** | **1,874,013** | **2,119,186** | **2,692,852** | **2,746,315** | **265,331** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Upstream (Exploration & Production)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| BLACK HILLS CORP | BKH | 4,643,767 | 4,894,837 | 5,495,973 | 5,741,527 | 4,831,594 | 4,505,354 | 4,778,655 | 4,733,876 | 4,637,706 | 4,807,053 | 5,094,782 | 5,449,917 | 531,212 | 9 |
| ENERGEN | EGN | 3,104,889 | 4,581,398 | 4,247,728 | 4,098,572 | 5,668,191 | 5,547,969 | 6,206,161 | 5,867,869 | 4,536,944 | 3,264,249 | 3,245,921 | 3,146,329 | 724,058 | 6 |
| EQUITABLE RESOURCES | EQT | 7,989,000 | 7,696,050 | 7,503,067 | 6,843,069 | 7,003,638 | 22,173,567 | 30,943,828 | 31,673,417 | 29,685,306 | 29,171,342 | 6,724,882 | 5,640,962 | 3,264,458 | 2 |
| MDU RESOURCES, INC. | MDU | 3,034,771 | 2,423,864 | 3,738,525 | 3,049,397 | 2,938,686 | 2,369,999 | 2,362,615 | 1,416,439 | 1,543,244 | 1,431,957 | 1,754,874 | 1,488,862 | 855,070 | 3 |
| NATIONAL FUEL GAS | NFG | 3,240,432 | 4,255,148 | 4,841,475 | 4,800,950 | 5,409,021 | 6,638,013 | 6,072,594 | 5,813,455 | 5,813,027 | 5,113,474 | 4,576,608 | 4,430,728 | 352,786 | 12 |
| WILLIAMS COMPANIES | WMB | 11,131,044 | 9,528,546 | 11,432,419 | 10,687,025 | 10,065,013 | 12,586,010 | 14,895,321 | 14,178,400 | 14,540,022 | 12,978,105 | 15,289,920 | 16,241,860 | 5,827,346 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | 6 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Short Interest

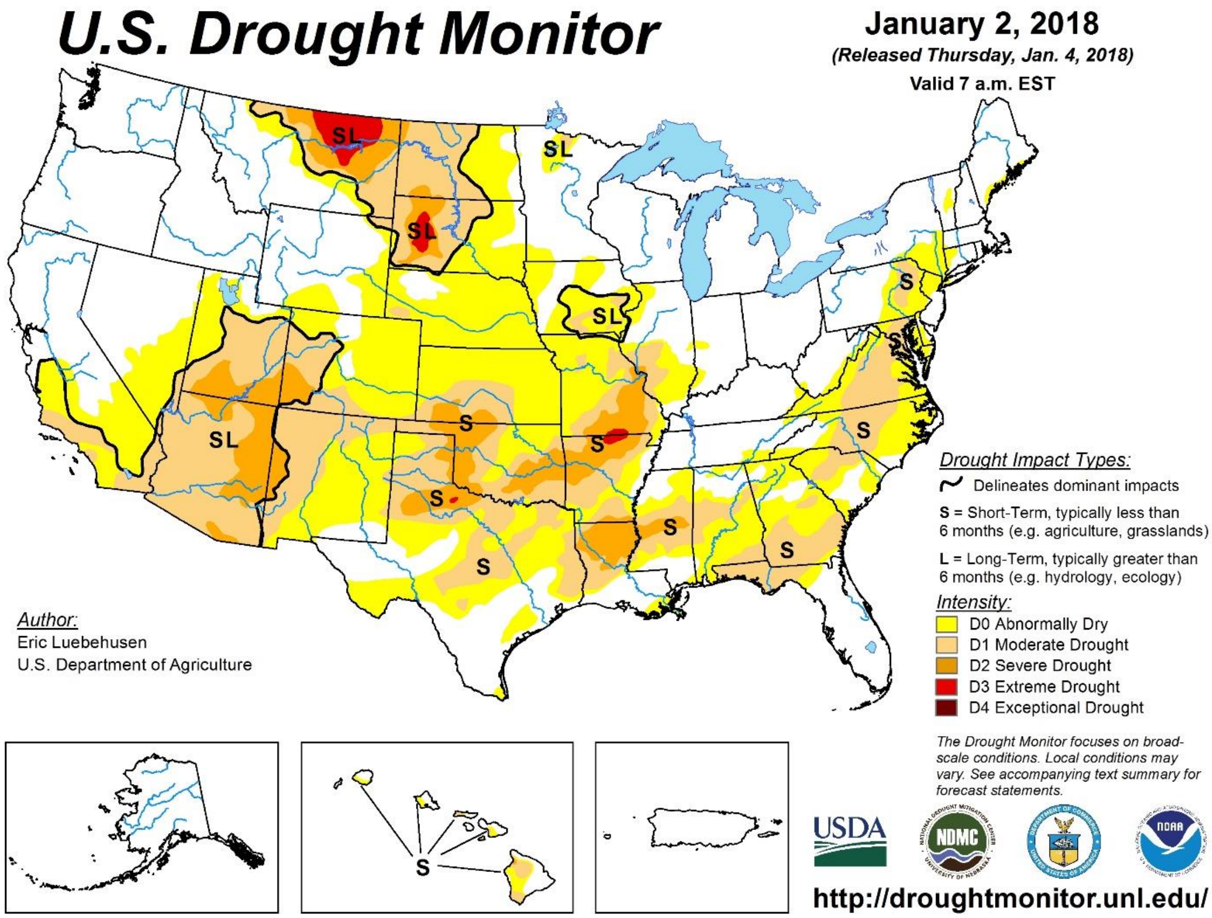
**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| OGE ENERGY CORP | OGE | 5,598,729 | 4,775,812 | 3,296,839 | 4,382,988 | 3,939,793 | 2,981,343 | 2,954,099 | 2,768,183 | 2,486,339 | 1,696,186 | 2,041,236 | 3,771,011 | 1,034,915 | 5 |
| ONEOK, INC. | OKE | 12,483,746 | 18,851,614 | 19,773,430 | 22,257,988 | 20,156,029 | 24,364,024 | 14,275,327 | 12,708,814 | 13,252,141 | 11,054,576 | 12,419,904 | 12,112,381 | 2,867,216 | 7 |
| NISOURCE | NI | 5,939,904 | 6,726,689 | 5,942,696 | 8,750,931 | 9,083,794 | 6,714,317 | 5,187,139 | 4,417,064 | 3,664,748 | 3,550,476 | 10,266,004 | 8,253,518 | 2,907,819 | 2 |
| SEMPRA ENERGY | SRE | 5,181,531 | 5,261,847 | 4,612,359 | 5,310,495 | 6,828,494 | 5,510,848 | 5,704,185 | 5,993,907 | 4,916,629 | 5,824,093 | 6,620,338 | 7,391,010 | 2,067,344 | 3 |
| **UGI CORP** | **UGI** | **1,928,934** | **1,957,314** | **3,556,214** | **2,997,409** | **1,823,833** | **1,330,248** | **1,302,095** | **1,723,837** | **1,351,056** | **1,067,524** | **1,637,548** | **2,218,726** | **863,046** | **2** |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT




## Recent Research

- *Janney/MWA: Adjusting Estimates to Reflect Tax Reform, Raising Fair Value to $16 – January 2 2018*
- *Janney/UTL: Valuation/Yield Compelling; Upgrading to BUY, Fair Value Remains $50 – December 26 2017*
- *Janney/RGCO: Initiating Coverage with NEUTRAL Rating, $29 Fair Value – December 20 2017*
- *Janney/Utilities and Infrastructure Weekly – December 18 2017*
- *Janney/Utilities and Infrastructure Weekly – December 11 2017*
- *Janney/XYL: HQ Visit Highlights, Maintain BUY Rating, $70 Fair Value – December 11 2017*
- *Janney/MWA: Investor Meeting Takeaways; Maintain BUY Rating, $15 Fair Value – December 6 2017*
- *Janney/Utilities and Infrastructure Weekly – December 4 2017*
- *Janney/Utilities and Infrastructure Weekly – November 20 2017*
- *Janney/SBSP3: Billed Volume/Profitability Continues to Improve; Maintain BUY Rating, R$38 Fair Value – November 20 2017*
- *Janney/Utilities and Infrastructure Weekly – November 13 2017*
- *Janney/CWCO: 3Q17 Reported Results Below Expectations; Maintain BUY Rating, $15 Fair Value – November 13 2017*

- *Janney/CPK: 3Q17 Results Above Expectations; Maintain BUY Rating, Raising Fair Value from $83 to $88 – November 10 2017*
- *Janney/APU: Equity Commitment Provides Future Backstop; Maintain BUY Rating, $58 Fair Value – November 9 2017*
- *Janney/UGI: FY18 Guidance Better Than Expected; Maintain BUY Rating, $56 Fair Value – November 9 2017*
- *Janney/AWR: 3Q17 Results Just Below Expectations; Maintain NEUTRAL Rating, Raising F.V. to $48 – November 8 2017*
- *Janney/AP: Growing Pains Materialized in 3Q; Maintaining BUY Rating, $21 Fair Value – November 7 2017*
- *Janney/MSEX: Adjusting Estimates; Maintaining BUY Rating, Raising Fair Value from $44 to $46 – November 3 2017*
- *Janney/SJI: Forward Outlook Strengthening; Maintain BUY Rating, $38 Fair Value – November 3 2017*
- *Janney/ES: 3Q17 Results Just Below Expectations; Maintain BUY Rating, $71 Fair Value – November 3 2017*
- *Janney/AWK: Lowering to NEUTRAL, Maintaining $90 Fair Value; Inline Quarter, Fair Value Achieved – November 3 2017*
- *Janney/WTS: 3Q17 Results Above Expectations; Raising Estimate, Fair Value from $67 to $69 – November 2 2017*
- *Janney/RXN: FY2Q18 Results Inline; Maintain BUY Rating, Raising Fair Value Target to $29 – November 2 2017*
- *Janney/MWA: Solid 4Q17 Results; Adjusting Estimates, Lowering Fair Value from $15.50 to $15 – November 2 2017*
- *Janney/WTR: 3Q17 Results Meet Expectations; Reiterate BUY Rating, $41 Fair Value – November 1 2017*
- *Janney/XYL: Solid Results, Positive Guidance Revision; Maintain BUY Rating, $70 Fair Value – October 31 2017*
- *Janney/UTL: 3Q17 Results Above Forecasts Maintain NEUTRAL Rating, Fair Value Raised from $50 to $52 – October 27 2017*
- *Janney/SJW: Excellent 3Q17 Results; Raising Fair Value from $59 to $68 – October 27 2017*
- *Janney/CWT: Solid 3Q17 Performance; Maintain NEUTRAL Rating, Fair Value Raised from $36 to $40 – October 27 2017*
- *Janney/AGR: Momentum Building; Reiterating BUY Rating, Raising Fair Value to $55 – October 24 2017*
- *Janney/Utilities and Infrastructure Weekly – October 23 2017*
- *Janney/IEX: Solid 3Q17 Results; 2017 Guidance Increased; Raising Fair Value to $117 – October 17 2017*
- *Janney/SJI: The "Go Big or Go Home" Question is Answered; Maintaining BUY Rating – October 17 2017*
- *Janney/Utilities and Infrastructure Weekly – October 16 2017*
- *Janney/Utilities and Infrastructure Weekly – October 09 2017*
- *Janney/CAFD: Discontinuing Coverage – October 06 2017*
- *Janney/XYL: Adjusting Estimates, Maintaining BUY rating, fair Value from $63 to $70 – October 05 2017*
- *Janney/MSEX: Primary Coverage Assumption; Upgrading to BUY, Fair Value to $44 – October 04 2017*
- *Janney/Utilities and Infrastructure Weekly – October 02 2017*
- *Janney/Utilities and Infrastructure Weekly – September 25 2017*
- *Janney/AWK: AWK Investor Visit Takeaways; Maintaining BUY Rating, $90 Fair Value – September 25 2017*
- *Janney/CCC: CCC To be Acquired by Kuraray at $21.50/Share; Rating Lowered to SELL – September 21 2017*
- *Janney/ES: Investor Meeting Takeaways; Maintain BUY Rating, $71 Fair Value – September 21 2017*
- *Janney/Utilities and Infrastructure Weekly – September 18 2017*
- *Janney/Utilities and Infrastructure Weekly – September 11 2017*
- *Janney/MWA: Raising Estimates on Reorganization/Restructuring; Increasing Fair Value to $15.50 – September 8 2017*

## IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

AmeriGas Partners, LP currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Chesapeake Utilities Corporation currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

South Jersey Industries, Inc. currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Unitil currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Janney Montgomery Scott LLC currently acts as a market-maker in the securities of AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Consolidated Water Co., California Water Service, IDEX Corporation, Middlesex Water Co., Mueller Water Products, New Jersey Resources Corp., Rexnord Corporation, Companhia de Saneamento Basico do Estado de Sao Paulo (ADR), South Jersey Industries, Inc., SJW Corp, Unitil, Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc..

Janney Montgomery Scott LLC managed or co-managed a public offering of securities for Chesapeake Utilities Corporation, South Jersey Industries, Inc. and Unitil in the past 12 months.

Janney Montgomery Scott LLC received compensation for investment banking services from Chesapeake Utilities Corporation and South Jersey Industries, Inc. in the past 12 months.

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Avangrid, Inc., AMETEK, Inc., Ampco-Pittsburgh Corporation, AmeriGas Partners, LP, American Water Works, American States Water, Calgon Carbon Corp., Chesapeake Utilities Corporation, Consolidated Water Co., California Water Service, Eversource Energy, IDEX Corporation, Middlesex Water Co., Mueller Water Products, New Jersey Resources Corp., RGC Resources, Inc., Rexnord Corporation, South Jersey Industries, Inc., SJW Corp, UGI Corporation, Unitil, WGL Holdings Inc., Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

Individual disclosures for the companies mentioned in this report can be obtained by accessing our Firm's Disclosure Site

Disclosure Site

## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

### Janney Montgomery Scott Ratings Distribution as of 12/31/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 111 | 48.05 | 31 | 27.93 |

| | | | | |
|---|---|---|---|---|
| **NEUTRAL [N]** | 117 | 50.65 | 22 | 18.80 |
| **SELL [S]** | 3 | 1.30 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

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Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

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January 16, 2018

INFRASTRUCTURE

# Utility & Infrastructure Weekly

**Janney Coverage Universe**

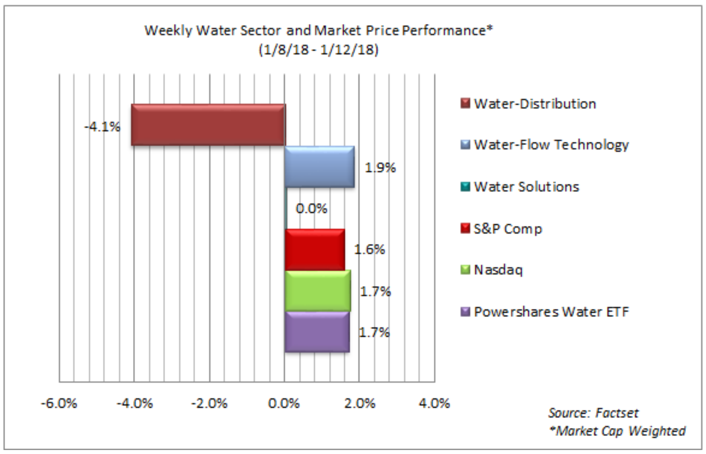
| Ticker | Name | Rating | Price | Fair Value | Upside | 17 EPS/ (P/E) | 18 EPS/ (P/E) | 19 EPS/ (P/E) |
|---|---|---|---|---|---|---|---|---|
| | | | WATER UTILITIES | | | | | |
| AWR | American States Water Company | Neutral | $54.92 | $48.00 | -13% | $1.89 (33.9) | $1.80 (29.1) | $1.92 (30.5) |
| AWK | American Water Works Company, Inc. | Neutral | $80.83 | $90.00 | 11% | $2.99 (28.4) | $3.25 (27.0) | $3.48 (24.9) |
| WTR | Aqua America, Inc. | Buy | $35.12 | $41.00 | 17% | $1.36 (26.4) | $1.44 (25.8) | $1.56 (24.4) |
| CWCO | Consolidated Water Co. Ltd. | Buy | $13.00 | $15.00 | 15% | $0.56 (22.4) | $0.76 (23.2) | $0.76 (17.1) |
| CWT | California Water Service Group | Neutral | $42.85 | $40.00 | -7% | $1.39 (42.4) | $1.47 (30.8) | $1.57 (29.1) |
| MSEX | Middlesex Water Company | Buy | $37.37 | $46.00 | 23% | $1.40 (25.2) | $1.71 (26.7) | $1.78 (21.9) |
| SBS | Companhia de Saneamento Basico do Estado de | Buy | $10.51 | $11.45 | 9% | $1.10 (7.9) | $1.16 (9.6) | $1.45 (9.0) |
| SBSP3-BR | Companhia de Saneamento Basico do Estado de | Buy | R$33.88 | R$38.00 | 12% | $3.65 (7.9) | $3.86 (9.3) | $4.80 (8.8) |
| SJW | SJW Group | Buy | $58.38 | $68.00 | 16% | $2.48 (22.7) | $2.52 (23.5) | $2.73 (23.2) |
| | | | INDUSTRIALS | | | | | |
| AME | AMETEK, Inc. | Buy | $75.20 | $71.00 | -6% | $2.57 (32.7) | $2.93 (29.3) | $3.21 (25.7) |
| AP | Ampco-Pittsburgh Corporation | Buy | $14.75 | $21.00 | 42% | ($0.62) (NM) | $0.95 (NM) | $1.29 (15.5) |
| CCC | Calgon Carbon Corporation | Sell | $21.30 | $21.50 | 1% | $0.51 (34.4) | $0.63 (41.8) | $0.78 (33.8) |
| IEX | IDEX Corporation | Neutral | $136.81 | $117.00 | -14% | $4.26 (NM) | $4.60 (32.1) | $4.89 (29.7) |
| MWA | Mueller Water Products, Inc. Class A | Buy | $12.66 | $16.00 | 26% | $0.44 (26.4) | $0.66 (28.8) | $0.79 (19.2) |
| RXN | Rexnord Corporation | Buy | $27.84 | $29.00 | 4% | $1.19 (NM) | $1.38 (23.4) | $1.60 (20.2) |
| WTS | Watts Water Technologies, Inc. Class A | Neutral | $78.65 | $69.00 | -12% | $3.01 (29.5) | $3.29 (26.1) | $3.45 (23.9) |
| XYL | Xylem Inc. | Buy | $70.46 | $70.00 | -1% | $2.40 (34.7) | $2.66 (29.4) | $3.05 (26.5) |
| | | | ELECTRIC & GAS UTILITIES | | | | | |
| AGR | Avangrid, Inc. | Buy | $48.52 | $55.00 | 13% | $2.14 (23.8) | $2.46 (22.7) | $2.63 (19.7) |
| CPK | Chesapeake Utilities Corporation | Buy | $72.65 | $88.00 | 21% | $2.74 (25.4) | $3.33 (26.5) | $3.95 (21.8) |
| ES | Eversource Energy | Buy | $61.35 | $71.00 | 16% | $3.14 (20.7) | $3.35 (19.5) | $3.53 (18.3) |
| NJR | New Jersey Resources Corporation | Buy | $39.45 | $50.00 | 27% | $1.73 (24.5) | $1.85 (22.8) | $2.07 (21.3) |
| RGCO | RGC Resources, Inc. | Neutral | $26.21 | $29.00 | 11% | N/A | $0.92 (NM) | $1.01 (28.5) |
| SJI | South Jersey Industries, Inc. | Buy | $29.71 | $38.00 | 28% | $1.14 (22.2) | $1.46 (26.1) | $1.79 (20.3) |
| UGI | UGI Corporation | Buy | $47.34 | $56.00 | 18% | $2.29 (NM) | $2.57 (20.7) | $2.79 (18.4) |
| UTL | Unitil Corporation | Buy | $44.07 | $50.00 | 13% | $2.03 (22.7) | $2.05 (21.7) | $2.25 (21.5) |
| WGL | WGL Holdings, Inc. | Neutral | $85.39 | $71.00 | -17% | $3.11 (26.1) | $3.68 (27.5) | $3.78 (22.6) |
| | | | MLPs | | | | | |
| APU | AmeriGas Partners, L.P. | Buy | $47.17 | $58.00 | 23% | $2.13 (22.2) | $3.13 (15.1) | $2.83 (16.7) |

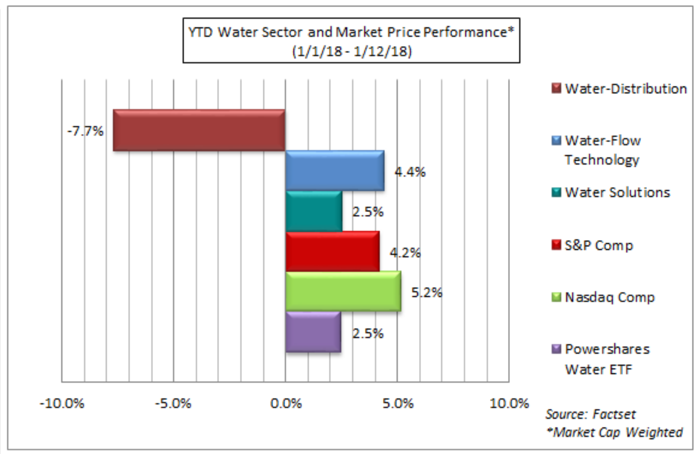
Sources: FactSet (pricing, estimates), Janney Montgomery Scott, LLC Ratings/Fair Values


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 45 - 46 OF THIS REPORT

**Water utilities declined significantly for the second week in a row.** For the second week in a row, utilities notably underperformed. The Water-Distribution segment fell -4.1%, with 8 of 11 names finishing down. American Water Works and Aqua America, the two biggest U.S.-based names in terms of market capitalization, declined by -6.8% and -6.9%, respectively. The Water-Flow Technology segment added +1.9%, while the Water Solutions segment managed a breakeven performance. The general market benchmarks finished higher (the S&P Composite and NASDAQ gained +1.6 and +1.7%, respectively) while the Powershares Water ETF added +1.7%.

YTD, it's a disappointing start to 2018 for the water utilities, which are down -7.7%. At the other end of the performance spectrum, the Water Flow Technology segment is off to great start, at +4.4%. The Water Solutions segment has also opened 2018 on a positive note, +2.5%. The market benchmarks are all positive, with the S&P Composite +4.2%, the NASDAQ Composite +5.2% and the Powershares Water ETF at +2.5%.



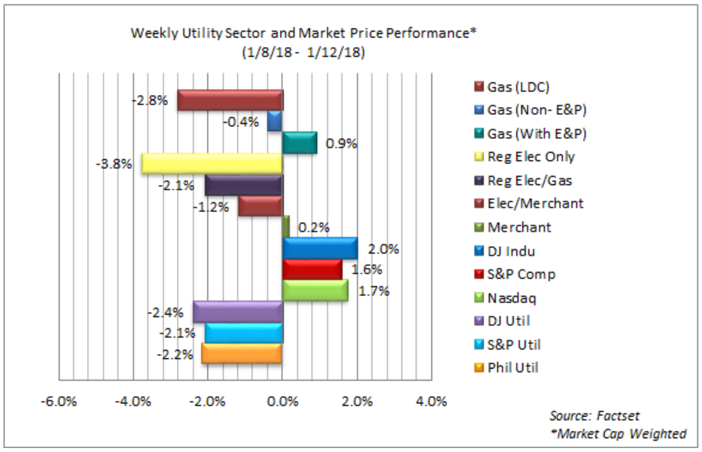



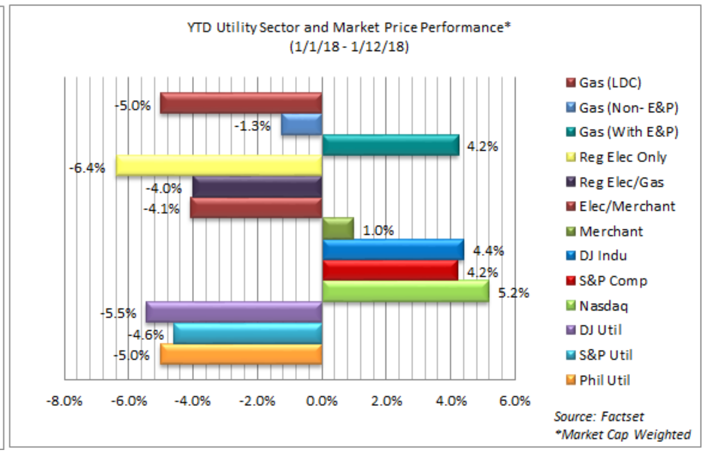

| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Water Distribution** | | | **Water Distribution** | | |
| Pure Cycle Corp. | PCYO | 2.4% | **Aqua America, Inc.** | **WTR** | **-6.9%** |
| **Water Flow Technology** | | | **Water Flow Technology** | | |
| **Rexnord Corp.** | **RXN** | **5.9%** | Lydall, Inc. | LDL | -2.7% |
| **Water Solutions** | | | **Water Solutions** | | |
| Cantel Medical Corp. | CMN | 3.9% | Veolia Environnement SA | VE | -5.1% |

*Source:Factset*

**Utilitiy performance suffered as the 10-year T-Note rate rose.** It was a sea of red in terms of utility performance last week, as 7 of our 9 segments finished down. The best performance came from the Gas (with E&P) segment, which finished +0.9%. The worst performance was from the Regulated Electric Only segment, at -3.8%. The Gas (LDC) names also took a large hit, finishing lower by -2.8%. The remaining segments finished in a range from +0.2% to -2.1%. Performance across the general market benchmarks was positive (the DJ Indu +2.0%, the S&P Composite +1.6% and the NASDAQ +1.7%), while the utility indexes all finished lower in a range of -2.4% to -2.1%.

YTD, it's been a difficult start for utilities where earnings are largely regulated. The Gas (with E&P) segment holds best-performer status at +4.2%, and the Merchant segment has managed a +1.0% gain. All other utility segments are negative, with the Regulated Electric Only segment as the worst-performer at -6.4%. The damage to returns inflicted early-on in 2018 is meaningful, and with the 10-year U.S. T-Note yield rising, the carnage may not be over for quite some time. That said, the market benchmarks have opened 2018 with strong positive returns; the DJ Industrials are up 4.4%, the S&P 500 is +4.2%, and the NASDAQ is +5.2%. The utility benchmarks are all negative, in a range of -4.6% to -5.5%.




| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Gas Distribution (LDC)** | | | **Gas Distribution (LDC)** | | |
| **New Jersey Resources Corp.** | **NJR** | **0.1%** | Atmos Energy Corp. | ATO | -4.0% |
| **Gas (Non-E&P)** | | | **Gas (Non-E&P)** | | |
| ONEOK, Inc. | OKE | 4.7% | OGE Energy Corp. | OGE | -5.4% |
| **Gas (With E&P)** | | | **Gas (With E&P)** | | |
| The Williams Cos., Inc. | WMB | 2.3% | Black Hills Corp. | BKH | -5.2% |
| **Regulated Electric Only** | | | **Regulated Electric Only** | | |
| | | | PNM Resources, Inc. | PNM | -9.4% |
| **Regulated Electric/Gas** | | | **Regulated Electric/Gas** | | |
| | | | **Chesapeake Utilities Corp.** | **CPK** | **-4.4%** |
| **Electric/Merchant** | | | **Electric/Merchant** | | |
| Public Service Enterprise Group, Inc | PEG | 0.9% | American Electric Power Co., Inc. | AEP | -4.7% |
| **Merchant** | | | **Merchant** | | |
| Covanta Holding Corp. | CVA | 2.4% | Vistra Energy Corp. | VSTE | 0.6% |

*Source:Factset*

**Commentary** – We had the opportunity to spend time with **Chesapeake Utilities (CPK)**'s management team in NYC last week, and it appears the company is off to a busy start in 2018, due to the extremely cold weather. We expect weather impacts in both 4Q17 and 1Q18 to be meaningfully positive when the company reports quarterly results; temperatures were below normal in the Mid-Atlantic, Midwest and Florida service territories (the company experienced snow at its Amelia Island facility). The comps in terms of weather impact impacts should be very favorable, given 4Q16 and 1Q17 experienced much milder temperatures versus the last several weeks. That should benefit not only the regulated operations, but the unregulated propane operations, as well. We believe the results could exceed the winter of 2013/2014, if current temperature trends continue.

The extra anticipated cash could come in handy as 2018 unfolds, given the preliminary CAPEX forecast of $182MM (the final tally for 2017 looks to be $193MM). The company continues to find new attractive investment opportunities, particularly with service expansions. In Florida alone, the company highlighted 3 separate expansions (Northwest Florida, New Smyrna and Belvedere). The expansion in Florida (pipeline service) caught our attention, given that asset isn't yet in-service (but investment is increasing). The company sees solid growth prospects across its entire service territory, but we noted that the Florida Natural Gas projects were broken out in a separate slide in the investor deck. The service expansions are expected to add an incremental $7.7MM in margin after completion.

Across our utility coverage universe, the sell-off in equity prices was severe last week, accelerating from the opening week of 2018. Most of the utility charts are broken, with many already closing below key support levels (the 200 and 50 moving averages). The significant rise in the U.S. 10-year T-Note (it finished at 2.55% at the end of last week, Exhibit #1) and was the primary cause we can identify as driving utility shares lower.

**Exhibit #1, U.S. 10-year T-Note Yield**


*Source: FactSet*

We have several charts to display this week, and we begin by showing **American Water Works (AWK**) and **Aqua America (WTR)** side-by-side. Both experienced substantial drops in their share prices last week, approximately 7%. The difference we observed was that the shares of AWK move decidedly below their 200 day moving average, and on heavy volume while WTR's shares remain above that key support level.



*Source: FactSet*

Looking beyond the two largest water utilities, which are primarily East Coast-based, we examine the West Coast names, where the charts look a bit better. None of the West Coast names have breached the 200 day moving average, which generates two questions for us: are AWK shares the bellwether (which would imply the remaining names in the water utility peer group can be expected to breach their respective 200 day moving averages) or are AWK shares oversold and set to bounce back to the 200-day MA?




*Source: FactSet*

Next up we take a look at our Electric & Gas utility coverage. Our New Jersey-based utilities had already pulled back ahead of last week's decline, and both **New Jersey Resources** (**NJR)** and **South Jersey Industries** (**SJI)** showed relatively stability while others were in a free fall.


*Source: FactSet*

The best chart in our electric & gas utility coverage universe is **Avangrid (AGR**). The shares have been holding above the 200 day moving average, but are getting close. **Eversource Energy (ES)** closed below the 200 day moving average last week, but performance in both names last week didn't raise any alarm bells; they held up fairly well given the performance of some of the other names in the peer group.


*Source: FactSet*

Taking everything into account across all our utility sectors, it appears the market finally got around to selling the water utilities down last week, at least the two biggest U.S.-based names. Many of the charts have similar patterns; some are showing signs of potentially bottoming-out. The big remaining question is where the 10-year T-Note yield goes from here; its already moved well beyond Janney's fixed income internal forecasts out through 2019. That said, positives for our utility coverage are numerous; the bulk of the names have relatively low pay-out ratios and can raise dividends to make equity values more attractive, and the group in general also has significant investment opportunities where rates of return are guaranteed by state and federal regulators.

## TOP IDEAS

### Electric/Gas Utilities

**SJI:** recently announced regulated utility acquisitions, ongoing midstream investment opportunities, a generous yield and favorable valuation all factor into our positive investment thesis on SJI shares.

### Industrials

**MWA:** Ongoing cost-out activities and free cash flow capability to support future growth, coupled with an attractive valuation are the primary determinants for MWA's position as our #1 pick in our industrial coverage universe.

### Water Utilities

**WTR**: Within the U.S. water utility group, Aqua America is our top pick. We see several future catalysts, including M&A transactions across its regulated business platforms, and a significant rate case filing in Pennsylvania (approximately two-thirds of total rate base) in 2H18. We consider the company's asset base to be very high quality, and we assign the shares the highest price-to-earnings multiple within its sector. Valuation remains favorable, with an attractive yield.

## COMPANY SNAPSHOTS

**Avangrid** — **AGR** — **$48.52**
**Buy/$55 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $14,996 | 2017E | $0.73 | $0.46 | $0.40 | $0.55 | $2.14 | 22.7x |
| Avg. Daily Vol (MM): | | 462,780 | 2018E | $0.81 | $0.48 | $0.47 | $0.70 | $2.46 | 19.7x |
| 52-wk Range: | $53.46 | $37.42 | 2019E | $0.86 | $0.50 | $0.49 | $0.78 | $2.63 | 18.4x |

Avangrid is a diversified energy and utility company. The company operates regulated utilities, electricity generation, and natural gas storage through three primary lines of business.

**Ametek** — **AME** — **$75.20**
**Buy/$71 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $17,380 | 2017E | $0.61 | $0.65 | $0.66 | $0.66 | $2.57 | 29.3x |
| Avg. Daily Vol (MM): | | 1,089,047 | 2018E | $0.69 | $0.74 | $0.78 | $0.71 | $2.93 | 25.7x |
| 52-wk Range: | $75.42 | $49.93 | 2019E | $0.75 | $0.82 | $0.85 | $0.79 | $3.21 | 23.4x |

Ametek is a global, diversified manufacturer of high technology products serving a diverse set of niche markets and applications. It reports results though two segments, Electronic Instruments Group (EIG) and Electromechanical Group (EMG).

**Ampco-Pittsburgh** — **AP** — **$14.75**
**Buy/$21 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $182 | 2017E | ($0.39) | ($0.16) | ($0.18) | $0.11 | ($0.62) | NA |
| Avg. Daily Vol: | | 31,142 | 2018E | $0.07 | $0.22 | $0.24 | $0.43 | $0.95 | NA |
| 52-wk Range: | $18.60 | $12.15 | 2019E | $0.25 | $0.41 | $0.25 | $0.37 | $1.29 | 11.4x |

Ampco-Pittsburgh is a global manufacturer of cast and forged steel rolls, open-die forge products and air & liquid processing products. It reports results through two segments: Forged and Engineered Products and Air & Liquid Processing. The company is headquartered in Carnegie, Pennsylvania.

**AmeriGas Partners, LP** — **APU** — **$47.17**
**Buy/$58 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $4,385 | 2017E | $0.95 | $1.33 | ($0.62) | ($0.62) | $1.04 | 45.4x |
| Avg. Daily Vol: | | 182,741 | 2018E | $1.06 | $2.10 | ($0.58) | $0.54 | $3.13 | 15.1x |
| 52-wk Range: | $50.00 | $42.00 | 2019E | N/A | N/A | N/A | N/A | N/A | |

AmeriGas Partners, L.P. is the largest retail marketer of propane in the United States, serving approximately 2 million customers from nearly 2000 distribution locations in all 50 states. UGI Corporation owns 26% of AmeriGas Partners, L.P.

*Source: Company data Janney Montgomery Scott, LLC estimates*

**American Water Works Co.** **AWK** **$80.83**
**Neutral/$90 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $14,418 | 2017E | $0.52 | $0.73 | $1.08 | $0.65 | $2.99 | 27.0x |
| Avg. Daily Vol: | | 1,046,218 | 2018E | $0.53 | $0.77 | $1.17 | $0.78 | $3.25 | 24.9x |
| 52-wk Range: | $92.37 | $70.40 | 2019E | $0.57 | $0.84 | $1.24 | $0.84 | $3.48 | 23.2x |

American Water Works Co. provides water and wastewater services to residential, commercial, and industrial customers in the U.S. and Canada, servicing 20 states of the U.S. and Ontario, Canada. It also enters into public/private partnerships, including operation and maintenance contracts, design, build, and operate contracts for the provision of services to water and wastewater facilities.

**American States Water Co.** **AWR** **$54.92**
**Neutral/$48 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,014 | 2017E | $0.34 | $0.62 | $0.57 | $0.36 | $1.89 | 29.1x |
| Avg. Daily Vol: | | 203,533 | 2018E | $0.37 | $0.48 | $0.58 | $0.37 | $1.80 | 30.5x |
| 52-wk Range: | $58.44 | $41.14 | 2019E | $0.39 | $0.52 | $0.61 | $0.39 | $1.92 | 28.6x |

American States Water Co. pumps, purchases, distributes and sells water and electricity primarily to residential and commercial customers. Approximately 90% of its business is conducted in the State of California. The company also manages water/wastewater systems on U.S. military installations through its ASUS subsidiary.

**Calgon Carbon Corporation** **CCC** **$21.30**
**Sell/$21.50 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,082 | 2017E | $0.10 | $0.12 | $0.10 | $0.14 | $0.51 | 41.8x |
| Avg. Daily Vol: | | 1,518,692 | 2018E | $0.14 | $0.15 | $0.19 | $0.16 | $0.63 | 33.8x |
| 52-wk Range: | $22.10 | $12.00 | 2019E | $0.17 | $0.18 | $0.23 | $0.20 | $0.78 | 27.3x |

Calgon Carbon provides services and solutions for purifying water & air, food, beverage and industrial process streams. It operates three business segments: Activated Carbon, Advanced Water Purification and Alternative Materials. The Activated Carbon segment manufactures granular activated carbon (GAC), which is used to remove inorganic compounds from water, air, liquids and gases, and powdered activated carbon (PAC), used for mercury removal from coal-fired electric powerplant emissions (MATS compliance). The Advanced Water Purification segment designs and fabricates systems that provide solutions to water problems. The Alternative Materials segment manufactures and sells carbon cloth, diatomaceous earth and perlite filtration media products for a variety of applications.

**Chesapeake Utilities** **CPK** **$72.65**
**Buy/$88 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,187 | 2017E | $1.23 | $0.37 | $0.42 | $0.73 | $2.74 | 26.5x |
| Avg. Daily Vol: | | 54,299 | 2018E | $1.34 | $0.50 | $0.52 | $1.03 | $3.33 | 21.8x |
| 52-wk Range: | $86.35 | $63.11 | 2019E | $1.48 | $0.65 | $0.65 | $1.17 | $3.95 | 18.4x |

CPK's regulated energy business delivers natural gas to customers located in central and southern Delaware, Maryland's Eastern Shore, and Florida and electricity to customers in northeast and northwest Florida. CPK's regulated energy business also offers natural gas transmission service primarily through a 400+-mile interstate pipeline from various points in Pennsylvania and northern Delaware to natural gas distribution affiliates in Delaware and Maryland as well as to other utility and industrial customers in Pennsylvania, Delaware and the Eastern Shore of Maryland. CPK's unregulated energy business includes propane distribution and propane wholesale marketing operations. The natural gas marketing operation sells natural gas supplies directly to commercial and industrial customers in Florida, Delaware and Maryland. CPK distributes propane to customers in Delaware, the Eastern Shore of Maryland and Virginia, southeastern Pennsylvania and Florida. The propane wholesale marketing operation markets propane to wholesale customers including large independent oil and petrochemical companies, resellers and propane distribution companies in the southeastern United States.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Consolidated Water Co., Ltd.** | | | **CWCO** | **$13.00** | | | | | | |
| **Buy/$15 Fair Value** | | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** | |
| Market Cap (MM): | | $194 | 2016 | $0.14 | $0.15 | $0.18 | $0.11 | $0.58 | 22.4x | |
| Avg. Daily Vol: | | 52,478 | 2017E | $0.18 | $0.11 | $0.08 | $0.20 | $0.56 | 23.2x | |
| 52-wk Range: | $13.95 | $10.00 | 2018E | $0.22 | $0.16 | $0.16 | $0.23 | $0.76 | 17.1x | |

Consolidated Water processes and supplies water to public utilities, commercial & tourist properties, residential properties and government facilities. It uses reverse osmosis technology to produce freshwater from seawater. The Retail water segment produces and supplies water to end users, including residential, commercial and government customers in the Cayman Islands and the Bahamas. The Bulk water segment produces and supplies water to government owned distribution systems in the Cayman Islands, Belize, the British Virgin Islands and The Bahamas. the Services segment provides engineering and management services for desalination projects.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **California Water Service Group** | | | **CWT** | **$42.85** | | | | | |
| **Neutral/$40 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $2,056 | 2017E | 0.02 | 0.39 | 0.70 | 0.27 | 1.39 | 30.8x |
| Avg. Daily Vol: | | 207,417 | 2018E | 0.04 | 0.37 | 0.75 | 0.31 | 1.47 | 29.1x |
| 52-wk Range: | $46.15 | $32.65 | 2019E | 0.06 | 0.39 | 0.78 | 0.34 | 1.57 | 27.3x |

California Water Services Group provides water supply and related services through its subsidiaries. Its services include the production, purchase, storage, treatment, testing, distribution and sale of water for domestic, industrial, [public and irrigation uses. The company has operations in the states of California, Hawaii, New Mexico and Washington.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Eversource Energy** | | | **ES** | **$61.35** | | | | | |
| **Buy/$71 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $19,441 | 2017E | $0.82 | $0.72 | $0.82 | $0.78 | $3.14 | 19.5x |
| Avg. Daily Vol: | | 1,972,958 | 2018E | $0.87 | $0.71 | $0.94 | $0.83 | $3.35 | 18.3x |
| 52-wk Range: | $66.15 | $54.10 | 2019E | $0.91 | $0.73 | $1.00 | $0.88 | $3.53 | 17.4x |

Eversource Energy is a diversified energy holding company that primarily comprises electric transmission, electric and gas distribution assets in the States of New Hampshire, Connecticut and Massachusetts.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **IDEX Corp.** | | | **IEX** | **$136.81** | | | | | |
| **Neutral/$117 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $10,453 | 2017E | $1.03 | $1.08 | $1.08 | $1.07 | $4.26 | 32.1x |
| Avg. Daily Vol: | | 244,056 | 2018E | $1.12 | $1.17 | $1.17 | $1.14 | $4.60 | 29.7x |
| 52-wk Range: | $137.41 | $88.29 | 2019E | $1.19 | $1.24 | $1.24 | $1.21 | $4.89 | 28.0x |

IDEX manufactures pump products and engineered equipment. It operates and reports through three segments: Fluid & Metering, Health & Science and Fire Safety/Diversified Products. The Fluid & Metering segment designs, produces and distributes positive displacement pumps and flow meters, compressors, injectors and other fluid handling equipment. The Health & Science segment designs, produces and distributes a wide range of precision fluidics solutions for a wide range of applications. The FireSafety/Diversified Products segment produces firefighting pumps and controls, rescue tools and lifting bags.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Middlesex Water Company** | **MSEX** | **$37.37**
**Buy/$46 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $611 | 2017E | $0.27 | $0.32 | $0.46 | $0.33 | $1.40 | 26.7x |
| Avg. Daily Vol: | | 48,981 | 2018E | $0.30 | $0.40 | $0.60 | $0.40 | $1.71 | 21.9x |
| 52-wk Range: | $46.74 | $32.23 | 2019E | $0.32 | $0.43 | $0.62 | $0.42 | $1.78 | 21.0x |

Middlesex Water Company conducts water, wastewater and contract service operations in New Jersey, Delaware and Pennsylvania. The current revenue mix is 95% regulated operations, 5% non-regulated.

**Mueller Water Products, Inc.** | **MWA** | **$12.66**
**Buy/$16 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,007 | 2017E | $0.04 | $0.09 | $0.16 | $0.15 | $0.44 | 28.8x |
| Avg. Daily Vol: | | 1,046,420 | 2018E | $0.06 | $0.12 | $0.20 | $0.20 | $0.58 | 21.8x |
| 52-wk Range: | $14.02 | $10.84 | 2019E | $0.10 | $0.17 | $0.25 | $0.24 | $0.75 | 16.9x |

Mueller Water Products manufactures a broad range of water infrastructure and flow control products for use in water distribution networks, water and wastewater treatment facilities, gas distribution systems and fire protection piping systems. The company reports through through 2 segments: Mueller Co, and Mueller Technologies. The Mueller Co. segment primarily designs and manufactures fire hydrants and valves; the Mueller Technologies segment contains the metering, metering systems and leak detection operations.

**New Jersey Resources** | **NJR** | **$39.45**
**Buy/$50 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | Adj EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $3,429 | 2017E | $0.47 | $1.21 | $0.20 | ($0.14) | $1.73 | 22.8x |
| Avg. Daily Vol: | | 571,448 | 2018E | $0.59 | $1.02 | $0.17 | $0.07 | $1.85 | 21.3x |
| 52-wk Range: | $45.45 | $35.40 | 2019E | $0.62 | $1.20 | $0.16 | $0.08 | $2.07 | 19.1x |

New Jersey Resources is an energy services holding company providing retail and wholesale energy services to customers in states from the Gulf Coast and Mid-Continent regions to the Appalachian and Northeast regions, the West Coast and Canada. The natural gas segment provides natural gas service to customers in central and northern New Jersey. Its energy services segment maintains and transacts around a portfolio of physical assets consisting of natural gas storage and transportation contracts. The company's clean energy ventures segment installs, operates, and maintains solar equipment on residential and commercial properties. Its midstream assets segment invests in natural gas midstream assets, such as natural gas transportation and storage facilities.

**Rexnord** | **RXN** | **$27.84**
**Buy $29 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS ($R) | Jun | Sep | Dec | Mar | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,893 | 2018E | $0.27 | $0.32 | $0.26 | $0.34 | $1.19 | 23.4x |
| Avg. Daily Vol (MM): | | 959,162 | 2019E | $0.30 | $0.36 | $0.31 | $0.41 | $1.38 | 20.2x |
| 52-wk Range: | $28.44 | $20.75 | 2020E | $0.36 | $0.42 | $0.37 | $0.45 | $1.60 | 17.4x |

Rexnord is a global diversified manufacturer that reports results through two segments: Process & Motion Control and Water Infrastructure. The company sells its products into a wide variety of end markets, including material handling, water infrastructure, food & beverage and aerospace.

**RGC Resources** | **RGCO** | **$26.21**
**Neutral $29 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS ($R) | Jun | Sep | Dec | Mar | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $189 | 2018E | $0.34 | $0.50 | $0.09 | $0.03 | $0.92 | 28.5x |
| Avg. Daily Vol (MM): | | 10,822 | 2019E | $0.35 | $0.53 | $0.10 | $0.04 | $1.01 | 26.0x |
| 52-wk Range: | $31.99 | $16.72 | 2020E | $0.38 | $0.57 | $0.12 | $0.06 | $1.11 | 23.6x |

RGC Resources is the local gas distribution utility serving the greater Roanoke, VA region. The company also has a 1% ownership interest in the Mountain Valley Pipeline.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Sabesp** | | | **SBSP3-BR** | **$33.88** | | | | | | |
| **Buy/R$38 Fair Value** | | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | | |
| | | | **EPS ($R)** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** | |
| Market Cap (MM): | | $23,157 | 2017E | $0.99 | $0.49 | $1.32 | $0.86 | $3.65 | 9.3x | |
| Avg. Daily Vol (MM): | | 1,011,907 | 2018E | $0.95 | $0.85 | $0.99 | $1.07 | $3.86 | 8.8x | |
| 52-wk Range: | $35.81 | $25.61 | 2019E | $1.19 | $1.08 | $1.24 | $1.29 | $4.80 | 7.1x | |

Companhia de Saneamento Basico do Estado de Sao Paulo (aka SABESP) collects and distributes water and provides sewage treatment services. It operates in 367 counties in the State of Sao Paulo.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **South Jersey Industries** | | | **SJI** | **$29.71** | | | | | |
| **Buy/$38 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $2,361 | 2017E | $0.72 | $0.06 | ($0.05) | $0.41 | $1.14 | 26.1x |
| Avg. Daily Vol (MM): | | 365,920 | 2018E | $0.75 | $0.12 | $0.05 | $0.54 | $1.46 | 20.3x |
| 52-wk Range: | $38.40 | $29.04 | 2019E | $0.78 | $0.22 | $0.22 | $0.57 | $1.79 | 16.6x |

South Jersey Industries, Inc. is an energy services holding company that provides energy-related products and services through its subsidiaries, South Jersey Gas Company (SJG), South Jersey Resources Group (SJRG), Marina Energy (Marina), South Jersey Energy Company, and South Jersey Energy Service Plus. SJG distributes natural gas in the 7 southernmost counties of New Jersey. SJRG markets wholesale nautral gas storage, commodity and transportation in the mid-Atlantic, Appalachian and southern states. Marina develops and operates onsitge energy-related projects. SJE acquires and markets natural gas and electricity to retail end users and provides total energy management services to commercial and industrial customers. SJESP provides residential and light commercial service and installation of heating, ventilation, and air conditioning (HVAC) systems, plumbing services and appliance repair and service/maintenance contracts.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **SJW Corp.** | | | **SJW** | **$58.38** | | | | | |
| **Buy/$68 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $1,198 | 2017E | $0.18 | $0.91 | $0.95 | $0.44 | $2.48 | 23.5x |
| Avg. Daily Vol (MM): | | 58,905 | 2018E | $0.23 | $0.75 | $1.00 | $0.54 | $2.52 | 23.2x |
| 52-wk Range: | $69.29 | $45.39 | 2019E | $0.27 | $0.77 | $1.11 | $0.58 | $2.73 | 21.4x |

SJW is not the typical water utility. Although the bulk of the company's revenues and earnings are derived from regulated water utility operations, other operations, including a real estate segment, add a non-regulated component to revenues. The company continues to look for external growth opportunities, and with its recent acquistion in Texas, has increased its geographic footprint.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **UGI Corp** | | | **UGI** | **$47.34** | | | | | |
| **Buy/$56 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
| Market Cap (MM): | | $8,197 | 2017E | $0.91 | $1.31 | $0.09 | ($0.02) | $2.29 | 20.7x |
| Avg. Daily Vol (MM): | | 893,196 | 2018E | $0.88 | $1.43 | $0.16 | $0.11 | $2.57 | 18.4x |
| 52-wk Range: | $52.00 | $45.04 | 2019E | $0.84 | $1.60 | $0.19 | $0.16 | $2.79 | 17.0x |

UGI Corp. is a distributor and marketer of energy products and services including natural gas, propane, butane and electricity. The company reports results in the following segments: AmeriGas Propane, Gas Utility, Midstream & Marketing, and UGI International.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| **Unitil Corp** | | | **UTL** | **$44.07** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$50 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $649 | 2017E | $0.88 | $0.22 | $0.16 | $0.76 | $2.03 | 21.7x |
| Avg. Daily Vol (MM): | | 97,089 | 2018E | $0.88 | $0.26 | $0.15 | $0.76 | $2.05 | 21.5x |
| 52-wk Range: | $52.84 | $43.03 | 2019E | $0.95 | $0.31 | $0.21 | $0.80 | $2.25 | 19.6x |

UTL's regulated operating utilities serve approximately 109,900 electric and 70,800 gas customers in the states of Maine, New Hampshire and Massachusetts under various subsidiaries. The company also has non-regulated business operations (Usource) that provides energy brokering and management services.

| **Watts Water Technologies** | | | **WTS** | **$78.65** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$69 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $2,686 | 2017E | $0.65 | $0.83 | $0.80 | $0.76 | $3.04 | 25.9x |
| Avg. Daily Vol (MM): | | 104,315 | 2018E | $0.77 | $0.86 | $0.82 | $0.84 | $3.29 | 23.9x |
| 52-wk Range: | $79.25 | $59.15 | 2019E | $0.83 | $0.90 | $0.86 | $0.87 | $3.45 | 22.8x |

Watts Water Technologies is a global manufacturer of products and systems focused on the control, conservation and quality of water and the comfort and safety of people using it. Its strategy is to be the preferred supplier of differentiated products and systems that manage and conserve the flow of fluids and energy into, through and out of buildings in the residential and commercial markets of the Americas, EMEA, and Asia Pacific.

| **WGL Holdings, Inc.** | | | **WGL** | **$85.39** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$71 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **Adj EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
| Market Cap (MM): | | $4,385 | 2016 | $1.18 | $1.78 | $0.33 | ($0.01) | $3.27 | 26.1x |
| Avg. Daily Vol (MM): | | 253,605 | 2017E | $1.13 | $1.87 | $0.26 | ($0.17) | $3.11 | 27.5x |
| 52-wk Range: | $86.89 | $77.81 | 2018E | $1.28 | $2.16 | $0.38 | ($0.15) | $3.68 | 23.2x |

WGL Holdings is comprised of both regulated and non-regulated energy-related businesses. Its regulated public utility, Washington Gas, provides natural gas service to over one million customers in the Washington, D.C. metro region, Maryland and Virginia. Its unregulated operations provide energy-related services to residential and commercial customers.

| **Aqua America, Inc.** | | | **WTR** | **$35.12** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$41 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $6,241 | 2017E | $0.28 | $0.34 | $0.43 | $0.32 | $1.36 | 25.8x |
| Avg. Daily Vol (MM): | | 697,910 | 2018E | $0.31 | $0.37 | $0.44 | $0.32 | $1.44 | 24.4x |
| 52-wk Range: | $39.55 | $29.41 | 2019E | $0.34 | $0.41 | $0.47 | $0.34 | $1.56 | 22.5x |

Aqua America provides water and wastewater services to residential, commercial and industrial customers. The company serves approximately 3 million customers in Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana and North Carolina. The company also has a non-regulated business that are complementary to its core water services.

| **Xylem, Inc.** | | | **XYL** | **$70.46** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$70 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $12,655 | 2017E | $0.39 | $0.59 | $0.65 | $0.77 | $2.40 | 29.4x |
| Avg. Daily Vol (MM): | | 808,942 | 2018E | $0.44 | $0.66 | $0.72 | $0.84 | $2.66 | 26.5x |
| 52-wk Range: | $70.79 | $46.67 | 2019E | $0.54 | $0.74 | $0.83 | $0.93 | $3.05 | 23.1x |

Xylem is a global leader in water application solutions that focuses on the technology-intensive equipment and services end market (a sector of the $500 billion global water market), and should see increasing long-term demand from a favorable end market environment for investment in water due to population growth, economic development, and increasing (and tighter) water quality regulations. The company has exposure to many different end markets, including industrial, public utility, commercial, residential, and agriculture.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

# Industry Valuation

## Water Utilities

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/12/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| | | $ | | | | |
| AMERICAN STATES WATER | AWR | $54.92 | Neutral | 4 | 48.00 | -13% |
| AMERICAN WATER WORKS | AWK | $80.83 | Neutral | 15 | 90.00 | 11% |
| AQUA AMERICA | WTR | $35.12 | Buy | 9 | 41.00 | 17% |
| ARTESIAN RESOURCES | ARTNA | $38.40 | NR | 0 | | |
| CALIFORNIA WATER | CWT | $42.85 | Neutral | 6 | 40.00 | -7% |
| CONNECTICUT WATER | CTWS | $53.07 | NR | 1 | | |
| MIDDLESEX WATER | MSEX | $37.37 | Buy | 1 | 46.00 | 23% |
| PURE CYCLE | PCYO | $8.55 | NR | 0 | | |
| SABESP | SBSP3-BR | R$ 33.88 | Buy | 10 | 38.00 | 12% |
| SJW | SJW | $58.38 | Buy | 1 | 68.00 | 16% |
| YORK WATER | YORW | $31.95 | NR | 1 | | |
| MEDIAN | | | | | | |

**Trading & Market Data**

| | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| AMERICAN STATES WATER | 253 | 2,014 | 58 | 41 | 37 | 36 | 1% | 67% | 5 | 0.7 | 2,385 |
| AMERICAN WATER WORKS | 4,004 | 14,418 | 92 | 70 | 178 | 178 | 0% | 86% | 6 | 0.5 | 21,819 |
| AQUA AMERICA | 1,312 | 6,241 | 40 | 29 | 178 | 177 | 0% | 54% | 13 | 0.6 | 8,310 |
| ARTESIAN RESOURCES | 18 | 353 | 43 | 29 | 8 | 8 | 4% | 43% | 2 | 0.6 | 471 |
| CALIFORNIA WATER | 236 | 2,056 | 46 | 33 | 48 | 47 | 1% | 72% | 6 | 0.7 | 2,779 |
| CONNECTICUT WATER | 45 | 640 | 65 | 51 | 12 | 12 | 2% | 48% | 7 | 0.6 | 913 |
| MIDDLESEX WATER | 152 | 611 | 47 | 32 | 16 | 16 | 4% | 53% | 3 | 0.7 | 783 |
| PURE CYCLE | 22 | 203 | 9 | 5 | 24 | 23 | 4% | 68% | 9 | 0.7 | 178 |
| SABESP | 606 | 23,157 | 36 | 26 | 684 | 340 | 50% | 16% | -- | 0.8 | 32,773 |
| SJW | 30 | 1,198 | 69 | 45 | 21 | 15 | 28% | 56% | 1 | 0.7 | 1,645 |
| YORK WATER | 20 | 411 | 40 | 32 | 13 | 13 | 1% | 35% | 8 | 0.8 | 500 |
| MEDIAN | 152 | 1,198 | | | | | N/A | 54% | 6 | 0.7 | |

**Valuation Statistics**

| | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| AMERICAN STATES WATER | 3.8 | 15.5 | 14.4 | 13.5 | 33.9 | 31.4 | 30.7 |
| AMERICAN WATER WORKS | 2.6 | 14.2 | 12.6 | 12.0 | 30.9 | 26.9 | 24.6 |
| AQUA AMERICA | 3.2 | 18.1 | 17.3 | 16.0 | 26.6 | 25.9 | 24.6 |
| ARTESIAN RESOURCES | 2.4 | 13.0 | 12.8 | 12.1 | 27.2 | NA | NA |
| CALIFORNIA WATER | 3.0 | 16.7 | 13.7 | 12.6 | 42.4 | 32.3 | 30.2 |
| CONNECTICUT WATER | 2.2 | 20.4 | 20.2 | 18.9 | 25.5 | 24.1 | 22.6 |
| MIDDLESEX WATER | 2.7 | 14.5 | NA | NA | 27.1 | 26.7 | 21.9 |
| PURE CYCLE | 3.0 | -101.4 | NA | NA | -154.6 | -122.1 | NA |
| SABESP | 1.3 | 7.2 | 6.1 | 5.5 | 7.9 | 9.3 | 8.1 |
| SJW | 2.6 | 11.8 | NA | NA | 22.7 | 23.5 | 23.2 |
| YORK WATER | 3.5 | 17.1 | 17.1 | 16.3 | 34.7 | NA | 32.0 |
| MEDIAN | 2.7 | 14.5 | 14.0 | 13.0 | 27.1 | 25.9 | 24.6 |

# Flow Technology

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| Company | Symbol | Price 1/12/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| 3M CORPORATION | MMM | $244.47 | NR | 13 | | |
| **AMETEK** | **AME** | **$75.20** | **Buy** | **15** | **71.00** | **-6%** |
| BADGER METER | BMI | $48.70 | NR | 6 | | |
| CIRCOR INTERNATIONAL | CIR | $52.43 | NR | 4 | | |
| CRANE COMPANY | CR | $92.28 | NR | 10 | | |
| DXP ENTERPRISES | DXPE | $33.10 | NR | 4 | | |
| EMERSON ELECTRIC | EMR | $73.91 | NR | 20 | | |
| ENERGY RECOVERY | ERII | $8.98 | NR | 4 | | |
| FLOWSERVE | FLS | $44.00 | NR | 16 | | |
| FRANKLIN ELECTRIC | FELE | $45.55 | NR | 6 | | |
| **IDEX** | **IEX** | **$136.81** | **Neutral** | **11** | **117.00** | **-14%** |
| ITRON | ITRI | $71.70 | NR | 9 | | |
| MUELLER INDUSTRIES | MLI | $36.91 | NR | 0 | | |
| **MUELLER WATER PRODUCTS** | **MWA** | **$12.66** | **Buy** | **12** | **16.00** | **26%** |
| NORTHWEST PIPE | NWPX | $19.97 | NR | 1 | | |
| PENTAIR | PNR | $73.76 | NR | 15 | | |
| **REXNORD** | **RXN** | **$27.84** | **Buy** | **8** | **29.00** | **4%** |
| ROPER INDUSTRIES | ROP | $275.28 | NR | 14 | | |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$78.65** | **Neutral** | **10** | **69.00** | **-12%** |
| **XYLEM** | **XYL** | **$70.46** | **Buy** | **17** | **70.00** | **-1%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| Company | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 1,974 | 145,608 | 246 | 174 | 596 | 595 | 0% | 69% | 4 | 0.9 | 158,089 |
| **AMETEK** | **739** | **17,380** | **75** | **50** | **231** | **227** | **2%** | **87%** | **2** | **1.1** | **19,159** |
| BADGER METER | 56 | 1,418 | 52 | 34 | 29 | 28 | 3% | 86% | 10 | 1.1 | 1,450 |
| CIRCOR INTERNATIONAL | 40 | 865 | 73 | 42 | 17 | 13 | 21% | 104% | 12 | 1.4 | 1,069 |
| CRANE COMPANY | 153 | 5,477 | 93 | 68 | 59 | 51 | 15% | 70% | 1 | 1.2 | 5,759 |
| DXP ENTERPRISES | 142 | 576 | 42 | 25 | 17 | 16 | 10% | 76% | 6 | 1.5 | 823 |
| EMERSON ELECTRIC | 3,501 | 47,202 | 74 | 56 | 639 | 635 | 1% | 72% | 2 | 1.1 | 49,200 |
| ENERGY RECOVERY | 203 | 481 | 11 | 6 | 54 | 36 | 33% | 34% | 18 | 1.7 | 401 |
| FLOWSERVE | 1,428 | 5,748 | 52 | 38 | 131 | 130 | 0% | 109% | 7 | 1.3 | 6,885 |
| FRANKLIN ELECTRIC | 96 | 2,122 | 47 | 36 | 47 | 39 | 17% | 79% | 4 | 1.3 | 2,314 |
| **IDEX** | **160** | **10,453** | **137** | **88** | **76** | **76** | **0%** | **99%** | **4** | **1.1** | **11,178** |
| ITRON | 249 | 2,777 | 80 | 58 | 39 | 38 | 1% | 99% | 2 | 1.0 | 3,037 |
| MUELLER INDUSTRIES | 130 | 2,134 | 44 | 28 | 58 | 56 | 3% | 93% | 5 | 1.2 | 2,427 |
| **MUELLER WATER PRODUCTS** | **1,341** | **2,007** | **14** | **11** | **159** | **155** | **3%** | **91%** | **1** | **1.4** | **2,168** |
| NORTHWEST PIPE | 17 | 192 | 21 | 12 | 10 | 9 | 2% | 87% | 19 | 1.1 | 187 |
| PENTAIR | 1,429 | 13,386 | 74 | 57 | 181 | 181 | 0% | 88% | 3 | 1.3 | 14,930 |
| **REXNORD** | **490** | **2,893** | **28** | **21** | **104** | **103** | **1%** | **104%** | **3** | **1.3** | **4,023** |
| ROPER INDUSTRIES | 250 | 28,178 | 276 | 185 | 102 | 100 | 2% | 97% | 5 | 1.1 | 33,270 |
| **WATTS WATER TECHNOLOGIES** | **67** | **2,686** | **79** | **59** | **28** | **27** | **1%** | **100%** | **3** | **1.2** | **2,982** |
| **XYLEM** | **848** | **12,655** | **71** | **47** | **180** | **179** | **1%** | **91%** | **4** | **1.1** | **14,765** |
| **MEDIAN** | **226** | **2,835** | | | | | **2%** | **89%** | **4** | **1.2** | |

### Valuation Statistics

| Company | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 12.0 | 18.6 | 17.1 | 16.2 | 30.0 | 27.02 | 24.8 |
| **AMETEK** | **4.6** | **19.0** | **17.5** | **16.2** | **34.3** | **29.1** | **26.1** |
| BADGER METER | 5.2 | 19.8 | 19.9 | 17.8 | 43.9 | 41.2 | 36.2 |
| CIRCOR INTERNATIONAL | 1.9 | 18.5 | 17.3 | 10.6 | 86.0 | 32.5 | 21.8 |
| CRANE COMPANY | 4.0 | 12.4 | 11.6 | 10.4 | 44.6 | 20.4 | 18.0 |
| DXP ENTERPRISES | 2.2 | 16.7 | 13.6 | 11.1 | 68.2 | 54.5 | 32.3 |
| EMERSON ELECTRIC | 5.4 | 14.7 | 15.2 | 13.9 | 29.2 | 28.0 | 25.2 |
| ENERGY RECOVERY | 7.0 | 99.3 | 11.1 | 10.6 | 449.0 | 143.7 | 19.9 |
| FLOWSERVE | 3.3 | NA | NA | 13.2 | 43.6 | NA | 24.0 |
| FRANKLIN ELECTRIC | 3.0 | 16.1 | 15.3 | 13.4 | 27.6 | 24.0 | 21.5 |
| **IDEX** | **5.8** | **20.8** | **19.2** | **17.8** | **38.8** | **32.1** | **29.2** |
| ITRON | 3.6 | 14.2 | 12.9 | 10.7 | 87.4 | 24.1 | 21.6 |
| MUELLER INDUSTRIES | 4.1 | 12.7 | NA | NA | 21.2 | NA | NA |
| **MUELLER WATER PRODUCTS** | **4.1** | **10.9** | **13.2** | **11.6** | **32.5** | **28.8** | **23.2** |
| NORTHWEST PIPE | 0.9 | -18.8 | -54.8 | 12.9 | -20.7 | -20.0 | 57.1 |
| PENTAIR | 2.7 | 16.2 | 15.0 | 14.3 | 25.9 | 20.9 | 18.8 |
| **REXNORD** | **2.5** | **12.3** | **10.6** | **9.7** | **43.5** | **22.2** | **17.4** |
| ROPER INDUSTRIES | 4.4 | 25.5 | 20.7 | 19.1 | 42.8 | 29.5 | 27.1 |
| **WATTS WATER TECHNOLOGIES** | **3.2** | **15.3** | **13.3** | **12.5** | **32.2** | **26.3** | **23.7** |
| **XYLEM** | **5.1** | **22.4** | **17.1** | **15.3** | **48.8** | **29.4** | **25.0** |
| **MEDIAN** | **4.0** | **16.2** | **15.1** | **13.2** | **40.8** | **28.4** | **24.0** |

## Water Solutions

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/12/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| | | $ | | | | |
| AIR PRODUCTS & CHEM | APD | $170.15 | NR | 20 | | |
| ASHLAND | ASH | $74.12 | NR | 11 | | |
| CADIZ | CDZI | $14.10 | NR | 0 | | |
| **CALGON CARBON** | **CCC** | **$21.30** | **Sell** | **2** | **21.50** | **1%** |
| CANTEL MEDICAL | CMD | $110.18 | NR | 4 | | |
| **CONSOLIDATED WATER** | **CWCO** | **$13.00** | **Buy** | **2** | **15.00** | **15%** |
| ECHOLAB | ECL | $137.68 | NR | 22 | | |
| FORTIVE | FTV | $74.47 | NR | 17 | | |
| LAYNE CHRISTENSEN | LAYN | $13.34 | NR | 1 | | |
| STANTEC, INC. | STN | $28.25 | NR | 11 | | |
| TETRA TECH | TTEK | $49.20 | NR | 7 | | |
| VEOLIA ENVIRONNEMENT | VE | $25.01 | NR | 19 | | |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| AIR PRODUCTS & CHEM | 649 | 37,232 | 171 | 134 | 219 | NA | 0% | 90% | 2 | 1.0 | 37,783 |
| ASHLAND | 368 | 4,612 | 128 | 60 | 62 | 62 | 1% | 93% | 4 | 1.0 | 6,818 |
| CADIZ | 47 | 322 | 16 | 10 | 23 | 22 | 4% | 53% | 23 | 0.6 | N/A |
| **CALGON CARBON** | **738** | **1,082** | **22** | **12** | **51** | **50** | **2%** | **100%** | **4** | **1.0** | **1,295** |
| CANTEL MEDICAL | 103 | 4,606 | 111 | 69 | 42 | 37 | 11% | 87% | 3 | 1.2 | 4,713 |
| **CONSOLIDATED WATER** | **50** | **194** | **14** | **10** | **15** | **14** | **3%** | **53%** | **3** | **0.8** | **158** |
| ECHOLAB | 1,267 | 39,778 | 138 | 118 | 289 | 287 | 0% | 90% | 7 | 1.0 | 47,792 |
| FORTIVE | 1,283 | 25,883 | 76 | 54 | 348 | 307 | 12% | 81% | 5 | 1.1 | 29,046 |
| LAYNE CHRISTENSEN | 88 | 265 | 14 | 7 | 20 | 19 | 5% | 115% | 25 | 1.3 | 404 |
| STANTEC, INC. | 5 | 3,219 | 29 | 22 | 114 | 113 | 1% | 63% | 21 | 0.9 | 3,691 |
| TETRA TECH | 186 | 2,742 | 51 | 39 | 56 | 55 | 2% | 89% | 2 | 1.0 | 3,014 |
| VEOLIA ENVIRONNEMENT | 180 | 13,744 | 26 | 16 | 563 | #VALUE! | N/A | 0% | -- | 0.8 | 26,903 |
| **MEDIAN** | **186** | **3,219** | | | | | **2%** | **89%** | **4** | **1** | |

**Valuation Statistics**

| | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| AIR PRODUCTS & CHEM | 3.7 | 12.3 | 13.7 | 12.5 | 25.1 | 27.0 | 24.1 |
| ASHLAND | 1.3 | 9.2 | 8.2 | 10.2 | -163.6 | 30.4 | 22.0 |
| CADIZ | 112.7 | NA | NA | NA | NA | NA | NA |
| **CALGON CARBON** | **2.6** | **16.8** | **NA** | **NA** | **78.9** | **41.4** | **29.8** |
| CANTEL MEDICAL | 8.5 | 38.7 | 30.8 | 26.3 | 76.5 | 53.0 | 45.9 |
| **CONSOLIDATED WATER** | **1.3** | **12.3** | **NA** | **NA** | **48.1** | **24.3** | **17.9** |
| ECHOLAB | 5.5 | 16.7 | 16.2 | 15.1 | 33.3 | 29.33 | 26.1 |
| FORTIVE | 7.4 | 20.1 | 18.8 | 16.7 | 29.7 | 26.1 | 23.0 |
| LAYNE CHRISTENSEN | 4.9 | 148.6 | 10.9 | 7.6 | -5.1 | -26.2 | 37.1 |
| STANTEC, INC. | 2.1 | 13.7 | 11.8 | 10.2 | 30.7 | 18.9 | 16.0 |
| TETRA TECH | 3.0 | 14.1 | 13.0 | 12.0 | 34.6 | 24.1 | 21.1 |
| VEOLIA ENVIRONNEMENT | 1.9 | 111.5 | 46.9 | 52.4 | 21.4 | 12.1 | 10.6 |
| **MEDIAN** | **3.7** | **15.4** | **13.3** | **12.3** | **32.0** | **26.5** | **23.6** |

# Electric Utilities (Regulated Electrics/Gas)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/12/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ALLIANT | LNT | $39.53 | NR | 8 | | | 1,643 | 9,139 | 46 | 37 | 231 | 231 | 0% | 70% | 5 | 0.6 | 14,168 | 2.3 | 13.5 | 12.3 | 11.2 | 21.1 | 20.2 | 18.7 |
| **AVANGRID** | **AGR** | **$48.52** | **Buy** | **10** | **55.00** | **13%** | **467** | **14,996** | **53** | **37** | **309** | **56** | **82%** | **15%** | **10** | **0.7** | **20,737** | **1.0** | **10.2** | **10.2** | **9.3** | **23.4** | **21.8** | **20.1** |
| AVISTA | AVA | $51.61 | NR | 2 | | | 128 | 3,324 | 53 | 38 | 64 | 64 | 1% | 79% | 0 | 0.6 | 5,262 | 2.0 | 11.7 | 11.9 | 10.4 | 24.0 | 27.5 | 25.2 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$72.65** | **Buy** | **6** | **88.00** | **21%** | **54** | **1,187** | **86** | **63** | **16** | **16** | **4%** | **63%** | **3** | **0.7** | **1,602** | **4.8** | **0.8** | **0.7** | **0.7** | **36.0** | **33.4** | **31.2** |
| CMS ENERGY | CMS | $44.01 | NR | 15 | | | 3,402 | 12,411 | 51 | 42 | 282 | 280 | 1% | 90% | 3 | 0.5 | 22,592 | 2.9 | 10.8 | 10.3 | 9.6 | 21.8 | 20.3 | 18.9 |
| CONEDISON INC | ED | $79.49 | NR | 16 | | | 1,900 | 24,647 | 90 | 72 | 310 | 309 | 0% | 58% | 5 | 0.3 | 40,178 | 1.7 | 10.7 | 10.0 | 9.8 | 19.9 | 19.4 | 18.7 |
| DTE CORP | DTE | $103.92 | NR | 11 | | | 1,314 | 18,642 | 117 | 97 | 179 | 178 | 1% | 70% | 4 | 0.5 | 31,483 | 2.1 | 12.7 | 11.7 | 10.8 | 19.7 | 18.8 | 18.2 |
| **EVERSOURCE ENERGY** | **ES** | **$61.35** | **Buy** | **14** | **71.00** | **16%** | **2,805** | **19,441** | **66** | **54** | **317** | **315** | **1%** | **75%** | **3** | **0.5** | **30,980** | **1.8** | **11.7** | **11.2** | **10.6** | **20.7** | **19.6** | **18.5** |
| MGE ENERGY | MGEE | $59.00 | NR | 1 | | | 107 | 2,045 | 69 | 59 | 35 | 35 | 0% | 39% | 4 | 0.7 | 2,337 | 2.8 | NA | NA | NA | 27.1 | 26.8 | 25.7 |
| NORTHWESTERN | NWE | $55.40 | NR | 5 | | | 289 | 2,692 | 64 | 55 | 49 | 48 | 1% | 94% | 2 | 0.6 | 4,764 | 1.6 | 11.5 | 11.0 | 10.6 | 16.8 | 16.4 | 16.2 |
| PG&E CORP | PCG | $43.82 | NR | 15 | | | 6,279 | 22,472 | 72 | 42 | 513 | 512 | 0% | 84% | 1 | 0.5 | 40,853 | 1.2 | 7.3 | 6.6 | 6.4 | 11.7 | 11.9 | 11.5 |
| SCANA | SCG | $44.05 | NR | 10 | | | 1,622 | 6,295 | 73 | 37 | 143 | - | 0% | 69% | 2 | 0.6 | 12,942 | 1.1 | 8.3 | 8.3 | 9.6 | 10.6 | 10.9 | 13.8 |
| **UNITIL CORP** | **UTL** | **$44.07** | **Neutral** | **3** | **50.00** | **13%** | **54** | **649** | **53** | **43** | **15** | **14** | **2%** | **59%** | **1** | **0.6** | **1,064** | **2.1** | **9.5** | **9.0** | **8.3** | **22.7** | **21.7** | **21.1** |
| VECTREN CORP | VVC | $60.92 | NR | 5 | | | 250 | 5,056 | 70 | 54 | 83 | 83 | 0% | 66% | 1 | 0.7 | 7,094 | 2.9 | NA | 10.6 | 10.0 | 23.9 | 23.2 | 21.7 |
| WISCONSIN ENERGY | WEC | $63.63 | NR | 12 | | | 1,267 | 20,080 | 70 | 56 | 316 | 315 | 0% | 74% | 5 | 0.5 | 30,703 | 2.2 | 12.1 | 11.7 | 11.1 | 21.4 | 20.5 | 19.4 |
| XCEL ENERGY | XEL | $45.15 | NR | 12 | | | 3,423 | 22,926 | 40 | 508 | 508 | 507 | 0% | 74% | 4 | 0.5 | 38,142 | 2.1 | 10.8 | 10.2 | 9.7 | 20.4 | 19.6 | 18.5 |
| **MEDIAN** | | | | | | | | **10,775** | | | | | **44%** | **-** | **3** | **0.6** | **17452.2** | **2.1** | **NA** | **10.3** | **9.8** | **21.3** | **20.2** | **18.8** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Regulated Electrics Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/12/18 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ALLETE | ALE | $73.00 | NR | 5 | | | 255 | 3,713 | 81 | 62 | 51 | 51 | 1% | 74% | 3 | 0.6 | 5,135 | 1.9 | 12.0 | 11.0 | 10.8 | 23.3 | 22.3 | 20.3 |
| CENTERPOINT ENERGY | CNP | $27.37 | NR | 15 | | | 3,958 | 11,797 | 30 | 25 | 431 | 409 | 5% | 80% | 0 | 0.8 | 19,173 | 3.4 | 9.5 | 9.3 | 8.8 | 23.6 | 20.6 | 18.9 |
| DUKE ENERGY | DUK | $78.90 | NR | 17 | | | 3,211 | 55,221 | 92 | 76 | 700 | 699 | 0% | 58% | 3 | 0.4 | 108,272 | 1.3 | 11.8 | 11.0 | 10.3 | 16.8 | 17.3 | 16.4 |
| EL PASO ELECTRIC | EE | $51.05 | NR | 4 | | | 206 | 2,072 | 61 | 45 | 41 | 40 | 1% | 100% | 2 | 0.6 | 3,427 | 1.9 | 12.3 | 11.6 | 11.5 | 21.2 | 20.6 | 19.4 |
| GREAT PLAINS | GXP | $30.33 | NR | 8 | | | 1,514 | 6,541 | 35 | 27 | 216 | 215 | 0% | 87% | 4 | 0.6 | 9,473 | 1.2 | 9.7 | 10.0 | 9.3 | 16.4 | 18.4 | 17.6 |
| HAWAIIAN ELECTRIC | HE | $34.41 | NR | 6 | | | 298 | 3,743 | 39 | 32 | 109 | 108 | 1% | 51% | 10 | 0.6 | 5,365 | 1.8 | 9.6 | 9.7 | 9.2 | 19.7 | 21.1 | 18.9 |
| IDACORP | IDA | $83.32 | NR | 4 | | | 445 | 4,199 | 100 | 78 | 50 | 50 | 1% | 76% | 3 | 0.6 | 5,849 | 1.9 | 13.7 | 12.5 | 12.3 | 21.1 | 20.4 | 20.0 |
| PINNACLE WEST | PNW | $79.22 | NR | 14 | | | 749 | 8,851 | 92 | 76 | 112 | 111 | 0% | 85% | 4 | 0.5 | 13,858 | 1.8 | 10.3 | 9.6 | 9.0 | 20.1 | 18.6 | 17.9 |
| PNM RESOURCES | PNM | $35.70 | NR | 9 | | | 635 | 2,844 | 46 | 33 | 80 | 79 | 1% | 93% | 2 | 0.7 | 5,608 | 1.7 | 10.7 | 9.5 | 9.6 | 21.6 | 19.1 | 20.5 |
| PORTLAND GENERAL | POR | $42.62 | NR | 9 | | | 869 | 3,797 | 50 | 42 | 89 | 89 | 1% | 94% | 1 | 0.6 | 6,080 | 1.6 | 9.1 | 8.6 | 8.3 | 19.7 | 18.8 | 18.4 |
| SOUTHERN COMPANY | SO | $44.84 | NR | 19 | | | 8,591 | 45,003 | 54 | 44 | 1,004 | 1,003 | 0% | 56% | 6 | 0.4 | 95,850 | 1.8 | 12.8 | 10.8 | 10.5 | 15.5 | 15.2 | 14.9 |
| WESTAR ENERGY | WR | $50.29 | NR | 8 | | | 741 | 7,143 | 57 | 49 | 142 | 141 | 1% | 74% | 2 | 0.5 | 11,100 | 1.9 | 10.7 | 10.5 | 8.5 | 20.7 | 20.3 | 19.2 |
| **MEDIAN** | | | | | | | **745** | **5,370** | **55** | **45** | **110** | **109** | | **-** | **3** | **1** | **7,776** | **1.8** | **NA** | **10.2** | **9.5** | **20.4** | **19.7** | **18.9** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Combination Electrics With Merchant)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | | Rating Data | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/12/18 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| AMEREN | AEE | $55.52 | NR | 8 | | | 1,385 | 13,471 | 65 | 51 | 243 | 242 | 0% | 32% | 4 | 0.5 | 21,864 | 1.9 | 9.7 | 9.3 | 9.0 | 20.7 | 19.8 | 18.5 |
| AMERICAN ELECTRIC POWER | AEP | $67.46 | NR | 17 | | | 6,647 | 33,183 | 78 | 62 | 492 | 492 | 0% | 28% | 3 | 0.5 | 54,274 | 1.9 | 9.9 | 10.1 | 9.4 | 17.1 | 18.7 | 17.3 |
| DOMINION | D | $75.94 | NR | 17 | | | 4,351 | 48,949 | 85 | 71 | 645 | 641 | 0% | 35% | 6 | 0.5 | 87,520 | 3.3 | 15.5 | 13.7 | 11.8 | 20.0 | 21.2 | 18.8 |
| EDISON INTERNATIONAL | EIX | $61.42 | NR | 15 | | | 3,171 | 20,011 | 83 | 61 | 326 | 325 | 0% | 36% | 1 | 0.5 | 35,329 | 1.7 | 8.4 | 7.9 | 7.5 | 15.5 | 14.2 | 14.4 |
| ENTERGY | ETR | $78.22 | NR | 11 | | | 999 | 14,099 | 88 | 70 | 180 | 180 | 0% | 41% | 3 | 0.5 | 29,997 | 1.7 | 9.1 | 8.9 | 8.5 | 11.0 | 11.3 | 15.5 |
| EXELON | EXC | $38.39 | NR | 17 | | | 5,095 | 36,858 | 43 | 33 | 960 | 958 | 0% | 36% | 2 | 0.6 | 73,005 | 1.4 | 9.2 | 8.6 | 8.1 | 14.3 | 14.5 | 13.1 |
| FIRST ENERGY | FE | $30.07 | NR | 16 | | | 3,989 | 13,377 | 35 | 28 | 445 | 444 | 0% | 39% | 3 | 0.6 | 35,606 | 2.1 | 8.2 | 8.0 | 8.4 | 11.4 | 9.9 | 11.8 |
| NEXTERA ENERGY | NEE | $150.32 | NR | 17 | | | 1,597 | 70,710 | 159 | 118 | 470 | 469 | 0% | 33% | 3 | 0.5 | 105,236 | 2.9 | 12.9 | 11.4 | 10.8 | 24.3 | 22.3 | 20.7 |
| PPL CORP | PPL | $31.08 | NR | 15 | | | 6,845 | 21,233 | 40 | 30 | 683 | 683 | 0% | 32% | 3 | 0.6 | 41,442 | 2.1 | 9.9 | 10.6 | 9.8 | 12.7 | 14.3 | 13.4 |
| PUBLIC SERVICE ENT GROUP | PEG | $50.10 | NR | 13 | | | 2,852 | 25,353 | 53 | 42 | 506 | 505 | 0% | 30% | 2 | 0.6 | 37,765 | 1.9 | 10.2 | 10.0 | 9.6 | 17.3 | 17.2 | 16.7 |
| **MEDIAN** | | | | | | | **3,580** | **23,293** | | | | | | | **3** | **1** | **39,603** | **1.9** | **NA** | **9.6** | **9.2** | **16.3** | **15.8** | **16.1** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Merchant Generators)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | | Rating Data | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/12/18 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| CALPINE | CPN | $15.07 | NR | 6 | | | 2,461 | 5,434 | 15 | 15 | 361 | 341 | 5% | 35% | 2 | 1.0 | 16,309 | 1.7 | 9.0 | 8.9 | 8.2 | -195.8 | 60.2 | 17.3 |
| COVANTA | CVA | $16.95 | NR | 8 | | | 687 | 2,221 | 17 | 17 | 131 | 129 | 1% | 51% | 12 | 0.7 | 5,080 | 4.7 | 12.4 | 12.4 | 11.2 | -113.0 | -68.5 | 154.1 |
| DYNEGY | DYN | $11.96 | NR | 5 | | | 1,477 | 1,726 | 13 | 13 | 144 | 128 | 10% | 41% | 4 | 1.2 | 10,321 | 0.9 | 10.2 | 8.6 | 7.1 | -1.2 | 271.8 | 38.4 |
| NRG ENERGY | NRG | $28.70 | NR | 5 | | | 4,825 | 9,088 | 30 | 30 | 317 | 305 | 4% | 43% | 4 | 1.2 | 26,503 | 4.4 | 8.1 | 10.7 | 9.3 | 23.4 | 29.7 | 13.4 |
| ORMAT TECHNOLOGIES | ORA | $66.07 | NR | 6 | | | 162 | 3,343 | 66 | 66 | 51 | 36 | 28% | 35% | 4 | 0.9 | 4,231 | 3.0 | 13.1 | 12.3 | 11.4 | 35.3 | 28.4 | 26.3 |
| VISTA ENERGY | VSTE | $18.57 | NR | 4 | | | 2,015 | 7,955 | 21 | 21 | 428 | NA | 17% | 56% | NA | 0.5 | 11,238 | 1.2 | 7.0 | 8.0 | 8.0 | -48.9 | 19.1 | 23.4 |
| **MEDIAN** | | | | | | | **1,746** | **4,388** | **19** | **19** | **230** | **129** | **8** | **42** | **4** | **1** | **10,779** | **2.3** | **9.6** | **9.8** | **8.7** | **-25.0** | **29.1** | **24.9** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Gas Utilities - Downstream (Gas Distribution Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/12/2018 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ATMOS ENERGY | ATO | $79.84 | NR | 7 | | | 738 | 8,859 | 94 | 73 | 111 | 110 | 1.2% | 70% | 3 | 0.6 | 11,957 | 2.2 | 11.9 | 11.5 | 10.5 | 23.6 | 22.2 | 20.7 |
| LACLEDE GROUP | LG | $68.90 | NR | 9 | | | 185 | 3,328 | 83 | 62 | 48 | N/A | 3.0% | 81% | 3 | 0.5 | 5,797 | 1.7 | 14.1 | 12.1 | 11.0 | 21.3 | 19.4 | 18.5 |
| **NEW JERSEY RESOURCES** | **NJR** | **$39.45** | **Buy** | 6 | **$50.00** | **27%** | **673** | **3,429** | **45** | **35** | **87** | **86** | **1.3%** | **65%** | **5** | **0.7** | **4,808** | **2.8** | **23.1** | **19.3** | **15.7** | **26.0** | **22.8** | **21.7** |
| NORTHWEST NATURAL GAS | NWN | $57.00 | NR | 7 | | | 166 | 1,637 | 70 | 56 | 29 | 28 | 1.4% | 67% | 11 | 0.6 | 2,396 | 1.9 | 9.4 | 10.4 | 10.0 | 26.9 | 26.1 | 25.1 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$29.71** | **Buy** | 7 | **$38.00** | **28%** | **439** | **2,361** | **38** | **29** | **79** | **79** | **0.7%** | **72%** | **3** | **0.7** | **3,779** | **1.9** | **14.2** | **17.6** | **10.8** | **19.1** | **25.8** | **20.6** |
| **RGC RESOURCES** | **RGCO** | **$26.21** | **Neutral** | 1 | **$29.00** | **11%** | **10** | **189** | **32** | **17** | **7** | **6** | **13.0%** | **23%** | **96** | **0.1** | **251** | **3.2** | **14.9** | **NA** | **NA** | **32.2** | **NA** | **28.5** |
| SOUTHWEST GAS | SWX | $75.75 | NR | 5 | | | 148 | 3,616 | 87 | 72 | 48 | 47 | 1.1% | 80% | 6 | 0.7 | 5,444 | 2.1 | 9.4 | 10.0 | 9.6 | 23.8 | 21.8 | 20.8 |
| **WGL HOLDINGS, INC.** | **WGL** | **$85.39** | **Neutral** | 5 | **$71.00** | **-17%** | **366** | **4,385** | **87** | **78** | **51** | **51** | **1.1%** | **73%** | **13** | **0.7** | **6,647** | **2.9** | **17.4** | **12.9** | **11.6** | **25.8** | **27.5** | **23.2** |
| **MEDIAN** | | | | | | | **275** | **3,378** | | | | | **1.24%** | **71%** | **5** | **0.6** | | **2.1** | **14.2** | **12.1** | **10.8** | **24.8** | **22.8** | **21.3** |

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | FCF | EPS | | | | | | | |
| | Common | Pref | Minority | LT | ST | Credit | Annual | Div | Div | Current | Quick | Interest | 2016 | 2016 | 2016 | 2016 | Book | EBITDA | | | EPS | | |
| | Equity | Stock | Interest | Debt | Debt | Rating | Dividend | Yield | Payout | Ratio | Ratio | Coverage | ROA | ROE | Yield | Yield | Value | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| ATMOS ENERGY | -- | -- | -- | -- | -- | A | $1.94 | 2.4% | 49 | 0.5 | 0.3 | 9 | 3% | 10.4% | -4% | 5% | 36.74 | 1,007 | 1,043 | 1,142 | 3.38 | 3.60 | 3.85 |
| LACLEDE GROUP | -- | -- | -- | -- | -- | | $2.25 | 3.3% | 61 | 0.7 | 0.5 | 5 | 3% | 8.6% | 1% | 5% | 41.26 | 410 | 479 | 528 | 3.24 | 3.56 | 3.72 |
| **NEW JERSEY RESOURCES** | **--** | **--** | **--** | **--** | **--** | | $1.09 | 2.8% | **68** | 0.7 | **0.5** | **5** | **4%** | **11.6%** | **-5%** | **5%** | **14.3** | **209** | **249** | **307** | **1.52** | **1.73** | **1.82** |
| NORTHWEST NATURAL GAS | -- | -- | -- | -- | -- | A+ | $1.89 | 3.3% | 85 | 1.0 | 0.7 | 4 | 2% | 7.2% | 5% | 4% | 29.5 | 254 | 229 | 241 | 2.12 | 2.18 | 2.27 |
| **SOUTH JERSEY INDUSTRIES** | **--** | **--** | **--** | **--** | **--** | **BBB+** | $1.12 | 3.8% | **221** | 0.5 | **0.4** | **3** | **3%** | **10.2%** | **-1%** | **5%** | **15.4** | **267** | **215** | **351** | **1.55** | **1.15** | **1.44** |
| **RGC RESOURCES** | **--** | **--** | **--** | **--** | **--** | | $0.62 | 2.4% | **67** | 1.1 | **0.5** | **9** | **4%** | **10.7%** | **-3%** | **5%** | **8.3** | **17** | **N/A** | **N/A** | **0.81** | **N/A** | **0.92** |
| SOUTHWEST GAS | -- | -- | -- | -- | -- | BBB+ | $1.98 | 2.6% | 56 | 0.8 | 0.8 | 7 | 3% | 9.3% | 2% | 4% | 35.9 | 578 | 544 | 569 | 3.18 | 3.47 | 3.64 |
| **WGL HOLDINGS, INC.** | **40%** | **1%** | **0%** | **38%** | **21%** | **A** | $2.04 | 2.4% | **54** | **0.7** | **0.48** | **5** | **3%** | **12.6%** | **-9%** | **5%** | **29.3** | **381** | **517** | **574** | **3.31** | **3.11** | **3.67** |
| **MEDIAN** | **40%** | **1%** | **0%** | **38%** | **21%** | | **$1.92** | **2.7%** | **64** | **0.7** | **0.5** | 5 | **3%** | **10.3%** | **-2%** | **5%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Gas Utilities - Upstream (Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/12/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| BLACK HILLS CORP | BKH | $54.44 | NR | 8 | | |
| ENERGEN | EGN | $57.95 | NR | 27 | | |
| EQUITABLE RESOURCES | EQT | $58.46 | NR | 18 | | |
| MDU RESOURCES, INC. | MDU | $26.08 | NR | 2 | | |
| NATIONAL FUEL GAS | NFG | $56.14 | NR | 7 | | |
| WILLIAMS COMPANIES | WMB | $33.21 | NR | 9 | | |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 663 | 2,912 | 72 | 54 | 53 | 53 | 0.95% | 96.1% | 7 | 0.8 | 6,455 |
| ENERGEN | 585 | 5,633 | 60 | 46 | 97 | 96 | 0.82% | 95.8% | 1 | 1.6 | 6,394 |
| EQUITABLE RESOURCES | 3,120 | 15,066 | 68 | 50 | 258 | 254 | 1.47% | 73.7% | 1 | 1.0 | 16,337 |
| MDU RESOURCES, INC. | 468 | 5,094 | 30 | 25 | 195 | 194 | 0.92% | 65.5% | 2 | 1.1 | 6,809 |
| NATIONAL FUEL GAS | 371 | 4,805 | 61 | 53 | 86 | 80 | 6.41% | 73.4% | 3 | 0.9 | 6,656 |
| WILLIAMS COMPANIES | 4,371 | 27,456 | 33 | 27 | 827 | 825 | 0.23% | 86.5% | 1 | 1.7 | 54,213 |
| **MEDIAN** | **624** | **5,363** | | | | | **0.94%** | **80%** | **2** | **1.1** | |

### Valuation Statistics

| | Mkt/Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 1.7 | 11.7 | 10.4 | 10.2 | 39.7 | 16.2 | 15.8 |
| ENERGEN | 1.8 | 20.6 | 10.4 | 6.9 | -32.7 | 110.9 | 27.7 |
| EQUITABLE RESOURCES | 1.7 | 17.9 | 9.1 | 4.8 | -21.6 | 63.4 | 27.2 |
| MDU RESOURCES, INC. | 2.2 | 10.8 | NA | NA | 79.0 | 21.9 | 20.2 |
| NATIONAL FUEL GAS | 2.8 | 9.5 | 8.4 | 8.8 | 17.0 | 17.0 | 19.1 |
| WILLIAMS COMPANIES | 3.4 | 15.4 | 12.1 | 11.5 | -58.8 | 46.6 | 36.2 |
| **MEDIAN** | **2.0** | **13.6** | **10.4** | **8.8** | **-2.3** | **34.2** | **23.7** |

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| BLACK HILLS CORP | -- | -- | -- | -- | -- | BBB |
| ENERGEN | -- | -- | -- | -- | -- | BB |
| EQUITABLE RESOURCES | -- | -- | -- | -- | -- | BBB |
| MDU RESOURCES, INC. | -- | -- | -- | -- | -- | BBB+ |
| NATIONAL FUEL GAS | -- | -- | -- | -- | -- | BBB |
| WILLIAMS COMPANIES | -- | -- | -- | -- | -- | BB+ |
| **MEDIAN** | **--** | **--** | **--** | **--** | **--** | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | $1.90 | 3.49% | 67.0 | 0.6946 | 0.5 | 4 | 1% | 5% | (5%) | 2% |
| ENERGEN | $0.00 | 0.00% | N/A | 0.5776 | 0.5 | 13 | (4%) | (6%) | (3%) | (3%) |
| EQUITABLE RESOURCES | $0.12 | 0.21% | 63.2 | 0.5981 | 0.6 | 9 | (3%) | (8%) | (14%) | (4%) |
| MDU RESOURCES, INC. | $0.79 | 3.03% | 65 | 1.2833 | 1.0 | 8 | 4% | 10% | 1% | NA |
| NATIONAL FUEL GAS | $1.66 | 2.96% | 49.7 | 1.2666 | 1.2 | 6 | (5%) | (16%) | (0%) | (6%) |
| WILLIAMS COMPANIES | $1.20 | 3.61% | 193 | 0.9741 | 0.9 | 3 | (1%) | (8%) | 9% | (2%) |
| **MEDIAN** | **$1.00** | **2.99%** | **65** | **0.8** | **0.8** | **7** | | | | |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 31.42 | 553 | 622 | 634 | 1.37 | 3.36 | 3.44 |
| ENERGEN | 32.67 | 311 | 615 | 923 | -1.77 | 0.52 | 2.09 |
| EQUITABLE RESOURCES | 35.12 | 911 | 1,792 | 3,435 | -2.71 | 0.92 | 2.15 |
| MDU RESOURCES, INC. | 12.05 | 629 | N/A | N/A | 0.33 | 1.19 | 1.29 |
| NATIONAL FUEL GAS | 19.92 | 702 | 790 | 758 | 3.30 | 3.30 | 2.95 |
| WILLIAMS COMPANIES | 9.82 | 3,513 | 4,477 | 4,724 | -0.56 | 0.71 | 0.92 |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Gas Utilities - Midstream (Non Exploration & Production)
Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/12/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| OGE ENERGY CORP | OGE | $30.74 | NR | 5 | | |
| ONEOK, INC. | OKE | $58.67 | NR | 14 | | |
| NISOURCE | NI | $24.07 | NR | 14 | | |
| SEMPRA ENERGY | SRE | $106.89 | NR | 10 | | |
| **UGI CORP** | **UGI** | **$47.34** | **Buy** | **5** | **56.00** | **18%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 1,425 | 6,139 | 37 | 31 | 200 | 199 | 0.24% | 63.9% | 1 | 0.8 | 9,397 |
| ONEOK, INC. | 2,965 | 23,915 | 59 | 47 | 408 | 381 | 0.64% | 74.1% | 1 | 1.4 | 31,986 |
| NISOURCE | 2,661 | 8,107 | 28 | 22 | 337 | 335 | 0.62% | 84.5% | 1 | 0.7 | 16,624 |
| SEMPRA ENERGY | 2,562 | 29,365 | 123 | 100 | 275 | 251 | 0.16% | 83.7% | 3 | 0.7 | 47,621 |
| **UGI CORP** | **693** | **8,197** | **52** | **45** | **173** | **172** | **0.58%** | **79.3%** | **1** | **0.7** | **12,872** |
| **MEDIAN** | **2,562** | **8,197.0** | | | | | **N/A** | **79%** | **1** | **0.7** | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 1.7 | 11.4 | 11.1 | 11.3 | 18.2 | 15.9 | 16.2 |
| ONEOK, INC. | 4.2 | 19.5 | 16.2 | 16.1 | 35.3 | 33.7 | 33.8 |
| NISOURCE | 1.9 | 11.8 | 10.9 | 10.9 | 23.6 | 20.2 | 20.2 |
| SEMPRA ENERGY | 2.0 | 15.9 | 12.7 | 12.7 | 19.6 | 20.2 | 20.2 |
| **UGI CORP** | **2.6** | **10.5** | **8.5** | **8.4** | **19.2** | **19.1** | **18.7** |
| **MEDIAN** | **2.0** | **11.8** | **11.1** | **11.3** | **19.6** | **20.2** | **20.2** |

**covered by Janney Research*

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| OGE ENERGY CORP | -- | -- | -- | -- | -- | A- |
| ONEOK, INC. | 36% | 0% | 1% | 54% | 9% | BBB |
| NISOURCE | -- | -- | -- | -- | -- | BBB+ |
| SEMPRA ENERGY | 39% | 0% | 6% | 43% | 11% | BBB+ |
| **UGI CORP** | **--** | **--** | **--** | **--** | **--** | |
| **MEDIAN** | **37%** | **0%** | **4%** | **49%** | **10%** | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | $1.33 | 4.33% | 64.92 | 0.6291 | 0.46 | 5.08 | 3% | 10% | (0%) | 5% |
| ONEOK, INC. | $2.98 | 5.08% | 158.90 | 0.5541 | 0.41 | 3.84 | 2% | 135% | 6% | 3% |
| NISOURCE | $0.70 | 2.91% | 84.15 | 0.5191 | 0.32 | 4.05 | 2% | 8% | (9%) | 5% |
| SEMPRA ENERGY | $3.29 | 3.08% | 71.38 | 0.4001 | 0.36 | 4.33 | 3% | 11% | (7%) | NA |
| **UGI CORP** | **$1.00** | **2.11%** | **39.63** | **1.0044** | **0.84** | **5.59** | 3% | 13% | 5% | 5% |
| **MEDIAN** | **$1.33** | **3.08%** | **71** | **0.55** | **0.4** | 4 | | | | |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 18.11 | 826 | 848 | 833 | 1.69 | 1.93 | 1.90 |
| ONEOK, INC. | 14.06 | 1,642 | 1,973 | 1,981 | 1.66 | 1.74 | 1.74 |
| NISOURCE | 12.96 | 1,404 | 1,530 | 1,530 | 1.02 | 1.19 | 1.19 |
| SEMPRA ENERGY | 52.85 | 3,001 | 3,736 | 3,736 | 5.45 | 5.29 | 5.29 |
| **UGI CORP** | **18.27** | **1,228** | **1,512** | **1,539** | **2.46** | **2.48** | **2.53** |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Historicals

# Utilities

### Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/18 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| **AMERICAN STATES WATER** | **AWR** | **$54.92** | **$58.44** | **$41.14** | **253** | **0.74** | **-1.1** | **-0.2** | **4.1** | **-5.2** | **29.8** | **148.0** | **283.2** | **23.0** | **34.7** | **13.9** | **11.0** | **29.8** |
| **AMERICAN WATER WORKS** | **AWK** | **$80.83** | **$92.37** | **$70.40** | **4004** | **0.48** | **-6.8** | **-9.5** | **-4.6** | **-11.7** | **16.7** | **135.4** | **N/A** | **16.1** | **29.4** | **14.9** | **23.6** | **29.0** |
| **AQUA AMERICA** | **WTR** | **$35.12** | **$39.55** | **$29.41** | **1312** | **0.61** | **-6.9** | **-5.8** | **1.2** | **-10.5** | **19.5** | **85.9** | **179.4** | **18.8** | **16.1** | **14.5** | **3.2** | **33.8** |
| ARTESIAN RESOURCES | ARTNA | $38.40 | $43.22 | $29.37 | 18 | 0.55 | 0.7 | 3.4 | -9.2 | -0.4 | 33.8 | 100.5 | 195.5 | 6.1 | 2.4 | 27.5 | 18.9 | 23.9 |
| **CALIFORNIA WATER** | **CWT** | **$42.85** | **$46.15** | **$32.65** | **236** | **0.70** | **-1.5** | **0.8** | **3.1** | **-5.5** | **33.8** | **156.3** | **217.8** | **29.7** | **9.7** | **-2.7** | **49.2** | **36.4** |
| CONNECTICUT WATER | CTWS | $53.07 | $65.04 | $50.75 | 45 | 0.57 | -0.8 | -9.7 | -15.0 | -7.6 | 1.0 | 102.0 | 194.9 | 23.1 | 5.3 | 7.8 | 50.4 | 5.0 |
| **MIDDLESEX WATER** | **MSEX** | **$37.37** | **$46.74** | **$32.23** | **152** | **0.67** | **-0.8** | **-8.9** | **-14.1** | **-6.4** | **-1.5** | **124.9** | **177.6** | **11.1** | **14.2** | **19.0** | **65.6** | **-4.9** |
| PURE CYCLE | PCYO | $8.55 | $8.73 | $5.05 | 22 | 0.71 | 2.4 | 14.8 | 14.8 | 2.4 | 64.4 | 180.3 | 10.8 | 123.7 | -36.8 | 20.0 | 14.6 | 51.8 |
| **SABESP** | **SBSP3-BR** | **$33.88** | **$35.81** | **$25.61** | **606** | **0.82** | **0.5** | **1.4** | **1.1** | **-1.3** | **12.9** | **32.1** | **225.4** | **-6.3** | **-33.2** | **13.5** | **53.6** | **23.7** |
| **SJW** | **SJW** | **$58.38** | **$69.29** | **$45.39** | **30** | **0.74** | **-4.0** | **-7.9** | **-4.2** | **-8.5** | **16.4** | **150.7** | **133.1** | **15.1** | **10.8** | **-5.3** | **92.9** | **16.2** |
| YORK WATER | YORW | $31.95 | $39.86 | $31.70 | 20 | 0.78 | -2.4 | -5.6 | -11.4 | -5.8 | -8.8 | 100.1 | 172.3 | 22.5 | 14.0 | 10.2 | 56.2 | -9.6 |
| **Average** | | | | | **609** | **0.67** | **-1.9** | **-2.5** | **-3.1** | **-5.5** | **19.8** | **119.7** | **179.0** | **25.7** | **6.1** | **12.1** | **39.9** | **21.4** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2786.24 | 2787.85 | 2257.02 | ----- | 1.03 | 1.6 | 4.6 | 9.2 | 4.2 | 22.7 | 89.3 | 98.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25803.19 | 25810.43 | 19677.94 | ----- | 1.00 | 2.0 | 5.3 | 13.0 | 4.4 | 29.7 | 91.3 | 104.7 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7261.06 | 7265.26 | 5522.69 | ----- | 1.06 | 1.7 | 5.8 | 10.2 | 5.2 | 30.9 | 132.3 | 197.6 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | 31.03 | $31.10 | $24.75 | ----- | NA | 1.7 | 3.6 | 6.8 | 2.5 | 25.2 | 47.9 | 66.5 | 27.1 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | Symbol | Closing Price 1/12/18 Per Share | Trading Range (LTM) High Per Share | Trading Range (LTM) Low Per Share | Trading Data Volume (1,000) | Trading Data Beta | Percentage Change In Total Return Week % | Month % | Qtr % | YTD % | LTM % | 5 Yrs % | 10 Yrs % | Calendar Year Change 2014 % | 2015 % | 2016 % | 2017 % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORP | MMM | $244.47 | $246.00 | $173.55 | 1974 | 0.89 | 1.6 | 3.3 | 12.9 | 3.9 | 41.0 | 186.9 | 309.1 | 20.0 | -5.9 | 21.7 | 34.9 |
| **AMETEK** | **AME** | **$75.20** | **$75.42** | **$49.93** | **739** | **1.12** | **1.9** | **4.3** | **12.2** | **3.8** | **50.0** | **100.2** | **329.6** | **0.6** | **2.5** | **-8.6** | **50.0** |
| BADGER METER | BMI | $48.70 | $52.10 | $34.40 | 56 | 1.11 | 3.4 | 4.5 | -5.4 | 1.9 | 28.3 | 110.1 | 182.4 | 10.4 | 0.0 | 27.7 | 30.9 |
| CIRCOR INT'L | CIR | $52.43 | $72.96 | $42.25 | 40 | 1.39 | 3.5 | 12.4 | -5.5 | 7.7 | -16.0 | 31.6 | 33.2 | -25.2 | -29.9 | 54.4 | -24.8 |
| CRANE COMPANY | CR | $92.28 | $92.71 | $67.62 | 153 | 1.18 | 1.0 | 8.5 | 13.8 | 3.4 | 28.5 | 113.4 | 207.1 | -11.1 | -16.6 | 54.1 | 25.9 |
| EMERSON ELECTRIC | EMR | $73.91 | $74.45 | $56.00 | 3501 | 1.13 | 2.0 | 10.9 | 16.6 | 6.1 | 32.8 | 57.4 | 96.1 | -9.6 | -19.7 | 21.0 | 29.0 |
| ENERGY RECOVERY | ERII | $8.98 | $11.30 | $6.13 | 203 | 1.72 | 1.6 | -16.9 | 11.7 | 2.6 | -14.3 | 135.7 | N/A | -5.0 | 34.2 | 46.4 | -15.5 |
| FLOWSERVE | FLS | $44.00 | $52.10 | $37.51 | 1428 | 1.33 | 1.4 | 7.1 | 0.3 | 4.9 | -9.2 | -9.3 | 65.5 | -23.4 | -28.6 | 16.0 | -11.2 |
| FRANKLIN ELECTRIC | FELE | $45.55 | $47.20 | $36.00 | 96 | 1.32 | 0.3 | 1.7 | 0.7 | -0.8 | 16.8 | 47.9 | 184.6 | -15.1 | -27.1 | 45.7 | 19.2 |
| **IDEX** | **IEX** | **$136.81** | **$137.41** | **$88.29** | **160** | **1.06** | **1.8** | **4.5** | **10.5** | **3.9** | **52.9** | **209.8** | **429.5** | **7.0** | **0.0** | **19.5** | **48.5** |
| ITRON | ITRI | $71.70 | $79.95 | $57.80 | 249 | 1.02 | 2.1 | 1.6 | -8.3 | 5.1 | 14.4 | 58.3 | -18.8 | 2.1 | -14.4 | 73.7 | 8.5 |
| LYDALL INC | LDL | $49.85 | $63.20 | $45.45 | 158 | 1.29 | -2.7 | 0.0 | -14.6 | -1.8 | -16.7 | 225.8 | 439.5 | 86.3 | 8.1 | 74.3 | -17.9 |
| MUELLER INDUSTRIES | MLI | $36.91 | $43.96 | $27.72 | 130 | 1.18 | 1.3 | 3.8 | 5.9 | 4.2 | 19.5 | 90.5 | 300.8 | 9.4 | -19.9 | 49.2 | 11.4 |
| **MUELLER WATER PRODUCTS** | **MWA** | **$12.66** | **$14.02** | **$10.84** | **1341** | **1.35** | **0.6** | **4.5** | **1.1** | **1.0** | **0.9** | **127.9** | **78.4** | **10.1** | **-15.3** | **56.4** | **-4.6** |
| NORTHWEST PIPE | NWPX | $19.97 | $21.11 | $12.41 | 17 | 1.15 | 1.7 | 9.9 | -0.2 | 4.3 | 17.1 | -16.6 | -48.7 | -20.2 | -62.8 | 53.9 | 11.1 |
| PENTAIR | PNR | $73.76 | $74.47 | $57.44 | 1429 | 1.29 | 1.5 | 5.9 | 6.1 | 4.4 | 31.6 | 61.6 | 196.5 | -13.2 | -23.8 | 16.0 | 28.6 |
| **REXNORD** | **RXN** | **$27.84** | **$28.44** | **$20.75** | **490** | **1.31** | **5.7** | **13.5** | **9.1** | **7.0** | **31.5** | **39.2** | **N/A** | **4.4** | **-35.8** | **8.1** | **32.8** |
| ROPER INDUSTRIES | ROP | $275.28 | $275.52 | $185.10 | 250 | 1.05 | 3.3 | 7.9 | 9.4 | 6.4 | 47.6 | 148.1 | 477.4 | 13.4 | 22.1 | -2.9 | 42.4 |
| SPX | SPW | $32.93 | $33.18 | $21.97 | 146 | 1.48 | 1.3 | 8.1 | 12.7 | 4.9 | 33.4 | 94.1 | 54.7 | -12.4 | -56.5 | 154.2 | 32.3 |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$78.65** | **$79.25** | **$59.15** | **67** | **1.21** | **2.9** | **6.2** | **16.5** | **3.6** | **25.1** | **89.4** | **228.6** | **3.6** | **-20.8** | **32.8** | **17.8** |
| **XYLEM** | **XYL** | **$70.46** | **$70.79** | **$46.67** | **848** | **1.11** | **1.8** | **4.3** | **8.9** | **3.3** | **47.8** | **179.0** | **N/A** | **11.6** | **-2.6** | **37.6** | **39.5** |
| **Average** | | | | | **642** | **1.22** | **1.8** | **5.0** | **5.1** | **3.8** | **22.0** | **99.1** | **197.0** | **2.1** | **-14.9** | **40.5** | **18.5** |

| Market Index Comparisons | Symbol | Closing Price | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2786.24 | 2787.85 | 2257.02 | ----- | 1.03 | 1.6 | 4.6 | 9.2 | 4.2 | 22.7 | 89.3 | 98.9 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25803.19 | 25810.43 | 19677.94 | ----- | 1.00 | 2.0 | 5.3 | 13.0 | 4.4 | 29.7 | 91.3 | 104.7 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7261.06 | 7265.26 | 5522.69 | ----- | 1.06 | 1.7 | 5.8 | 10.2 | 5.2 | 30.9 | 132.3 | 197.6 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | $31.03 | $31.10 | $24.75 | ----- | NA | 1.7 | 3.6 | 6.8 | 2.5 | 25.2 | 47.9 | 66.5 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/18 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AIR PRODUCTS & CHEM | APD | $170.15 | $170.53 | 01/11/18 | $133.63 | 03/27/17 | 649 | 1.04 | 1.0 | 5.1 | 11.6 | 3.7 | 19.7 | 136.2 | 163.9 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| ASHLAND | ASH | $74.12 | $128.19 | 04/25/17 | $59.80 | 08/11/17 | 368 | 0.99 | 0.1 | 4.4 | 12.8 | 4.1 | 38.3 | 91.5 | 289.4 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| BARNWELL INDUSTRIES | CDZI | $14.10 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | 47 | 0.65 | 0.7 | 3.3 | 11.9 | -1.1 | 18.0 | 91.6 | -26.6 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |
| **CALGON CARBON** | **CCC** | **$21.30** | **$22.10** | **10/05/17** | **$12.00** | **08/24/17** | **738** | **1.01** | **-0.2** | **-0.7** | **-0.9** | **0.0** | **30.4** | **43.1** | **51.4** | **45.1** | **1.0** | **-16.1** | **-0.1** | **27.0** |
| CANTEL MEDICAL | CMN | $110.18 | $110.74 | 01/12/18 | $69.21 | 05/17/17 | 103 | 1.15 | 3.9 | 13.8 | 16.0 | 7.1 | 42.5 | 436.5 | 1835.1 | 71.3 | 27.9 | 43.9 | 27.0 | 30.9 |
| **CONSOLIDATED WATER** | **CWCO** | **$13.00** | **$13.95** | **11/27/17** | **$10.00** | **02/03/17** | **50** | **0.83** | **1.6** | **2.0** | **1.1** | **3.9** | **28.8** | **76.1** | **-34.8** | **95.3** | **-22.3** | **17.6** | **-9.1** | **18.3** |
| FORTIVE | FTV | $74.47 | $75.69 | 12/01/17 | $53.59 | 01/23/17 | 1283 | 1.08 | 1.5 | 2.7 | 2.3 | 2.9 | 39.4 | N/A | N/A | N/A | N/A | N/A | N/A | 35.5 |
| LAYNE CHRISTENSEN | LAYN | $13.34 | $13.64 | 10/26/17 | $6.98 | 05/31/17 | 88 | 1.32 | 2.2 | 11.2 | 2.3 | 6.3 | 24.9 | -42.9 | -69.6 | -29.6 | -44.1 | -44.9 | 106.7 | 15.5 |
| STANTEC INC | STN | $28.25 | $28.90 | 10/27/17 | $22.25 | 05/18/17 | 5 | 0.94 | 0.0 | 4.4 | 0.0 | 1.1 | 10.0 | 43.2 | 80.5 | 56.6 | -10.6 | -8.4 | 3.3 | 12.3 |
| TETRA TECH | TTEK | $49.20 | $50.90 | 11/29/17 | $38.85 | 03/17/17 | 186 | 1.05 | 1.3 | 2.6 | 2.9 | 2.2 | 18.5 | 80.5 | 159.0 | 5.7 | -3.8 | -1.4 | 67.7 | 12.6 |
| VEOLIA ENVIRONNEMENT | VE | $25.01 | $26.43 | 01/08/18 | $15.99 | 02/24/17 | 180 | 0.76 | -5.1 | 0.6 | 6.2 | -2.1 | 58.9 | 161.4 | -57.9 | 41.9 | 12.1 | 38.9 | -26.2 | 55.2 |
| **Average** | | | | | | | **336** | **0.98** | **0.6** | **4.5** | **6.0** | **2.6** | **29.9** | **111.7** | **239.0** | **33.4** | **7.8** | **-4.4** | **33.7** | **24.8** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2786.24 | 2787.85 | 01/12/18 | 2257.02 | 01/23/17 | ----- | 1.00 | 1.6 | 4.6 | 9.2 | 4.2 | 22.7 | 89.3 | 98.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 170.15 | 170.53 | 01/11/18 | 133.63 | 03/27/17 | ----- | 1.04 | 1.0 | 5.1 | 11.6 | 3.7 | 19.7 | 136.2 | 163.9 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| Nasdaq Composite | COMP | 74.12 | 128.19 | 04/25/17 | 59.80 | 08/11/17 | ----- | 0.99 | 0.1 | 4.4 | 12.8 | 4.1 | 38.3 | 91.5 | 289.4 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| Powershares Dyn Water | PHO-US | $14.10 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | ----- | 0.65 | 0.7 | 3.3 | 11.9 | -1.1 | 18.0 | 91.6 | -26.6 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLIANT | LNT | $39.53 | $45.55 | $36.56 | 1643 | 0.57 | -3.8 | -10.2 | -7.4 | -7.2 | 8.3 | 105.3 | 183.7 | 21.9 | 33.4 | -2.6 | 23.5 | 15.1 |
| **AVANGRID** | **AGR** | **$48.52** | **$53.46** | **$37.42** | **467** | **0.66** | **-0.4** | **-5.2** | **1.1** | **-4.1** | **27.5** | **111.9** | **186.9** | **13.2** | **17.7** | **18.0** | **3.4** | **38.5** |
| AVISTA | AVA | $51.61 | $52.83 | $37.78 | 128 | 0.60 | -0.3 | 0.4 | -0.5 | 0.2 | 36.0 | 155.3 | 265.9 | 22.3 | 30.5 | 4.2 | 15.0 | 32.2 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$72.65** | **$86.35** | **$63.11** | **54** | **0.70** | **-4.4** | **-9.0** | **-10.6** | **-7.5** | **15.6** | **161.9** | **349.4** | **36.1** | **27.1** | **16.9** | **13.3** | **18.9** |
| CMS ENERGY | CMS | $44.01 | $50.85 | $41.58 | 3402 | 0.51 | -3.9 | -10.5 | -7.1 | -7.0 | 8.2 | 108.6 | 271.8 | 13.9 | 34.6 | 7.3 | 16.9 | 16.6 |
| CONEDISON | ED | $79.49 | $89.70 | $72.13 | 1900 | 0.34 | -2.8 | -9.8 | -4.1 | -6.4 | 11.7 | 73.2 | 165.7 | 3.8 | 24.8 | 1.4 | 17.1 | 18.6 |
| DTE CORPORATION | DTE | $103.92 | $116.74 | $96.56 | 1314 | 0.53 | -2.1 | -8.1 | -5.4 | -5.1 | 8.9 | 101.2 | 259.2 | 14.9 | 34.7 | -3.7 | 24.8 | 14.1 |
| **EVERSOURCE ENERGY** | **ES** | **$61.35** | **$66.15** | **$54.10** | **2805** | **0.50** | **-0.8** | **-3.8** | **0.2** | **-2.9** | **14.4** | **85.0** | **183.7** | **12.4** | **30.6** | **-1.3** | **10.1** | **17.2** |
| MGE ENERGY | MGEE | $59.00 | $68.70 | $58.50 | 107 | 0.72 | -4.0 | -4.8 | -11.8 | -6.5 | -3.7 | 93.5 | 249.6 | 16.7 | 21.9 | 4.6 | 42.6 | -1.8 |
| NORTHWESTERN | NWE | $55.40 | $64.47 | $55.33 | 289 | 0.60 | -3.5 | -10.0 | -4.7 | -7.2 | 0.3 | 84.9 | 193.8 | 29.5 | 35.0 | -0.5 | 6.6 | 8.4 |
| PG&E CORPORATION | PCG | $43.82 | $71.57 | $41.61 | 6279 | 0.50 | -1.1 | -18.0 | -32.1 | -2.3 | -26.0 | 26.9 | 42.4 | 4.6 | 37.4 | 3.5 | 16.3 | -24.9 |
| SCANA | SCG | $44.05 | $72.89 | $37.10 | 1622 | 0.56 | -2.2 | 2.9 | -9.9 | 10.7 | -36.1 | 15.5 | 63.4 | 7.2 | 34.0 | 4.3 | 23.5 | -43.6 |
| TECO ENERGY | TE | - | - | - | - | 0.54 | - | - | - | - | - | - | - | 8.1 | 24.9 | 35.6 | - | - |
| **UNITIL CORP** | **UTL** | **$44.07** | **$52.84** | **$43.03** | **54** | **0.59** | **-1.5** | **-8.9** | **-14.9** | **-3.4** | **0.1** | **101.9** | **161.3** | **23.2** | **25.4** | **1.8** | **29.5** | **3.5** |
| VECTREN CORP | VVC | $60.92 | $69.86 | $53.65 | 250 | 0.66 | -2.5 | -10.0 | -8.9 | -6.3 | 15.8 | 142.0 | 226.6 | 25.8 | 35.1 | -4.9 | 24.1 | 27.6 |
| WISCONSIN ENERGY | WEC | $63.63 | $70.09 | $56.05 | 1267 | 0.50 | -1.9 | -6.0 | -2.2 | -4.2 | 12.1 | 98.6 | 267.0 | 16.1 | 32.1 | 0.8 | 16.1 | 16.7 |
| XCEL ENERGY | XEL | $45.15 | $52.22 | $40.43 | 3423 | 0.48 | -3.5 | -10.0 | -6.7 | -6.2 | 14.0 | 98.6 | 199.2 | 8.8 | 33.5 | 3.8 | 15.6 | 21.2 |
| **Average** | | | | | **1563** | **0.56** | **-2.4** | **-7.6** | **-7.8** | **-4.1** | **6.7** | **97.8** | **204.4** | **16.4** | **30.1** | **5.3** | **18.7** | **11.2** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2786.24 | 2787.85 | 2257.02 | ----- | 1.03 | 1.6 | 4.7 | 9.8 | 4.3 | 25.2 | 110.1 | 146.9 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25803.19 | 25810.43 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7261.06 | 7265.26 | 5522.69 | ----- | 1.06 | 1.7 | 5.9 | 10.4 | 5.2 | 32.3 | 146.7 | 232.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | $640.58 | $726.43 | $611.02 | ----- | NA | 1.7 | 3.6 | 6.8 | 2.5 | 25.2 | 47.9 | 66.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLETE | ALE | $73.00 | $81.24 | $62.04 | 255 | 0.60 | -0.7 | -5.6 | -6.7 | -1.8 | 19.5 | 103.4 | 193.3 | 26.5 | 15.0 | -4.1 | 29.0 | 19.1 |
| CENTERPOINT ENERGY | CNP | $27.37 | $30.45 | $25.25 | 3958 | 0.79 | -1.8 | -3.6 | -7.1 | -3.5 | 12.3 | 68.9 | 158.7 | 24.8 | 5.1 | -17.6 | 41.3 | 19.2 |
| CLECO | CNL | - | - | - | - | 0.43 | - | - | - | - | - | - | - | 20.1 | 20.6 | -1.4 | - | - |
| DUKE ENERGY | DUK | $78.90 | $91.80 | $76.28 | 3211 | 0.43 | -3.7 | -9.4 | -8.4 | -6.2 | 6.1 | 48.8 | 111.7 | 13.0 | 26.4 | -10.8 | 12.2 | 12.4 |
| EL PASO ELECTRIC | EE | $51.05 | $61.15 | $44.70 | 206 | 0.63 | -5.9 | -11.6 | -11.8 | -7.8 | 12.5 | 81.9 | 153.5 | 13.4 | 17.6 | -0.7 | 21.7 | 21.2 |
| EMPIRE DISTRICT ELECTRIC | EDE | - | - | - | - | 0.54 | - | - | - | - | - | - | - | 16.6 | 36.5 | -1.3 | 23.1 | - |
| GREAT PLAINS | GXP | $30.33 | $34.72 | $26.72 | 1514 | 0.56 | -2.5 | -10.1 | -4.3 | -5.9 | 14.5 | 76.3 | 65.0 | 24.1 | 21.6 | -0.2 | 2.2 | 21.1 |
| HAWAIIAN ELECTRIC | HE | $34.41 | $38.72 | $31.71 | 298 | 0.58 | -1.6 | -7.8 | 1.0 | -4.8 | 6.6 | 65.3 | 152.3 | 8.6 | 34.9 | -10.0 | 18.1 | 12.4 |
| IDACORP | IDA | $83.32 | $100.04 | $78.05 | 445 | 0.64 | -5.0 | -12.3 | -7.5 | -8.8 | 8.1 | 121.6 | 237.8 | 23.4 | 31.8 | 5.9 | 19.2 | 16.1 |
| PINNACLE WEST | PNW | $79.22 | $92.48 | $75.79 | 749 | 0.53 | -3.9 | -11.1 | -8.5 | -7.0 | 5.5 | 83.3 | 195.8 | 7.9 | 34.5 | -2.0 | 23.9 | 12.3 |
| PNM RESOURCES | PNM | $35.70 | $46.00 | $33.35 | 635 | 0.65 | -9.4 | -18.6 | -13.2 | -11.7 | 6.4 | 101.7 | 159.7 | 21.0 | 26.3 | 6.1 | 13.4 | 21.1 |
| PORTLAND GENERAL | POR | $42.62 | $50.11 | $42.38 | 869 | 0.59 | -2.8 | -10.2 | -7.8 | -6.5 | 0.8 | 80.6 | 141.4 | 14.5 | 29.4 | -0.6 | 19.9 | 7.9 |
| SOUTHERN COMPANY | SO | $44.84 | $53.51 | $44.44 | 8591 | 0.38 | -4.1 | -12.4 | -10.6 | -6.8 | -4.1 | 30.9 | 80.9 | 0.5 | 25.2 | -0.1 | 8.8 | 2.0 |
| WESTAR ENERGY | WR | $50.29 | $57.32 | $49.20 | 741 | 0.51 | -2.7 | -9.6 | -3.1 | -4.8 | -5.7 | 105.9 | 212.3 | 17.4 | 33.2 | 6.9 | 34.4 | -3.3 |
| **Average** | | | | | **1789** | **0.56** | **-3.7** | **-10.2** | **-7.3** | **-6.3** | **6.9** | **80.7** | **155.2** | **16.6** | **25.6** | **-2.1** | **20.6** | **13.5** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2786.24 | 2787.85 | 2257.02 | ----- | 1.03 | 1.6 | 4.7 | 9.8 | 4.3 | 25.2 | 110.1 | 146.9 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25803.19 | 25810.43 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7261.06 | 7265.26 | 5522.69 | ----- | 1.06 | 1.7 | 5.9 | 10.4 | 5.2 | 32.3 | 146.7 | 232.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 640.58 | 726.43 | 611.02 | ----- | NA | 1.7 | 3.6 | 6.8 | 2.5 | 25.2 | 47.9 | 66.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 45 - 46 OF THIS REPORT

# Electric Utilities (Combination Electrics with Merchant)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Symbol** | 1/12/2018 | **High** | **Low** | **Volume** | **Beta** | **Week** | **Month** | **Qtr** | **YTD** | **LTM** | **5 Yrs** | **10 Yrs** | **2013** | **2014** | **2015** | **2016** | **2017** |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AMEREN | AEE | $55.52 | $64.89 | $51.35 | 1385 | 0.54 | -3.3 | -9.5 | -7.3 | -5.9 | 10.2 | 114.0 | 73.3 | 23.3 | 32.7 | -2.4 | 23.5 | 15.7 |
| AMERICAN ELECTRIC POWER | AEP | $67.46 | $78.07 | $62.14 | 6647 | 0.53 | -4.7 | -11.3 | -7.3 | -8.3 | 10.3 | 88.3 | 116.6 | 14.2 | 35.1 | -0.3 | 10.7 | 20.3 |
| DOMINION | D | $75.94 | $85.30 | $70.87 | 4351 | 0.52 | -1.2 | -9.0 | -2.5 | -6.3 | 4.8 | 74.5 | 140.4 | 29.8 | 23.0 | -8.8 | 15.9 | 9.3 |
| EDISON INTERNATIONAL | EIX | $61.42 | $83.38 | $61.25 | 3171 | 0.47 | -2.5 | -9.6 | -22.2 | -2.9 | -12.6 | 54.2 | 52.8 | 5.4 | 45.0 | -6.9 | 22.7 | -9.8 |
| ENTERGY | ETR | $78.22 | $87.95 | $69.63 | 999 | 0.52 | -2.1 | -6.1 | -3.4 | -3.9 | 13.9 | 56.6 | -2.1 | 4.3 | 44.8 | -18.2 | 11.1 | 15.9 |
| EXELON | EXC | $38.39 | $42.67 | $33.30 | 5095 | 0.62 | 0.5 | -6.4 | -0.7 | -2.6 | 12.2 | 59.6 | -30.2 | -3.5 | 40.6 | -22.2 | 33.2 | 14.3 |
| FIRST ENERGY | FE | $30.07 | $35.22 | $27.93 | 3989 | 0.58 | -0.1 | -7.9 | -6.3 | -1.8 | 2.7 | -5.2 | -37.4 | -16.5 | 23.5 | -15.2 | 0.1 | 3.1 |
| NEXTERA ENERGY | NEE | $150.32 | $159.40 | $117.88 | 1597 | 0.54 | -0.9 | -4.3 | 0.4 | -3.8 | 29.3 | 143.5 | 194.2 | 28.0 | 27.9 | 0.7 | 17.3 | 33.6 |
| PPL CORP | PPL | $31.08 | $40.20 | $30.44 | 6845 | 0.57 | 0.4 | -8.7 | -18.1 | 0.4 | -6.0 | 44.9 | -2.0 | 10.3 | 26.2 | 6.2 | 3.5 | -5.8 |
| PUBLIC SERVICE ENT GROUP | PEG | $50.10 | $53.28 | $41.67 | 2852 | 0.59 | 0.9 | -3.7 | 3.0 | -2.7 | 18.0 | 102.6 | 50.9 | 9.4 | 34.4 | -2.8 | 16.9 | 21.3 |
| **Average** | | | | | **3693** | **0.55** | **-1.3** | **-7.6** | **-6.4** | **-3.8** | **8.3** | **73.3** | **55.7** | **10.5** | **33.3** | **-7.0** | **15.5** | **11.8** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2786.24 | 2787.85 | 2257.02 | ----- | 1.03 | 1.6 | 4.7 | 9.8 | 4.3 | 25.2 | 110.1 | 146.9 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25803.19 | 25810.43 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7261.06 | 7265.26 | 5522.69 | ----- | 1.06 | 1.7 | 5.9 | 10.4 | 5.2 | 32.3 | 146.7 | 232.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 640.58 | 726.43 | 611.02 | ----- | NA | 1.7 | 3.6 | 6.8 | 2.5 | 25.2 | 47.9 | 66.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 45 - 46 OF THIS REPORT

# Electric Utilities (Merchant Generators)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| CALPINE | CPN | $15.07 | $15.16 | $9.30 | 2461 | 0.96 | -0.1 | -0.2 | 1.9 | -0.4 | 24.2 | -19.2 | -11.4 | 7.6 | 13.4 | -34.6 | -19.6 | 30.0 |
| DYNEGY | DYN | $11.96 | $12.84 | $5.84 | 1477 | 1.21 | -0.1 | 3.9 | 24.7 | 0.9 | 26.2 | -40.9 | -99.5 | 12.5 | 41.0 | -55.8 | -33.9 | 38.8 |
| GENON | GEN | $0.84 | $4.53 | $0.60 | 1115 | 1.37 | 4.0 | 16.3 | -17.1 | 9.8 | -81.0 | -85.1 | -94.0 | -24.5 | 78.2 | -59.5 | 15.8 | -81.6 |
| COVANTA | CVA | $16.95 | $17.30 | $13.00 | 687 | 0.74 | 2.4 | 15.5 | 11.7 | 0.3 | 13.6 | 13.9 | -1.7 | -0.3 | 29.4 | -25.8 | 7.1 | 17.3 |
| NRG | NRG | $28.70 | $29.78 | $14.30 | 4825 | 1.17 | -0.1 | 0.0 | 11.9 | 0.8 | 100.8 | 33.4 | -21.7 | 27.0 | -4.5 | -55.0 | 12.9 | 131.2 |
| ORMAT TECHNOLOGIES | ORA | $66.07 | $66.46 | $52.39 | 162 | 0.92 | 1.6 | 5.8 | 6.6 | 3.3 | 26.6 | 237.9 | 36.2 | 41.6 | 0.7 | 35.1 | 48.5 | 19.9 |
| **Average** | | | | | **1631** | **1.01** | **1.5** | **8.1** | **7.4** | **2.1** | **17.7** | **22.0** | **-27.7** | **9.1** | **26.8** | **-31.6** | **5.4** | **24.7** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2786.24 | 2787.85 | 2257.02 | ----- | 1.03 | 1.6 | 4.7 | 9.8 | 4.3 | 25.2 | 110.1 | 146.9 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 25803.19 | 25810.43 | 19677.94 | ----- | 1.00 | - | - | - | - | - | - | - | 29.6 | 10.0 | - | - | - |
| Nasdaq Composite | COMP | 7261.06 | 7265.26 | 5522.69 | ----- | 1.06 | 1.7 | 5.9 | 10.4 | 5.2 | 32.3 | 146.7 | 232.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 640.58 | 726.43 | 611.02 | ----- | NA | 1.7 | 3.6 | 6.8 | 2.5 | 25.2 | 47.9 | 66.5 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | Symbol | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AGL RESOURCES, INC. | GAS | N/A | N/A | N/A | N/A | N/A | N/A | 0.25 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 23.3 | 20.0 | 21.7 | N/A | N/A |
| ATMOS ENERGY | ATO | $79.84 | $93.56 | 4-Dec-17 | $72.58 | 8-Feb-17 | 738 | 0.61 | -4.0 | -10.6 | -7.5 | -7.0 | 9.5 | 157.8 | 314.4 | 33.8 | 26.5 | 16.3 | 20.4 | 18.4 |
| LACLEDE GROUP | LG | $68.90 | $82.85 | 4-Dec-17 | $62.33 | 7-Feb-17 | 185 | 0.53 | -3.9 | -10.7 | -9.3 | -8.3 | 9.8 | 114.0 | 190.0 | 22.6 | 21.2 | 15.7 | 12.0 | 19.9 |
| **NEW JERSEY RESOURCES** | **NJR** | **$39.45** | **$45.45** | **15-Nov-17** | **$35.40** | **13-Jan-17** | **673** | **0.69** | **0.1** | **-5.7** | **-9.2** | **-1.9** | **14.0** | **133.4** | **231.4** | **21.1** | **36.8** | **11.3** | **10.7** | **16.2** |
| NORTHWEST NATURAL GAS | NWN | $57.00 | $69.50 | 30-Nov-17 | $55.70 | 10-Jan-18 | 166 | 0.57 | -2.8 | -10.9 | -13.0 | -4.4 | 0.2 | 54.7 | 63.8 | 0.9 | 21.5 | 5.5 | 22.2 | 2.8 |
| **RGC RESOURCES** | **RGCO** | **$26.21** | **$31.99** | **13-Jun-17** | **$16.72** | **13-Jan-17** | **10** | **0.14** | **-1.2** | **3.4** | **-13.9** | **-2.6** | **57.1** | **150.0** | **309.8** | **7.0** | **20.3** | **0.5** | **21.4** | **66.7** |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$29.71** | **$38.40** | **27-Apr-17** | **$29.04** | **11-Jan-18** | **439** | **0.67** | **-3.2** | **-7.6** | **-15.9** | **-4.9** | **-4.2** | **36.0** | **122.2** | **14.8** | **8.9** | **-16.7** | **48.4** | **-4.3** |
| SOUTHWEST GAS | SWX | $75.75 | $86.87 | 4-Dec-17 | $72.32 | 29-Jun-17 | 148 | 0.65 | -3.9 | -5.9 | -5.4 | -5.9 | -1.1 | 102.6 | 241.3 | 35.3 | 13.5 | -8.2 | 42.5 | 7.6 |
| **WGL HOLDINGS, INC.** | **WGL** | **$85.39** | **$86.89** | **2-Aug-17** | **$77.81** | **19-Jan-17** | **366** | **0.68** | **-0.2** | **0.1** | **0.4** | **0.1** | **9.0** | **160.0** | **265.8** | **6.3** | **42.2** | **19.1** | **24.7** | **15.4** |
| **Average** | | | | | | | **340** | **0.53** | **-2.4** | **-6.0** | **-9.2** | **-4.4** | **12** | **113.58** | **217** | **18** | **23** | **7.25** | **25** | **17.82** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2,786.24 | 2,787.85 | 12-Jan-18 | 2,257.02 | 23-Jan-17 | ----- | 1.00 | 1.6 | 4.6 | 9.2 | 4.2 | 22.7 | 89.3 | 98.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25,803.19 | 25,810.43 | 12-Jan-18 | 19,677.94 | 19-Jan-17 | ----- | 0.93 | 2.0 | 5.3 | 13.0 | 4.4 | 29.7 | 91.3 | 104.7 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,261.06 | 7,265.26 | 12-Jan-18 | 5,522.69 | 23-Jan-17 | ----- | 1.10 | 1.7 | 5.8 | 10.2 | 5.2 | 30.9 | 132.3 | 197.6 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $640.58 | $726.43 | 15-Nov-17 | 611.02 | 25-Jan-17 | ----- | 0.51 | -2.2 | -8.6 | -7.5 | -5.0 | 3.7 | 38.1 | 10.6 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| BLACK HILLS CORP | BKH | $54.44 | $72.02 | 19-Jun-17 | $54.20 | 9-Jan-18 | 663 | 0.85 | -5.2 | -8.9 | -19.8 | -9.4 | -8.1 | 65.7 | 94.3 | 49.1 | 4.0 | -9.3 | 36.1 | 0.8 |
| ENERGEN | EGN | $57.95 | $60.07 | 9-Jan-18 | $46.16 | 7-Jul-17 | 585 | 1.60 | -0.7 | 6.1 | 9.0 | 0.7 | 4.4 | 21.2 | -6.1 | 58.5 | -9.3 | -35.6 | 40.7 | -0.2 |
| EQUITABLE RESOURCES | EQT | $58.46 | $67.84 | 28-Jul-17 | $49.63 | 21-Jun-17 | 3,120 | 1.01 | 1.1 | 4.4 | -7.9 | 2.7 | -6.9 | 0.9 | 17.8 | 52.5 | -15.6 | -31.0 | 25.7 | -12.8 |
| MDU RESOURCES, INC. | MDU | $26.08 | $29.74 | 30-Jan-17 | $25.14 | 3-Aug-17 | 468 | 1.09 | -1.2 | -5.1 | -3.3 | -3.0 | -6.3 | 37.9 | 29.0 | 47.7 | -21.2 | -18.9 | 62.2 | -3.8 |
| NATIONAL FUEL GAS | NFG | $56.14 | $61.25 | 15-Mar-17 | $53.03 | 18-Apr-17 | 371 | 0.89 | 0.1 | -1.4 | -1.5 | 2.2 | 0.7 | 30.6 | 62.1 | 44.1 | -0.5 | -36.6 | 36.5 | -0.2 |
| WILLIAMS COMPANIES | WMB | $33.21 | $33.38 | 12-Jan-18 | $26.82 | 17-Nov-17 | 4,371 | 1.69 | 2.3 | 14.2 | 11.2 | 8.9 | 20.6 | 29.4 | 72.6 | 22.8 | 21.4 | -39.2 | 31.4 | 2.0 |
| **Average** | | | | | | | **1596** | **1.19** | **-0.6** | **1.6** | **-2.0** | **0.4** | **0.7** | **30.9** | **44.9** | **45.8** | **-3.5** | **-28.4** | **38.8** | **-2.4** |
| S&P 500 | SPX | 2,786.24 | 2,787.85 | 12-Jan-18 | 2,257.02 | 23-Jan-17 | ----- | 1.00 | 1.6 | 4.6 | 9.2 | 4.2 | 22.7 | 89.3 | 98.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25,803.19 | 25,810.43 | 12-Jan-18 | 19,677.94 | 19-Jan-17 | ----- | 0.93 | 2.0 | 5.3 | 13.0 | 4.4 | 29.7 | 91.3 | 104.7 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,261.06 | 7,265.26 | 12-Jan-18 | 5,522.69 | 23-Jan-17 | ----- | 1.10 | 1.7 | 5.8 | 10.2 | 5.2 | 30.9 | 132.3 | 197.6 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $640.58 | $726.43 | 15-Nov-17 | 611.02 | 25-Jan-17 | ----- | 0.51 | -2.2 | -8.6 | -7.5 | -5.0 | 3.7 | 38.1 | 10.6 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/12/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| OGE ENERGY CORP | OGE | $30.74 | $37.41 | 1-Mar-17 | $30.70 | 12-Jan-18 | 1,425 | 0.78 | -4.4 | -8.8 | -15.7 | -5.6 | -5.3 | 26.2 | 146.2 | 23.5 | 7.4 | -23.4 | 32.3 | 2.0 |
| ONEOK, INC. | OKE | $58.67 | $59.30 | 1-Feb-17 | $47.14 | 20-Jun-17 | 2,965 | 1.40 | 4.7 | 9.9 | 5.5 | 9.8 | 9.1 | 90.3 | 329.5 | 49.6 | -5.3 | -47.4 | 149.4 | -2.1 |
| NISOURCE | NI | $24.07 | $27.76 | 15-Nov-17 | $21.65 | 30-Jan-17 | 2,661 | 0.70 | -2.9 | -8.8 | -8.8 | -6.2 | 12.4 | 174.8 | 383.9 | 36.5 | 32.6 | 20.5 | 16.7 | 19.3 |
| QUESTAR, INC. | STR | N/A | N/A | N/A | N/A | N/A | N/A | 0.60 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 19.9 | 13.5 | -19.8 | N/A | N/A |
| SEMPRA ENERGY | SRE | $106.89 | $122.98 | 15-Nov-17 | $99.71 | 30-Jan-17 | 2,562 | 0.66 | -1.4 | -6.1 | -7.1 | 0.0 | 8.1 | 71.4 | 131.8 | 30.3 | 27.3 | -13.2 | 10.1 | 9.4 |
| **UGI CORP** | **UGI** | **$47.34** | **$52.00** | **2-Jun-17** | **$45.04** | **30-Jan-17** | **693** | **0.75** | **-0.4** | **-1.5** | **0.3** | **0.8** | **4.6** | **140.2** | **251.5** | **30.5** | **40.8** | **-8.7** | **39.5** | **4.0** |
| SPECTRA ENERGY | SE | $12.97 | $16.99 | 20-Oct-17 | $10.79 | 29-Nov-17 | 1,162 | 1.54 | -6.6 | -1.7 | N/A | -2.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| **Average** | | | | | | | **1911** | **0.92** | **-1.9** | **-2.8** | **-5.2** | **-0.7** | **5.8** | **100.6** | **248.6** | **31.7** | **19.4** | **-15.3** | **49.6** | **6.5** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2,786.24 | 2,787.85 | 12-Jan-18 | 2,257.02 | 23-Jan-17 | ----- | 1.00 | 1.6 | 4.6 | 9.2 | 4.2 | 22.7 | 89.3 | 98.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 25,803.19 | 25,810.43 | 12-Jan-18 | 19,677.94 | 19-Jan-17 | ----- | 0.93 | 2.0 | 5.3 | 13.0 | 4.4 | 29.7 | 91.3 | 104.7 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,261.06 | 7,265.26 | 12-Jan-18 | 5,522.69 | 23-Jan-17 | ----- | 1.10 | 1.7 | 5.8 | 10.2 | 5.2 | 30.9 | 132.3 | 197.6 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $640.58 | $726.43 | 15-Nov-17 | 611.02 | 25-Jan-17 | ----- | 0.51 | -2.2 | -8.6 | -7.5 | -5.0 | 3.7 | 38.1 | 10.6 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Short Interest Analysis

# Water Utilities
Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| **AMERICAN STATES WATER** | **AWR** | **870,080** | **952,796** | **942,848** | **851,432** | **693,156** | **710,608** | **615,654** | **570,128** | **770,311** | **937,632** | **959,428** | **194,511** | **5** |
| **AMERICAN WATER WORKS** | **AWK** | **4,931,704** | **4,066,020** | **4,652,422** | **3,911,499** | **3,937,971** | **3,533,813** | **3,516,181** | **3,834,363** | **3,922,123** | **4,791,649** | **4,745,403** | **867,627** | **5** |
| **AQUA AMERICA** | **WTR** | **6,375,600** | **6,916,987** | **7,989,370** | **7,315,021** | **7,074,672** | **7,037,294** | **6,947,532** | **6,737,429** | **7,156,442** | **6,856,908** | **7,321,666** | **615,615** | **12** |
| ARTESIAN RESOURCES | ARTNA | 49,224 | 65,918 | 81,240 | 96,103 | 97,693 | 91,398 | 105,398 | 70,302 | 61,305 | 62,843 | 49,719 | 23,142 | 2 |
| **CALIFORNIA WATER** | **CWT** | **981,206** | **847,003** | **906,581** | **910,728** | **701,897** | **1,137,562** | **887,333** | **879,195** | **827,776** | **1,017,607** | **931,332** | **194,468** | **5** |
| CONNECTICUT WATER | CTWS | 212,224 | 220,556 | 210,148 | 216,555 | 261,172 | 284,124 | 264,771 | 257,771 | 248,946 | 252,728 | 271,904 | 43,293 | 6 |
| **MIDDLESEX WATER** | **MSEX** | **130,417** | **169,824** | **171,256** | **169,910** | **226,424** | **246,976** | **253,461** | **191,538** | **158,957** | **132,669** | **133,494** | **39,302** | **3** |
| PURE CYCLE | PCYO | 59,369 | 72,402 | 74,549 | 124,772 | 667,673 | 628,093 | 741,772 | 576,577 | 583,311 | 583,495 | 486,569 | 43,610 | 11 |
| **SABESP** | **SBS** | **753,485** | **900,521** | **1,451,181** | **5,281,984** | **5,056,851** | **3,528,671** | **1,283,127** | **1,790,382** | **853,797** | **2,496,187** | **3,437,163** | **1,219,022** | **3** |
| **SJW** | **SJW** | **125,048** | **127,238** | **113,748** | **130,299** | **141,752** | **134,239** | **163,388** | **129,372** | **117,855** | **115,081** | **92,610** | **64,351** | **1** |
| YORK WATER | YORW | 146,716 | 179,867 | 181,363 | 160,975 | 220,139 | 207,237 | 198,634 | 163,494 | 157,889 | 168,552 | 199,986 | 29,506 | 7 |
| **MEDIAN** | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| 3M COMPANY | MMM | 7,060,241 | 7,991,822 | 8,115,913 | 8,700,072 | 8,453,661 | 8,033,770 | 8,166,891 | 8,372,423 | 6,879,576 | 6,196,511 | 7,279,191 | 1,981,503 | 4 |
| **AMETEK** | **AME** | **6,008,002** | **4,640,428** | **5,756,651** | **5,785,745** | **4,015,506** | **2,755,300** | **2,974,705** | **2,190,704** | **2,211,752** | **3,285,049** | **2,456,937** | **1,082,161** | **2** |
| BADGER METER | BMI | 1,348,369 | 1,418,807 | 1,737,265 | 1,649,292 | 1,539,559 | 1,400,535 | 1,374,378 | 1,399,327 | 1,523,037 | 1,501,582 | 1,434,606 | 107,014 | 13 |
| CIRCOR INT'L | CIR | 1,029,159 | 1,245,319 | 1,301,177 | 1,339,803 | 1,334,092 | 1,279,463 | 1,358,578 | 1,262,950 | 1,213,659 | 1,112,866 | 1,084,984 | 84,632 | 13 |
| CRANE COMPANY | CR | 373,832 | 356,022 | 300,823 | 247,795 | 378,337 | 380,251 | 611,864 | 476,296 | 475,499 | 248,274 | 286,335 | 287,341 | 1 |
| DXP ENTERPRISES | DXPE | 595,679 | 569,261 | 544,173 | 440,356 | 530,801 | 494,781 | 504,017 | 552,078 | 457,900 | 517,701 | 560,111 | 93,380 | 6 |
| EMERSON ELECTRIC | EMR | 9,338,410 | 10,689,037 | 9,423,388 | 10,093,391 | 12,331,903 | 12,292,291 | 10,912,723 | 9,168,764 | 9,899,094 | 6,496,944 | 8,345,432 | 3,317,324 | 3 |
| ENERGY RECOVERY | ERII | 3,540,863 | 4,543,898 | 5,271,394 | 5,665,089 | 6,069,327 | 6,111,623 | 7,540,770 | 7,869,263 | 7,937,256 | 7,626,452 | 7,925,249 | 467,759 | 17 |
| FLOWSERVE | FLS | 8,469,450 | 10,195,773 | 10,681,323 | 10,282,725 | 9,840,089 | 9,601,983 | 9,325,164 | 8,660,318 | 8,147,318 | 10,491,400 | 10,324,441 | 1,097,147 | 9 |
| FRANKLIN ELECTRIC | FELE | 898,169 | 877,467 | 798,183 | 977,987 | 532,078 | 623,483 | 644,133 | 569,372 | 762,472 | 626,169 | 634,632 | 138,351 | 5 |
| **IDEX** | **IEX** | **1,774,073** | **1,589,033** | **1,598,363** | **2,023,395** | **2,045,446** | **1,695,968** | **1,812,624** | **1,524,056** | **1,417,596** | **1,435,747** | **1,353,559** | **239,824** | **6** |
| ITRON | ITRI | 672,061 | 719,772 | 775,355 | 647,437 | 454,344 | 243,650 | 364,484 | 344,625 | 233,561 | 417,029 | 574,159 | 372,640 | 2 |
| LYDALL | LDL | 111,619 | 150,883 | 209,013 | 128,237 | 104,682 | 129,693 | 164,250 | 105,006 | 116,911 | 126,926 | 159,591 | 55,853 | 3 |
| MUELLER INDUSTRIES | MLI | 545,073 | 507,365 | 565,846 | 672,420 | 441,980 | 500,098 | 632,443 | 659,552 | 766,612 | 780,434 | 1,022,662 | 143,931 | 7 |
| **MUELLER WATER PRODUCTS** | **MWA** | **2,497,680** | **1,651,893** | **2,012,601** | **2,315,005** | **2,216,528** | **1,693,026** | **2,320,152** | **1,961,379** | **1,911,692** | **1,583,011** | **2,250,937** | **1,038,810** | **2** |
| NORTHWEST PIPE | NWPX | 360,230 | 271,752 | 253,727 | 298,029 | 527,802 | 506,427 | 556,642 | 589,226 | 619,874 | 609,873 | 610,063 | 28,903 | 21 |
| PENTAIR | PNR | 5,149,425 | 4,768,789 | 3,882,106 | 4,355,636 | 2,789,645 | 2,898,693 | 1,610,699 | 1,657,527 | 2,456,559 | 2,925,363 | 2,340,069 | 949,057 | 2 |
| **REXNORD** | **RXN** | **5,394,645** | **5,846,206** | **5,881,331** | **5,226,577** | **6,196,141** | **5,514,131** | **5,128,239** | **4,183,640** | **3,557,460** | **2,945,598** | **2,654,266** | **908,155** | **3** |
| ROPER INDUSTRIES | ROP | 2,980,370 | 2,895,527 | 3,001,494 | 2,479,680 | 2,003,001 | 2,006,101 | 1,754,208 | 1,835,095 | 1,940,004 | 2,328,990 | 2,243,080 | 415,759 | 5 |
| **WATTS WATER TECH** | **WTS** | **832,524** | **826,260** | **664,627** | **653,092** | **710,635** | **771,218** | **763,117** | **825,097** | **962,792** | **874,103** | **555,068** | **112,129** | **5** |
| **XYLEM** | **XYL** | **4,265,010** | **4,167,410** | **5,285,429** | **5,300,282** | **6,421,238** | **6,220,619** | **5,433,356** | **4,143,245** | **4,085,866** | **3,385,470** | **3,451,789** | **773,737** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | **6.3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| AIR PRODUCTS & CHEM | APD | 3,797,416 | 3,344,957 | 2,782,034 | 2,861,809 | 2,854,313 | 2,373,474 | 2,177,366 | 2,361,939 | 2,427,163 | 2,203,956 | 2,143,958 | 845,188 | 3 |
| ASHLAND | ASH | 1,959,211 | 1,787,667 | 1,646,723 | 2,671,828 | 3,094,775 | 2,781,073 | 2,404,418 | 2,599,338 | 2,143,664 | 2,004,011 | 2,288,244 | 610,710 | 4 |
| BARNWELL INDUSTRIES | BRN | 29,603 | 21,450 | 26,469 | 24,987 | 16,405 | 4,744 | 5,443 | 5,138 | 2,043 | 6,277 | 6,184 | 31,224 | 0 |
| **CALGON CARBON** | **CCC** | **522,521** | **868,350** | **712,094** | **1,027,245** | **984,990** | **1,573,723** | **1,593,148** | **4,837,563** | **4,548,875** | **5,378,243** | **5,361,344** | **1,209,881** | **4** |
| CANTEL MEDICAL | CMN | 947,003 | 963,167 | 1,057,166 | 1,076,278 | 1,106,028 | 1,098,519 | 1,184,947 | 1,175,114 | 731,860 | 628,264 | 608,782 | 154,810 | 4 |
| **CONSOLIDATED WATER** | **CWCO** | **244,548** | **267,212** | **250,504** | **326,135** | **241,999** | **256,986** | **288,445** | **268,093** | **227,333** | **249,844** | **219,728** | **53,516** | **4** |
| ECHOLAB | ECL | 5,569,238 | 4,904,398 | 4,322,535 | 4,816,198 | 3,852,231 | 4,287,351 | 4,668,295 | 4,726,957 | 5,228,558 | 6,169,021 | 6,841,745 | 1,031,187 | 7 |
| FORTIVE | FTV | 1,139,385 | 1,617,188 | 2,064,897 | 2,131,077 | 2,793,149 | 2,337,385 | 2,084,376 | 3,535,942 | 4,855,830 | 6,005,448 | 6,282,169 | 1,125,063 | 6 |
| LAYNE CHRISTENSEN | LAYN | 3,130,509 | 3,156,754 | 3,263,580 | 3,302,461 | 3,227,324 | 3,207,864 | 3,357,098 | 3,514,975 | 3,719,639 | 3,696,505 | 3,722,899 | 156,674 | 24 |
| STANTEC, INC. | STN | 337,202 | 420,859 | 470,870 | 324,778 | 352,097 | 338,854 | 793,114 | 660,883 | 606,555 | 412,544 | 412,813 | 18,130 | 23 |
| TETRA TECH | TTEK | 925,508 | 1,005,039 | 1,185,072 | 925,648 | 671,846 | 623,254 | 1,091,115 | 873,277 | 810,805 | 596,094 | 664,793 | 269,201 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | **7** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| ALLIANT | LNT | 5,409,345 | 4,566,482 | 3,645,885 | 4,342,726 | 3,513,512 | 2,899,307 | 3,159,484 | 3,975,745 | 5,378,873 | 5,928,608 | 7,528,290 | 7,089,148 | 1,259,743 | 6 |
| **AVANGRID** | **AGR** | **2,149,170** | **1,637,777** | **1,929,679** | **1,453,776** | **1,801,384** | **1,660,426** | **1,374,446** | **1,347,442** | **2,567,954** | **4,702,306** | **4,950,129** | **4,862,961** | **409,060** | **12** |
| AVISTA | AVA | 1,409,708 | 1,525,533 | 1,580,040 | 1,569,496 | 1,686,391 | 1,715,671 | 1,933,013 | 3,291,609 | 3,343,721 | 3,092,739 | 3,338,423 | 3,932,055 | 430,986 | 9 |
| **CHESAPEAKE UTILITIES** | **CPK** | **233,478** | **262,773** | **264,080** | **239,420** | **251,742** | **192,332** | **240,501** | **278,329** | **216,129** | **172,718** | **166,885** | **154,867** | **47,597** | **3** |
| CMS ENERGY | CMS | 4,877,715 | 4,147,871 | 3,311,656 | 4,131,055 | 4,928,316 | 5,333,775 | 4,634,626 | 4,875,954 | 5,589,775 | 5,878,501 | 5,000,479 | 6,102,223 | 1,853,120 | 3 |
| CONEDISON | ED | 10,295,176 | 10,226,704 | 11,182,177 | 10,306,460 | 11,016,473 | 11,080,156 | 10,486,678 | 10,783,195 | 9,740,969 | 9,967,953 | 9,413,607 | 9,286,045 | 1,571,010 | 6 |
| DTE CORP | DTE | 3,528,022 | 3,886,211 | 3,225,916 | 3,193,239 | 3,475,283 | 4,310,239 | 3,824,650 | 4,099,232 | 4,834,270 | 4,044,631 | 3,108,937 | 3,784,494 | 928,824 | 4 |
| **EVERSOURCE ENERGY** | **ES** | **3,907,531** | **4,127,245** | **6,018,776** | **5,131,876** | **4,770,610** | **4,461,304** | **3,445,193** | **4,582,399** | **4,457,768** | **4,944,028** | **5,409,923** | **5,874,654** | **1,824,964** | **3** |
| MGE ENERGY | MGEE | 485,353 | 344,716 | 387,046 | 493,046 | 304,509 | 254,303 | 397,535 | 414,763 | 358,462 | 246,161 | 267,706 | 300,314 | 108,232 | 3 |
| NORTHWESTERN | NWE | 1,457,184 | 1,362,452 | 1,148,403 | 1,010,991 | 1,136,951 | 1,141,000 | 1,246,942 | 1,182,741 | 927,547 | 1,097,612 | 878,905 | 852,890 | 321,800 | 3 |
| PG&E CORP | PCG | 4,897,045 | 4,586,203 | 5,851,355 | 6,330,839 | 6,404,365 | 5,783,070 | 6,826,275 | 6,328,202 | 6,261,203 | 6,120,553 | 9,187,359 | 7,690,225 | 7,077,220 | 1 |
| SCANA | SCG | 4,346,492 | 5,317,636 | 6,352,230 | 6,255,402 | 5,098,031 | 4,923,704 | 4,572,666 | 3,588,508 | 3,798,159 | 3,375,158 | 5,004,371 | 5,149,655 | 3,476,500 | 1 |
| **UNITIL CORP** | **UTL** | **266,528** | **216,642** | **181,586** | **144,622** | **146,510** | **130,306** | **143,194** | **160,952** | **120,185** | **100,468** | **242,378** | **262,023** | **91,053** | **3** |
| VECTREN CORP | VVC | 1,059,831 | 1,044,273 | 651,262 | 733,242 | 589,207 | 779,635 | 363,789 | 462,301 | 1,016,032 | 650,093 | 592,791 | 922,140 | 318,180 | 3 |
| WISCONSIN ENERGY | WEC | 12,231,228 | 9,192,076 | 8,760,561 | 8,868,864 | 7,714,249 | 7,539,614 | 8,257,052 | 8,033,126 | 7,445,885 | 7,527,488 | 9,086,165 | 9,683,643 | 1,660,764 | 6 |
| XCEL ENERGY | XEL | 10,023,854 | 8,685,773 | 10,603,959 | 12,027,677 | 12,211,867 | 10,463,422 | 11,633,439 | 12,663,254 | 12,538,128 | 10,873,280 | 12,700,090 | 12,035,574 | 2,988,324 | 4 |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| ALLETE | ALE | 1,115,994 | 881,360 | 965,111 | 725,494 | 516,265 | 654,632 | 791,051 | 768,040 | 839,027 | 762,541 | 955,842 | 228,469 | 4 |
| CENTERPOINT ENERGY | CNP | 8,612,470 | 10,111,969 | 12,483,776 | 7,630,157 | 7,744,874 | 8,745,790 | 14,073,575 | 8,621,283 | 5,239,680 | 7,647,101 | 9,234,812 | 2,863,668 | 3 |
| DUKE ENERGY | DUK | 9,753,550 | 10,540,986 | 10,914,102 | 12,673,350 | 11,006,808 | 10,377,598 | 10,400,623 | 9,949,927 | 9,029,066 | 7,311,625 | 8,747,231 | 2,712,312 | 3 |
| EL PASO ELECTRIC | EE | 394,243 | 370,106 | 437,501 | 582,511 | 332,765 | 311,243 | 420,431 | 352,717 | 468,227 | 575,595 | 689,098 | 243,547 | 3 |
| GREAT PLAINS | GXP | 8,889,673 | 7,636,648 | 5,722,006 | 6,816,518 | 5,830,269 | 7,373,200 | 6,296,938 | 6,184,183 | 5,115,012 | 6,192,697 | 6,742,150 | 1,136,515 | 6 |
| HAWAIIAN ELECTRIC | HE | 3,305,063 | 4,254,164 | 4,400,640 | 4,738,841 | 4,342,411 | 3,621,742 | 3,276,486 | 3,158,482 | 5,687,461 | 5,241,557 | 5,157,973 | 396,218 | 13 |
| IDACORP | IDA | 1,050,865 | 828,083 | 1,009,862 | 941,326 | 881,708 | 890,037 | 857,947 | 706,377 | 596,488 | 590,778 | 769,555 | 214,110 | 4 |
| PINNACLE WEST | PNW | 2,519,950 | 2,854,378 | 3,630,631 | 3,920,359 | 3,189,290 | 2,989,754 | 2,533,351 | 2,442,849 | 2,203,539 | 2,539,516 | 2,594,468 | 599,666 | 4 |
| PNM RESOURCES | PNM | 3,299,198 | 2,959,507 | 2,635,769 | 3,191,323 | 2,004,069 | 2,068,319 | 2,449,370 | 1,934,545 | 1,553,172 | 1,756,204 | 1,746,943 | 630,600 | 3 |
| PORTLAND GENERAL | POR | 1,552,707 | 1,940,728 | 2,011,685 | 1,855,791 | 1,273,088 | 1,273,355 | 1,323,565 | 1,091,394 | 951,097 | 828,240 | 861,274 | 588,680 | 1 |
| SOUTHERN COMPANY | SO | 22,557,114 | 24,271,529 | 19,172,442 | 22,185,758 | 20,983,957 | 24,011,404 | 21,347,185 | 21,231,835 | 21,701,897 | 22,431,431 | 22,476,645 | 5,322,571 | 4 |
| WESTAR ENERGY | WR | 1,617,176 | 1,503,389 | 1,896,950 | 1,594,058 | 1,211,804 | 1,137,106 | 1,185,547 | 1,195,571 | 1,302,071 | 1,184,282 | 1,530,373 | 596,058 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 45 - 46 OF THIS REPORT

# Electric Utilities (Combination Electrics With Merchant)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg. Vol | SIR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Short Interest | | | | | | | | | | | | | |
| AMEREN | AEE | 6,616,420 | 7,191,279 | 8,036,282 | 7,662,727 | 6,558,632 | 5,310,411 | 5,175,354 | 8,159,133 | 7,914,491 | 6,431,806 | 6,909,765 | 6,912,244 | 1,397,876 | 5 |
| AMERICAN ELECTRIC POWER | AEP | 4,959,061 | 6,028,096 | 5,569,001 | 5,907,106 | 7,079,343 | 6,742,651 | 6,698,363 | 7,975,185 | 6,281,152 | 5,846,064 | 6,061,533 | 7,038,320 | 2,319,131 | 3 |
| DOMINION | D | 17,513,374 | 19,845,221 | 20,816,617 | 18,808,504 | 20,677,436 | 20,045,461 | 13,926,442 | 14,446,396 | 13,393,722 | 12,930,154 | 14,791,027 | 14,945,885 | 2,982,885 | 5 |
| EDISON INTERNATIONAL | EIX | 5,887,214 | 5,821,026 | 4,846,557 | 4,596,357 | 4,820,943 | 4,439,686 | 3,862,212 | 3,887,172 | 3,905,069 | 3,864,737 | 4,182,479 | 4,767,939 | 4,347,563 | 1 |
| ENTERGY | ETR | 6,044,081 | 5,949,562 | 4,627,930 | 5,672,944 | 4,580,172 | 3,362,524 | 3,200,009 | 3,337,890 | 2,925,352 | 3,275,675 | 3,768,372 | 4,475,765 | 1,362,118 | 3 |
| EXELON | EXC | 14,470,087 | 15,671,760 | 16,535,402 | 14,492,733 | 22,764,138 | 11,923,333 | 12,992,968 | 13,021,851 | 12,796,336 | 13,879,272 | 12,661,197 | 14,652,089 | 5,317,714 | 3 |
| FIRST ENERGY | FE | 7,077,948 | 8,717,118 | 9,670,222 | 7,788,907 | 7,808,568 | 11,513,982 | 12,031,084 | 11,580,120 | 13,572,934 | 14,779,336 | 15,388,419 | 15,583,507 | 4,105,689 | 4 |
| NEXTERA ENERGY | NEE | 5,684,692 | 11,012,068 | 10,817,723 | 11,388,891 | 10,912,637 | 6,533,446 | 6,949,002 | 7,239,465 | 6,333,172 | 6,483,212 | 6,014,445 | 6,253,272 | 1,846,090 | 3 |
| PPL CORP | PPL | 11,308,934 | 10,784,419 | 11,478,638 | 10,441,674 | 10,562,779 | 9,515,443 | 6,373,595 | 7,853,542 | 9,315,783 | 8,632,942 | 12,061,035 | 15,467,162 | 6,397,282 | 2 |
| PUBLIC SERVICE ENT GROUP | PEG | 9,020,650 | 7,988,900 | 8,325,899 | 8,732,216 | 7,765,149 | 6,172,778 | 7,764,136 | 6,896,227 | 7,903,726 | 8,951,766 | 8,259,093 | 8,072,237 | 3,655,935 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | **3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Ticker | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| CALPINE | CPN | 28,771,379 | 27,743,654 | 28,117,884 | 31,406,984 | 29,236,409 | 22,388,843 | 20,689,060 | 12,412,637 | 8,581,513 | 9,445,678 | 11,634,251 | 17,728,993 | 5,396,789 | 3 |
| COVANTA | CVA | 12,069,855 | 12,163,837 | 12,520,510 | 12,670,673 | 14,793,868 | 18,867,258 | 17,329,973 | 16,624,697 | 16,432,324 | 15,770,544 | 12,430,455 | 12,429,285 | 959,149 | 13 |
| DYNERGY | DYN | 18,153,185 | 17,049,127 | 20,385,768 | 20,771,130 | 20,303,380 | 22,532,771 | 20,500,812 | 19,405,468 | 20,354,821 | 21,669,181 | 23,015,480 | 22,540,907 | 4,872,464 | 5 |
| NRG ENERGY | NRG | 15,853,043 | 13,016,231 | 12,848,957 | 13,234,169 | 16,655,481 | 13,260,349 | 21,717,853 | 20,487,685 | 15,864,456 | 21,767,034 | 21,796,149 | 20,751,077 | 5,160,801 | 4 |
| ORMAT TECHNOLOGIES | ORA | 876,947 | 635,189 | 596,787 | 592,572 | 528,923 | 513,203 | 318,691 | 474,961 | 411,204 | 367,678 | 336,031 | 486,068 | 165,860 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Short Interest | | | | | | | | | | | | | |
| ATMOS ENERGY | ATO | 891,329 | 879,310 | 1,224,711 | 944,101 | 782,821 | 874,210 | 922,806 | 642,008 | 730,106 | 700,794 | 860,615 | 1,143,367 | 645,888 | 1 |
| LACLEDE GROUP | LG | 773,830 | 886,008 | 1,343,875 | 909,387 | 755,155 | 588,216 | 423,462 | 556,576 | 772,291 | 897,395 | 1,124,149 | 1,434,175 | 178,247 | 5 |
| **NEW JERSEY RESOURCES** | **NJR** | **3,570,296** | **4,675,510** | **4,262,104** | **4,484,868** | **3,846,891** | **3,125,675** | **2,703,452** | **2,406,915** | **2,328,469** | **2,602,464** | **2,289,053** | **2,479,972** | **532,734** | **9** |
| NORTHWEST NATURAL GAS | NWN | 937,071 | 921,642 | 1,070,206 | 1,247,218 | 1,289,283 | 1,144,690 | 1,021,318 | 1,034,393 | 670,492 | 968,567 | 821,751 | 956,438 | 159,383 | 6 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **2,687,074** | **2,739,222** | **3,181,251** | **2,983,179** | **3,198,941** | **2,367,331** | **2,205,944** | **2,075,551** | **1,882,462** | **1,883,598** | **2,156,510** | **2,169,796** | **334,816** | **8** |
| SOUTHWEST GAS | SWX | 917,894 | 1,012,872 | 541,515 | 296,021 | 296,957 | 265,152 | 739,734 | 485,210 | 483,679 | 591,548 | 672,821 | 711,373 | 210,333 | 5 |
| **WGL HOLDINGS, INC.** | **WGL** | **1,035,527** | **1,035,562** | **1,263,546** | **1,256,904** | **1,247,446** | **1,017,413** | **1,179,588** | **1,646,717** | **1,874,013** | **2,119,186** | **2,692,852** | **2,746,315** | **265,331** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| BLACK HILLS CORP | BKH | 4,643,767 | 4,894,837 | 5,495,973 | 5,741,527 | 4,831,594 | 4,505,354 | 4,778,655 | 4,733,876 | 4,637,706 | 4,807,053 | 5,094,782 | 5,449,917 | 531,212 | 9 |
| ENERGEN | EGN | 3,104,889 | 4,581,398 | 4,247,728 | 4,098,572 | 5,668,191 | 5,547,969 | 6,206,161 | 5,867,869 | 4,536,944 | 3,264,249 | 3,245,921 | 3,146,329 | 724,058 | 6 |
| EQUITABLE RESOURCES | EQT | 7,989,000 | 7,696,050 | 7,503,067 | 6,843,069 | 7,003,638 | 22,173,567 | 30,943,828 | 31,673,417 | 29,685,306 | 29,171,342 | 6,724,882 | 5,640,962 | 3,264,458 | 2 |
| MDU RESOURCES, INC. | MDU | 3,034,771 | 2,423,864 | 3,738,525 | 3,049,397 | 2,938,686 | 2,369,999 | 2,362,615 | 1,416,439 | 1,543,244 | 1,431,957 | 1,754,874 | 1,488,862 | 855,070 | 3 |
| NATIONAL FUEL GAS | NFG | 3,240,432 | 4,255,148 | 4,841,475 | 4,800,950 | 5,409,021 | 6,638,013 | 6,072,594 | 5,813,455 | 5,813,027 | 5,113,474 | 4,576,608 | 4,430,728 | 352,786 | 12 |
| WILLIAMS COMPANIES | WMB | 11,131,044 | 9,528,546 | 11,432,419 | 10,687,025 | 10,065,013 | 12,586,010 | 14,895,321 | 14,178,400 | 14,540,022 | 12,978,105 | 15,289,920 | 16,241,860 | 5,827,346 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | 6 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

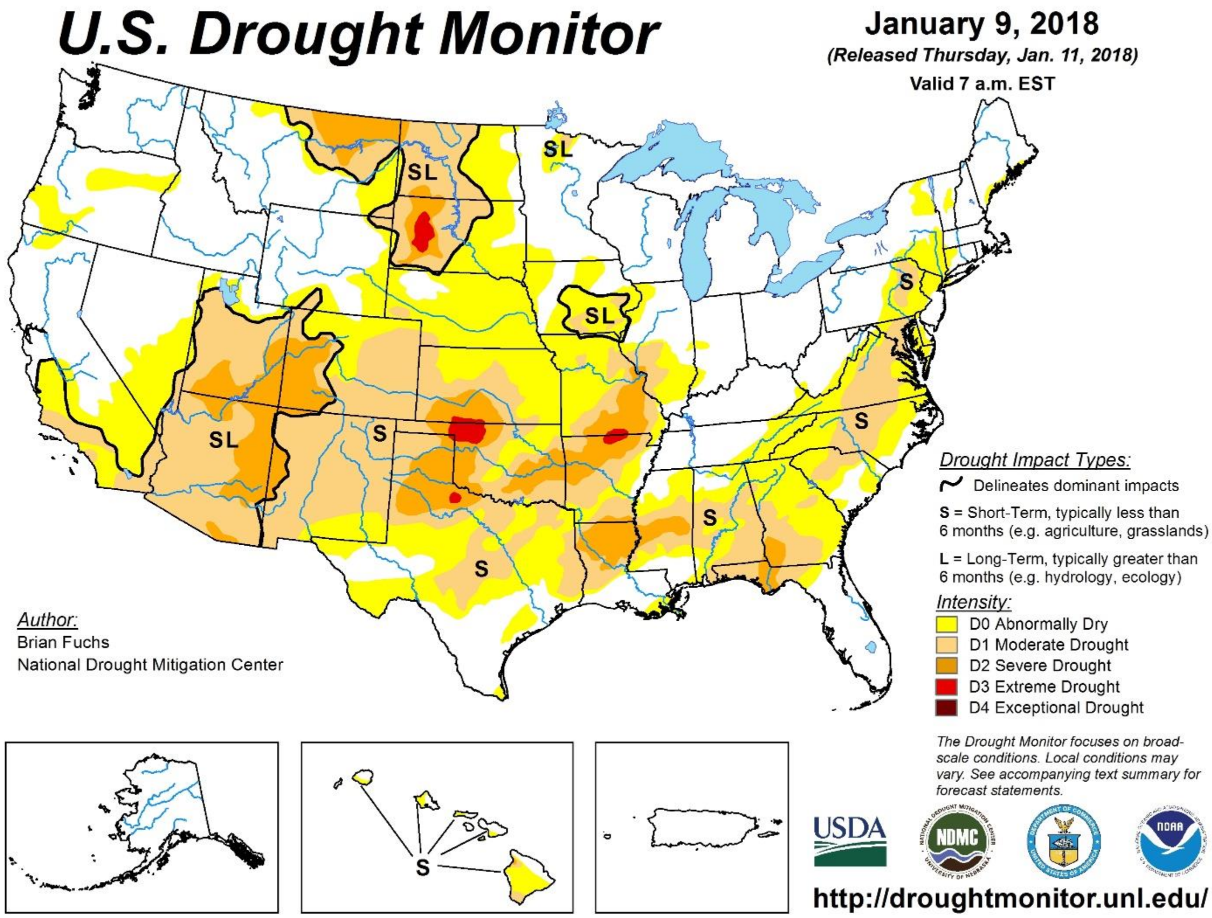
# Gas Utilities - Midstream (Non Exploration & Production)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| OGE ENERGY CORP | OGE | 5,598,729 | 4,775,812 | 3,296,839 | 4,382,988 | 3,939,793 | 2,981,343 | 2,954,099 | 2,768,183 | 2,486,339 | 1,696,186 | 2,041,236 | 3,771,011 | 1,034,915 | 5 |
| ONEOK, INC. | OKE | 12,483,746 | 18,851,614 | 19,773,430 | 22,257,988 | 20,156,029 | 24,364,024 | 14,275,327 | 12,708,814 | 13,252,141 | 11,054,576 | 12,419,904 | 12,112,381 | 2,867,216 | 7 |
| NISOURCE | NI | 5,939,904 | 6,726,689 | 5,942,696 | 8,750,931 | 9,083,794 | 6,714,317 | 5,187,139 | 4,417,064 | 3,664,748 | 3,550,476 | 10,266,004 | 8,253,518 | 2,907,819 | 2 |
| SEMPRA ENERGY | SRE | 5,181,531 | 5,261,847 | 4,612,359 | 5,310,495 | 6,828,494 | 5,510,848 | 5,704,185 | 5,993,907 | 4,916,629 | 5,824,093 | 6,620,338 | 7,391,010 | 2,067,344 | 3 |
| **UGI CORP** | **UGI** | **1,928,934** | **1,957,314** | **3,556,214** | **2,997,409** | **1,823,833** | **1,330,248** | **1,302,095** | **1,723,837** | **1,351,056** | **1,067,524** | **1,637,548** | **2,218,726** | **863,046** | **2** |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*




## Recent Research

- *Janney/Utilities and Infrastructure Weekly – January 8 2018*
- *Janney/MWA: Adjusting Estimates to Reflect Tax Reform, Raising Fair Value to $16 – January 2 2018*
- *Janney/UTL: Valuation/Yield Compelling; Upgrading to BUY, Fair Value Remains $50 – December 26 2017*
- *Janney/RGCO: Initiating Coverage with NEUTRAL Rating, $29 Fair Value – December 20 2017*
- *Janney/Utilities and Infrastructure Weekly – December 18 2017*
- *Janney/Utilities and Infrastructure Weekly – December 11 2017*
- *Janney/XYL: HQ Visit Highlights, Maintain BUY Rating, $70 Fair Value – December 11 2017*
- *Janney/MWA: Investor Meeting Takeaways; Maintain BUY Rating, $15 Fair Value – December 6 2017*
- *Janney/Utilities and Infrastructure Weekly – December 4 2017*
- *Janney/Utilities and Infrastructure Weekly – November 20 2017*
- *Janney/SBSP3: Billed Volume/Profitability Continues to Improve; Maintain BUY Rating, R$38 Fair Value – November 20 2017*
- *Janney/Utilities and Infrastructure Weekly – November 13 2017*
- *Janney/CWCO: 3Q17 Reported Results Below Expectations; Maintain BUY Rating, $15 Fair Value – November 13 2017*

- *Janney/CPK: 3Q17 Results Above Expectations; Maintain BUY Rating, Raising Fair Value from $83 to $88 – November 10 2017*
- *Janney/APU: Equity Commitment Provides Future Backstop; Maintain BUY Rating, $58 Fair Value – November 9 2017*
- *Janney/UGI: FY18 Guidance Better Than Expected; Maintain BUY Rating, $56 Fair Value – November 9 2017*
- *Janney/AWR: 3Q17 Results Just Below Expectations; Maintain NEUTRAL Rating, Raising F.V. to $48 – November 8 2017*
- *Janney/AP: Growing Pains Materialized in 3Q; Maintaining BUY Rating, $21 Fair Value – November 7 2017*
- *Janney/MSEX: Adjusting Estimates; Maintaining BUY Rating, Raising Fair Value from $44 to $46 – November 3 2017*
- *Janney/SJI: Forward Outlook Strengthening; Maintain BUY Rating, $38 Fair Value – November 3 2017*
- *Janney/ES: 3Q17 Results Just Below Expectations; Maintain BUY Rating, $71 Fair Value – November 3 2017*
- *Janney/AWK: Lowering to NEUTRAL, Maintaining $90 Fair Value; Inline Quarter, Fair Value Achieved – November 3 2017*
- *Janney/WTS: 3Q17 Results Above Expectations; Raising Estimate, Fair Value from $67 to $69 – November 2 2017*
- *Janney/RXN: FY2Q18 Results Inline; Maintain BUY Rating, Raising Fair Value Target to $29 – November 2 2017*
- *Janney/MWA: Solid 4Q17 Results; Adjusting Estimates, Lowering Fair Value from $15.50 to $15 – November 2 2017*
- *Janney/WTR: 3Q17 Results Meet Expectations; Reiterate BUY Rating, $41 Fair Value – November 1 2017*
- *Janney/XYL: Solid Results, Positive Guidance Revision; Maintain BUY Rating, $70 Fair Value – October 31 2017*
- *Janney/UTL: 3Q17 Results Above Forecasts Maintain NEUTRAL Rating, Fair Value Raised from $50 to $52 – October 27 2017*
- *Janney/SJW: Excellent 3Q17 Results; Raising Fair Value from $59 to $68 – October 27 2017*
- *Janney/CWT: Solid 3Q17 Performance; Maintain NEUTRAL Rating, Fair Value Raised from $36 to $40 – October 27 2017*
- *Janney/AGR: Momentum Building; Reiterating BUY Rating, Raising Fair Value to $55 – October 24 2017*
- *Janney/Utilities and Infrastructure Weekly – October 23 2017*
- *Janney/IEX: Solid 3Q17 Results; 2017 Guidance Increased; Raising Fair Value to $117 – October 17 2017*
- *Janney/SJI: The "Go Big or Go Home" Question is Answered; Maintaining BUY Rating – October 17 2017*
- *Janney/Utilities and Infrastructure Weekly – October 16 2017*
- *Janney/Utilities and Infrastructure Weekly – October 09 2017*
- *Janney/CAFD: Discontinuing Coverage – October 06 2017*
- *Janney/XYL: Adjusting Estimates, Maintaining BUY rating, fair Value from $63 to $70 – October 05 2017*
- *Janney/MSEX: Primary Coverage Assumption; Upgrading to BUY, Fair Value to $44 – October 04 2017*
- *Janney/Utilities and Infrastructure Weekly – October 02 2017*
- *Janney/Utilities and Infrastructure Weekly – September 25 2017*
- *Janney/AWK: AWK Investor Visit Takeaways; Maintaining BUY Rating, $90 Fair Value – September 25 2017*
- *Janney/CCC: CCC To be Acquired by Kuraray at $21.50/Share; Rating Lowered to SELL – September 21 2017*
- *Janney/ES: Investor Meeting Takeaways; Maintain BUY Rating, $71 Fair Value – September 21 2017*
- *Janney/Utilities and Infrastructure Weekly – September 18 2017*

## IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

Chesapeake Utilities Corporation currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

South Jersey Industries, Inc. currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Unitil currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Janney Montgomery Scott LLC currently acts as a market-maker in the securities of AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Consolidated Water Co., California Water Service, IDEX Corporation, Middlesex Water Co., New Jersey Resources Corp., Rexnord Corporation, Companhia de Saneamento Basico do Estado de Sao Paulo (ADR), South Jersey Industries, Inc., SJW Corp, Unitil, Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc..

Janney Montgomery Scott LLC managed or co-managed a public offering of securities for Chesapeake Utilities Corporation, South Jersey Industries, Inc. and Unitil in the past 12 months.

Janney Montgomery Scott LLC received compensation for investment banking services from Chesapeake Utilities Corporation and South Jersey Industries, Inc. in the past 12 months.

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Avangrid, Inc., AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Chesapeake Utilities Corporation, Consolidated Water Co., California Water Service, Eversource Energy, IDEX Corporation, Middlesex Water Co., New Jersey Resources Corp., Rexnord Corporation, South Jersey Industries, Inc., SJW Corp, UGI Corporation, Unitil, WGL Holdings Inc., Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

Individual disclosures for the companies mentioned in this report can be obtained by accessing our Firm's Disclosure Site

Disclosure Site

## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

### Janney Montgomery Scott Ratings Distribution as of 12/31/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 111 | 48.05 | 31 | 27.93 |
| **NEUTRAL [N]** | 117 | 50.65 | 22 | 18.80 |
| **SELL [S]** | 3 | 1.30 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

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Michael Gaugler 215-665-1359 mgaugler@janney.com

January 22, 2018

INFRASTRUCTURE

# Utility & Infrastructure Weekly

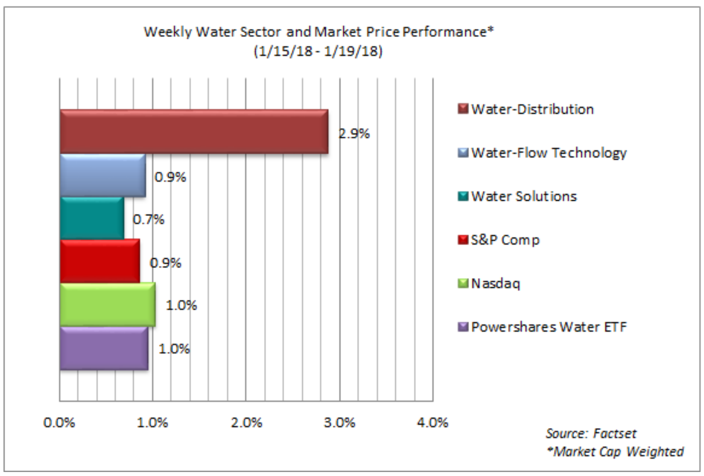
## Janney Coverage Universe

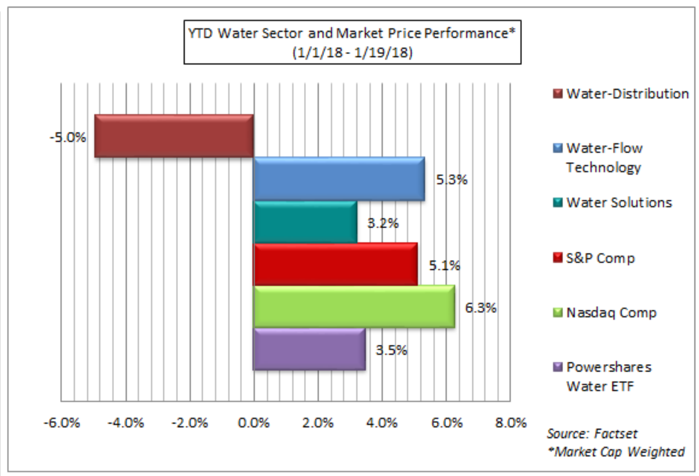
| Ticker | Name | Rating | Price | Fair Value | Upside | 17 EPS/ (P/E) | 18 EPS/ (P/E) | 19 EPS/ (P/E) |
|---|---|---|---|---|---|---|---|---|
| | | | WATER UTILITIES | | | | | |
| AWR | American States Water Company | Neutral | $54.92 | $48.00 | -13% | $1.89 (33.9) | $1.80 (29.1) | $1.92 (30.5) |
| AWK | American Water Works Company, Inc. | Neutral | $80.83 | $90.00 | 11% | $2.99 (28.4) | $3.25 (27.0) | $3.48 (24.9) |
| WTR | Aqua America, Inc. | Buy | $35.12 | $41.00 | 17% | $1.36 (26.4) | $1.44 (25.8) | $1.56 (24.4) |
| CWCO | Consolidated Water Co. Ltd. | Buy | $13.00 | $15.00 | 15% | $0.56 (22.4) | $0.76 (23.2) | $0.76 (17.1) |
| CWT | California Water Service Group | Neutral | $42.85 | $40.00 | -7% | $1.39 (42.4) | $1.47 (30.8) | $1.57 (29.1) |
| MSEX | Middlesex Water Company | Buy | $37.37 | $46.00 | 23% | $1.40 (25.2) | $1.71 (26.7) | $1.78 (21.9) |
| SBS | Companhia de Saneamento Basico do Estado de | Buy | $10.51 | $11.45 | 9% | $1.10 (7.9) | $1.16 (9.6) | $1.45 (9.0) |
| SBSP3-BR | Companhia de Saneamento Basico do Estado de | Buy | R$33.88 | R$38.00 | 12% | $3.65 (7.9) | $3.86 (9.3) | $4.80 (8.8) |
| SJW | SJW Group | Buy | $58.38 | $68.00 | 16% | $2.48 (22.7) | $2.52 (23.5) | $2.73 (23.2) |
| | | | INDUSTRIALS | | | | | |
| AME | AMETEK, Inc. | Buy | $75.20 | $71.00 | -6% | $2.57 (32.7) | $2.93 (29.3) | $3.21 (25.7) |
| AP | Ampco-Pittsburgh Corporation | Buy | $14.75 | $21.00 | 42% | ($0.62) (NM) | $0.95 (NM) | $1.29 (15.5) |
| CCC | Calgon Carbon Corporation | Sell | $21.30 | $21.50 | 1% | $0.51 (34.4) | $0.63 (41.8) | $0.78 (33.8) |
| IEX | IDEX Corporation | Neutral | $136.81 | $117.00 | -14% | $4.26 (NM) | $4.60 (32.1) | $4.89 (29.7) |
| MWA | Mueller Water Products, Inc. Class A | Buy | $12.66 | $16.00 | 26% | $0.44 (26.4) | $0.66 (28.8) | $0.79 (19.2) |
| RXN | Rexnord Corporation | Buy | $27.84 | $29.00 | 4% | $1.19 (NM) | $1.38 (23.4) | $1.60 (20.2) |
| WTS | Watts Water Technologies, Inc. Class A | Neutral | $78.65 | $69.00 | -12% | $3.01 (29.5) | $3.29 (26.1) | $3.45 (23.9) |
| XYL | Xylem Inc. | Buy | $70.46 | $70.00 | -1% | $2.40 (34.7) | $2.66 (29.4) | $3.05 (26.5) |
| | | | ELECTRIC & GAS UTILITIES | | | | | |
| AGR | Avangrid, Inc. | Buy | $48.52 | $55.00 | 13% | $2.14 (23.8) | $2.46 (22.7) | $2.63 (19.7) |
| CPK | Chesapeake Utilities Corporation | Buy | $72.65 | $88.00 | 21% | $2.74 (25.4) | $3.33 (26.5) | $3.95 (21.8) |
| ES | Eversource Energy | Buy | $61.35 | $71.00 | 16% | $3.14 (20.7) | $3.35 (19.5) | $3.53 (18.3) |
| NJR | New Jersey Resources Corporation | Buy | $39.45 | $50.00 | 27% | $1.73 (24.5) | $1.85 (22.8) | $2.07 (21.3) |
| RGCO | RGC Resources, Inc. | Neutral | $26.21 | $29.00 | 11% | N/A | $0.92 (NM) | $1.01 (28.5) |
| SJI | South Jersey Industries, Inc. | Buy | $29.71 | $38.00 | 28% | $1.14 (22.2) | $1.46 (26.1) | $1.79 (20.3) |
| UGI | UGI Corporation | Buy | $47.34 | $56.00 | 18% | $2.29 (NM) | $2.57 (20.7) | $2.79 (18.4) |
| UTL | Unitil Corporation | Buy | $44.07 | $50.00 | 13% | $2.03 (22.7) | $2.05 (21.7) | $2.25 (21.5) |
| WGL | WGL Holdings, Inc. | Neutral | $85.39 | $71.00 | -17% | $3.11 (26.1) | $3.68 (27.5) | $3.78 (22.6) |
| | | | MLPs | | | | | |
| APU | AmeriGas Partners, L.P. | Buy | $47.17 | $58.00 | 23% | $2.13 (22.2) | $3.13 (15.1) | $2.83 (16.7) |

Sources: FactSet (pricing, estimates), Janney Montgomery Scott, LLC Ratings/Fair Values

**Water utilities caught a bid, but it wasn't as strong as it appeared.** Water utilities (the Water-Distribution) segment rebounded last week, finishing up +2.9%. While 10 of 11 names finished higher, segment performance was boosted by the 4.9% gain in the shares/ADR's of Brazilian water utility SABESP, which had a magnified impact on our market cap-weighted calculation. The 10 year U.S. T-Note yield continued to climb, and finished the week at 2.64%, but investors decided to overlook that and buy water utilities anyway. The Water-Flow Technology segment added +0.9%, while the Water Solutions segment added 0.7%. The general market benchmarks finished higher (the S&P Composite and NASDAQ gained +0.9 and +1.0%, respectively) while the Powershares Water ETF added +1.0%.

YTD, the Water Flow Technology segment continues to outperform, at +5.3%. The Water Solutions segment is +3.2%, while the Water-Distributions segment is lower at -5.0%. With the U.S. government failing to reach a budget agreement Friday night, we'd expect continuing pressure on the 10 year T-Note, which could negatively impact yield-sensitive names (see Dan Wantrobski's note dated 1/18/18 for his opinion on where yields could be headed at https://jms.bluematrix.com/sellside/EmailDocViewer?encrypt=fbfc616f-a510-44b0-b997-5fa7297b0f51&mime=pdf&co=Janney&id=respub@janney.com&source=mail. The market benchmarks are all positive, with the S&P Composite +5.1%, the NASDAQ Composite +6.3% and the Powershares Water ETF at +3.5%.




**Largest Gains Last Week**

| Company Name | Ticker | Gain |
|---|---|---|
| **Water Distribution** | | |
| **Companhia de Saneamento Ba:** | **SBS** | **4.9%** |
| **Water Flow Technology** | | |
| Itron, Inc. | ITRI | 4.3% |
| **Water Solutions** | | |
| Veolia Environnement SA | VE | 2.9% |

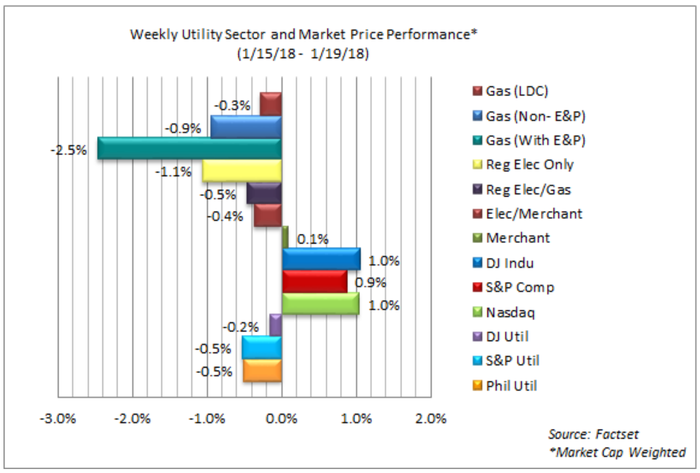
**Largest Losses Last Week**

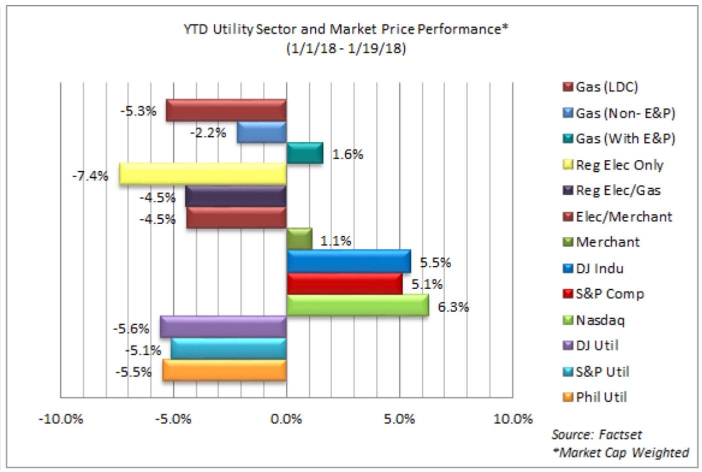
| Company Name | Ticker | Loss |
|---|---|---|
| **Water Distribution** | | |
| Connecticut Water Service, Inc. | CTWS | -0.2% |
| **Water Flow Technology** | | |
| **Mueller Water Products, Inc.** | **MWA** | **-6.6%** |
| **Water Solutions** | | |
| Air Products & Chemicals, Inc. | APD | -1.4% |

*Source:Factset*

**Utilitiy performance once again suffered as the 10-year T-Note rate rose.** Unlike the buying we observed in the water utilities last week, it was once again a sea of red in terms of electric & gas utility performance, as 6 of 7 segments finished lower. Last week's best performer was this week's worst performer (the Gas (with E&P) segment), which finished down by -2.5%. The best performance was from the Merchant segment, at +0.1%. The remaining segments finished in a range from -0.3% to -1.1%. Performance across the general market benchmarks was positive (the DJ Indu +1.0%, the S&P Composite +0.9% and the NASDAQ +1.0%), while the utility indexes all finished lower in a range of -0.2% to -0.5%.

YTD, 5 of 7 utility segments are lower. The Gas (with E&P) segment holds best-performer status at +1.6%, with the Merchant segment holding a +1.1% gain. All other utility segments are negative, with the Regulated Electric Only segment as the worst-performer at -7.4%. As we mentioned in our water industry overview on the previous page, pressure on the U.S. 10-year T-Note will likely lead to increasing yields for that investment product, putting pressure on utility shares near-term. The market benchmarks continue to welcome 2018 with strong positive returns; the DJ Industrials are up 5.5%, the S&P 500 is +5.1%, and the NASDAQ is +6.3%. The utility benchmarks are all negative, in a range of -5.1% to -5.6%.




| **Largest Gains Last Week** | | | **Largest Losses Last Week** | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Gas Distribution (LDC)** | | | **Gas Distribution (LDC)** | | |
| **RGC Resources, Inc.** | **RGCO** | **3.0%** | Southwest Gas Holdings, Inc. | SWX | -2.0% |
| **Gas (Non-E&P)** | | | **Gas (Non-E&P)** | | |
| OGE Energy Corp. | OGE | 2.2% | **UGI Corp.** | **UGI** | **-3.4%** |
| **Gas (With E&P)** | | | **Gas (With E&P)** | | |
| | | | EQT Corp. | EQT | -4.2% |
| **Regulated Electric Only** | | | **Regulated Electric Only** | | |
| PNM Resources, Inc. | PNM | 3.6% | Duke Energy Corp. | DUK | -2.6% |
| **Regulated Electric/Gas** | | | **Regulated Electric/Gas** | | |
| PG&E Corp. | PCG | 1.3% | **Chesapeake Utilities Corp.** | **CPK** | **-4.9%** |
| **Electric/Merchant** | | | **Electric/Merchant** | | |
| PPL Corp. | PPL | 1.6% | FirstEnergy Corp. | FE | -2.2% |
| **Merchant** | | | **Merchant** | | |
| Dynegy, Inc. | DYN | 5.3% | NRG Energy, Inc. | NRG | -6.3% |

*Source:Factset*

**Commentary** – The big news in our coverage universe came late Friday afternoon, as the Federal Energy Regulatory Commission (FERC) finally approved the PennEast Pipeline. This is good news for 3 companies in our coverage universe, **New Jersey Resources (NJR), South Jersey Industries (SJI)** and **UGI Corp (UGI)**, which are all investors in the project. Other approvals remain, but the project continues to push forward, albeit at a slow pace. In the 106-page decision, we found comments that FERC made in response to objectors to the project regarding the necessity of the project as worthy of reprint: "*With respect to the ability of alternatives to meet the project's need, our environmental review considered the potential for renewable energy and energy conservation, and the availability of capacity on existing or proposed natural gas systems, to serve as alternatives to the project and concluded that they do not presently serve as practical alternatives to the project. Specifically, the EIS stated that renewable energy and energy efficiency measures to reduce the dependence on natural gas is not a comparable replacement for the transportation of natural gas to be provided by the project. Moreover, the final EIS found that there is not sufficient available capacity on existing pipeline systems to transport all of the volumes contemplated to be transported by the PennEast Project to the range of delivery points proposed by PennEast, and that expansion of existing pipeline systems was not a feasible alternative.*

*The EIS also found that the proposed Atlantic Sunrise Project could not serve as a practical system alternative because there is customer demand for both projects (noting that approximately 100 percent of capacity of the Atlantic Sunrise Project, and 90 percent of the capacity of the PennEast Project had been contracted for), as well as the fact that the Atlantic Sunrise Project would not provide for the same delivery points for customers that have been identified for the PennEast Project.*

*We also find that NJRC's assertion that the PennEast Project is not needed based on the fact that pipeline utilization on long-haul pipelines from the Gulf Coast to markets in the Northeast has declined in recent years is unavailing. Pipeline utilization rates reflect actual gas flows over the facilities but do not indicate whether there is available firm capacity on the pipelines. As indicated above, the EIS found that there was insufficient firm capacity availbale on existing pipeline systems to provide the service proposed by PennEast*".

The FERC decision systematically takes apart the major objections raised by opponents; that said, a coalition of NIMBY (not-in-my-back-yard) groups have already vowed to continue their opposition to the project. PennEast still requires other permits to proceed to the construction phase, and we'd expect challenges every step of the way, which has been the norm thus far in the history of this project. That said, it is moving forward, and we consider the potential addition of the pipeline a substantial net positive for the region, given it would provide an alternative (and inexpensive) source of Marcellus Shale natural gas supply transported over a relatively short distance, versus the gas supplies now being brought into the region on long-haul pipelines from the Gulf of Mexico.

Our chart of the week is **Mueller Water Products (MWA)**. The shares declined noticeably last week after a competitor downgrade, and are now trading at 15.5x the FY2020 consensus forecast of $0.76. We expect some (if not all) of the weakness being seen in the shares is due to concerns over raw material input costs (scrap steel and copper, used to make bronze) which have remained at elevated levels throughout the most recent quarter. We see several scenarios where Mueller can offset those impacts; the company typically raises prices annually in February, and should certainly benefit from the recently passed tax reform that lowers the corporate rate from 35% to 21%. We also note housing starts continue to improve; which we display in Exhibit #1.

Investors should get a better handle on recent developments when the company reports FY1Q18 developments on February 1st (after market close) and on the ensuing conference call on February 2nd at 9AM. Our view is that with the shares trading at the current depressed levels, MWA is a very attractive takeover candidate, given 1) its margin profile, 2) it's fairly unlevered balance sheet, 3) its market leading positions, and 4) its growth platforms in the Mueller Technologies segment. We remind investors that another company in our coverage universe, **Calgon Carbon Corp (CCC)** experienced a similar valuation disconnect; it's now in the final stages of being acquired.  MWA shares are now trading below the 50 and 200 day moving averages, and although we observed large volume last week, the shares did close off the lows and just below the 200 day moving average.

**Exhibit #1, U.S. Housing Starts / MWA Share Price/Volume Chart**


*Sources: Schnitzer Steel, FactSet*

**TOP IDEAS**

**Electric/Gas Utilities**

**SJI:** recently announced regulated utility acquisitions, ongoing midstream investment opportunities, a generous yield and favorable valuation all factor into our positive investment thesis on SJI shares.

**Industrials**

**MWA:** Ongoing cost-out activities and free cash flow capability to support future growth, coupled with an attractive valuation are the primary determinants for MWA's position as our #1 pick in our industrial coverage universe.

**Water Utilities**

**WTR**: Within the U.S. water utility group, Aqua America is our top pick.  We see several future catalysts, including M&A transactions across its regulated business platforms, and a significant rate case filing in Pennsylvania (approximately two-thirds of total rate base) in 2H18.  We consider the company's asset base to be very high quality, and we assign the shares the highest price-to-earnings multiple within its sector.  Valuation remains favorable, with an attractive yield.

## COMPANY SNAPSHOTS

**Avangrid** | **AGR** | **$47.65**
**Buy/$55 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $14,727 | 2017E | $0.73 | $0.46 | $0.40 | $0.55 | $2.14 | 22.3x |
| Avg. Daily Vol (MM): | | 467,121 | 2018E | $0.81 | $0.48 | $0.47 | $0.70 | $2.46 | 19.4x |
| 52-wk Range: | $53.46 | $37.42 | 2019E | $0.86 | $0.50 | $0.49 | $0.78 | $2.63 | 18.1x |

Avangrid is a diversified energy and utility company. The company operates regulated utilities, electricity generation, and natural gas storage through three primary lines of business.

**Ametek** | **AME** | **$76.98**
**Buy/$71 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $17,791 | 2017E | $0.61 | $0.65 | $0.66 | $0.66 | $2.57 | 30.0x |
| Avg. Daily Vol (MM): | | 1,085,624 | 2018E | $0.69 | $0.74 | $0.78 | $0.71 | $2.93 | 26.3x |
| 52-wk Range: | $77.32 | $50.06 | 2019E | $0.75 | $0.82 | $0.85 | $0.79 | $3.21 | 24.0x |

Ametek is a global, diversified manufacturer of high technology products serving a diverse set of niche markets and applications. It reports results though two segments, Electronic Instruments Group (EIG) and Electromechanical Group (EMG).

**Ampco-Pittsburgh** | **AP** | **$14.20**
**Buy/$21 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $176 | 2017E | ($0.39) | ($0.16) | ($0.18) | $0.11 | ($0.62) | NA |
| Avg. Daily Vol: | | 31,032 | 2018E | $0.07 | $0.22 | $0.24 | $0.43 | $0.95 | NA |
| 52-wk Range: | $18.60 | $12.15 | 2019E | $0.25 | $0.41 | $0.25 | $0.37 | $1.29 | 11.0x |

Ampco-Pittsburgh is a global manufacturer of cast and forged steel rolls, open-die forge products and air & liquid processing products. It reports results through two segments: Forged and Engineered Products and Air & Liquid Processing. The company is headquartered in Carnegie, Pennsylvania.

**AmeriGas Partners, LP** | **APU** | **$47.01**
**Buy/$58 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $4,370 | 2017E | $0.95 | $1.33 | ($0.62) | ($0.62) | $1.04 | 45.2x |
| Avg. Daily Vol: | | 177,147 | 2018E | $1.06 | $2.10 | ($0.58) | $0.54 | $3.13 | 15.0x |
| 52-wk Range: | $50.00 | $42.00 | 2019E | N/A | N/A | N/A | N/A | N/A | |

AmeriGas Partners, L.P. is the largest retail marketer of propane in the United States, serving approximately 2 million customers from nearly 2000 distribution locations in all 50 states. UGI Corporation owns 26% of AmeriGas Partners, L.P.

*Source: Company data Janney Montgomery Scott, LLC estimates*

**American Water Works Co.** | **AWK** | **$83.01**
**Neutral/$90 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $14,807 | 2017E | $0.52 | $0.73 | $1.08 | $0.65 | $2.99 | 27.8x |
| Avg. Daily Vol: | | 1,187,177 | 2018E | $0.53 | $0.77 | $1.17 | $0.78 | $3.25 | 25.5x |
| 52-wk Range: | $92.37 | $71.00 | 2019E | $0.57 | $0.84 | $1.24 | $0.84 | $3.48 | 23.9x |

American Water Works Co. provides water and wastewater services to residential, commercial, and industrial customers in the U.S. and Canada, servicing 20 states of the U.S. and Ontario, Canada. It also enters into public/private partnerships, including operation and maintenance contracts, design, build, and operate contracts for the provision of services to water and wastewater facilities.

**American States Water Co.** | **AWR** | **$56.19**
**Neutral/$48 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,061 | 2017E | $0.34 | $0.62 | $0.57 | $0.36 | $1.89 | 29.7x |
| Avg. Daily Vol: | | 215,336 | 2018E | $0.37 | $0.48 | $0.58 | $0.37 | $1.80 | 31.2x |
| 52-wk Range: | $58.44 | $41.14 | 2019E | $0.39 | $0.52 | $0.61 | $0.39 | $1.92 | 29.3x |

American States Water Co. pumps, purchases, distributes and sells water and electricity primarily to residential and commercial customers. Approximately 90% of its business is conducted in the State of California. The company also manages water/wastewater systems on U.S. military

**Calgon Carbon Corporation** | **CCC** | **$21.40**
**Sell/$21.50 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,087 | 2017E | $0.10 | $0.12 | $0.10 | $0.14 | $0.51 | 42.0x |
| Avg. Daily Vol: | | 1,560,160 | 2018E | $0.14 | $0.15 | $0.19 | $0.16 | $0.63 | 34.0x |
| 52-wk Range: | $22.10 | $12.00 | 2019E | $0.17 | $0.18 | $0.23 | $0.20 | $0.78 | 27.4x |

Calgon Carbon provides services and solutions for purifying water & air, food, beverage and industrial process streams. It operates three business segments: Activated Carbon, Advanced Water Purification and Alternative Materials. The Activated Carbon segment manufactures granular activated carbon (GAC), which is used to remove inorganic compounds from water, air, liquids and gases, and powdered activated carbon (PAC), used for mercury removal from coal-fired electric powerplant emissions (MATS compliance). The Advanced Water Purification segment designs and fabricates systems that provide solutions to water problems. The Alternative Materials segment manufactures and sells carbon cloth, diatomaceous earth and perlite

**Chesapeake Utilities** | **CPK** | **$69.10**
**Buy/$88 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,129 | 2017E | $1.23 | $0.37 | $0.42 | $0.73 | $2.74 | 25.2x |
| Avg. Daily Vol: | | 58,683 | 2018E | $1.34 | $0.50 | $0.52 | $1.03 | $3.33 | 20.8x |
| 52-wk Range: | $86.35 | $63.11 | 2019E | $1.48 | $0.65 | $0.65 | $1.17 | $3.95 | 17.5x |

CPK's regulated energy business delivers natural gas to customers located in central and southern Delaware, Maryland's Eastern Shore, and Florida and electricity to customers in northeast and northwest Florida. CPK's regulated energy business also offers natural gas transmission service primarily through a 400+-mile interstate pipeline from various points in Pennsylvania and northern Delaware to natural gas distribution affiliates in Delaware and Maryland as well as to other utility and industrial customers in Pennsylvania, Delaware and the Eastern Shore of Maryland. CPK's unregulated energy business includes propane distribution and propane wholesale marketing operations. The natural gas marketing operation sells natural gas supplies directly to commercial and industrial customers in Florida, Delaware and Maryland. CPK distributes propane to customers in Delaware, the Eastern Shore of Maryland and Virginia, southeastern Pennsylvania and Florida. The propane wholesale marketing operation markets propane to wholesale customers including large independent oil and petrochemical companies, resellers and propane distribution companies in the

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| Consolidated Water Co., Ltd. | | | CWCO | $13.05 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$15 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $194 | 2016 | $0.14 | $0.15 | $0.18 | $0.11 | $0.58 | 22.5x |
| Avg. Daily Vol: | | 51,663 | 2017E | $0.18 | $0.11 | $0.08 | $0.20 | $0.56 | 23.3x |
| 52-wk Range: | $13.95 | $10.00 | 2018E | $0.22 | $0.16 | $0.16 | $0.23 | $0.76 | 17.2x |

Consolidated Water processes and supplies water to public utilities, commercial & tourist properties, residential properties and government facilities. It uses reverse osmosis technology to produce freshwater from seawater. The Retail water segment produces and supplies water to end users, including residential, commercial and government customers in the Cayman Islands and the Bahamas. The Bulk water segment produces and supplies water to government owned distribution systems in the Cayman Islands, Belize, the British Virgin Islands and The Bahamas. the Services segment provides engineering and management services for desalination projects.

| California Water Service Group | | | CWT | $43.80 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$40 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,101 | 2017E | 0.02 | 0.39 | 0.70 | 0.27 | 1.39 | 31.5x |
| Avg. Daily Vol: | | 224,290 | 2018E | 0.04 | 0.37 | 0.75 | 0.31 | 1.47 | 29.8x |
| 52-wk Range: | $46.15 | $32.75 | 2019E | 0.06 | 0.39 | 0.78 | 0.34 | 1.57 | 27.9x |

California Water Services Group provides water supply and related services through its subsidiaries. Its services include the production, purchase, storage, treatment, testing, distribution and sale of water for domestic, industrial, [public and irrigation uses. The company has operations in the states of California, Hawaii, New Mexico and Washington.

| Eversource Energy | | | ES | $60.79 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$71 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $19,264 | 2017E | $0.82 | $0.72 | $0.82 | $0.78 | $3.14 | 19.4x |
| Avg. Daily Vol: | | 1,945,076 | 2018E | $0.87 | $0.71 | $0.94 | $0.83 | $3.35 | 18.1x |
| 52-wk Range: | $66.15 | $54.10 | 2019E | $0.91 | $0.73 | $1.00 | $0.88 | $3.53 | 17.2x |

Eversource Energy is a diversified energy holding company that primarily comprises electric transmission, electric and gas distribution assets in the States of New Hampshire, Connecticut and Massachusetts.

| IDEX Corp. | | | IEX | $138.35 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$117 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $10,570 | 2017E | $1.03 | $1.08 | $1.08 | $1.07 | $4.26 | 32.5x |
| Avg. Daily Vol: | | 228,815 | 2018E | $1.12 | $1.17 | $1.17 | $1.14 | $4.60 | 30.1x |
| 52-wk Range: | $138.57 | $88.29 | 2019E | $1.19 | $1.24 | $1.24 | $1.21 | $4.89 | 28.3x |

IDEX manufactures pump products and engineered equipment. It operates and reports through three segments: Fluid & Metering, Health & Science and Fire Safety/Diversified Products. The Fluid & Metering segment designs, produces and distributes positive displacement pumps and flow meters, compressors, injectors and other fluid handling equipment. The Health & Science segment designs, produces and distributes a wide range of precision fluidics solutions for a wide range of applications. The FireSafety/Diversified Products segment produces firefighting pumps and controls, rescue tools

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Middlesex Water Company** **MSEX** **$38.53**
**Buy/$46 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $630 | 2017E | $0.27 | $0.32 | $0.46 | $0.33 | $1.40 | 27.5x |
| Avg. Daily Vol: | | 58,435 | 2018E | $0.30 | $0.40 | $0.60 | $0.40 | $1.71 | 22.5x |
| 52-wk Range: | $46.74 | $32.23 | 2019E | $0.32 | $0.43 | $0.62 | $0.42 | $1.78 | 21.6x |

Middlesex Water Company conducts water, wastewater and contract service operations in New Jersey, Delaware and Pennsylvania. The current revenue mix is 95% regulated operations, 5% non-regulated.

**Mueller Water Products, Inc.** **MWA** **$11.82**
**Buy/$16 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | **EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,874 | 2017E | $0.04 | $0.09 | $0.16 | $0.15 | $0.44 | 26.9x |
| Avg. Daily Vol: | | 1,158,783 | 2018E | $0.06 | $0.12 | $0.20 | $0.20 | $0.58 | 20.4x |
| 52-wk Range: | $14.02 | $10.84 | 2019E | $0.10 | $0.17 | $0.25 | $0.24 | $0.75 | 15.8x |

Mueller Water Products manufactures a broad range of water infrastructure and flow control products for use in water distribution networks, water and wastewater treatment facilities, gas distribution systems and fire protection piping systems. The company reports through through 2 segments: Mueller Co, and Mueller Technologies. The Mueller Co. segment primarily designs and manufactures fire hydrants and valves; the Mueller Technologies segment contains the metering, metering systems and leak detection operations.

**New Jersey Resources** **NJR** **$38.95**
**Buy/$50 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | **Adj EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $3,385 | 2017E | $0.47 | $1.21 | $0.20 | ($0.14) | $1.73 | 22.5x |
| Avg. Daily Vol: | | 567,486 | 2018E | $0.59 | $1.02 | $0.17 | $0.07 | $1.85 | 21.1x |
| 52-wk Range: | $45.45 | $36.25 | 2019E | $0.62 | $1.20 | $0.16 | $0.08 | $2.07 | 18.8x |

New Jersey Resources is an energy services holding company providing retail and wholesale energy services to customers in states from the Gulf Coast and Mid-Continent regions to the Appalachian and Northeast regions, the West Coast and Canada. The natural gas segment provides natural gas service to customers in central and northern New Jersey. Its energy services segment maintains and transacts around a portfolio of physical assets consisting of natural gas storage and transportation contracts. The company's clean energy ventures segment installs, operates, and maintains solar equipment on residential and commercial properties. Its midstream assets segment invests in natural gas midstream assets, such as natural gas

**Rexnord** **RXN** **$28.76**
**Buy $29 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | **EPS ($R)** | **Jun** | **Sep** | **Dec** | **Mar** | **FY** | **P/E** |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,989 | 2018E | $0.27 | $0.32 | $0.26 | $0.34 | $1.19 | 24.2x |
| Avg. Daily Vol (MM): | | 892,228 | 2019E | $0.30 | $0.36 | $0.31 | $0.41 | $1.38 | 20.8x |
| 52-wk Range: | $28.85 | $21.07 | 2020E | $0.36 | $0.42 | $0.37 | $0.45 | $1.60 | 18.0x |

Rexnord is a global diversified manufacturer that reports results through two segments: Process & Motion Control and Water Infrastructure. The company sells its products into a wide variety of end markets, including material handling, water infrastructure, food & beverage and aerospace.

**RGC Resources** **RGCO** **$27.00**
**Neutral $29 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | **EPS ($R)** | **Jun** | **Sep** | **Dec** | **Mar** | **FY** | **P/E** |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $195 | 2018E | $0.34 | $0.50 | $0.09 | $0.03 | $0.92 | 29.3x |
| Avg. Daily Vol (MM): | | 9,817 | 2019E | $0.35 | $0.53 | $0.10 | $0.04 | $1.01 | 26.7x |
| 52-wk Range: | $31.99 | $16.78 | 2020E | $0.38 | $0.57 | $0.12 | $0.06 | $1.11 | 24.3x |

RGC Resources is the local gas distribution utility serving the greater Roanoke, VA region. The company also has a 1% ownership interest in the Mountain Valley Pipeline.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Sabesp** | **SBSP3-BR** | **$35.41**
**Buy/R$38 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS ($R) | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $24,203 | 2017E | $0.99 | $0.49 | $1.32 | $0.86 | $3.65 | 9.7x |
| Avg. Daily Vol (MM): | | 938,200 | 2018E | $0.95 | $0.85 | $0.99 | $1.07 | $3.86 | 9.2x |
| 52-wk Range: | $35.99 | $25.61 | 2019E | $1.19 | $1.08 | $1.24 | $1.29 | $4.80 | 7.4x |

Companhia de Saneamento Basico do Estado de Sao Paulo (aka SABESP) collects and distributes water and provides sewage treatment services. It operates in 367 counties in the State of Sao Paulo.

**South Jersey Industries** | **SJI** | **$29.29**
**Buy/$38 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,328 | 2017E | $0.72 | $0.06 | ($0.05) | $0.41 | $1.14 | 25.7x |
| Avg. Daily Vol (MM): | | 393,546 | 2018E | $0.75 | $0.12 | $0.05 | $0.54 | $1.46 | 20.1x |
| 52-wk Range: | $38.40 | $29.04 | 2019E | $0.78 | $0.22 | $0.22 | $0.57 | $1.79 | 16.4x |

South Jersey Industries, Inc. is an energy services holding company that provides energy-related products and services through its subsidiaries, South Jersey Gas Company (SJG), South Jersey Resources Group (SJRG), Marina Energy (Marina), South Jersey Energy Company, and South Jersey Energy Service Plus. SJG distributes natural gas in the 7 southernmost counties of New Jersey. SJRG markets wholesale nautral gas storage, commodity and transportation in the mid-Atlantic, Appalachian and southern states. Marina develops and operates onsitge energy-related projects. SJE acquires and markets natural gas and electricity to retail end users and provides total energy management services to commercial and industrial customers. SJESP provides residential and light commercial service and installation of heating, ventilation, and air conditioning (HVAC) systems, plumbing services and

**SJW Corp.** | **SJW** | **$60.25**
**Buy/$68 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,236 | 2017E | $0.18 | $0.91 | $0.95 | $0.44 | $2.48 | 24.3x |
| Avg. Daily Vol (MM): | | 58,109 | 2018E | $0.23 | $0.75 | $1.00 | $0.54 | $2.52 | 23.9x |
| 52-wk Range: | $69.29 | $45.39 | 2019E | $0.27 | $0.77 | $1.11 | $0.58 | $2.73 | 22.1x |

SJW is not the typical water utility. Although the bulk of the company's revenues and earnings are derived from regulated water utility operations, other operations, including a real estate segment, add a non-regulated component to revenues. The company continues to look for external growth opportunities, and with its recent acquistion in Texas, has increased its geographic footprint.

**UGI Corp** | **UGI** | **$45.72**
**Buy/$56 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $7,917 | 2017E | $0.91 | $1.31 | $0.09 | ($0.02) | $2.29 | 20.0x |
| Avg. Daily Vol (MM): | | 897,369 | 2018E | $0.88 | $1.43 | $0.16 | $0.11 | $2.57 | 17.8x |
| 52-wk Range: | $52.00 | $45.04 | 2019E | $0.84 | $1.60 | $0.19 | $0.16 | $2.79 | 16.4x |

UGI Corp. is a distributor and marketer of energy products and services including natural gas, propane, butane and electricity. The company reports results in the following segments: AmeriGas Propane, Gas Utility, Midstream & Marketing, and UGI International.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| Unitil Corp | | | UTL | $43.81 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$50 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $645 | 2017E | $0.88 | $0.22 | $0.16 | $0.76 | $2.03 | 21.6x |
| Avg. Daily Vol (MM): | | 100,394 | 2018E | $0.88 | $0.26 | $0.15 | $0.76 | $2.05 | 21.4x |
| 52-wk Range: | $52.84 | $43.03 | 2019E | $0.95 | $0.31 | $0.21 | $0.80 | $2.25 | 19.5x |

UTL's regulated operating utilities serve approximately 109,900 electric and 70,800 gas customers in the states of Maine, New Hampshire and Massachusetts under various subsidiaries. The company also has non-regulated business operations (Usource) that provides energy brokering and management services.

| Watts Water Technologies | | | WTS | $80.50 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$69 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $2,749 | 2017E | $0.65 | $0.83 | $0.80 | $0.76 | $3.04 | 26.5x |
| Avg. Daily Vol (MM): | | 98,577 | 2018E | $0.77 | $0.86 | $0.82 | $0.84 | $3.29 | 24.5x |
| 52-wk Range: | $80.55 | $59.15 | 2019E | $0.83 | $0.90 | $0.86 | $0.87 | $3.45 | 23.3x |

Watts Water Technologies is a global manufacturer of products and systems focused on the control, conservation and quality of water and the comfort and safety of people using it. Its strategy is to be the preferred supplier of differentiated products and systems that manage and conserve the flow of fluids and energy into, through and out of buildings in the residential and commercial markets of the Americas, EMEA, and Asia Pacific.

| WGL Holdings, Inc. | | | WGL | $84.57 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Neutral/$71 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **Adj EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
| Market Cap (MM): | | $4,343 | 2016 | $1.18 | $1.78 | $0.33 | ($0.01) | $3.27 | 25.9x |
| Avg. Daily Vol (MM): | | 245,205 | 2017E | $1.13 | $1.87 | $0.26 | ($0.17) | $3.11 | 27.2x |
| 52-wk Range: | $86.89 | $77.96 | 2018E | $1.28 | $2.16 | $0.38 | ($0.15) | $3.68 | 23.0x |

WGL Holdings is comprised of both regulated and non-regulated energy-related businesses. Its regulated public utility, Washington Gas, provides natural gas service to over one million customers in the Washington, D.C. metro region, Maryland and Virginia. Its unregulated operations provide energy-related services to residential and commercial customers.

| Aqua America, Inc. | | | WTR | $35.72 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$41 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $6,347 | 2017E | $0.28 | $0.34 | $0.43 | $0.32 | $1.36 | 26.3x |
| Avg. Daily Vol (MM): | | 708,151 | 2018E | $0.31 | $0.37 | $0.44 | $0.32 | $1.44 | 24.8x |
| 52-wk Range: | $39.55 | $29.41 | 2019E | $0.34 | $0.41 | $0.47 | $0.34 | $1.56 | 22.9x |

Aqua America provides water and wastewater services to residential, commercial and industrial customers. The company serves approximately 3 million customers in Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana and North Carolina. The company also has a non-regulated business that are complementary to its core water services.

| Xylem, Inc. | | | XYL | $71.91 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Buy/$70 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $12,915 | 2017E | $0.39 | $0.59 | $0.65 | $0.77 | $2.40 | 30.0x |
| Avg. Daily Vol (MM): | | 821,543 | 2018E | $0.44 | $0.66 | $0.72 | $0.84 | $2.66 | 27.0x |
| 52-wk Range: | $75.16 | $46.67 | 2019E | $0.54 | $0.74 | $0.83 | $0.93 | $3.05 | 23.6x |

Xylem is a global leader in water application solutions that focuses on the technology-intensive equipment and services end market (a sector of the $500 billion global water market), and should see increasing long-term demand from a favorable end market environment for investment in water due to population growth, economic development, and increasing (and tighter) water quality regulations. The company has exposure to many different end markets, including industrial, public utility, commercial, residential, and agriculture.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

# Industry Valuation

## Water Utilities

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/19/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| | | $ | | | | |
| **AMERICAN STATES WATER** | **AWR** | **$56.19** | **Neutral** | **4** | **48.00** | **-15%** |
| **AMERICAN WATER WORKS** | **AWK** | **$83.01** | **Neutral** | **14** | **90.00** | **8%** |
| **AQUA AMERICA** | **WTR** | **$35.72** | **Buy** | **9** | **41.00** | **15%** |
| ARTESIAN RESOURCES | ARTNA | $39.20 | NR | 1 | | |
| **CALIFORNIA WATER** | **CWT** | **$43.80** | **Neutral** | **6** | **40.00** | **-9%** |
| CONNECTICUT WATER | CTWS | $52.95 | NR | 1 | | |
| **MIDDLESEX WATER** | **MSEX** | **$38.53** | **Buy** | **1** | **46.00** | **19%** |
| PURE CYCLE | PCYO | $8.65 | NR | 0 | | |
| **SABESP** | **SBSP3-BR** | **R$ 35.41** | **Buy** | **9** | **38.00** | **7%** |
| **SJW** | **SJW** | **$60.25** | **Buy** | **1** | **68.00** | **13%** |
| YORK WATER | YORW | $32.40 | NR | 1 | | |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| **AMERICAN STATES WATER** | **304** | **2,061** | **58** | **41** | **37** | **36** | **1%** | **67%** | **5** | **0.7** | **2,432** |
| **AMERICAN WATER WORKS** | **1,324** | **14,807** | **92** | **71** | **178** | **178** | **0%** | **86%** | **5** | **0.5** | **22,209** |
| **AQUA AMERICA** | **581** | **6,347** | **40** | **29** | **178** | **177** | **0%** | **54%** | **13** | **0.6** | **8,417** |
| ARTESIAN RESOURCES | 24 | 360 | 43 | 30 | 8 | 8 | 4% | 43% | 2 | 0.6 | 479 |
| **CALIFORNIA WATER** | **256** | **2,101** | **46** | **33** | **48** | **47** | **1%** | **72%** | **5** | **0.7** | **2,825** |
| CONNECTICUT WATER | 61 | 639 | 65 | 51 | 12 | 12 | 2% | 48% | 7 | 0.6 | 912 |
| **MIDDLESEX WATER** | **39** | **630** | **47** | **32** | **16** | **16** | **4%** | **53%** | **3** | **0.7** | **802** |
| PURE CYCLE | 76 | 205 | 9 | 5 | 24 | **23** | **4%** | 68% | 9 | 0.7 | 181 |
| **SABESP** | **900** | **24,203** | **36** | **26** | **684** | **340** | **50%** | **16%** | **0** | **0.8** | **33,819** |
| **SJW** | **75** | **1,236** | **69** | **45** | **21** | **15** | **28%** | **56%** | **1** | **0.7** | **1,683** |
| YORK WATER | 27 | 417 | 40 | 32 | 13 | **13** | **1%** | 35% | 8 | 0.8 | 506 |
| **MEDIAN** | **76** | **1,236** | | | | | **N/A** | **54%** | **5** | **0.7** | |

**Valuation Statistics**

| | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| **AMERICAN STATES WATER** | **3.9** | **15.8** | **14.7** | **13.7** | **34.7** | **32.1** | **31.4** |
| **AMERICAN WATER WORKS** | **2.7** | **14.4** | **12.8** | **12.4** | **31.7** | **27.6** | **25.3** |
| **AQUA AMERICA** | **3.3** | **18.4** | **17.5** | **16.2** | **27.1** | **26.4** | **25.1** |
| ARTESIAN RESOURCES | 2.5 | 13.2 | 13.0 | 12.3 | 27.8 | 27.4 | 25.1 |
| **CALIFORNIA WATER** | **3.1** | **17.0** | **13.9** | **12.8** | **43.4** | **33.0** | **30.9** |
| CONNECTICUT WATER | 2.2 | 20.4 | 20.2 | 18.9 | 25.5 | 24.1 | 22.5 |
| **MIDDLESEX WATER** | **2.8** | **14.8** | **NA** | **NA** | **27.9** | **27.5** | **22.5** |
| PURE CYCLE | 3.0 | -102.8 | NA | NA | -156.4 | -123.6 | NA |
| **SABESP** | **1.4** | **7.5** | **6.3** | **5.7** | **8.2** | **9.7** | **8.6** |
| **SJW** | **2.7** | **12.1** | **NA** | **NA** | **23.4** | **24.3** | **23.9** |
| YORK WATER | 3.5 | **17.3** | **17.3** | **16.5** | **35.2** | **NA** | **32.4** |
| **MEDIAN** | **2.8** | **14.8** | **14.3** | **13.3** | **27.8** | **26.9** | **25.1** |

**Balance Sheet and Credit Ratings**

| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | (S&P) |
| **AMERICAN STATES WATER** | **55%** | **0%** | **0%** | **35%** | **10%** | **A+** |
| **AMERICAN WATER WORKS** | **42%** | **0%** | **0%** | **46%** | **11%** | **A** |
| **AQUA AMERICA** | **49%** | **0%** | **0%** | **46%** | **4%** | |
| ARTESIAN RESOURCES | 56% | 0% | 0% | 41% | 3% | |
| **CALIFORNIA WATER** | **50%** | **0%** | **0%** | **40%** | **9%** | |
| CONNECTICUT WATER | 50% | 0% | 0% | 42% | 8% | A |
| **MIDDLESEX WATER** | **100%** | **0%** | **0%** | **0%** | **0%** | **A** |
| PURE CYCLE | 57% | 0% | 0% | 39% | 4% | |
| **SABESP** | **49%** | **0%** | **0%** | **50%** | **2%** | **BB** |
| **SJW** | **57%** | **0%** | **0%** | **43%** | **0%** | |
| YORK WATER | 57% | 0% | 0% | 43% | 0% | A- |
| **MEDIAN** | **50%** | **0%** | **0%** | **41%** | **8%** | |

**Liquidity and Profitability Ratios**

| | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield |
|---|---|---|---|---|---|---|---|---|---|---|
| | $ | % | % | X | X | X | % | % | % | % |
| **AMERICAN STATES WATER** | **1.02** | **1.8%** | **54** | **1.0** | **0.9** | **7** | **4%** | **12%** | **-2%** | **4%** |
| **AMERICAN WATER WORKS** | **1.66** | **2.0%** | **55** | **0.5** | **0.5** | **5** | **2%** | **9%** | **0%** | **4%** |
| **AQUA AMERICA** | **0.82** | **2.3%** | **59** | **0.5** | **0.5** | **5** | **4%** | **13%** | **0%** | **4%** |
| ARTESIAN RESOURCES | 0.94 | 2.4% | 66 | 0.7 | 0.6 | 6 | 3% | 10% | 1% | 4% |
| **CALIFORNIA WATER** | **0.72** | **1.6%** | **50** | **0.5** | **0.5** | **6** | **2%** | **7%** | **-4%** | **3%** |
| CONNECTICUT WATER | 1.19 | 2.2% | 56 | 1.2 | 1.1 | 6 | 3% | 10% | -5% | 4% |
| **MIDDLESEX WATER** | **0.90** | **2.3%** | **68** | **0.5** | **0.4** | **10** | **4%** | **11%** | **0%** | **3%** |
| PURE CYCLE | 0.00 | 0.0% | 0 | 43.6 | 43.6 | 0 | -2% | -2% | -2% | -1% |
| **SABESP** | **0.00** | **0.0%** | **0** | **1.1** | **1.1** | **4** | **8%** | **20%** | **15%** | **15%** |
| **SJW** | **0.87** | **1.4%** | **32** | **0.9** | **0.9** | **6** | **4%** | **13%** | **-3%** | **5%** |
| YORK WATER | 0.67 | 2.1% | 66 | 0.9 | 0.8 | 5 | 4% | 11% | 1% | 2% |
| **MEDIAN** | **$0.87** | **2.0%** | **55** | **0.9** | **0.8** | 6 | **4%** | **11%** | **0%** | **4%** |

**Financial Statistics/Estimates**

| | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
|---|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ | $ |
| **AMERICAN STATES WATER** | **14.34** | **154** | **166** | **177** | **1.62** | **1.75** | **1.79** |
| **AMERICAN WATER WORKS** | **30.94** | **1540** | **1735** | **1793** | **2.61** | **3.01** | **3.28** |
| **AQUA AMERICA** | **10.91** | **459** | **480** | **519** | **1.32** | **1.35** | **1.43** |
| ARTESIAN RESOURCES | 15.73 | 36 | 37 | 39 | 1.41 | 1.43 | 1.56 |
| **CALIFORNIA WATER** | **14.32** | **166** | **203** | **221** | **1.01** | **1.33** | **1.42** |
| CONNECTICUT WATER | 24.39 | 45 | 45 | 48 | 2.08 | 2.20 | 2.35 |
| **MIDDLESEX WATER** | **13.89** | **54** | **0** | **0** | **1.38** | **1.40** | **1.71** |
| PURE CYCLE | 2.89 | -2 | **0** | **0** | -0.06 | -0.07 | 0.00 |
| **SABESP** | **25.26** | **4524** | **5351** | **5889** | **4.31** | **3.65** | **4.10** |
| **SJW** | **22.05** | **139** | **0** | **0** | **2.57** | **2.48** | **2.52** |
| YORK WATER | 9.14 | 29 | **29** | **31** | 0.92 | 0.00 | 1.00 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Flow Technology

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/19/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| 3M CORPORATION | MMM | $248.18 | NR | 13 | | |
| **AMETEK** | **AME** | **$76.98** | **Buy** | **15** | **71.00** | **-8%** |
| BADGER METER | BMI | $49.85 | NR | 6 | | |
| CIRCOR INTERNATIONAL | CIR | $53.53 | NR | 4 | | |
| CRANE COMPANY | CR | $93.13 | NR | 10 | | |
| DXP ENTERPRISES | DXPE | $34.58 | NR | 4 | | |
| EMERSON ELECTRIC | EMR | $73.14 | NR | 20 | | |
| ENERGY RECOVERY | ERII | $8.81 | NR | 4 | | |
| FLOWSERVE | FLS | $43.71 | NR | 16 | | |
| FRANKLIN ELECTRIC | FELE | $45.40 | NR | 6 | | |
| **IDEX** | **IEX** | **$138.35** | **Neutral** | **10** | **117.00** | **-15%** |
| ITRON | ITRI | $74.80 | NR | 9 | | |
| MUELLER INDUSTRIES | MLI | $36.74 | NR | 0 | | |
| **MUELLER WATER PRODUCTS** | **MWA** | **$11.82** | **Buy** | **12** | **16.00** | **35%** |
| NORTHWEST PIPE | NWPX | $20.18 | NR | 1 | | |
| PENTAIR | PNR | $73.98 | NR | 15 | | |
| **REXNORD** | **RXN** | **$28.76** | **Buy** | **9** | **29.00** | **1%** |
| ROPER INDUSTRIES | ROP | $275.69 | NR | 14 | | |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$80.50** | **Neutral** | **10** | **69.00** | **-14%** |
| **XYLEM** | **XYL** | **$71.91** | **Buy** | **17** | **70.00** | **-3%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 2,013 | 147,818 | 249 | 174 | 596 | 595 | 0% | 69% | 4 | 0.9 | 160,362 |
| **AMETEK** | **1,650** | **17,791** | **77** | **50** | **231** | **227** | **2%** | **87%** | **2** | **1.1** | **19,573** |
| BADGER METER | 118 | 1,451 | 52 | 34 | 29 | 28 | 3% | 86% | 10 | 1.1 | 1,483 |
| CIRCOR INTERNATIONAL | 64 | 883 | 73 | 42 | 17 | 13 | 21% | 104% | 11 | 1.4 | 1,088 |
| CRANE COMPANY | 331 | 5,527 | 94 | 68 | 59 | 51 | 15% | 69% | 1 | 1.2 | 5,810 |
| DXP ENTERPRISES | 122 | 601 | 42 | 25 | 17 | 16 | 10% | 76% | 6 | 1.5 | 850 |
| EMERSON ELECTRIC | 3,538 | 46,710 | 74 | 57 | 639 | 635 | 1% | 72% | 2 | 1.1 | 48,704 |
| ENERGY RECOVERY | 291 | 472 | 11 | 6 | 54 | 36 | 33% | 35% | 18 | 1.7 | 391 |
| FLOWSERVE | 1,489 | 5,710 | 52 | 38 | 131 | 130 | 0% | 109% | 7 | 1.3 | 6,847 |
| FRANKLIN ELECTRIC | 138 | 2,116 | 47 | 36 | 47 | 39 | 17% | 79% | 4 | 1.3 | 2,307 |
| **IDEX** | **111** | **10,570** | **139** | **88** | **76** | **76** | **0%** | **99%** | **4** | **1.1** | **11,297** |
| ITRON | 153 | 2,897 | 80 | 58 | 39 | 38 | 1% | 98% | 2 | 1.0 | 3,159 |
| MUELLER INDUSTRIES | 199 | 2,124 | 44 | 28 | 58 | 56 | 3% | 93% | 5 | 1.2 | 2,418 |
| **MUELLER WATER PRODUCTS** | **3,730** | **1,874** | **14** | **11** | **159** | **155** | **3%** | **91%** | **1** | **1.3** | **2,032** |
| NORTHWEST PIPE | 55 | 194 | 21 | 12 | 10 | 9 | 3% | 87% | 19 | 1.2 | 189 |
| PENTAIR | 774 | 13,426 | 75 | 57 | 181 | 181 | 0% | 88% | 3 | 1.3 | 14,970 |
| **REXNORD** | **1,797** | **2,989** | **29** | **21** | **104** | **103** | **1%** | **104%** | **3** | **1.3** | **4,120** |
| ROPER INDUSTRIES | 645 | 28,220 | 277 | 185 | 102 | 100 | 2% | 97% | 5 | 1.1 | 33,312 |
| **WATTS WATER TECHNOLOGIES** | **86** | **2,749** | **81** | **59** | **28** | **27** | **1%** | **100%** | **3** | **1.2** | **3,046** |
| **XYLEM** | **1,222** | **12,915** | **75** | **47** | **180** | **179** | **1%** | **91%** | **4** | **1.1** | **15,027** |
| **MEDIAN** | **311** | **2,943** | | | | | **2%** | **89%** | **4** | **1.2** | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 12.2 | 18.9 | 17.3 | 16.5 | 30.4 | 27.42 | 25.0 |
| **AMETEK** | **4.7** | **19.4** | **17.9** | **16.5** | **35.2** | **29.8** | **26.6** |
| BADGER METER | 5.3 | 20.3 | 20.4 | 18.2 | 44.9 | 42.2 | 35.8 |
| CIRCOR INTERNATIONAL | 2.0 | 18.8 | 17.6 | 9.1 | 87.8 | 33.1 | 22.3 |
| CRANE COMPANY | 4.0 | 12.5 | 11.7 | 10.5 | 45.0 | 20.6 | 17.9 |
| DXP ENTERPRISES | 2.3 | 17.2 | 14.1 | 11.4 | 71.3 | 56.9 | 32.5 |
| EMERSON ELECTRIC | 5.4 | 14.5 | 15.0 | 13.7 | 28.9 | 27.7 | 24.7 |
| ENERGY RECOVERY | 6.9 | 97.0 | 10.9 | 10.4 | 440.5 | 141.0 | 19.5 |
| FLOWSERVE | 3.3 | NA | NA | 13.1 | 43.3 | NA | 23.7 |
| FRANKLIN ELECTRIC | 3.0 | 16.1 | 15.3 | 13.3 | 27.5 | 23.9 | 21.4 |
| **IDEX** | **5.9** | **21.0** | **19.3** | **17.9** | **39.2** | **32.4** | **29.1** |
| ITRON | 3.8 | 14.8 | 13.5 | 11.1 | 91.2 | 25.1 | 22.5 |
| MUELLER INDUSTRIES | 4.1 | 12.6 | NA | NA | 21.1 | NA | NA |
| **MUELLER WATER PRODUCTS** | **3.8** | **10.3** | **12.4** | **10.9** | **30.3** | **26.9** | **21.7** |
| NORTHWEST PIPE | 1.0 | -19.0 | -55.4 | 13.0 | -20.9 | -20.2 | 57.7 |
| PENTAIR | 2.7 | 16.3 | 15.1 | 14.3 | 26.0 | 20.9 | 18.8 |
| **REXNORD** | **2.6** | **12.6** | **10.8** | **9.9** | **44.9** | **22.8** | **17.9** |
| ROPER INDUSTRIES | 4.4 | 25.6 | 20.7 | 19.1 | 42.9 | 29.6 | 26.9 |
| **WATTS WATER TECHNOLOGIES** | **3.3** | **15.6** | **13.6** | **12.8** | **33.0** | **26.9** | **23.6** |
| **XYLEM** | **5.2** | **22.8** | **17.4** | **15.5** | **49.8** | **30.0** | **25.5** |
| **MEDIAN** | **3.9** | **16.3** | **15.0** | **13.1** | **41.0** | **27.6** | **23.7** |

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| 3M CORPORATION | 47% | 0% | 0% | 49% | 4% | AA- |
| **AMETEK** | **58%** | **0%** | **0%** | **37%** | **5%** | **BBB+** |
| BADGER METER | 87% | 0% | 0% | 0% | 13% | |
| CIRCOR INTERNATIONAL | 62% | 0% | 0% | 38% | 0% | |
| CRANE COMPANY | 60% | 0% | 1% | 39% | 0% | BBB |
| DXP ENTERPRISES | 53% | 0% | 0% | 36% | 11% | B |
| EMERSON ELECTRIC | 65% | 0% | 0% | 28% | 6% | A |
| ENERGY RECOVERY | 100% | 0% | 0% | 0% | 0% | |
| FLOWSERVE | 50% | 0% | 1% | 46% | 3% | BBB |
| FRANKLIN ELECTRIC | 75% | 0% | 1% | 19% | 4% | |
| **IDEX** | **60%** | **0%** | **0%** | **40%** | **0%** | **BBB** |
| ITRON | 66% | 0% | 2% | 30% | 1% | |
| MUELLER INDUSTRIES | 77% | 0% | 3% | 18% | 1% | |
| **MUELLER WATER PRODUCTS** | **50%** | **0%** | **0%** | **49%** | **1%** | **BB-** |
| NORTHWEST PIPE | 100% | 0% | 0% | 0% | 0% | |
| PENTAIR | 50% | 0% | 0% | 50% | 0% | BBB- |
| **REXNORD** | **40%** | **0%** | **0%** | **60%** | **1%** | |
| ROPER INDUSTRIES | 48% | 0% | 0% | 48% | 3% | BBB |
| **WATTS WATER TECHNOLOGIES** | **53%** | **0%** | **0%** | **37%** | **10%** | |
| **XYLEM** | **48%** | **0%** | **0%** | **46%** | **6%** | **BBB** |
| **MEDIAN** | **59%** | **0%** | **0%** | **38%** | **2%** | |

### Liquidity and Profitability Ratios

| | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 4.70 | 1.9% | 52 | 2.1 | 1.5 | 0 | 15% | 46% | 5% | 5% |
| **AMETEK** | **0.36** | **0.5%** | **15** | **2** | **1** | **11** | **7%** | **16%** | **6%** | **5%** |
| BADGER METER | 0.52 | 1.0% | 41 | 1.8 | 0.9 | 97 | 9% | 13% | 4% | 3% |
| CIRCOR INTERNATIONAL | 0.15 | 0.3% | 16 | 3.2 | 1.9 | 8 | 1% | 3% | 4% | 1% |
| CRANE COMPANY | 1.32 | 1.4% | 59 | 2.7 | 2.0 | 14 | 4% | 11% | 6% | 3% |
| DXP ENTERPRISES | 0.00 | 0.0% | 0 | 2.5 | 1.8 | 4 | 1% | 3% | 8% | 1% |
| EMERSON ELECTRIC | 1.94 | 2.7% | 81 | 1.6 | 1.3 | 16 | 7% | 20% | 7% | 5% |
| ENERGY RECOVERY | 0.00 | 0.0% | 0 | 6.7 | 6.4 | 2171 | 1% | 2% | 1% | 0% |
| FLOWSERVE | 0.76 | 1.7% | 62 | 2.1 | 1.3 | 8 | 3% | 8% | 2% | 2% |
| FRANKLIN ELECTRIC | 0.43 | 0.9% | 22 | 2.3 | 1.1 | 15 | 8% | 13% | 4% | 4% |
| **IDEX** | **1.48** | **1.1%** | **37** | **2.8** | **2.0** | **17** | **9%** | **18%** | **5%** | **4%** |
| ITRON | 0.00 | 0.0% | 0 | 1.7 | 1.3 | 22 | 2% | 5% | 3% | 1% |
| MUELLER INDUSTRIES | 0.40 | 1.1% | 24 | 2.8 | 1.7 | 13 | 7% | 12% | 5% | 4% |
| **MUELLER WATER PRODUCTS** | **0.16** | **1.4%** | **44** | **4.7** | **3.8** | **7** | **4%** | **11%** | **4%** | **3%** |
| NORTHWEST PIPE | 0.00 | 0.0% | 0 | 11.3 | 9.8 | -3 | -3% | -4% | 0% | -6% |
| PENTAIR | 1.40 | 1.9% | 62 | 1.6 | 1.1 | 8 | 4% | 11% | 7% | 5% |
| **REXNORD** | **0.00** | **0.0%** | **0** | **3.1** | **2.2** | **5** | **2%** | **9%** | **6%** | **3%** |
| ROPER INDUSTRIES | 1.65 | 0.6% | 20 | 1.1 | 0.9 | 9 | 5% | 12% | 5% | 4% |
| **WATTS WATER TECHNOLOGIES** | **0.76** | **0.9%** | **27** | **2.6** | **1.7** | **11** | **5%** | **12%** | **5%** | **4%** |
| **XYLEM** | **0.72** | **1.0%** | **41** | **1.8** | **1.3** | **10** | **5%** | **3%** | **4%** | **3%** |
| **MEDIAN** | **$0.48** | **1.0%** | **26** | **2** | **2** | | **4%** | **11%** | **5%** | **3%** |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 20.39 | 8493 | 9268 | 9742 | 8.16 | 9.05 | 9.91 |
| **AMETEK** | **16.30** | **1007** | **1093** | **1185** | **2.19** | **2.58** | **2.89** |
| BADGER METER | 9.42 | 73 | 73 | 81 | 1.11 | 1.18 | 1.39 |
| CIRCOR INTERNATIONAL | 27.39 | 58 | 62 | 120 | 0.61 | 1.62 | 2.41 |
| CRANE COMPANY | 23.25 | 465 | 497 | 553 | 2.07 | 4.52 | 5.20 |
| DXP ENTERPRISES | 15.03 | 49 | 60 | 74 | 0.49 | 0.61 | 1.06 |
| EMERSON ELECTRIC | 13.59 | 3358 | 3247 | 3556 | 2.53 | 2.64 | 2.96 |
| ENERGY RECOVERY | 1.27 | 4 | 36 | 38 | 0.02 | 0.06 | 0.45 |
| FLOWSERVE | 13.42 | 542 | 0 | 521 | 1.01 | 0.00 | 1.84 |
| FRANKLIN ELECTRIC | 14.99 | 144 | 151 | 173 | 1.65 | 1.90 | 2.12 |
| **IDEX** | **23.62** | **538** | **584** | **629** | **3.53** | **4.27** | **4.75** |
| ITRON | 19.89 | 214 | 235 | 284 | 0.82 | 2.98 | 3.32 |
| MUELLER INDUSTRIES | 8.94 | 192 | 0 | 0 | 1.74 | 0.00 | 0.00 |
| **MUELLER WATER PRODUCTS** | **3.08** | **198** | **164** | **186** | **0.39** | **0.44** | **0.55** |
| NORTHWEST PIPE | 21.04 | -10 | -3 | 15 | -0.97 | -1.00 | 0.35 |
| PENTAIR | 27.58 | 920 | 993 | 1046 | 2.85 | 3.53 | 3.93 |
| **REXNORD** | **11.22** | **328** | **380** | **417** | **0.64** | **1.26** | **1.61** |
| ROPER INDUSTRIES | 63.10 | 1304 | 1608 | 1745 | 6.43 | 9.32 | 10.26 |
| **WATTS WATER TECHNOLOGIES** | **24.33** | **195** | **224** | **238** | **2.44** | **3.00** | **3.41** |
| **XYLEM** | **13.71** | **660** | **861** | **967** | **1.44** | **2.40** | **2.82** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Water Solutions

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/19/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
| AIR PRODUCTS & CHEM | APD | $167.80 | NR | 21 | | | 1,057 | 36,717 | 171 | 134 | 219 | NA | 0% | 90% | 2 | 1.0 | 37,267 | 3.6 | 12.2 | 13.5 | 12.3 | 24.8 | 26.6 | 23.7 |
| ASHLAND | ASH | $74.33 | NR | 11 | | | 1,131 | 4,625 | 128 | 60 | 62 | 62 | 1% | 93% | 4 | 1.0 | 6,831 | 1.4 | 9.2 | 8.2 | 10.3 | -164.0 | 30.5 | 22.1 |
| CADIZ | CDZI | $14.13 | NR | 0 | | | 124 | 322 | 16 | 10 | 23 | 22 | 4% | 53% | 24 | 0.6 | 442 | -4.2 | -49.6 | NA | NA | -10.0 | NA | NA |
| **CALGON CARBON** | **CCC** | **$21.40** | **Sell** | **2** | **21.50** | **0%** | **1,907** | **1,087** | **22** | **12** | **51** | **50** | **2%** | **100%** | **4** | **1.0** | **1,300** | **2.7** | **16.9** | **NA** | **NA** | **79.3** | **41.6** | **29.9** |
| CANTEL MEDICAL | CMD | $113.10 | NR | 4 | | | 119 | 4,728 | 113 | 69 | 42 | 37 | 11% | 88% | 3 | 1.1 | 4,834 | 8.7 | 39.7 | 31.6 | 27.0 | 78.5 | 54.4 | 47.1 |
| **CONSOLIDATED WATER** | **CWCO** | **$13.05** | **Buy** | **2** | **15.00** | **15%** | **59** | **194** | **14** | **10** | **15** | **14** | **3%** | **54%** | **3** | **0.8** | **159** | **1.3** | **12.4** | **NA** | **NA** | **48.3** | **24.4** | **18.0** |
| ECHOLAB | ECL | $139.75 | NR | 22 | | | 1,068 | 40,376 | 140 | 118 | 289 | 287 | 0% | 90% | 7 | 1.0 | 48,399 | 5.6 | 16.9 | 16.4 | 15.2 | 33.8 | 29.77 | 26.3 |
| FORTIVE | FTV | $74.56 | NR | 17 | | | 1,812 | 25,914 | 76 | 54 | 348 | 307 | 12% | 81% | 5 | 1.1 | 29,077 | 7.5 | 20.1 | 18.8 | 16.7 | 29.7 | 26.1 | 23.0 |
| LAYNE CHRISTENSEN | LAYN | $13.42 | NR | 1 | | | 124 | 267 | 14 | 7 | 20 | 19 | 5% | 115% | 24 | 1.3 | 406 | 4.9 | 149.2 | 11.0 | 7.6 | -5.1 | -26.3 | 37.3 |
| STANTEC, INC. | STN | $28.65 | NR | 11 | | | 12 | 3,265 | 29 | 22 | 114 | 113 | 1% | 63% | 21 | 0.9 | 3,757 | 2.2 | 14.0 | 12.0 | 10.5 | 31.1 | 19.1 | 16.4 |
| TETRA TECH | TTEK | $49.85 | NR | 7 | | | 192 | 2,778 | 51 | 39 | 56 | 55 | 2% | 89% | 2 | 1.0 | 3,051 | 3.0 | 14.3 | 13.2 | 12.2 | 35.1 | 24.4 | 21.3 |
| VEOLIA ENVIRONNEMENT | VE | $25.75 | NR | 17 | | | 27 | 14,148 | 26 | 16 | 563 | 0 | 0% | 0% | 0 | 0.8 | 27,326 | 2.0 | 127.7 | 118.2 | 109.1 | 28.0 | 12.6 | 11.0 |
| **MEDIAN** | | | | | | | **192** | **3,265** | | | | | **2%** | **89%** | **4** | **1** | | **3.0** | **14.3** | **13.3** | **12.3** | **31.1** | **26.4** | **23.3** |

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
| AIR PRODUCTS & CHEM | N/A | N/A | N/A | N/A | N/A | A | 3.80 | 2.3% | 67 | 2.4 | 2.2 | 20 | 6% | 15% | 4% | 5% | 46.19 | 3060 | 2768 | 3025 | 6.77 | 6.31 | 7.08 |
| ASHLAND | NA | NA | NA | NA | NA | BB | 0.90 | 1.2% | 7,640 | 2.0 | 1.3 | 2 | -3% | -9% | 2% | 0% | 54.94 | 739 | 833 | 666 | -0.45 | 2.44 | 3.36 |
| CADIZ | -90% | 0% | 0% | 189% | 0% | | 0.00 | 0.0% | 0 | 1.8 | 1.8 | -1 | -43% | 0% | -4% | -11% | -3.39 | -9 | 0 | 0 | -1.41 | 0.00 | 0.00 |
| **CALGON CARBON** | **63%** | **0%** | **0%** | **36%** | **1%** | | **0.20** | **0.9%** | **182** | **2.8** | **1.7** | **12** | **2%** | **4%** | **4%** | **2%** | **8.07** | **77** | **0** | **0** | **0.27** | **0.52** | **0.72** |
| CANTEL MEDICAL | 81% | 0% | 0% | 19% | 0% | | 0.17 | 0.2% | 8 | 2.4 | 1.5 | 34 | 9% | 14% | 2% | 2% | 12.98 | 122 | 153 | 179 | 1.44 | 2.08 | 2.40 |
| **CONSOLIDATED WATER** | **94%** | **0%** | **6%** | **0%** | **0%** | | **0.34** | **2.6%** | **73** | **9.4** | **9.1** | **675** | **2%** | **3%** | **3%** | **2%** | **9.87** | **13** | **0** | **0** | **0.27** | **0.53** | **0.73** |
| ECHOLAB | 51% | 0% | 1% | 45% | 4% | A- | 1.64 | 1.2% | 33 | 1.2 | 0.8 | 11 | 7% | 18% | 3% | 4% | 25.00 | 2858 | 2949 | 3177 | 4.14 | 4.69 | 5.30 |
| FORTIVE | NA | NA | NA | NA | NA | | 0.28 | 0.4% | 11 | 2.0 | 1.5 | 17 | 11% | 22% | 5% | 5% | 10.00 | 1445 | 1546 | 1743 | 2.51 | 2.85 | 3.24 |
| LAYNE CHRISTENSEN | 34% | 0% | 0% | 66% | 0% | | 0.00 | 0.0% | 0 | 1.5 | 1.3 | 1 | -11% | -50% | -4% | -25% | 2.72 | 3 | 37 | 53 | -2.64 | -0.51 | 0.36 |
| STANTEC, INC. | 66% | 0% | 0% | 31% | 3% | | 0.40 | 1.4% | 48 | 1.5 | 1.5 | 10 | 4% | 8% | 6% | 4% | 13.21 | 268 | 314 | 357 | 0.92 | 1.50 | 1.75 |
| TETRA TECH | 5% | 0% | 7% | 58% | 30% | | 0.40 | 0.8% | 19 | 1.9 | 1.9 | 20 | 5% | 10% | 6% | 4% | 16.62 | 214 | 231 | 250 | 1.42 | 2.04 | 2.34 |
| VEOLIA ENVIRONNEMENT | 29% | 0% | 5% | 43% | 23% | BBB | 0.68 | 2.7% | 0 | 0.0 | 0.0 | 0 | 1% | 5% | 9% | 4% | 0.00 | 3183 | 3741 | 3947 | 0.63 | 1.23 | 1.44 |
| **MEDIAN** | **57%** | **0%** | **0%** | **41%** | **1%** | | **$0.34** | **0.9%** | | **2** | **2** | | **4%** | **8%** | **3%** | **2%** | **12.98** | 214 | 231 | 250 | 0.92 | 2.04 | 2.34 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Regulated Electrics/Gas)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/12/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| ALLIANT | LNT | $39.53 | NR | 8 | | |
| **AVANGRID** | **AGR** | **$48.52** | **Buy** | **10** | **55.00** | **13%** |
| AVISTA | AVA | $51.61 | NR | 2 | | |
| **CHESAPEAKE UTILITIES** | **CPK** | **$72.65** | **Buy** | **6** | **88.00** | **21%** |
| CMS ENERGY | CMS | $44.01 | NR | 15 | | |
| CONEDISON INC | ED | $79.49 | NR | 16 | | |
| DTE CORP | DTE | $103.92 | NR | 11 | | |
| **EVERSOURCE ENERGY** | **ES** | **$61.35** | **Buy** | **14** | **71.00** | **16%** |
| MGE ENERGY | MGEE | $59.00 | NR | 1 | | |
| NORTHWESTERN | NWE | $55.40 | NR | 5 | | |
| PG&E CORP | PCG | $43.82 | NR | 15 | | |
| SCANA | SCG | $44.05 | NR | 10 | | |
| **UNITIL CORP** | **UTL** | **$44.07** | **Buy** | **3** | **50.00** | **13%** |
| VECTREN CORP | VVC | $60.92 | NR | 5 | | |
| WISCONSIN ENERGY | WEC | $63.63 | NR | 12 | | |
| XCEL ENERGY | XEL | $45.15 | NR | 12 | | |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ALLIANT | 1,643 | 9,139 | 46 | 37 | 231 | 231 | 0% | 70% | 5 | 0.6 | 14,168 |
| **AVANGRID** | **467** | **14,996** | **53** | **37** | **309** | **56** | **82%** | **15%** | **10** | **0.7** | **20,737** |
| AVISTA | 128 | 3,324 | 53 | 38 | 64 | 64 | 1% | 79% | 0 | 0.6 | 5,262 |
| **CHESAPEAKE UTILITIES** | **54** | **1,187** | **86** | **63** | **16** | **16** | **4%** | **63%** | **3** | **0.7** | **1,602** |
| CMS ENERGY | 3,402 | 12,411 | 51 | 42 | 282 | 280 | 1% | 90% | 3 | 0.5 | 22,592 |
| CONEDISON INC | 1,900 | 24,647 | 90 | 72 | 310 | 309 | 0% | 58% | 5 | 0.3 | 40,178 |
| DTE CORP | 1,314 | 18,642 | 117 | 97 | 179 | 178 | 1% | 70% | 4 | 0.5 | 31,483 |
| **EVERSOURCE ENERGY** | **2,805** | **19,441** | **66** | **54** | **317** | **315** | **1%** | **75%** | **3** | **0.5** | **30,980** |
| MGE ENERGY | 107 | 2,045 | 69 | 59 | 35 | 35 | 0% | 39% | 4 | 0.7 | 2,337 |
| NORTHWESTERN | 289 | 2,692 | 64 | 55 | 49 | 48 | 1% | 94% | 2 | 0.6 | 4,764 |
| PG&E CORP | 6,279 | 22,472 | 72 | 42 | 513 | 512 | 0% | 84% | 1 | 0.5 | 40,853 |
| SCANA | 1,622 | 6,295 | 73 | 37 | 143 | - | 0% | 69% | 2 | 0.6 | 12,942 |
| **UNITIL CORP** | **54** | **649** | **53** | **43** | **15** | **14** | **2%** | **59%** | **1** | **0.6** | **1,064** |
| VECTREN CORP | 250 | 5,056 | 70 | 54 | 83 | 83 | 0% | 66% | 1 | 0.7 | 7,094 |
| WISCONSIN ENERGY | 1,267 | 20,080 | 70 | 56 | 316 | 315 | 0% | 74% | 5 | 0.5 | 30,703 |
| XCEL ENERGY | 3,423 | 22,926 | 40 | 508 | 508 | 507 | 0% | 74% | 4 | 0.5 | 38,142 |
| **MEDIAN** | | **10,775** | | | | | **44%** | **-** | **3** | **0.6** | **17452** |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| ALLIANT | 2.3 | 13.5 | 12.3 | 11.2 | 21.1 | 20.2 | 18.7 |
| **AVANGRID** | **1.0** | **10.2** | **10.2** | **9.3** | **23.4** | **21.8** | **20.1** |
| AVISTA | 2.0 | 11.7 | 11.9 | 10.4 | 24.0 | 27.5 | 25.2 |
| **CHESAPEAKE UTILITIES** | **4.8** | **0.8** | **0.7** | **0.7** | **36.0** | **33.4** | **31.2** |
| CMS ENERGY | 2.9 | 10.8 | 10.3 | 9.6 | 21.8 | 20.3 | 18.9 |
| CONEDISON INC | 1.7 | 10.7 | 10.0 | 9.8 | 19.9 | 19.4 | 18.7 |
| DTE CORP | 2.1 | 12.7 | 11.7 | 10.8 | 19.7 | 18.8 | 18.2 |
| **EVERSOURCE ENERGY** | **1.8** | **11.7** | **11.2** | **10.6** | **20.7** | **19.6** | **18.5** |
| MGE ENERGY | 2.8 | NA | NA | NA | 27.1 | 26.8 | 25.7 |
| NORTHWESTERN | 1.6 | 11.5 | 11.0 | 10.6 | 16.8 | 16.4 | 16.2 |
| PG&E CORP | 1.2 | 7.3 | 6.6 | 6.4 | 11.7 | 11.9 | 11.5 |
| SCANA | 1.1 | 8.3 | 8.3 | 9.6 | 10.6 | 10.9 | 13.8 |
| **UNITIL CORP** | **2.1** | **9.5** | **9.0** | **8.3** | **22.7** | **21.7** | **21.1** |
| VECTREN CORP | 2.9 | NA | 10.6 | 10.0 | 23.9 | 23.2 | 21.7 |
| WISCONSIN ENERGY | 2.2 | 12.1 | 11.7 | 11.1 | 21.4 | 20.5 | 19.4 |
| XCEL ENERGY | 2.1 | 10.8 | 10.2 | 9.7 | 20.4 | 19.6 | 18.5 |
| **MEDIAN** | **2.1** | **NA** | **10.3** | **9.8** | **21.3** | **20.2** | **18.8** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| ALLIANT | 42% | 2% | 0% | 49% | 6% | A- |
| **AVANGRID** | **69%** | **0%** | **0%** | **26%** | **5%** | **BBB+** |
| AVISTA | 42% | 0% | 0% | 48% | 10% | BBB |
| **CHESAPEAKE UTILITIES** | **42%** | **0%** | **0%** | **38%** | **20%** | |
| CMS ENERGY | 28% | 0% | 0% | 64% | 8% | BBB+ |
| CONEDISON INC | 47% | 0% | 0% | 49% | 3% | A- |
| DTE CORP | 41% | 0% | 0% | 55% | 3% | BBB+ |
| **EVERSOURCE ENERGY** | **47%** | **0%** | **0%** | **49%** | **4%** | **A** |
| MGE ENERGY | 65% | 0% | 0% | 34% | 1% | |
| NORTHWESTERN | 42% | 0% | 0% | 51% | 7% | BBB |
| PG&E CORP | N/A | N/A | N/A | N/A | N/A | A- |
| SCANA | N/A | N/A | N/A | N/A | N/A | BBB+ |
| **UNITIL CORP** | **33%** | **0%** | **0%** | **51%** | **16%** | **BBB+** |
| VECTREN CORP | 43% | 0% | 0% | 48% | 9% | A- |
| WISCONSIN ENERGY | 43% | 0% | 0% | 49% | 8% | A- |
| XCEL ENERGY | N/A | N/A | N/A | N/A | N/A | A- |
| **MEDIAN** | | | | | | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| ALLIANT | 1.26 | 3.2% | 66 | 0.7 | 0.1 | 5 | 3% | 10% | (4%) | 6% |
| **AVANGRID** | **1.73** | **3.6%** | **80** | **0.8** | **2.0** | **7** | **2%** | **4%** | **(1%)** | **6%** |
| AVISTA | 1.43 | 2.8% | 71 | 0.6 | 0.1 | 5 | 3% | 9% | (2%) | 7% |
| **CHESAPEAKE UTILITIES** | | **0.0%** | **47** | **0.4** | **0.1** | **11** | **4%** | **11%** | **(6%)** | **6%** |
| CMS ENERGY | 1.33 | 3.0% | 68 | 0.6 | 2.5 | 5 | 3% | 13% | (0%) | 6% |
| CONEDISON INC | 2.76 | 3.5% | 69 | 0.7 | 7.8 | 6 | 3% | 9% | (1%) | 7% |
| DTE CORP | 3.53 | 3.4% | 60 | 0.6 | 1.6 | 5 | 3% | 10% | 0% | 6% |
| **EVERSOURCE ENERGY** | **1.9** | **3.1%** | **61** | **0.6** | **0.5** | **6** | **3%** | **9%** | **1%** | **6%** |
| MGE ENERGY | 1.29 | 2.2% | 57 | 0.6 | 1.0 | 9 | 4% | 11% | 3% | 6% |
| NORTHWESTERN | 2.10 | 3.8% | 63 | 0.6 | 0.1 | 4 | 3% | 10% | (0%) | 6% |
| PG&E CORP | 2.12 | 4.8% | 47 | 0.7 | 1.8 | 7 | 2% | 8% | (4%) | 5% |
| SCANA | 1.73 | 3.9% | 77 | 0.6 | 2 | 5 | 3% | 11% | (5%) | 7% |
| **UNITIL CORP** | **1.44** | **3.3%** | **72** | **0.7** | **0.1** | **5** | **3%** | **9%** | **(5%)** | **5%** |
| VECTREN CORP | 1.80 | 3.0% | 62 | 0.6 | 0.7 | 8 | 4% | 12% | (0%) | 5% |
| WISCONSIN ENERGY | 2.08 | 3.3% | 68 | 0.7 | 0.4 | 6 | 3% | 11% | 4% | 6% |
| XCEL ENERGY | 1.44 | 3.2% | 61 | 0.6 | | 6 | 3% | 10% | (1%) | 7% |
| **MEDIAN** | | **3.2%** | **64** | **0.6** | | 6 | 3% | 10% | (1%) | **6%** |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| ALLIANT | 16.96 | 1050 | 1149 | 1265 | 1.87 | 1.96 | 2.12 |
| **AVANGRID** | **48.90** | **2038** | **2039** | **2224** | **2.07** | **2.23** | **2.42** |
| AVISTA | 25.69 | 449.1 | 442 | 504 | 2.15 | 1.88 | 2.05 |
| **CHESAPEAKE UTILITIES** | **27.36** | **116.1** | **126** | **148** | **2.86** | **2.87** | **3.40** |
| CMS ENERGY | 15.23 | 2097 | 2201 | 2353 | 2.02 | 2.17 | 2.33 |
| CONEDISON INC | 46.88 | 3771 | 4033 | 4114 | 3.99 | 4.09 | 4.26 |
| DTE CORP | 50.22 | 2488 | 2698 | 2920 | 5.28 | 5.52 | 5.70 |
| **EVERSOURCE ENERGY** | **33.80** | 2651 | **2774** | **2916** | **2.96** | **3.13** | **3.32** |
| MGE ENERGY | 20.89 | 0 | 0 | 0 | 2.18 | 2.20 | 2.30 |
| NORTHWESTERN | 34.68 | 412.9 | 435 | 449 | 3.30 | 3.38 | 3.43 |
| PG&E CORP | 35.39 | 5599 | 6190 | 6409 | 3.76 | 3.69 | 3.81 |
| SCANA | 40.06 | 1551 | 1555 | 1343 | 4.16 | 4.06 | 3.19 |
| **UNITIL CORP** | **20.82** | 111.6 | **119** | **128** | **1.94** | **2.03** | **2.09** |
| VECTREN CORP | 21.33 | 0 | 668 | 710 | 2.55 | 2.62 | 2.81 |
| WISCONSIN ENERGY | 28.29 | 2541 | 2624 | 2763 | 2.97 | 3.11 | 3.29 |
| XCEL ENERGY | 21.73 | 3547 | 3746 | 3936 | 2.21 | 2.31 | 2.45 |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Regulated Electrics Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/19/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| ALLETE | ALE | $71.98 | NR | 5 | | | 515 | 3,661 | 81 | 62 | 51 | 51 | 1% | 74% | 3 | 0.6 | 5,083 | 1.9 | 11.8 | 10.9 | 10.7 | 23.0 | 21.9 | 20.0 |
| CENTERPOINT ENERGY | CNP | $27.80 | NR | 15 | | | 3,564 | 11,983 | 30 | 25 | 431 | 409 | 5% | 80% | 0 | 0.8 | 19,360 | 3.5 | 9.5 | 9.4 | 8.9 | 24.0 | 20.9 | 19.0 |
| DUKE ENERGY | DUK | $76.82 | NR | 17 | | | 4,537 | 53,765 | 92 | 76 | 700 | 699 | 0% | 58% | 3 | 0.4 | 106,816 | 1.3 | 11.6 | 10.9 | 10.3 | 16.4 | 16.9 | 16.0 |
| EL PASO ELECTRIC | EE | $51.65 | NR | 4 | | | 236 | 2,097 | 61 | 45 | 41 | 40 | 1% | #### | 2 | 0.6 | 3,451 | 1.9 | 12.4 | 11.7 | 11.6 | 21.5 | 20.8 | 19.7 |
| GREAT PLAINS | GXP | $30.95 | NR | 7 | | | 861 | 6,675 | 35 | 27 | 216 | 215 | 0% | 87% | 4 | 0.6 | 9,607 | 1.3 | 9.9 | 10.1 | 9.5 | 16.7 | 18.8 | 18.0 |
| HAWAIIAN ELECTRIC | HE | $34.45 | NR | 6 | | | 325 | 3,748 | 39 | 32 | 109 | 108 | 1% | 51% | 10 | 0.6 | 5,369 | 1.8 | 9.6 | 9.7 | 9.2 | 19.7 | 21.1 | 18.9 |
| IDACORP | IDA | $83.86 | NR | 4 | | | 322 | 4,226 | 100 | 78 | 50 | 50 | 1% | 75% | 3 | 0.6 | 5,877 | 2.0 | 13.7 | 12.5 | 12.3 | 21.3 | 20.5 | 20.2 |
| PINNACLE WEST | PNW | $79.08 | NR | 14 | | | 779 | 8,836 | 92 | 76 | 112 | 111 | 0% | 85% | 3 | 0.5 | 13,843 | 1.8 | 10.3 | 9.6 | 9.0 | 20.0 | 18.5 | 17.8 |
| PNM RESOURCES | PNM | $37.00 | NR | 9 | | | 1,277 | 2,947 | 46 | 33 | 80 | 79 | 1% | 92% | 2 | 0.7 | 5,713 | 1.8 | 10.9 | 9.7 | 9.8 | 22.4 | 19.7 | 21.3 |
| PORTLAND GENERAL | POR | $42.40 | NR | 8 | | | 629 | 3,778 | 50 | 42 | 89 | 89 | 1% | 94% | 1 | 0.6 | 6,060 | 1.6 | 9.1 | 8.5 | 8.2 | 19.6 | 18.7 | 18.3 |
| SOUTHERN COMPANY | SO | $44.44 | NR | 19 | | | 8,809 | 44,601 | 54 | 44 | 1,004 | 1,003 | 0% | 56% | 6 | 0.4 | 95,446 | 1.8 | 12.8 | 10.7 | 10.5 | 15.4 | 15.0 | 14.8 |
| WESTAR ENERGY | WR | $50.95 | NR | 8 | | | 468 | 7,237 | 57 | 49 | 142 | 141 | 1% | 74% | 2 | 0.5 | 11,194 | 1.9 | 10.8 | 10.6 | 8.5 | 21.0 | 20.6 | 19.4 |
| **MEDIAN** | | | | | | | **704** | **5,450** | **55** | **44** | **110** | **109** | | **-** | **3** | **1** | **7,833** | **1.8** | **NA** | **10.3** | **9.6** | **20.5** | **20.1** | **18.9** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| ALLETE | 56% | 0% | 0% | 42% | 2% | BBB+ | 2.14 | 3.0% | 61 | 0.7 | 0.3 | 6 | 3% | 8% | 2% | 5% | 38.20 | 429 | 468 | 474 | 3.13 | 3.28 | 3.60 |
| CENTERPOINT ENERGY | 27% | 0% | 0% | 65% | 9% | A- | 1.11 | 4.0% | 77 | NA | 13.9 | 5 | 2% | 12% | 8% | 4% | 8.03 | 2,029 | 2,070 | 2,167 | 1.16 | 1.33 | 1.46 |
| DUKE ENERGY | 42% | 0% | 0% | 54% | 4% | A- | 3.56 | 4.6% | 91 | 0.9 | 3.9 | 5 | 2% | 6% | (2%) | 5% | 58.62 | 9,184 | 9,833 | 10,383 | 4.69 | 4.56 | 4.80 |
| EL PASO ELECTRIC | 43% | 0% | 0% | 51% | 6% | BBB | 1.34 | 2.6% | 54 | 0.5 | 0.1 | 5 | 3% | 9% | (3%) | 5% | 26.52 | 279 | 295 | 299 | 2.40 | 2.48 | 2.63 |
| GREAT PLAINS | 51% | 0% | 0% | 41% | 8% | BBB+ | 1.10 | 3.6% | 611 | 0.7 | 23.7 | 5 | 2% | 6% | 4% | 6% | 24.73 | 973 | 948 | 1,016 | 1.85 | 1.64 | 1.72 |
| HAWAIIAN ELECTRIC | 53% | 1% | 0% | 45% | 1% | BBB- | 1.24 | 3.6% | 76 | 0.5 | N/A | 7 | 2% | 12% | 5% | 7% | 19.03 | 558 | 551 | 584 | 1.75 | 1.63 | 1.83 |
| IDACORP | 56% | 0% | 0% | 44% | 0% | BBB | 2.36 | 2.8% | 54 | 0.5 | 0.6 | 5 | 3% | 9% | 1% | 5% | 42.74 | 428 | 468 | 477 | 3.94 | 4.09 | 4.16 |
| PINNACLE WEST | 50% | 0% | 0% | 47% | 3% | A- | 2.78 | 3.5% | 56 | 0.6 | 0.3 | 7 | 3% | 9% | (3%) | 5% | 43.14 | 1,344 | 1,443 | 1,535 | 3.95 | 4.27 | 4.43 |
| PNM RESOURCES | 36% | 0% | 0% | 55% | 9% | BBB+ | 1.06 | 2.9% | 49 | 0.6 | 0.1 | 4 | 2% | 7% | (7%) | 4% | 21.04 | 526 | 588 | 583 | 1.65 | 1.88 | 1.74 |
| PORTLAND GENERAL | 49% | 0% | 0% | 49% | 2% | BBB | 1.36 | 3.2% | 57 | 0.6 | 0.2 | 5 | 3% | 8% | (1%) | 5% | 26.35 | 667 | 710 | 740 | 2.16 | 2.26 | 2.32 |
| SOUTHERN COMPANY | NA | NA | NA | NA | NA | A- | 2.32 | 5.2% | 418 | 0.9 | 19.8 | 6 | 3% | 11% | (6%) | 5% | 25.00 | 7,464 | 8,890 | 9,130 | 2.89 | 2.96 | 3.00 |
| WESTAR ENERGY | 48% | 0% | 0% | 49% | 3% | BBB+ | 1.60 | 3.1% | 66 | 0.6 | 0.0 | 6 | 3% | 9% | (3%) | 4% | 26.84 | 1,038 | 1,061 | 1,313 | 2.43 | 2.47 | 2.62 |
| **MEDIAN** | **49%** | **0%** | **0%** | **49%** | **3%** | | | | **63** | **1** | **0** | **5** | **3%** | **9%** | **(1%)** | **5%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Electric Utilities (Combination Electrics With Merchant)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/19/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| | | $ | | | | |
| AMEREN | AEE | $55.16 | NR | 8 | | |
| AMERICAN ELECTRIC POWER | AEP | $67.76 | NR | 18 | | |
| DOMINION | D | $74.99 | NR | 17 | | |
| EDISON INTERNATIONAL | EIX | $62.12 | NR | 15 | | |
| ENTERGY | ETR | $76.99 | NR | 11 | | |
| EXELON | EXC | $37.97 | NR | 17 | | |
| FIRST ENERGY | FE | $29.40 | NR | 16 | | |
| NEXTERA ENERGY | NEE | $150.16 | NR | 17 | | |
| PPL CORP | PPL | $31.59 | NR | 14 | | |
| PUBLIC SERVICE ENT GROUP | PEG | $49.80 | NR | 13 | | |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| AMEREN | 1,450 | 13,384 | 65 | 51 | 243 | 242 | 0% | 32% | 4 | 0.5 | 21,776 |
| AMERICAN ELECTRIC POWER | 3,222 | 33,330 | 78 | 62 | 492 | 492 | 0% | 28% | 3 | 0.5 | 54,421 |
| DOMINION | 6,530 | 48,336 | 85 | 71 | 645 | 641 | 0% | 35% | 5 | 0.5 | 86,910 |
| EDISON INTERNATIONAL | 3,222 | 20,239 | 83 | 61 | 326 | 325 | 0% | 36% | 1 | 0.5 | 35,558 |
| ENTERGY | 1,383 | 13,878 | 88 | 70 | 180 | 180 | 0% | 41% | 3 | 0.5 | 29,775 |
| EXELON | 8,465 | 36,455 | 43 | 33 | 960 | 958 | 0% | 36% | 2 | 0.6 | 72,600 |
| FIRST ENERGY | 6,574 | 13,079 | 35 | 28 | 445 | 444 | 0% | 39% | 3 | 0.6 | 35,307 |
| NEXTERA ENERGY | 2,247 | 70,635 | 159 | 118 | 470 | 469 | 0% | 33% | 3 | 0.5 | 105,160 |
| PPL CORP | 8,504 | 21,581 | 40 | 30 | 683 | 683 | 0% | 32% | 3 | 0.6 | 41,793 |
| PUBLIC SERVICE ENT GROUP | 2,690 | 25,201 | 53 | 42 | 506 | 505 | 0% | 30% | 2 | 0.6 | 37,613 |
| **MEDIAN** | **3,222** | **23,391** | | | | | | | **3** | **1** | **39,703** |

### Valuation Statistics

| | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| AMEREN | 1.9 | 9.7 | 9.2 | 8.9 | 20.6 | 19.7 | 18.3 |
| AMERICAN ELECTRIC POWER | 1.9 | 10.0 | 10.2 | 9.7 | 17.2 | 18.8 | 17.4 |
| DOMINION | 3.2 | 15.4 | 13.6 | 12.0 | 19.7 | 20.9 | 18.6 |
| EDISON INTERNATIONAL | 1.7 | 8.5 | 8.0 | 7.5 | 15.6 | 14.4 | 14.6 |
| ENTERGY | 1.7 | 9.1 | 8.8 | 8.5 | 10.8 | 11.2 | 15.1 |
| EXELON | 1.4 | 9.2 | 8.6 | 8.1 | 14.2 | 14.3 | 12.9 |
| FIRST ENERGY | 2.1 | 8.1 | 8.0 | 8.5 | 11.2 | 9.7 | 11.7 |
| NEXTERA ENERGY | 2.9 | 12.9 | 11.4 | 10.9 | 24.3 | 22.3 | 20.6 |
| PPL CORP | 2.2 | 10.0 | 10.7 | 10.0 | 12.9 | 14.5 | 13.6 |
| PUBLIC SERVICE ENT GROUP | 1.9 | 10.1 | 9.9 | 9.7 | 17.2 | 17.1 | 16.4 |
| **MEDIAN** | **1.9** | **NA** | **9.6** | **9.3** | **16.4** | **15.8** | **15.7** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

### Balance Sheet and Credit Ratings

| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | (S&P) |
| AMEREN | 44% | 0% | 0% | 49% | 7% | BBB+ |
| AMERICAN ELECTRIC POWER | 42% | 0% | 0% | 50% | 8% | A- |
| DOMINION | N/A | N/A | N/A | N/A | N/A | BBB+ |
| EDISON INTERNATIONAL | 46% | 0% | 0% | 49% | 6% | BBB+ |
| ENTERGY | 32% | 1% | 0% | 59% | 8% | BBB+ |
| EXELON | 41% | 0% | 0% | 53% | 6% | BBB |
| FIRST ENERGY | 21% | 0% | 0% | 74% | 5% | BBB- |
| NEXTERA ENERGY | 40% | 0% | 0% | 53% | 7% | A- |
| PPL CORP | 32% | 0% | 0% | 63% | 5% | A- |
| PUBLIC SERVICE ENT GROUP | 48% | 0% | 0% | 0% | 5% | BBB+ |
| **MEDIAN** | **41%** | **0%** | **0%** | **53%** | **6%** | |

### Liquidity and Profitability Ratios

| | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield |
|---|---|---|---|---|---|---|---|---|---|---|
| | $ | % | % | X | X | X | % | % | % | % |
| AMEREN | 1.83 | 3.3% | 70 | 0.6 | 0.1 | 6 | 3% | 9% | (0%) | 5% |
| AMERICAN ELECTRIC POWER | 2.48 | 3.7% | 62 | 1.8 | NA | 6 | 1% | 3% | (1%) | 2% |
| DOMINION | 3.08 | 4.1% | 87 | 0.8 | NA | 5 | 3% | 16% | (4%) | 4% |
| EDISON INTERNATIONAL | 2.42 | 3.9% | 49 | 0.5 | 1.7 | 7 | 3% | 11% | (2%) | 6% |
| ENTERGY | 3.56 | 4.6% | -71 | NA | 11.9 | 5 | (1%) | (6%) | (8%) | (4%) |
| EXELON | 1.31 | 3.5% | 58 | 1.0 | 18.1 | 6 | 1% | 4% | (0%) | 3% |
| FIRST ENERGY | 1.44 | 4.9% | -12 | NA | 4.0 | 4 | #### | (66%) | 3% | (47%) |
| NEXTERA ENERGY | 3.93 | 2.6% | 43 | 0.6 | 24.9 | 5 | 3% | 12% | 4% | 5% |
| PPL CORP | 1.58 | 5.0% | 71 | 0.5 | 4.0 | 5 | 5% | 19% | (0%) | 8% |
| PUBLIC SERVICE ENT GROUP | 1.72 | 3.5% | 165 | 0.9 | 5.9 | 8 | 2% | 7% | (4%) | 4% |
| **MEDIAN** | | | **60** | **1** | **5** | **6** | **2%** | **8%** | **(1%)** | **4%** |

### Financial Statistics/Estimates

| | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
|---|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ | $ |
| AMEREN | 29.28 | 2252 | 2354 | 2441 | 2.68 | 2.80 | 3.01 |
| AMERICAN ELECTRIC POWER | 35.4 | 5468 | 5320 | 5605 | 3.94 | 3.61 | 3.89 |
| DOMINION | 23.26 | 5644 | 6406 | 7255 | 3.80 | 3.58 | 4.04 |
| EDISON INTERNATIONAL | 36.8 | 4207 | 4465 | 4730 | 3.97 | 4.31 | 4.26 |
| ENTERGY | 45.12 | 3280 | 3372 | 3505 | 7.11 | 6.90 | 5.09 |
| EXELON | 28.0 | 7903 | 8447 | 8953 | 2.68 | 2.66 | 2.94 |
| FIRST ENERGY | 14.11 | 4369 | 4436 | 4149 | 2.63 | 3.03 | 2.51 |
| NEXTERA ENERGY | 52.0 | 8177 | 9258 | 9647 | 6.19 | 6.73 | 7.30 |
| PPL CORP | 14.56 | 4188 | 3911 | 4194 | 2.45 | 2.18 | 2.33 |
| PUBLIC SERVICE ENT GROUP | 26.0 | 3718 | 3784 | 3886 | 2.90 | 2.92 | 3.04 |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Merchant Generators)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/19/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| | | $ | | | | |
| CALPINE | CPN | $15.12 | NR | 6 | | |
| COVANTA | CVA | $17.00 | NR | 8 | | |
| DYNEGY | DYN | $12.59 | NR | 5 | | |
| NRG ENERGY | NRG | $26.90 | NR | 5 | | |
| ORMAT TECHNOLOGIES | ORA | $66.58 | NR | 6 | | |
| VISTA ENERGY | VSTE | $19.49 | NR | 4 | | |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| CALPINE | 1,779 | 5,452 | 15 | 15 | 361 | 341 | 5% | 35% | 2 | 1.0 | 16,327 |
| COVANTA | 711 | 2,227 | 17 | 17 | 131 | 129 | 1% | 51% | 12 | 0.7 | 5,087 |
| DYNEGY | 5,459 | 1,816 | 13 | 13 | 144 | 128 | 10% | 41% | 4 | 1.2 | 10,418 |
| NRG ENERGY | 8,706 | 8,518 | 30 | 30 | 317 | 305 | 4% | 43% | 4 | 1.2 | 25,924 |
| ORMAT TECHNOLOGIES | 140 | 3,369 | 67 | 67 | 51 | 36 | 28% | 37% | 4 | 0.9 | 4,257 |
| VISTA ENERGY | 7,149 | 8,349 | 21 | 21 | 428 | NA | 17% | 59% | NA | 0.6 | 11,632 |
| **MEDIAN** | **3,619** | **4,410** | **19** | **19** | **230** | **129** | **8** | **42** | **4** | **1** | **11,025** |

**Valuation Statistics**

| | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| CALPINE | 1.7 | 9.0 | 8.9 | 8.1 | -196.4 | 60.4 | 17.3 |
| COVANTA | 4.7 | 12.4 | 12.4 | 11.3 | -113.3 | -68.7 | 154.5 |
| DYNEGY | 0.9 | 10.3 | 8.7 | 7.1 | -1.3 | 13.1 | 25.8 |
| NRG ENERGY | 4.2 | 8.0 | 10.5 | 9.1 | 21.9 | 28.4 | 12.4 |
| ORMAT TECHNOLOGIES | 3.1 | 13.1 | 12.4 | 11.5 | 35.6 | 28.6 | 26.5 |
| VISTA ENERGY | 1.3 | 7.3 | 8.2 | 8.3 | -51.3 | 19.1 | 23.9 |
| **MEDIAN** | **2.4** | **9.7** | **9.7** | **8.7** | **-26.3** | **23.8** | **24.9** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

**Balance Sheet and Credit Ratings**

| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating |
|---|---|---|---|---|---|---|
| | % | % | % | % | % | (S&P) |
| CALPINE | 21% | 0% | 0% | 76% | 2% | B+ |
| COVANTA | 10% | 0% | 0% | 89% | 1% | BB- |
| DYNEGY | 15% | 4% | 0% | 81% | 1% | B+ |
| NRG ENERGY | 6% | 0% | 0% | 87% | 6% | BB- |
| ORMAT TECHNOLOGIES | 54% | 0% | 0% | 42% | 4% | |
| VISTA ENERGY | 60% | 0% | 0% | 40% | 0% | |
| **MEDIAN** | **15%** | **0%** | **0%** | **81%** | **2%** | |

**Liquidity and Profitability Ratios**

| | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield |
|---|---|---|---|---|---|---|---|---|---|---|
| | $ | % | % | X | X | X | % | % | % | % |
| CALPINE | 0.00 | 0% | 0 | 0.0 | 23.2 | 1 | 0% | 3% | 15% | 2% |
| COVANTA | 1.00 | 6% | -195 | 0.0 | 1.4 | 2 | (0%) | (1%) | (4%) | (0%) |
| DYNEGY | 0.00 | 0% | 0 | 0.0 | 19.7 | 1 | (10%) | (50%) | 34% | ##### |
| NRG ENERGY | 0.24 | 0% | -2 | 0.0 | 34.8 | 2 | (2%) | (31%) | 21% | NA |
| ORMAT TECHNOLOGIES | 0.52 | 0% | 17 | 0.3 | 2.7 | 5 | 4% | 9% | 0% | 3% |
| VISTA ENERGY | 0.00 | 0% | 0 | 0.0 | NA | 1 | 147% | 0% | (8%) | 342% |
| **MEDIAN** | **$0.24** | 0.4% | **0** | **0** | **20** | **2** | **(0%)** | **(1%)** | **15%** | **1%** |

**Financial Statistics/Estimates**

| | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
|---|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ | $ |
| CALPINE | 9.10 | 1815 | 1836 | 2009 | -0.08 | 0.25 | 0.87 |
| COVANTA | 3.61 | 410 | 409 | 452 | -0.15 | -0.25 | 0.11 |
| DYNEGY | 14.00 | 1007 | 1193 | 1472 | -9.78 | 0.96 | 0.49 |
| NRG ENERGY | 6.47 | 3257 | 2463 | 2861 | 1.23 | 0.95 | 2.17 |
| ORMAT TECHNOLOGIES | 21.71 | 323.8 | 344 | 370 | 1.87 | 2.32 | 2.52 |
| VISTA ENERGY | 15.43 | 1601 | 1419 | 1395 | -0.38 | 1.02 | 0.82 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

## Rating Data

| | Symbol | Price 1/19/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| ATMOS ENERGY | ATO | $80.83 | NR | 9 | | |
| LACLEDE GROUP | LG | $68.40 | NR | 9 | | |
| **NEW JERSEY RESOURCES** | **NJR** | **$38.95** | **Buy** | 6 | **$50.00** | **28%** |
| NORTHWEST NATURAL GAS | NWN | $57.55 | NR | 7 | | |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$29.29** | **Buy** | 7 | **$38.00** | **30%** |
| **RGC RESOURCES** | **RGCO** | **$27.00** | **Neutral** | 1 | **$29.00** | **7%** |
| SOUTHWEST GAS | SWX | $74.24 | NR | 5 | | |
| **WGL HOLDINGS, INC.** | **WGL** | **$84.57** | **Neutral** | 5 | **$71.00** | **-16%** |
| **MEDIAN** | | | | | | |

## Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 837 | 8,969 | 94 | 73 | 111 | 110 | 1.2% | 70% | 3 | 0.6 | 12,062 |
| LACLEDE GROUP | 206 | 3,303 | 83 | 62 | 48 | N/A | 3.0% | 81% | 3 | 0.5 | 5,774 |
| **NEW JERSEY RESOURCES** | **467** | **3,385** | **45** | **36** | **87** | **86** | **1.3%** | **65%** | **5** | **0.7** | **4,765** |
| NORTHWEST NATURAL GAS | 140 | 1,652 | 70 | 56 | 29 | 28 | 1.4% | 67% | 11 | 0.6 | 2,412 |
| **SOUTH JERSEY INDUSTRIES** | **451** | **2,328** | **38** | **29** | **79** | **79** | **0.7%** | **72%** | **3** | **0.7** | **3,746** |
| **RGC RESOURCES** | **6** | **195** | **32** | **17** | **7** | **6** | **13.0%** | **23%** | **97** | **0.1** | **257** |
| SOUTHWEST GAS | 168 | 3,544 | 87 | 72 | 48 | 47 | 1.1% | 80% | 6 | 0.7 | 5,372 |
| **WGL HOLDINGS, INC.** | **210** | **4,343** | **87** | **78** | **51** | **51** | **1.1%** | **73%** | **12** | **0.7** | **6,605** |
| **MEDIAN** | **208** | **3,344** | | | | | **1.25%** | **71%** | **5** | **0.6** | |

## Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 2.2 | 12.0 | 11.6 | 10.6 | 23.9 | 22.5 | 21.1 |
| LACLEDE GROUP | 1.7 | 14.1 | 12.1 | 10.9 | 21.1 | 19.2 | 18.4 |
| **NEW JERSEY RESOURCES** | **2.7** | **22.8** | **19.1** | **15.5** | **25.6** | **22.5** | **21.5** |
| NORTHWEST NATURAL GAS | 2.0 | 9.5 | 10.5 | 10.0 | 27.1 | 26.4 | 25.3 |
| **SOUTH JERSEY INDUSTRIES** | **1.9** | **14.1** | **17.4** | **10.7** | **18.9** | **25.4** | **20.3** |
| **RGC RESOURCES** | **3.3** | **15.2** | **NA** | **NA** | **33.2** | **NA** | **29.3** |
| SOUTHWEST GAS | 2.1 | 9.3 | 9.9 | 9.4 | 23.3 | 21.4 | 20.4 |
| **WGL HOLDINGS, INC.** | **2.9** | **17.3** | **12.8** | **11.5** | **25.5** | **27.2** | **23.0** |
| **MEDIAN** | **2.1** | **14.1** | **12.1** | **10.7** | **24.7** | **22.5** | **21.3** |

## Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| ATMOS ENERGY | 53% | 0% | 0% | 41% | 6% | A |
| LACLEDE GROUP | 44% | 0% | 0% | 44% | 13% | |
| **NEW JERSEY RESOURCES** | **46%** | **0%** | **0%** | **37%** | **16%** | |
| NORTHWEST NATURAL GAS | 52% | 0% | 0% | 47% | 1% | A+ |
| **SOUTH JERSEY INDUSTRIES** | **45%** | **0%** | **0%** | **44%** | **11%** | **BBB+** |
| **RGC RESOURCES** | **48%** | **0%** | **0%** | **48%** | **4%** | |
| SOUTHWEST GAS | 48% | 0% | 0% | 48% | 4% | BBB+ |
| **WGL HOLDINGS, INC.** | **40%** | **1%** | **0%** | **38%** | **21%** | **A** |
| **MEDIAN** | **47%** | **0%** | **0%** | **44%** | **8%** | |

## Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | $1.94 | 2.4% | 49 | 0.5 | 0.3 | 9 | 3% | 10.4% | -4% | 5% |
| LACLEDE GROUP | $2.25 | 3.3% | 61 | 0.7 | 0.5 | 5 | 3% | 8.6% | 1% | 5% |
| **NEW JERSEY RESOURCES** | $1.09 | 2.8% | **68** | 0.7 | **0.5** | **5** | **4%** | **11.6%** | **-5%** | **5%** |
| NORTHWEST NATURAL GAS | $1.89 | 3.3% | 85 | 1.0 | 0.7 | 4 | 2% | 7.2% | 5% | 4% |
| **SOUTH JERSEY INDUSTRIES** | $1.12 | 3.8% | **221** | 0.5 | **0.4** | **3** | **3%** | **10.2%** | **-1%** | **5%** |
| **RGC RESOURCES** | $0.62 | 2.3% | **67** | 1.1 | **0.5** | **9** | **4%** | **10.7%** | **-3%** | **5%** |
| SOUTHWEST GAS | $1.98 | 2.7% | 56 | 0.8 | 0.8 | 7 | 3% | 9.3% | 2% | 4% |
| **WGL HOLDINGS, INC.** | $2.04 | 2.4% | **54** | **0.7** | **0.48** | **5** | **3%** | **12.6%** | **-9%** | **5%** |
| **MEDIAN** | **$1.92** | **2.7%** | **64** | **0.7** | **0.5** | 5 | **3%** | **10.3%** | **-2%** | **5%** |

## Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 36.74 | 1,007 | 1,043 | 1,142 | 3.38 | 3.60 | 3.83 |
| LACLEDE GROUP | 41.26 | 410 | 479 | 528 | 3.24 | 3.56 | 3.72 |
| **NEW JERSEY RESOURCES** | **14.3** | **209** | **249** | **307** | **1.52** | **1.73** | **1.82** |
| NORTHWEST NATURAL GAS | 29.5 | 254 | 229 | 241 | 2.12 | 2.18 | 2.27 |
| **SOUTH JERSEY INDUSTRIES** | **15.4** | 267 | **215** | **351** | **1.55** | **1.15** | **1.44** |
| **RGC RESOURCES** | **8.3** | 17 | **0** | **0** | **0.81** | **0.00** | **0.92** |
| SOUTHWEST GAS | 35.9 | 578 | 544 | 569 | 3.18 | 3.47 | 3.64 |
| **WGL HOLDINGS, INC.** | **29.3** | **381** | **517** | **574** | **3.31** | **3.11** | **3.67** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Upstream (Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/19/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| BLACK HILLS CORP | BKH | $53.66 | NR | 8 | | |
| ENERGEN | EGN | $57.48 | NR | 27 | | |
| EQUITABLE RESOURCES | EQT | $56.03 | NR | 18 | | |
| MDU RESOURCES, INC. | MDU | $26.07 | NR | 2 | | |
| NATIONAL FUEL GAS | NFG | $55.52 | NR | 7 | | |
| WILLIAMS COMPANIES | WMB | $32.30 | NR | 9 | | |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 505 | 2,870 | 72 | 53 | 53 | 53 | 0.95% | 96.1% | 7 | 0.8 | 6,412 |
| ENERGEN | 2,334 | 5,587 | 60 | 46 | 97 | 96 | 0.82% | 95.8% | 1 | 1.6 | 6,349 |
| EQUITABLE RESOURCES | 2,328 | 14,440 | 68 | 50 | 258 | 254 | 1.47% | 73.9% | 1 | 1.0 | 15,915 |
| MDU RESOURCES, INC. | 641 | 5,092 | 30 | 25 | 195 | 194 | 0.92% | 65.4% | 2 | 1.1 | 6,807 |
| NATIONAL FUEL GAS | 331 | 4,752 | 61 | 53 | 86 | 80 | 6.41% | 73.5% | 3 | 0.9 | 6,602 |
| WILLIAMS COMPANIES | 4,335 | 26,704 | 33 | 27 | 827 | 825 | 0.22% | 86.6% | 1 | 1.7 | 53,459 |
| **MEDIAN** | **1,484** | **5,339** | | | | | **0.94%** | **80%** | **2** | **1.1** | |

**Valuation Statistics**

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 1.7 | 11.6 | 10.3 | 10.1 | 39.2 | 15.9 | 15.6 |
| ENERGEN | 1.8 | 20.4 | 10.3 | 6.8 | -32.4 | 109.1 | 26.1 |
| EQUITABLE RESOURCES | 1.6 | 17.5 | 8.9 | 4.6 | -20.7 | 60.9 | 27.4 |
| MDU RESOURCES, INC. | 2.2 | 10.8 | NA | NA | 79.0 | 21.9 | 20.2 |
| NATIONAL FUEL GAS | 2.8 | 9.4 | 8.4 | 8.7 | 16.8 | 16.8 | 18.5 |
| WILLIAMS COMPANIES | 3.3 | 15.2 | 11.9 | 11.3 | -57.2 | 45.1 | 34.9 |
| **MEDIAN** | **2.0** | **13.4** | **10.3** | **8.7** | **-1.9** | **33.5** | **23.2** |

**Balance Sheet and Credit Ratings**

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 33% | 0% | 2% | 61% | 4% | BBB |
| ENERGEN | 81% | 0% | 0% | 19% | 0% | BB |
| EQUITABLE RESOURCES | 47% | 0% | 26% | 21% | 6% | BBB |
| MDU RESOURCES, INC. | 57% | 0% | 0% | 39% | 4% | BBB+ |
| NATIONAL FUEL GAS | 42% | 0% | 0% | 51% | 7% | BBB |
| WILLIAMS COMPANIES | 23% | 0% | 19% | 57% | 1% | BB+ |
| **MEDIAN** | **45%** | **0%** | **1%** | **45%** | **4%** | |

**Liquidity and Profitability Ratios**

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | $1.90 | 3.54% | 67.0 | 0.695 | 0.5 | 4 | 1% | 5% | (5%) | 2% |
| ENERGEN | $0.00 | 0.00% | 0.0 | 0.578 | 0.5 | 13 | (4%) | (6%) | (3%) | (3%) |
| EQUITABLE RESOURCES | $0.12 | 0.21% | 63.2 | 0.598 | 0.6 | 9 | (3%) | (8%) | (14%) | (4%) |
| MDU RESOURCES, INC. | $0.79 | 3.03% | 65 | 1.283 | 1.0 | 8 | 4% | 10% | 1% | NA |
| NATIONAL FUEL GAS | $1.66 | 2.99% | 49.7 | 1.267 | 1.2 | 6 | (5%) | (16%) | (0%) | (6%) |
| WILLIAMS COMPANIES | $1.20 | 3.72% | 193 | 0.974 | 0.9 | 3 | (1%) | (8%) | 9% | (2%) |
| **MEDIAN** | **$1.00** | **3.01%** | **64** | **0.8** | **0.8** | **7** | | | | |

**Financial Statistics/Estimates**

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 31.46 | 553 | 622 | 634 | 1.37 | 3.37 | 3.44 |
| ENERGEN | 32.67 | 311 | 615 | 933 | -1.77 | 0.53 | 2.20 |
| EQUITABLE RESOURCES | 35.12 | 911 | 1,792 | 3,423 | -2.71 | 0.92 | 2.05 |
| MDU RESOURCES, INC. | 12.05 | 629 | 0 | 0 | 0.33 | 1.19 | 1.29 |
| NATIONAL FUEL GAS | 19.92 | 702 | 790 | 756 | 3.30 | 3.30 | 3.00 |
| WILLIAMS COMPANIES | 9.82 | 3,513 | 4,476 | 4,720 | -0.56 | 0.72 | 0.93 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

## Rating Data

| | Symbol | Price 1/19/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| OGE ENERGY CORP | OGE | $31.42 | NR | 5 | | |
| ONEOK, INC. | OKE | $58.32 | NR | 13 | | |
| NISOURCE | NI | $23.94 | NR | 14 | | |
| SEMPRA ENERGY | SRE | $105.99 | NR | 10 | | |
| **UGI CORP** | **UGI** | **$45.72** | **Buy** | **5** | **56.00** | **22%** |
| **MEDIAN** | | | | | | |

## Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 1,168 | 6,275 | 37 | 31 | 200 | 199 | 0.24% | 63.8% | 1 | 0.8 | 9,533 |
| ONEOK, INC. | 8,657 | 23,939 | 60 | 47 | 410 | 381 | 0.64% | 74.2% | 1 | 1.4 | 31,851 |
| NISOURCE | 2,586 | 8,063 | 28 | 22 | 337 | 335 | 0.62% | 84.4% | 1 | 0.7 | 16,581 |
| SEMPRA ENERGY | 2,168 | 29,118 | 123 | 100 | 275 | 251 | 0.16% | 83.8% | 2 | 0.7 | 47,393 |
| **UGI CORP** | **923** | **7,917** | **52** | **45** | **173** | **172** | **0.58%** | **79.2%** | **1** | **0.7** | **12,585** |
| **MEDIAN** | **2,168** | **8,062.8** | | | | | **N/A** | **79%** | **1** | **0.7** | |

## Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 1.7 | 11.5 | 11.2 | 11.4 | 18.6 | 16.3 | 16.5 |
| ONEOK, INC. | 4.1 | 19.4 | 16.1 | 16.2 | 35.1 | 33.5 | 33.9 |
| NISOURCE | 1.8 | 11.8 | 10.8 | 10.8 | 23.5 | 20.1 | 20.1 |
| SEMPRA ENERGY | 2.0 | 15.8 | 12.7 | 12.7 | 19.4 | 20.0 | 20.0 |
| **UGI CORP** | **2.5** | **10.2** | **8.3** | **8.2** | **18.6** | **18.5** | **18.0** |
| **MEDIAN** | **2.0** | **11.8** | **11.2** | **11.4** | **19.4** | **20.0** | **20.0** |

**covered by Janney Research*

## Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 53% | 0% | 0% | 40% | 7% | A- |
| ONEOK, INC. | 36% | 0% | 1% | 54% | 9% | BBB |
| NISOURCE | 34% | 0% | 0% | 58% | 9% | BBB+ |
| SEMPRA ENERGY | 39% | 0% | 6% | 43% | 11% | BBB+ |
| **UGI CORP** | **38%** | **0%** | **7%** | **48%** | **7%** | |
| **MEDIAN** | **38%** | **0%** | **1%** | **48%** | **9%** | |

## Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | $1.33 | 4.23% | 64.92 | 0.629 | 0.46 | 5.08 | 3% | 10% | (0%) | 5% |
| ONEOK, INC. | $3.08 | 5.28% | 158.90 | 0.554 | 0.41 | 3.84 | 2% | 135% | 6% | 3% |
| NISOURCE | $0.70 | 2.92% | 84.15 | 0.519 | 0.32 | 4.05 | 2% | 8% | (9%) | 5% |
| SEMPRA ENERGY | $3.29 | 3.10% | 71.38 | 0.4 | 0.36 | 4.33 | 3% | 11% | (7%) | NA |
| **UGI CORP** | **$1.00** | **2.19%** | **39.63** | **1.004** | **0.84** | **5.59** | 3% | 13% | 5% | 5% |
| **MEDIAN** | **$1.33** | **3.10%** | **71** | **0.55** | **0.4** | 4 | | | | |

## Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 18.11 | 826 | 848 | 833 | 1.69 | 1.93 | 1.90 |
| ONEOK, INC. | 14.06 | 1,642 | 1,973 | 1,970 | 1.66 | 1.74 | 1.72 |
| NISOURCE | 12.96 | 1,404 | 1,530 | 1,530 | 1.02 | 1.19 | 1.19 |
| SEMPRA ENERGY | 52.85 | 3,001 | 3,736 | 3,726 | 5.45 | 5.29 | 5.29 |
| **UGI CORP** | **18.27** | **1,228** | **1,512** | **1,539** | **2.46** | **2.48** | **2.54** |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Historicals

# Utilities

Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/18 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| **AMERICAN STATES WATER** | **AWR** | **$56.19** | **$58.44** | **$41.14** | **304** | **0.74** | **2.3** | **3.0** | **1.1** | **-3.0** | **35.3** | **149.5** | **309.3** | **23.0** | **34.7** | **13.9** | **11.0** | **29.8** |
| **AMERICAN WATER WORKS** | **AWK** | **$83.01** | **$92.37** | **$71.00** | **1324** | **0.47** | **2.7** | **-6.7** | **-4.4** | **-9.3** | **17.9** | **144.6** | **0.0** | **16.1** | **29.4** | **14.9** | **23.6** | **29.0** |
| **AQUA AMERICA** | **WTR** | **$35.72** | **$39.55** | **$29.41** | **581** | **0.61** | **1.7** | **-5.0** | **-0.3** | **-8.9** | **22.8** | **87.7** | **192.0** | **18.8** | **16.1** | **14.5** | **3.2** | **33.8** |
| ARTESIAN RESOURCES | ARTNA | $39.20 | $43.22 | $29.83 | 24 | 0.56 | 2.1 | 4.2 | -6.8 | 1.7 | 27.8 | 104.7 | 201.7 | 6.1 | 2.4 | 27.5 | 18.9 | 23.9 |
| **CALIFORNIA WATER** | **CWT** | **$43.80** | **$46.15** | **$32.75** | **256** | **0.70** | **2.2** | **2.8** | **1.5** | **-3.4** | **35.5** | **160.8** | **227.4** | **29.7** | **9.7** | **-2.7** | **49.2** | **36.4** |
| CONNECTICUT WATER | CTWS | $52.95 | $65.04 | $50.56 | 61 | 0.57 | -0.2 | -9.8 | -16.2 | -7.8 | 2.3 | 102.5 | 199.6 | 23.1 | 5.3 | 7.8 | 50.4 | 5.0 |
| **MIDDLESEX WATER** | **MSEX** | **$38.53** | **$46.74** | **$32.23** | **39** | **0.67** | **3.1** | **-4.3** | **-15.5** | **-3.5** | **3.5** | **132.9** | **194.7** | **11.1** | **14.2** | **19.0** | **65.6** | **-4.9** |
| PURE CYCLE | PCYO | $8.65 | $8.75 | $5.05 | 76 | 0.71 | 1.2 | 1.8 | 12.3 | 3.6 | 68.0 | 193.2 | 19.8 | 123.7 | -36.8 | 20.0 | 14.6 | 51.8 |
| **SABESP** | **SBSP3-BR** | **$35.41** | **$35.99** | **$25.61** | **900** | **0.83** | **4.5** | **6.0** | **15.7** | **3.1** | **15.7** | **33.5** | **284.4** | **-6.3** | **-33.2** | **13.5** | **53.6** | **23.7** |
| **SJW** | **SJW** | **$60.25** | **$69.29** | **$45.39** | **75** | **0.74** | **3.2** | **-4.4** | **-7.3** | **-5.6** | **25.0** | **162.2** | **163.3** | **15.1** | **10.8** | **-5.3** | **92.9** | **16.2** |
| YORK WATER | YORW | $32.40 | $39.86 | $31.50 | 27 | 0.78 | 1.4 | -4.7 | -11.3 | -4.4 | -8.6 | 99.4 | 175.3 | 22.5 | 14.0 | 10.2 | 56.2 | -9.6 |
| **Average** | | | | | **333** | **0.67** | **2.2** | **-1.6** | **-2.8** | **-3.4** | **22.3** | **124.6** | **178.9** | **25.7** | **6.1** | **12.1** | **39.9** | **21.4** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2810.30 | 2810.33 | 2257.02 | ----- | 1.03 | 0.9 | 4.8 | 9.7 | 5.1 | 24.1 | 89.1 | 112.1 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26071.72 | 26153.42 | 19732.36 | ----- | 1.00 | 1.0 | 5.3 | 12.6 | 5.5 | 32.1 | 91.0 | 115.5 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7336.38 | 7336.38 | 5522.69 | ----- | 1.06 | 1.0 | 5.3 | 11.1 | 6.3 | 32.4 | 134.0 | 213.5 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | 31.33 | $31.34 | $24.79 | ----- | NA | 1.0 | 4.2 | 7.6 | 3.5 | 26.8 | 46.6 | 78.7 | 27.1 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Flow Technology
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/18 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % |
| 3M CORP | MMM | $248.18 | $249.00 | $173.55 | 2013 | 0.89 | 1.5 | 4.1 | 13.8 | 5.4 | 42.2 | 184.0 | 330.1 | 20.0 | -5.9 | 21.7 | 34.9 |
| **AMETEK** | **AME** | **$76.98** | **$77.32** | **$50.06** | **1650** | **1.12** | **2.4** | **6.8** | **12.7** | **6.2** | **52.8** | **101.9** | **373.3** | **0.6** | **2.5** | **-8.6** | **50.0** |
| BADGER METER | BMI | $49.85 | $52.10 | $34.40 | 118 | 1.11 | 2.4 | 4.4 | 16.3 | 4.3 | 32.6 | 114.3 | 213.6 | 10.4 | 0.0 | 27.7 | 30.9 |
| CIRCOR INT'L | CIR | $53.53 | $72.96 | $42.25 | 64 | 1.39 | 2.1 | 10.3 | -0.1 | 10.0 | -11.7 | 32.9 | 45.5 | -25.2 | -29.9 | 54.4 | -24.8 |
| CRANE COMPANY | CR | $93.13 | $93.59 | $67.62 | 331 | 1.18 | 0.9 | 5.3 | 13.0 | 4.4 | 30.5 | 113.4 | 236.2 | -11.1 | -16.6 | 54.1 | 25.9 |
| EMERSON ELECTRIC | EMR | $73.14 | $74.45 | $56.77 | 3538 | 1.13 | -1.0 | 6.7 | 13.2 | 5.0 | 29.2 | 53.3 | 102.8 | -9.6 | -19.7 | 21.0 | 29.0 |
| ENERGY RECOVERY | ERII | $8.81 | $11.30 | $6.13 | 291 | 1.72 | -1.9 | -3.1 | 5.9 | 0.7 | -15.0 | 138.1 | 0.0 | -5.0 | 34.2 | 46.4 | -15.5 |
| FLOWSERVE | FLS | $43.71 | $52.10 | $37.51 | 1489 | 1.32 | -0.7 | 6.6 | -1.3 | 4.2 | -11.6 | -10.9 | 83.6 | -23.4 | -28.6 | 16.0 | -11.2 |
| FRANKLIN ELECTRIC | FELE | $45.40 | $47.20 | $36.00 | 138 | 1.32 | -0.3 | 0.0 | 0.8 | -1.1 | 17.3 | 45.1 | 201.9 | -15.1 | -27.1 | 45.7 | 19.2 |
| **IDEX** | **IEX** | **$138.35** | **$138.57** | **$88.29** | **111** | **1.06** | **1.1** | **5.0** | **11.3** | **5.1** | **54.4** | **200.4** | **456.6** | **7.0** | **0.0** | **19.5** | **48.5** |
| ITRON | ITRI | $74.80 | $79.95 | $57.80 | 153 | 1.02 | 4.3 | 6.6 | -5.1 | 9.7 | 22.8 | 66.3 | -11.8 | 2.1 | -14.4 | 73.7 | 8.5 |
| LYDALL INC | LDL | $50.25 | $63.20 | $45.45 | 62 | 1.30 | 0.8 | -1.1 | -14.8 | -1.0 | -13.9 | 224.8 | 458.3 | 86.3 | 8.1 | 74.3 | -17.9 |
| MUELLER INDUSTRIES | MLI | $36.74 | $43.96 | $27.72 | 199 | 1.18 | -0.5 | 3.3 | 7.9 | 3.7 | 19.4 | 88.5 | 317.9 | 9.4 | -19.9 | 49.2 | 11.4 |
| **MUELLER WATER PRODUCTS** | **MWA** | **$11.82** | **$14.02** | **$10.84** | **3730** | **1.35** | **-6.6** | **-7.0** | **-2.6** | **-5.7** | **-6.8** | **104.4** | **82.0** | **10.1** | **-15.3** | **56.4** | **-4.6** |
| NORTHWEST PIPE | NWPX | $20.18 | $21.11 | $12.41 | 55 | 1.15 | 1.1 | 11.6 | -1.0 | 5.4 | 15.1 | -14.6 | -50.2 | -20.2 | -62.8 | 53.9 | 11.1 |
| PENTAIR | PNR | $73.98 | $74.84 | $57.44 | 774 | 1.29 | 0.3 | 6.9 | 4.6 | 4.8 | 28.2 | 55.3 | 229.5 | -13.2 | -23.8 | 16.0 | 28.6 |
| **REXNORD** | **RXN** | **$28.76** | **$28.85** | **$21.07** | **1797** | **1.31** | **3.3** | **15.1** | **12.8** | **10.5** | **33.3** | **45.2** | **0.0** | **4.4** | **-35.8** | **8.1** | **32.8** |
| ROPER INDUSTRIES | ROP | $275.69 | $277.41 | $185.11 | 645 | 1.05 | 0.1 | 6.6 | 9.6 | 6.6 | 49.6 | 144.2 | 476.4 | 13.4 | 22.1 | -2.9 | 42.4 |
| SPX | SPW | $33.05 | $33.75 | $21.97 | 163 | 1.48 | 0.4 | 6.4 | 14.2 | 5.3 | 38.5 | 91.0 | 57.9 | -12.4 | -56.5 | 154.2 | 32.3 |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$80.50** | **$80.55** | **$59.15** | **86** | **1.21** | **2.4** | **5.8** | **20.3** | **6.0** | **27.6** | **91.1** | **255.5** | **3.6** | **-20.8** | **32.8** | **17.8** |
| **XYLEM** | **XYL** | **$71.91** | **$75.16** | **$46.67** | **1222** | **1.11** | **2.1** | **6.0** | **12.9** | **5.4** | **48.5** | **181.3** | **0.0** | **11.6** | **-2.6** | **37.6** | **39.5** |
| **Average** | | | | | **887** | **1.22** | **0.7** | **5.1** | **6.6** | **4.4** | **23.0** | **97.6** | **183.8** | **2.1** | **-14.9** | **40.5** | **18.5** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2810.30 | 2810.33 | 2257.02 | ----- | 1.03 | 0.9 | 4.8 | 9.7 | 5.1 | 24.1 | 89.1 | 112.1 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26071.72 | 26153.42 | 19732.36 | ----- | 1.00 | 1.0 | 5.3 | 12.6 | 5.5 | 32.1 | 91.0 | 115.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7336.38 | 7336.38 | 5522.69 | ----- | 1.06 | 1.0 | 5.3 | 11.1 | 6.3 | 32.4 | 134.0 | 213.5 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | $31.33 | $31.34 | $24.79 | ----- | NA | 1.0 | 4.2 | 7.6 | 3.5 | 26.8 | 46.6 | 78.7 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Water Solutions
Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/18 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AIR PRODUCTS & CHEM | APD | $167.80 | $171.49 | 01/16/18 | $133.63 | 03/27/17 | 1057 | 1.04 | -1.4 | 3.8 | 10.4 | 2.3 | 18.3 | 132.1 | 176.2 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| ASHLAND | ASH | $74.33 | $128.19 | 04/25/17 | $59.80 | 08/11/17 | 1131 | 0.99 | 0.3 | 5.1 | 12.6 | 4.4 | 40.3 | 91.3 | 316.7 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| BARNWELL INDUSTRIES | CDZI | $14.13 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | 124 | 0.64 | 0.2 | 1.6 | 10.8 | -0.9 | 20.7 | 94.6 | -18.3 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |
| **CALGON CARBON** | **CCC** | **$21.40** | **$22.10** | **10/05/17** | **$12.00** | **08/24/17** | **1907** | **1.01** | **0.5** | **-0.2** | **0.2** | **0.5** | **33.9** | **39.4** | **49.3** | **45.1** | **1.0** | **-16.1** | **-0.1** | **27.0** |
| CANTEL MEDICAL | CMN | $113.10 | $113.45 | 01/19/18 | $69.21 | 05/17/17 | 119 | 1.15 | 2.7 | 13.9 | 17.0 | 10.0 | 47.0 | 445.0 | 1865.5 | 71.3 | 27.9 | 43.9 | 27.0 | 30.9 |
| **CONSOLIDATED WATER** | **CWCO** | **$13.05** | **$13.95** | **11/27/17** | **$10.00** | **02/03/17** | **59** | **0.82** | **0.4** | **4.3** | **1.1** | **4.3** | **31.9** | **73.7** | **-34.4** | **95.3** | **-22.3** | **17.6** | **-9.1** | **18.3** |
| FORTIVE | FTV | $74.56 | $75.69 | 12/01/17 | $53.59 | 01/23/17 | 1812 | 1.08 | 0.1 | 2.5 | 5.0 | 3.1 | 38.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 35.5 |
| LAYNE CHRISTENSEN | LAYN | $13.42 | $13.72 | 01/18/18 | $6.98 | 05/31/17 | 124 | 1.32 | 0.6 | 5.0 | 3.1 | 6.9 | 28.4 | -42.7 | -63.5 | -29.6 | -44.1 | -44.9 | 106.7 | 15.5 |
| STANTEC INC | STN | $28.65 | $28.90 | 10/27/17 | $22.25 | 05/18/17 | 12 | 0.94 | 1.4 | 4.7 | 0.7 | 2.5 | 15.8 | 48.8 | 106.8 | 56.6 | -10.6 | -8.4 | 3.3 | 12.3 |
| TETRA TECH | TTEK | $49.85 | $50.90 | 11/29/17 | $38.85 | 03/17/17 | 192 | 1.05 | 1.3 | 5.1 | 2.5 | 3.5 | 20.6 | 79.8 | 190.8 | 5.7 | -3.8 | -1.4 | 67.7 | 12.6 |
| VEOLIA ENVIRONNEMENT | VE | $25.75 | $26.43 | 01/08/18 | $15.99 | 02/24/17 | 27 | 0.76 | 2.9 | 2.7 | 8.0 | 0.8 | 62.2 | 160.7 | -53.9 | 41.9 | 12.1 | 38.9 | -26.2 | 55.2 |
| **Average** | | | | | | | **597** | **0.98** | **0.8** | **4.4** | **6.5** | **3.4** | **32.5** | **102.0** | **230.5** | **30.3** | **7.1** | **-4.0** | **30.7** | **24.8** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2810.30 | 2810.33 | 01/19/18 | 2257.02 | 01/23/17 | ----- | 1.00 | 0.9 | 4.8 | 9.7 | 5.1 | 24.1 | 89.1 | 112.1 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 167.80 | 171.49 | 01/16/18 | 133.63 | 03/27/17 | ----- | 1.04 | -1.4 | 3.8 | 10.4 | 2.3 | 18.3 | 132.1 | 176.2 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| Nasdaq Composite | COMP | 74.33 | 128.19 | 04/25/17 | 59.80 | 08/11/17 | ----- | 0.99 | 0.3 | 5.1 | 12.6 | 4.4 | 40.3 | 91.3 | 316.7 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| Powershares Dyn Water | PHO-US | $14.13 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | ----- | 0.64 | 0.2 | 1.6 | 10.8 | -0.9 | 20.7 | 94.6 | -18.3 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLIANT | LNT | $39.41 | $45.55 | $36.56 | 2041 | 0.58 | -0.3 | -7.9 | -9.5 | -7.5 | 9.1 | 105.0 | 219.5 | 21.9 | 33.4 | -2.6 | 23.5 | 15.1 |
| **AVANGRID** | **AGR** | **$47.65** | **$53.46** | **$37.42** | **264** | **0.66** | **-1.8** | **-6.2** | **-0.7** | **-5.8** | **28.0** | **106.3** | **202.4** | **13.2** | **17.7** | **18.0** | **3.4** | **38.5** |
| AVISTA | AVA | $51.49 | $52.83 | $37.78 | 329 | 0.60 | -0.2 | 0.5 | -0.5 | 0.0 | 36.2 | 153.4 | 287.0 | 22.3 | 30.5 | 4.2 | 15.0 | 32.2 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$69.10** | **$86.35** | **$63.11** | **93** | **0.70** | **-4.9** | **-11.2** | **-14.8** | **-12.0** | **10.6** | **142.1** | **384.0** | **36.1** | **27.1** | **16.9** | **13.3** | **18.9** |
| CMS ENERGY | CMS | $44.05 | $50.85 | $41.58 | 1919 | 0.51 | 0.1 | -7.7 | -8.0 | -6.9 | 7.7 | 107.1 | 299.1 | 13.9 | 34.6 | 7.3 | 16.9 | 16.6 |
| CONEDISON | ED | $78.27 | $89.70 | $72.13 | 2584 | 0.34 | -1.5 | -8.5 | -7.0 | -7.9 | 10.2 | 71.0 | 175.2 | 3.8 | 24.8 | 1.4 | 17.1 | 18.6 |
| DTE CORPORATION | DTE | $103.15 | $116.74 | $96.56 | 1229 | 0.53 | -0.7 | -5.4 | -7.3 | -5.8 | 8.4 | 98.3 | 269.9 | 14.9 | 34.7 | -3.7 | 24.8 | 14.1 |
| **EVERSOURCE ENERGY** | **ES** | **$60.79** | **$66.15** | **$54.10** | **2158** | **0.50** | **-0.9** | **-2.9** | **-1.3** | **-3.8** | **13.8** | **83.3** | **190.6** | **12.4** | **30.6** | **-1.3** | **10.1** | **17.2** |
| MGE ENERGY | MGEE | $59.55 | $68.70 | $58.30 | 74 | 0.72 | 0.9 | -4.1 | -11.6 | -5.6 | 0.2 | 96.1 | 268.9 | 16.7 | 21.9 | 4.6 | 42.6 | -1.8 |
| NORTHWESTERN | NWE | $53.21 | $64.47 | $53.01 | 479 | 0.60 | -4.0 | -11.2 | -8.6 | -10.9 | -3.1 | 77.0 | 187.0 | 29.5 | 35.0 | -0.5 | 6.6 | 8.4 |
| PG&E CORPORATION | PCG | $44.39 | $71.57 | $41.61 | 4338 | 0.50 | 1.3 | -14.7 | -22.1 | -1.0 | -25.7 | 28.4 | 52.1 | 4.6 | 37.4 | 3.5 | 16.3 | -24.9 |
| SCANA | SCG | $43.35 | $71.35 | $37.10 | 2640 | 0.56 | -1.6 | 3.5 | -9.6 | 9.0 | -36.3 | 14.2 | 74.7 | 7.2 | 34.0 | 4.3 | 23.5 | -43.6 |
| TECO ENERGY | TE | $0.00 | $0.00 | $0.00 | 0 | 0.54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.1 | 24.9 | 35.6 | 0.0 | 0.0 |
| **UNITIL CORP** | **UTL** | **$43.81** | **$52.84** | **$43.03** | **67** | **0.59** | **-0.6** | **-4.0** | **-16.0** | **-4.0** | **-0.7** | **101.8** | **164.6** | **23.2** | **25.4** | **1.8** | **29.5** | **3.5** |
| VECTREN CORP | VVC | $60.44 | $69.86 | $53.65 | 300 | 0.66 | -0.8 | -8.3 | -10.7 | -7.0 | 14.6 | 132.9 | 245.8 | 25.8 | 35.1 | -4.9 | 24.1 | 27.6 |
| WISCONSIN ENERGY | WEC | $63.11 | $70.09 | $56.05 | 1780 | 0.50 | -0.8 | -4.6 | -4.5 | -5.0 | 11.4 | 96.6 | 276.8 | 16.1 | 32.1 | 0.8 | 16.1 | 16.7 |
| XCEL ENERGY | XEL | $45.13 | $52.22 | $40.43 | 2864 | 0.48 | 0.0 | -7.8 | -7.7 | -6.2 | 13.8 | 99.7 | 216.7 | 8.8 | 33.5 | 3.8 | 15.6 | 21.2 |
| **Average** | | | | | **1362** | **0.56** | **-0.9** | **-5.9** | **-8.2** | **-4.7** | **5.8** | **89.0** | **206.7** | **16.4** | **30.1** | **5.3** | **17.6** | **10.5** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2810.30 | 2810.33 | 2257.02 | ----- | 1.03 | 0.9 | 4.9 | 10.2 | 5.2 | 26.6 | 110.0 | 163.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26071.72 | 26153.42 | 19732.36 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7336.38 | 7336.38 | 5522.69 | ----- | 1.06 | 1.0 | 5.4 | 11.4 | 6.3 | 33.9 | 148.5 | 250.3 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | $637.29 | $726.43 | $611.02 | ----- | NA | 1.0 | 4.2 | 7.6 | 3.5 | 26.8 | 46.6 | 78.7 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Regulated Electrics Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLETE | ALE | $71.98 | $81.24 | $62.04 | 515 | 0.60 | -1.4 | -3.7 | -8.4 | -3.2 | 18.5 | 97.9 | 210.2 | 26.5 | 15.0 | -4.1 | 29.0 | 19.1 |
| CENTERPOINT ENERGY | CNP | $27.80 | $30.45 | $25.33 | 3564 | 0.79 | 1.6 | -0.7 | -5.7 | -2.0 | 13.5 | 71.7 | 178.3 | 24.8 | 5.1 | -17.6 | 41.3 | 19.2 |
| CLECO | CNL | $0.00 | $0.00 | $0.00 | 0 | 0.43 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.1 | 20.6 | -1.4 | 0.0 | 0.0 |
| DUKE ENERGY | DUK | $76.82 | $91.80 | $76.28 | 4537 | 0.43 | -2.6 | -9.6 | -11.7 | -8.7 | 3.8 | 42.5 | 117.1 | 13.0 | 26.4 | -10.8 | 12.2 | 12.4 |
| EL PASO ELECTRIC | EE | $51.65 | $61.15 | $44.70 | 236 | 0.64 | 1.2 | -8.5 | -9.5 | -6.7 | 15.6 | 82.0 | 181.7 | 13.4 | 17.6 | -0.7 | 21.7 | 21.2 |
| EMPIRE DISTRICT ELECTRIC | EDE | $0.00 | $0.00 | $0.00 | 0 | 0.54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.6 | 36.5 | -1.3 | 23.1 | 0.0 |
| GREAT PLAINS | GXP | $30.95 | $34.72 | $26.72 | 861 | 0.56 | 2.0 | -4.4 | -3.1 | -4.0 | 18.6 | 78.7 | 72.6 | 24.1 | 21.6 | -0.2 | 2.2 | 21.1 |
| HAWAIIAN ELECTRIC | HE | $34.45 | $38.72 | $31.71 | 325 | 0.58 | 0.1 | -5.1 | -1.9 | -4.7 | 8.0 | 65.0 | 159.3 | 8.6 | 34.9 | -10.0 | 18.1 | 12.4 |
| IDACORP | IDA | $83.86 | $100.04 | $78.05 | 322 | 0.64 | 0.6 | -9.5 | -7.6 | -8.2 | 9.4 | 122.2 | 255.9 | 23.4 | 31.8 | 5.9 | 19.2 | 16.1 |
| PINNACLE WEST | PNW | $79.08 | $92.48 | $75.79 | 779 | 0.53 | -0.2 | -8.7 | -10.0 | -7.2 | 5.9 | 81.1 | 212.5 | 7.9 | 34.5 | -2.0 | 23.9 | 12.3 |
| PNM RESOURCES | PNM | $37.00 | $46.00 | $33.35 | 1277 | 0.66 | 4.4 | -12.3 | -10.5 | -7.9 | 13.4 | 107.3 | 168.9 | 21.0 | 26.3 | 6.1 | 13.4 | 21.1 |
| PORTLAND GENERAL | POR | $42.40 | $50.11 | $42.25 | 629 | 0.59 | -0.5 | -8.0 | -5.8 | -7.0 | 0.2 | 78.3 | 153.3 | 14.5 | 29.4 | -0.6 | 19.9 | 7.9 |
| SOUTHERN COMPANY | SO | $44.44 | $53.51 | $44.26 | 8809 | 0.38 | -0.9 | -10.8 | -13.6 | -7.6 | -5.1 | 28.8 | 88.9 | 0.5 | 25.2 | -0.1 | 8.8 | 2.0 |
| WESTAR ENERGY | WR | $50.95 | $57.32 | $49.20 | 468 | 0.51 | 1.3 | -4.7 | -3.1 | -3.5 | -5.5 | 107.0 | 237.9 | 17.4 | 33.2 | 6.9 | 34.4 | -3.3 |
| **Average** | | | | | **1594** | **0.56** | **0.4** | **-6.1** | **-6.5** | **-5.0** | **6.9** | **68.7** | **145.5** | **16.6** | **25.6** | **-2.1** | **19.1** | **11.5** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2810.30 | 2810.33 | 2257.02 | ----- | 1.03 | 0.9 | 4.9 | 10.2 | 5.2 | 26.6 | 110.0 | 163.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26071.72 | 26153.42 | 19732.36 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7336.38 | 7336.38 | 5522.69 | ----- | 1.06 | 1.0 | 5.4 | 11.4 | 6.3 | 33.9 | 148.5 | 250.3 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 637.29 | 726.43 | 611.02 | ----- | NA | 1.0 | 4.2 | 7.6 | 3.5 | 26.8 | 46.6 | 78.7 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics with Merchant)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AMEREN | AEE | $55.16 | $64.89 | $51.35 | 1450 | 0.54 | -0.6 | -7.3 | -9.7 | -6.5 | 9.8 | 111.0 | 89.6 | 23.3 | 32.7 | -2.4 | 23.5 | 15.7 |
| AMERICAN ELECTRIC POWER | AEP | $67.76 | $78.07 | $62.14 | 3222 | 0.53 | 0.4 | -9.1 | -7.5 | -7.9 | 11.8 | 88.0 | 132.8 | 14.2 | 35.1 | -0.3 | 10.7 | 20.3 |
| DOMINION | D | $74.99 | $85.30 | $70.87 | 6530 | 0.52 | -1.3 | -7.8 | -5.3 | -7.5 | 3.0 | 70.7 | 153.8 | 29.8 | 23.0 | -8.8 | 15.9 | 9.3 |
| EDISON INTERNATIONAL | EIX | $62.12 | $83.38 | $60.64 | 3222 | 0.47 | 1.1 | -10.2 | -21.1 | -1.8 | -10.7 | 53.5 | 66.6 | 5.4 | 45.0 | -6.9 | 22.7 | -9.8 |
| ENTERGY | ETR | $76.99 | $87.95 | $69.63 | 1383 | 0.52 | -1.6 | -5.0 | -8.9 | -5.4 | 13.3 | 52.2 | 7.8 | 4.3 | 44.8 | -18.2 | 11.1 | 15.9 |
| EXELON | EXC | $37.97 | $42.67 | $33.30 | 8465 | 0.62 | -1.1 | -4.2 | -3.8 | -3.7 | 10.1 | 52.3 | -23.5 | -3.5 | 40.6 | -22.2 | 33.2 | 14.3 |
| FIRST ENERGY | FE | $29.40 | $35.22 | $27.93 | 6574 | 0.57 | -2.2 | -5.2 | -8.0 | -4.0 | 1.6 | -7.3 | -34.4 | -16.5 | 23.5 | -15.2 | 0.1 | 3.1 |
| NEXTERA ENERGY | NEE | $150.16 | $159.40 | $117.91 | 2247 | 0.54 | -0.1 | -2.6 | -1.8 | -3.9 | 29.4 | 144.0 | 228.8 | 28.0 | 27.9 | 0.7 | 17.3 | 33.6 |
| PPL CORP | PPL | $31.59 | $40.20 | $30.44 | 8504 | 0.57 | 1.6 | -2.6 | -15.5 | 2.1 | -3.7 | 45.1 | 8.0 | 10.3 | 26.2 | 6.2 | 3.5 | -5.8 |
| PUBLIC SERVICE ENT GROUP | PEG | $49.80 | $53.28 | $41.67 | 2690 | 0.59 | -0.6 | -3.0 | 2.6 | -3.3 | 18.3 | 103.4 | 58.6 | 9.4 | 34.4 | -2.8 | 16.9 | 21.3 |
| **Average** | | | | | **4429** | **0.55** | **-0.4** | **-5.7** | **-7.9** | **-4.2** | **8.3** | **71.3** | **68.8** | **10.5** | **33.3** | **-7.0** | **15.5** | **11.8** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2810.30 | 2810.33 | 2257.02 | ----- | 1.03 | 0.9 | 4.9 | 10.2 | 5.2 | 26.6 | 110.0 | 163.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26071.72 | 26153.42 | 19732.36 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7336.38 | 7336.38 | 5522.69 | ----- | 1.06 | 1.0 | 5.4 | 11.4 | 6.3 | 33.9 | 148.5 | 250.3 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 637.29 | 726.43 | 611.02 | ----- | NA | 1.0 | 4.2 | 7.6 | 3.5 | 26.8 | 46.6 | 78.7 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| CALPINE | CPN | $15.12 | $15.16 | $9.30 | 1779 | 0.96 | 0.3 | 0.2 | 1.7 | -0.1 | 24.0 | -19.7 | -5.5 | 7.6 | 13.4 | -34.6 | -19.6 | 30.0 |
| DYNEGY | DYN | $12.59 | $12.84 | $5.84 | 5459 | 1.22 | 5.3 | 9.8 | 36.3 | 6.2 | 29.8 | -37.2 | -99.4 | 12.5 | 41.0 | -55.8 | -33.9 | 38.8 |
| GENON | GEN | $1.00 | $4.49 | $0.60 | 1409 | 1.36 | 19.4 | 38.9 | -2.0 | 31.1 | -76.1 | -81.2 | -93.3 | -24.5 | 78.2 | -59.5 | 15.8 | -81.6 |
| COVANTA | CVA | $17.00 | $17.30 | $13.00 | 711 | 0.74 | 0.3 | 6.8 | 13.1 | 0.6 | 15.3 | 16.6 | 5.2 | -0.3 | 29.4 | -25.8 | 7.1 | 17.3 |
| NRG | NRG | $26.90 | $29.78 | $14.52 | 8706 | 1.16 | -6.3 | -1.3 | 5.5 | -5.5 | 73.9 | 23.3 | -20.7 | 27.0 | -4.5 | -55.0 | 12.9 | 131.2 |
| ORMAT TECHNOLOGIES | ORA | $66.58 | $66.94 | $52.39 | 140 | 0.92 | 0.8 | 5.9 | 3.5 | 4.1 | 27.0 | 250.7 | 66.7 | 41.6 | 0.7 | 35.1 | 48.5 | 19.9 |
| **Average** | | | | | **2702** | **1.01** | **2.9** | **9.6** | **10.2** | **5.3** | **15.6** | **24.1** | **-20.3** | **9.1** | **26.8** | **-31.6** | **5.4** | **24.7** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2810.30 | 2810.33 | 2257.02 | ----- | 1.03 | 0.9 | 4.9 | 10.2 | 5.2 | 26.6 | 110.0 | 163.2 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26071.72 | 26153.42 | 19732.36 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7336.38 | 7336.38 | 5522.69 | ----- | 1.06 | 1.0 | 5.4 | 11.4 | 6.3 | 33.9 | 148.5 | 250.3 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 637.29 | 726.43 | 611.02 | ----- | NA | 1.0 | 4.2 | 7.6 | 3.5 | 26.8 | 46.6 | 78.7 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AGL RESOURCES, INC. | GAS | $0.00 | $0.00 | 0-Jan-00 | $0.00 | 0-Jan-00 | 0 | 0.24 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.3 | 20.0 | 21.7 | 0.0 | 0.0 |
| ATMOS ENERGY | ATO | $80.83 | $93.56 | 4-Dec-17 | $72.58 | 8-Feb-17 | 837 | 0.61 | 1.2 | -7.3 | -6.7 | -5.9 | 11.3 | 150.8 | 334.1 | 33.8 | 26.5 | 16.3 | 20.4 | 18.4 |
| LACLEDE GROUP | LG | $68.40 | $82.85 | 4-Dec-17 | $62.33 | 7-Feb-17 | 206 | 0.53 | -0.7 | -8.9 | -10.8 | -9.0 | 9.5 | 108.1 | 205.1 | 22.6 | 21.2 | 15.7 | 12.0 | 19.9 |
| **NEW JERSEY RESOURCES** | **NJR** | **$38.95** | **$45.45** | **15-Nov-17** | **$36.25** | **23-Jan-17** | **467** | **0.69** | **-1.3** | **-0.8** | **-10.6** | **-3.1** | **10.1** | **121.7** | **249.1** | **21.1** | **36.8** | **11.3** | **10.7** | **16.2** |
| NORTHWEST NATURAL GAS | NWN | $57.55 | $69.50 | 30-Nov-17 | $55.70 | 10-Jan-18 | 140 | 0.57 | 1.0 | -5.0 | -13.1 | -3.5 | 1.2 | 57.7 | 71.2 | 0.9 | 21.5 | 5.5 | 22.2 | 2.8 |
| **RGC RESOURCES** | **RGCO** | **$27.00** | **$31.99** | **13-Jun-17** | **$16.78** | **25-Jan-17** | **6** | **0.15** | **3.0** | **-3.5** | **-5.6** | **0.3** | **61.5** | **166.0** | **343.2** | **7.0** | **20.3** | **0.5** | **21.4** | **66.7** |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$29.29** | **$38.40** | **27-Apr-17** | **$29.04** | **11-Jan-18** | **451** | **0.67** | **-1.4** | **-5.6** | **-11.7** | **-6.2** | **-5.6** | **32.0** | **125.6** | **14.8** | **8.9** | **-16.7** | **48.4** | **-4.3** |
| SOUTHWEST GAS | SWX | $74.24 | $86.87 | 4-Dec-17 | $72.32 | 29-Jun-17 | 168 | 0.65 | -2.0 | -10.0 | -6.5 | -7.8 | -1.7 | 93.7 | 258.7 | 35.3 | 13.5 | -8.2 | 42.5 | 7.6 |
| **WGL HOLDINGS, INC.** | **WGL** | **$84.57** | **$86.89** | **2-Aug-17** | **$77.96** | **23-Jan-17** | **210** | **0.68** | **-1.0** | **-0.8** | **-0.8** | **-0.9** | **10.6** | **145.8** | **277.2** | **6.3** | **42.2** | **19.1** | **24.7** | **15.4** |
| **Average** | | | | | | | **276** | **0.53** | **-0.1** | **-4.6** | **-7.3** | **-4.0** | **11** | **97.31** | **207** | **18** | **23** | **7.25** | **22** | **15.84** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2,810.30 | 2,810.33 | 19-Jan-18 | 2,257.02 | 23-Jan-17 | ----- | 1.00 | 0.9 | 4.8 | 9.7 | 5.1 | 24.1 | 89.1 | 112.1 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26,071.72 | 26,153.42 | 18-Jan-18 | 19,732.36 | 23-Jan-17 | ----- | 0.94 | 1.0 | 5.3 | 12.6 | 5.5 | 32.1 | 91.0 | 115.5 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,336.38 | 7,336.38 | 19-Jan-18 | 5,522.69 | 23-Jan-17 | ----- | 1.10 | 1.0 | 5.3 | 11.1 | 6.3 | 32.4 | 134.0 | 213.5 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $637.29 | $726.43 | 15-Nov-17 | 611.02 | 25-Jan-17 | ----- | 0.51 | -0.5 | -6.9 | -8.6 | -5.5 | 3.3 | 36.4 | 19.0 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| BLACK HILLS CORP | BKH | $53.66 | $72.02 | 19-Jun-17 | $52.50 | 18-Jan-18 | 505 | 0.85 | -1.4 | -9.2 | -19.6 | -10.7 | -10.4 | 60.2 | 101.2 | 49.1 | 4.0 | -9.3 | 36.1 | 0.8 |
| ENERGEN | EGN | $57.48 | $60.07 | 9-Jan-18 | $46.16 | 7-Jul-17 | 2,334 | 1.60 | -0.8 | 7.4 | 7.1 | -0.2 | 3.2 | 20.1 | -0.5 | 58.5 | -9.3 | -35.6 | 40.7 | -0.2 |
| EQUITABLE RESOURCES | EQT | $56.03 | $67.84 | 28-Jul-17 | $49.63 | 21-Jun-17 | 2,328 | 1.01 | -4.2 | 3.0 | -11.1 | -1.6 | -10.2 | -5.1 | 21.8 | 52.5 | -15.6 | -31.0 | 25.7 | -12.8 |
| MDU RESOURCES, INC. | MDU | $26.07 | $29.74 | 30-Jan-17 | $25.14 | 3-Aug-17 | 641 | 1.09 | 0.0 | -0.6 | -3.6 | -3.0 | -6.5 | 36.7 | 37.5 | 47.7 | -21.2 | -18.9 | 62.2 | -3.8 |
| NATIONAL FUEL GAS | NFG | $55.52 | $61.25 | 15-Mar-17 | $53.03 | 18-Apr-17 | 331 | 0.89 | -1.1 | 1.9 | -3.1 | 1.1 | -0.8 | 23.8 | 79.4 | 44.1 | -0.5 | -36.6 | 36.5 | -0.2 |
| WILLIAMS COMPANIES | WMB | $32.30 | $33.43 | 16-Jan-18 | $26.82 | 17-Nov-17 | 4,335 | 1.69 | -2.7 | 7.5 | 10.3 | 5.9 | 18.3 | 21.3 | 85.6 | 22.8 | 21.4 | -39.2 | 31.4 | 2.0 |
| **Average** | | | | | | | **1746** | **1.19** | **-1.7** | **1.7** | **-3.3** | **-1.4** | **-1.0** | **26.2** | **54.2** | **45.8** | **-3.5** | **-28.4** | **38.8** | **-2.4** |
| S&P 500 | SPX | 2,810.30 | 2,810.33 | 19-Jan-18 | 2,257.02 | 23-Jan-17 | ----- | 1.00 | 0.9 | 4.8 | 9.7 | 5.1 | 24.1 | 89.1 | 112.1 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26,071.72 | 26,153.42 | 18-Jan-18 | 19,732.36 | 23-Jan-17 | ----- | 0.94 | 1.0 | 5.3 | 12.6 | 5.5 | 32.1 | 91.0 | 115.5 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,336.38 | 7,336.38 | 19-Jan-18 | 5,522.69 | 23-Jan-17 | ----- | 1.10 | 1.0 | 5.3 | 11.1 | 6.3 | 32.4 | 134.0 | 213.5 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $637.29 | $726.43 | 15-Nov-17 | 611.02 | 25-Jan-17 | ----- | 0.51 | -0.5 | -6.9 | -8.6 | -5.5 | 3.3 | 36.4 | 19.0 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/19/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| OGE ENERGY CORP | OGE | $31.42 | $37.41 | 1-Mar-17 | $30.70 | 12-Jan-18 | 1,168 | 0.78 | 2.2 | -4.8 | -14.0 | -3.5 | -1.9 | 29.2 | 162.6 | 23.5 | 7.4 | -23.4 | 32.3 | 2.0 |
| ONEOK, INC. | OKE | $58.32 | $60.06 | 16-Jan-18 | $47.14 | 20-Jun-17 | 8,657 | 1.40 | -0.6 | 12.5 | 6.0 | 9.1 | 9.6 | 81.0 | 336.1 | 49.6 | -5.3 | -47.4 | 149.4 | -2.1 |
| NISOURCE | NI | $23.94 | $27.76 | 15-Nov-17 | $21.65 | 30-Jan-17 | 2,586 | 0.70 | -0.5 | -5.4 | -9.9 | -6.7 | 10.2 | 168.3 | 422.0 | 36.5 | 32.6 | 20.5 | 16.7 | 19.3 |
| QUESTAR, INC. | STR | $0.00 | $0.00 | 0-Jan-00 | $0.00 | 0-Jan-00 | 0 | 0.60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.9 | 13.5 | -19.8 | 0.0 | 0.0 |
| SEMPRA ENERGY | SRE | $105.99 | $122.98 | 15-Nov-17 | $99.71 | 30-Jan-17 | 2,168 | 0.66 | -0.8 | -4.8 | -6.4 | -0.9 | 6.9 | 66.8 | 150.9 | 30.3 | 27.3 | -13.2 | 10.1 | 9.4 |
| **UGI CORP** | **UGI** | **$45.72** | **$52.00** | **2-Jun-17** | **$45.04** | **30-Jan-17** | **923** | **0.75** | **-3.4** | **-2.3** | **-4.9** | **-2.6** | **1.2** | **128.2** | **266.2** | **30.5** | **40.8** | **-8.7** | **39.5** | **4.0** |
| SPECTRA ENERGY | SE | $12.31 | $16.99 | 20-Oct-17 | $10.79 | 29-Nov-17 | 642 | 1.31 | -5.1 | 3.7 | 0.0 | -7.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Average** | | | | | | | **2306** | **0.89** | **-1.2** | **-0.2** | **-4.2** | **-1.8** | **3.7** | **67.6** | **191.1** | **27.2** | **16.6** | **-13.1** | **35.4** | **4.7** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2,810.30 | 2,810.33 | 19-Jan-18 | 2,257.02 | 23-Jan-17 | ----- | 1.00 | 0.9 | 4.8 | 9.7 | 5.1 | 24.1 | 89.1 | 112.1 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26,071.72 | 26,153.42 | 18-Jan-18 | 19,732.36 | 23-Jan-17 | ----- | 0.94 | 1.0 | 5.3 | 12.6 | 5.5 | 32.1 | 91.0 | 115.5 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,336.38 | 7,336.38 | 19-Jan-18 | 5,522.69 | 23-Jan-17 | ----- | 1.10 | 1.0 | 5.3 | 11.1 | 6.3 | 32.4 | 134.0 | 213.5 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $637.29 | $726.43 | 15-Nov-17 | 611.02 | 25-Jan-17 | ----- | 0.51 | -0.5 | -6.9 | -8.6 | -5.5 | 3.3 | 36.4 | 19.0 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Short Interest Analysis

# Water Utilities

Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| **AMERICAN STATES WATER** | **AWR** | **870,080** | **952,796** | **942,848** | **851,432** | **693,156** | **710,608** | **615,654** | **570,128** | **770,311** | **937,632** | **959,428** | **194,511** | **5** |
| **AMERICAN WATER WORKS** | **AWK** | **4,931,704** | **4,066,020** | **4,652,422** | **3,911,499** | **3,937,971** | **3,533,813** | **3,516,181** | **3,834,363** | **3,922,123** | **4,791,649** | **4,745,403** | **867,627** | **5** |
| **AQUA AMERICA** | **WTR** | **6,375,600** | **6,916,987** | **7,989,370** | **7,315,021** | **7,074,672** | **7,037,294** | **6,947,532** | **6,737,429** | **7,156,442** | **6,856,908** | **7,321,666** | **615,615** | **12** |
| ARTESIAN RESOURCES | ARTNA | 49,224 | 65,918 | 81,240 | 96,103 | 97,693 | 91,398 | 105,398 | 70,302 | 61,305 | 62,843 | 49,719 | 23,142 | 2 |
| **CALIFORNIA WATER** | **CWT** | **981,206** | **847,003** | **906,581** | **910,728** | **701,897** | **1,137,562** | **887,333** | **879,195** | **827,776** | **1,017,607** | **931,332** | **194,468** | **5** |
| CONNECTICUT WATER | CTWS | 212,224 | 220,556 | 210,148 | 216,555 | 261,172 | 284,124 | 264,771 | 257,771 | 248,946 | 252,728 | 271,904 | 43,293 | 6 |
| **MIDDLESEX WATER** | **MSEX** | **130,417** | **169,824** | **171,256** | **169,910** | **226,424** | **246,976** | **253,461** | **191,538** | **158,957** | **132,669** | **133,494** | **39,302** | **3** |
| PURE CYCLE | PCYO | 59,369 | 72,402 | 74,549 | 124,772 | 667,673 | 628,093 | 741,772 | 576,577 | 583,311 | 583,495 | 486,569 | 43,610 | 11 |
| **SABESP** | **SBS** | **753,485** | **900,521** | **1,451,181** | **5,281,984** | **5,056,851** | **3,528,671** | **1,283,127** | **1,790,382** | **853,797** | **2,496,187** | **3,437,163** | **1,219,022** | **3** |
| **SJW** | **SJW** | **125,048** | **127,238** | **113,748** | **130,299** | **141,752** | **134,239** | **163,388** | **129,372** | **117,855** | **115,081** | **92,610** | **64,351** | **1** |
| YORK WATER | YORW | 146,716 | 179,867 | 181,363 | 160,975 | 220,139 | 207,237 | 198,634 | 163,494 | 157,889 | 168,552 | 199,986 | 29,506 | 7 |
| **MEDIAN** | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| 3M COMPANY | MMM | 7,060,241 | 7,991,822 | 8,115,913 | 8,700,072 | 8,453,661 | 8,033,770 | 8,166,891 | 8,372,423 | 6,879,576 | 6,196,511 | 7,279,191 | 1,981,503 | 4 |
| **AMETEK** | **AME** | **6,008,002** | **4,640,428** | **5,756,651** | **5,785,745** | **4,015,506** | **2,755,300** | **2,974,705** | **2,190,704** | **2,211,752** | **3,285,049** | **2,456,937** | **1,082,161** | **2** |
| BADGER METER | BMI | 1,348,369 | 1,418,807 | 1,737,265 | 1,649,292 | 1,539,559 | 1,400,535 | 1,374,378 | 1,399,327 | 1,523,037 | 1,501,582 | 1,434,606 | 107,014 | 13 |
| CIRCOR INT'L | CIR | 1,029,159 | 1,245,319 | 1,301,177 | 1,339,803 | 1,334,092 | 1,279,463 | 1,358,578 | 1,262,950 | 1,213,659 | 1,112,866 | 1,084,984 | 84,632 | 13 |
| CRANE COMPANY | CR | 373,832 | 356,022 | 300,823 | 247,795 | 378,337 | 380,251 | 611,864 | 476,296 | 475,499 | 248,274 | 286,335 | 287,341 | 1 |
| DXP ENTERPRISES | DXPE | 595,679 | 569,261 | 544,173 | 440,356 | 530,801 | 494,781 | 504,017 | 552,078 | 457,900 | 517,701 | 560,111 | 93,380 | 6 |
| EMERSON ELECTRIC | EMR | 9,338,410 | 10,689,037 | 9,423,388 | 10,093,391 | 12,331,903 | 12,292,291 | 10,912,723 | 9,168,764 | 9,899,094 | 6,496,944 | 8,345,432 | 3,317,324 | 3 |
| ENERGY RECOVERY | ERII | 3,540,863 | 4,543,898 | 5,271,394 | 5,665,089 | 6,069,327 | 6,111,623 | 7,540,770 | 7,869,263 | 7,937,256 | 7,626,452 | 7,925,249 | 467,759 | 17 |
| FLOWSERVE | FLS | 8,469,450 | 10,195,773 | 10,681,323 | 10,282,725 | 9,840,089 | 9,601,983 | 9,325,164 | 8,660,318 | 8,147,318 | 10,491,400 | 10,324,441 | 1,097,147 | 9 |
| FRANKLIN ELECTRIC | FELE | 898,169 | 877,467 | 798,183 | 977,987 | 532,078 | 623,483 | 644,133 | 569,372 | 762,472 | 626,169 | 634,632 | 138,351 | 5 |
| **IDEX** | **IEX** | **1,774,073** | **1,589,033** | **1,598,363** | **2,023,395** | **2,045,446** | **1,695,968** | **1,812,624** | **1,524,056** | **1,417,596** | **1,435,747** | **1,353,559** | **239,824** | **6** |
| ITRON | ITRI | 672,061 | 719,772 | 775,355 | 647,437 | 454,344 | 243,650 | 364,484 | 344,625 | 233,561 | 417,029 | 574,159 | 372,640 | 2 |
| LYDALL | LDL | 111,619 | 150,883 | 209,013 | 128,237 | 104,682 | 129,693 | 164,250 | 105,006 | 116,911 | 126,926 | 159,591 | 55,853 | 3 |
| MUELLER INDUSTRIES | MLI | 545,073 | 507,365 | 565,846 | 672,420 | 441,980 | 500,098 | 632,443 | 659,552 | 766,612 | 780,434 | 1,022,662 | 143,931 | 7 |
| **MUELLER WATER PRODUCTS** | **MWA** | **2,497,680** | **1,651,893** | **2,012,601** | **2,315,005** | **2,216,528** | **1,693,026** | **2,320,152** | **1,961,379** | **1,911,692** | **1,583,011** | **2,250,937** | **1,038,810** | **2** |
| NORTHWEST PIPE | NWPX | 360,230 | 271,752 | 253,727 | 298,029 | 527,802 | 506,427 | 556,642 | 589,226 | 619,874 | 609,873 | 610,063 | 28,903 | 21 |
| PENTAIR | PNR | 5,149,425 | 4,768,789 | 3,882,106 | 4,355,636 | 2,789,645 | 2,898,693 | 1,610,699 | 1,657,527 | 2,456,559 | 2,925,363 | 2,340,069 | 949,057 | 2 |
| **REXNORD** | **RXN** | **5,394,645** | **5,846,206** | **5,881,331** | **5,226,577** | **6,196,141** | **5,514,131** | **5,128,239** | **4,183,640** | **3,557,460** | **2,945,598** | **2,654,266** | **908,155** | **3** |
| ROPER INDUSTRIES | ROP | 2,980,370 | 2,895,527 | 3,001,494 | 2,479,680 | 2,003,001 | 2,006,101 | 1,754,208 | 1,835,095 | 1,940,004 | 2,328,990 | 2,243,080 | 415,759 | 5 |
| **WATTS WATER TECH** | **WTS** | **832,524** | **826,260** | **664,627** | **653,092** | **710,635** | **771,218** | **763,117** | **825,097** | **962,792** | **874,103** | **555,068** | **112,129** | **5** |
| **XYLEM** | **XYL** | **4,265,010** | **4,167,410** | **5,285,429** | **5,300,282** | **6,421,238** | **6,220,619** | **5,433,356** | **4,143,245** | **4,085,866** | **3,385,470** | **3,451,789** | **773,737** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | **6.3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| AIR PRODUCTS & CHEM | APD | 3,797,416 | 3,344,957 | 2,782,034 | 2,861,809 | 2,854,313 | 2,373,474 | 2,177,366 | 2,361,939 | 2,427,163 | 2,203,956 | 2,143,958 | 845,188 | 3 |
| ASHLAND | ASH | 1,959,211 | 1,787,667 | 1,646,723 | 2,671,828 | 3,094,775 | 2,781,073 | 2,404,418 | 2,599,338 | 2,143,664 | 2,004,011 | 2,288,244 | 610,710 | 4 |
| BARNWELL INDUSTRIES | BRN | 29,603 | 21,450 | 26,469 | 24,987 | 16,405 | 4,744 | 5,443 | 5,138 | 2,043 | 6,277 | 6,184 | 31,224 | 0 |
| **CALGON CARBON** | **CCC** | **522,521** | **868,350** | **712,094** | **1,027,245** | **984,990** | **1,573,723** | **1,593,148** | **4,837,563** | **4,548,875** | **5,378,243** | **5,361,344** | **1,209,881** | **4** |
| CANTEL MEDICAL | CMN | 947,003 | 963,167 | 1,057,166 | 1,076,278 | 1,106,028 | 1,098,519 | 1,184,947 | 1,175,114 | 731,860 | 628,264 | 608,782 | 154,810 | 4 |
| **CONSOLIDATED WATER** | **CWCO** | **244,548** | **267,212** | **250,504** | **326,135** | **241,999** | **256,986** | **288,445** | **268,093** | **227,333** | **249,844** | **219,728** | **53,516** | **4** |
| ECHOLAB | ECL | 5,569,238 | 4,904,398 | 4,322,535 | 4,816,198 | 3,852,231 | 4,287,351 | 4,668,295 | 4,726,957 | 5,228,558 | 6,169,021 | 6,841,745 | 1,031,187 | 7 |
| FORTIVE | FTV | 1,139,385 | 1,617,188 | 2,064,897 | 2,131,077 | 2,793,149 | 2,337,385 | 2,084,376 | 3,535,942 | 4,855,830 | 6,005,448 | 6,282,169 | 1,125,063 | 6 |
| LAYNE CHRISTENSEN | LAYN | 3,130,509 | 3,156,754 | 3,263,580 | 3,302,461 | 3,227,324 | 3,207,864 | 3,357,098 | 3,514,975 | 3,719,639 | 3,696,505 | 3,722,899 | 156,674 | 24 |
| STANTEC, INC. | STN | 337,202 | 420,859 | 470,870 | 324,778 | 352,097 | 338,854 | 793,114 | 660,883 | 606,555 | 412,544 | 412,813 | 18,130 | 23 |
| TETRA TECH | TTEK | 925,508 | 1,005,039 | 1,185,072 | 925,648 | 671,846 | 623,254 | 1,091,115 | 873,277 | 810,805 | 596,094 | 664,793 | 269,201 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | **7** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Regulated Electrics/Gas)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Short Interest | | | | | | | | | | | | | | |
| ALLIANT | LNT | 5,409,345 | 4,566,482 | 3,645,885 | 4,342,726 | 3,513,512 | 2,899,307 | 3,159,484 | 3,975,745 | 5,378,873 | 5,928,608 | 7,528,290 | 7,089,148 | 1,259,743 | 6 |
| **AVANGRID** | **AGR** | **2,149,170** | **1,637,777** | **1,929,679** | **1,453,776** | **1,801,384** | **1,660,426** | **1,374,446** | **1,347,442** | **2,567,954** | **4,702,306** | **4,950,129** | **4,862,961** | **409,060** | **12** |
| AVISTA | AVA | 1,409,708 | 1,525,533 | 1,580,040 | 1,569,496 | 1,686,391 | 1,715,671 | 1,933,013 | 3,291,609 | 3,343,721 | 3,092,739 | 3,338,423 | 3,932,055 | 430,986 | 9 |
| **CHESAPEAKE UTILITIES** | **CPK** | **233,478** | **262,773** | **264,080** | **239,420** | **251,742** | **192,332** | **240,501** | **278,329** | **216,129** | **172,718** | **166,885** | **154,867** | **47,597** | **3** |
| CMS ENERGY | CMS | 4,877,715 | 4,147,871 | 3,311,656 | 4,131,055 | 4,928,316 | 5,333,775 | 4,634,626 | 4,875,954 | 5,589,775 | 5,878,501 | 5,000,479 | 6,102,223 | 1,853,120 | 3 |
| CONEDISON | ED | 10,295,176 | 10,226,704 | 11,182,177 | 10,306,460 | 11,016,473 | 11,080,156 | 10,486,678 | 10,783,195 | 9,740,969 | 9,967,953 | 9,413,607 | 9,286,045 | 1,571,010 | 6 |
| DTE CORP | DTE | 3,528,022 | 3,886,211 | 3,225,916 | 3,193,239 | 3,475,283 | 4,310,239 | 3,824,650 | 4,099,232 | 4,834,270 | 4,044,631 | 3,108,937 | 3,784,494 | 928,824 | 4 |
| **EVERSOURCE ENERGY** | **ES** | **3,907,531** | **4,127,245** | **6,018,776** | **5,131,876** | **4,770,610** | **4,461,304** | **3,445,193** | **4,582,399** | **4,457,768** | **4,944,028** | **5,409,923** | **5,874,654** | **1,824,964** | **3** |
| MGE ENERGY | MGEE | 485,353 | 344,716 | 387,046 | 493,046 | 304,509 | 254,303 | 397,535 | 414,763 | 358,462 | 246,161 | 267,706 | 300,314 | 108,232 | 3 |
| NORTHWESTERN | NWE | 1,457,184 | 1,362,452 | 1,148,403 | 1,010,991 | 1,136,951 | 1,141,000 | 1,246,942 | 1,182,741 | 927,547 | 1,097,612 | 878,905 | 852,890 | 321,800 | 3 |
| PG&E CORP | PCG | 4,897,045 | 4,586,203 | 5,851,355 | 6,330,839 | 6,404,365 | 5,783,070 | 6,826,275 | 6,328,202 | 6,261,203 | 6,120,553 | 9,187,359 | 7,690,225 | 7,077,220 | 1 |
| SCANA | SCG | 4,346,492 | 5,317,636 | 6,352,230 | 6,255,402 | 5,098,031 | 4,923,704 | 4,572,666 | 3,588,508 | 3,798,159 | 3,375,158 | 5,004,371 | 5,149,655 | 3,476,500 | 1 |
| **UNITIL CORP** | **UTL** | **266,528** | **216,642** | **181,586** | **144,622** | **146,510** | **130,306** | **143,194** | **160,952** | **120,185** | **100,468** | **242,378** | **262,023** | **91,053** | **3** |
| VECTREN CORP | VVC | 1,059,831 | 1,044,273 | 651,262 | 733,242 | 589,207 | 779,635 | 363,789 | 462,301 | 1,016,032 | 650,093 | 592,791 | 922,140 | 318,180 | 3 |
| WISCONSIN ENERGY | WEC | 12,231,228 | 9,192,076 | 8,760,561 | 8,868,864 | 7,714,249 | 7,539,614 | 8,257,052 | 8,033,126 | 7,445,885 | 7,527,488 | 9,086,165 | 9,683,643 | 1,660,764 | 6 |
| XCEL ENERGY | XEL | 10,023,854 | 8,685,773 | 10,603,959 | 12,027,677 | 12,211,867 | 10,463,422 | 11,633,439 | 12,663,254 | 12,538,128 | 10,873,280 | 12,700,090 | 12,035,574 | 2,988,324 | 4 |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| ALLETE | ALE | 1,115,994 | 881,360 | 965,111 | 725,494 | 516,265 | 654,632 | 791,051 | 768,040 | 839,027 | 762,541 | 955,842 | 228,469 | 4 |
| CENTERPOINT ENERGY | CNP | 8,612,470 | 10,111,969 | 12,483,776 | 7,630,157 | 7,744,874 | 8,745,790 | 14,073,575 | 8,621,283 | 5,239,680 | 7,647,101 | 9,234,812 | 2,863,668 | 3 |
| DUKE ENERGY | DUK | 9,753,550 | 10,540,986 | 10,914,102 | 12,673,350 | 11,006,808 | 10,377,598 | 10,400,623 | 9,949,927 | 9,029,066 | 7,311,625 | 8,747,231 | 2,712,312 | 3 |
| EL PASO ELECTRIC | EE | 394,243 | 370,106 | 437,501 | 582,511 | 332,765 | 311,243 | 420,431 | 352,717 | 468,227 | 575,595 | 689,098 | 243,547 | 3 |
| GREAT PLAINS | GXP | 8,889,673 | 7,636,648 | 5,722,006 | 6,816,518 | 5,830,269 | 7,373,200 | 6,296,938 | 6,184,183 | 5,115,012 | 6,192,697 | 6,742,150 | 1,136,515 | 6 |
| HAWAIIAN ELECTRIC | HE | 3,305,063 | 4,254,164 | 4,400,640 | 4,738,841 | 4,342,411 | 3,621,742 | 3,276,486 | 3,158,482 | 5,687,461 | 5,241,557 | 5,157,973 | 396,218 | 13 |
| IDACORP | IDA | 1,050,865 | 828,083 | 1,009,862 | 941,326 | 881,708 | 890,037 | 857,947 | 706,377 | 596,488 | 590,778 | 769,555 | 214,110 | 4 |
| PINNACLE WEST | PNW | 2,519,950 | 2,854,378 | 3,630,631 | 3,920,359 | 3,189,290 | 2,989,754 | 2,533,351 | 2,442,849 | 2,203,539 | 2,539,516 | 2,594,468 | 599,666 | 4 |
| PNM RESOURCES | PNM | 3,299,198 | 2,959,507 | 2,635,769 | 3,191,323 | 2,004,069 | 2,068,319 | 2,449,370 | 1,934,545 | 1,553,172 | 1,756,204 | 1,746,943 | 630,600 | 3 |
| PORTLAND GENERAL | POR | 1,552,707 | 1,940,728 | 2,011,685 | 1,855,791 | 1,273,088 | 1,273,355 | 1,323,565 | 1,091,394 | 951,097 | 828,240 | 861,274 | 588,680 | 1 |
| SOUTHERN COMPANY | SO | 22,557,114 | 24,271,529 | 19,172,442 | 22,185,758 | 20,983,957 | 24,011,404 | 21,347,185 | 21,231,835 | 21,701,897 | 22,431,431 | 22,476,645 | 5,322,571 | 4 |
| WESTAR ENERGY | WR | 1,617,176 | 1,503,389 | 1,896,950 | 1,594,058 | 1,211,804 | 1,137,106 | 1,185,547 | 1,195,571 | 1,302,071 | 1,184,282 | 1,530,373 | 596,058 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics With Merchant)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg. Vol | SIR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Short Interest | | | | | | | | | | | | | |
| AMEREN | AEE | 6,616,420 | 7,191,279 | 8,036,282 | 7,662,727 | 6,558,632 | 5,310,411 | 5,175,354 | 8,159,133 | 7,914,491 | 6,431,806 | 6,909,765 | 6,912,244 | 1,397,876 | 5 |
| AMERICAN ELECTRIC POWER | AEP | 4,959,061 | 6,028,096 | 5,569,001 | 5,907,106 | 7,079,343 | 6,742,651 | 6,698,363 | 7,975,185 | 6,281,152 | 5,846,064 | 6,061,533 | 7,038,320 | 2,319,131 | 3 |
| DOMINION | D | 17,513,374 | 19,845,221 | 20,816,617 | 18,808,504 | 20,677,436 | 20,045,461 | 13,926,442 | 14,446,396 | 13,393,722 | 12,930,154 | 14,791,027 | 14,945,885 | 2,982,885 | 5 |
| EDISON INTERNATIONAL | EIX | 5,887,214 | 5,821,026 | 4,846,557 | 4,596,357 | 4,820,943 | 4,439,686 | 3,862,212 | 3,887,172 | 3,905,069 | 3,864,737 | 4,182,479 | 4,767,939 | 4,347,563 | 1 |
| ENTERGY | ETR | 6,044,081 | 5,949,562 | 4,627,930 | 5,672,944 | 4,580,172 | 3,362,524 | 3,200,009 | 3,337,890 | 2,925,352 | 3,275,675 | 3,768,372 | 4,475,765 | 1,362,118 | 3 |
| EXELON | EXC | 14,470,087 | 15,671,760 | 16,535,402 | 14,492,733 | 22,764,138 | 11,923,333 | 12,992,968 | 13,021,851 | 12,796,336 | 13,879,272 | 12,661,197 | 14,652,089 | 5,317,714 | 3 |
| FIRST ENERGY | FE | 7,077,948 | 8,717,118 | 9,670,222 | 7,788,907 | 7,808,568 | 11,513,982 | 12,031,084 | 11,580,120 | 13,572,934 | 14,779,336 | 15,388,419 | 15,583,507 | 4,105,689 | 4 |
| NEXTERA ENERGY | NEE | 5,684,692 | 11,012,068 | 10,817,723 | 11,388,891 | 10,912,637 | 6,533,446 | 6,949,002 | 7,239,465 | 6,333,172 | 6,483,212 | 6,014,445 | 6,253,272 | 1,846,090 | 3 |
| PPL CORP | PPL | 11,308,934 | 10,784,419 | 11,478,638 | 10,441,674 | 10,562,779 | 9,515,443 | 6,373,595 | 7,853,542 | 9,315,783 | 8,632,942 | 12,061,035 | 15,467,162 | 6,397,282 | 2 |
| PUBLIC SERVICE ENT GROUP | PEG | 9,020,650 | 7,988,900 | 8,325,899 | 8,732,216 | 7,765,149 | 6,172,778 | 7,764,136 | 6,896,227 | 7,903,726 | 8,951,766 | 8,259,093 | 8,072,237 | 3,655,935 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | **3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Merchant Generators)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| CALPINE | CPN | 28,771,379 | 27,743,654 | 28,117,884 | 31,406,984 | 29,236,409 | 22,388,843 | 20,689,060 | 12,412,637 | 8,581,513 | 9,445,678 | 11,634,251 | 17,728,993 | 5,396,789 | 3 |
| COVANTA | CVA | 12,069,855 | 12,163,837 | 12,520,510 | 12,670,673 | 14,793,868 | 18,867,258 | 17,329,973 | 16,624,697 | 16,432,324 | 15,770,544 | 12,430,455 | 12,429,285 | 959,149 | 13 |
| DYNERGY | DYN | 18,153,185 | 17,049,127 | 20,385,768 | 20,771,130 | 20,303,380 | 22,532,771 | 20,500,812 | 19,405,468 | 20,354,821 | 21,669,181 | 23,015,480 | 22,540,907 | 4,872,464 | 5 |
| NRG ENERGY | NRG | 15,853,043 | 13,016,231 | 12,848,957 | 13,234,169 | 16,655,481 | 13,260,349 | 21,717,853 | 20,487,685 | 15,864,456 | 21,767,034 | 21,796,149 | 20,751,077 | 5,160,801 | 4 |
| ORMAT TECHNOLOGIES | ORA | 876,947 | 635,189 | 596,787 | 592,572 | 528,923 | 513,203 | 318,691 | 474,961 | 411,204 | 367,678 | 336,031 | 486,068 | 165,860 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Downstream (Gas Distribution Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| ATMOS ENERGY | ATO | 891,329 | 879,310 | 1,224,711 | 944,101 | 782,821 | 874,210 | 922,806 | 642,008 | 730,106 | 700,794 | 860,615 | 1,143,367 | 645,888 | 1 |
| LACLEDE GROUP | LG | 773,830 | 886,008 | 1,343,875 | 909,387 | 755,155 | 588,216 | 423,462 | 556,576 | 772,291 | 897,395 | 1,124,149 | 1,434,175 | 178,247 | 5 |
| **NEW JERSEY RESOURCES** | **NJR** | **3,570,296** | **4,675,510** | **4,262,104** | **4,484,868** | **3,846,891** | **3,125,675** | **2,703,452** | **2,406,915** | **2,328,469** | **2,602,464** | **2,289,053** | **2,479,972** | **532,734** | **9** |
| NORTHWEST NATURAL GAS | NWN | 937,071 | 921,642 | 1,070,206 | 1,247,218 | 1,289,283 | 1,144,690 | 1,021,318 | 1,034,393 | 670,492 | 968,567 | 821,751 | 956,438 | 159,383 | 6 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **2,687,074** | **2,739,222** | **3,181,251** | **2,983,179** | **3,198,941** | **2,367,331** | **2,205,944** | **2,075,551** | **1,882,462** | **1,883,598** | **2,156,510** | **2,169,796** | **334,816** | **8** |
| SOUTHWEST GAS | SWX | 917,894 | 1,012,872 | 541,515 | 296,021 | 296,957 | 265,152 | 739,734 | 485,210 | 483,679 | 591,548 | 672,821 | 711,373 | 210,333 | 5 |
| **WGL HOLDINGS, INC.** | **WGL** | **1,035,527** | **1,035,562** | **1,263,546** | **1,256,904** | **1,247,446** | **1,017,413** | **1,179,588** | **1,646,717** | **1,874,013** | **2,119,186** | **2,692,852** | **2,746,315** | **265,331** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| BLACK HILLS CORP | BKH | 4,643,767 | 4,894,837 | 5,495,973 | 5,741,527 | 4,831,594 | 4,505,354 | 4,778,655 | 4,733,876 | 4,637,706 | 4,807,053 | 5,094,782 | 5,449,917 | 531,212 | 9 |
| ENERGEN | EGN | 3,104,889 | 4,581,398 | 4,247,728 | 4,098,572 | 5,668,191 | 5,547,969 | 6,206,161 | 5,867,869 | 4,536,944 | 3,264,249 | 3,245,921 | 3,146,329 | 724,058 | 6 |
| EQUITABLE RESOURCES | EQT | 7,989,000 | 7,696,050 | 7,503,067 | 6,843,069 | 7,003,638 | 22,173,567 | 30,943,828 | 31,673,417 | 29,685,306 | 29,171,342 | 6,724,882 | 5,640,962 | 3,264,458 | 2 |
| MDU RESOURCES, INC. | MDU | 3,034,771 | 2,423,864 | 3,738,525 | 3,049,397 | 2,938,686 | 2,369,999 | 2,362,615 | 1,416,439 | 1,543,244 | 1,431,957 | 1,754,874 | 1,488,862 | 855,070 | 3 |
| NATIONAL FUEL GAS | NFG | 3,240,432 | 4,255,148 | 4,841,475 | 4,800,950 | 5,409,021 | 6,638,013 | 6,072,594 | 5,813,455 | 5,813,027 | 5,113,474 | 4,576,608 | 4,430,728 | 352,786 | 12 |
| WILLIAMS COMPANIES | WMB | 11,131,044 | 9,528,546 | 11,432,419 | 10,687,025 | 10,065,013 | 12,586,010 | 14,895,321 | 14,178,400 | 14,540,022 | 12,978,105 | 15,289,920 | 16,241,860 | 5,827,346 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | 6 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

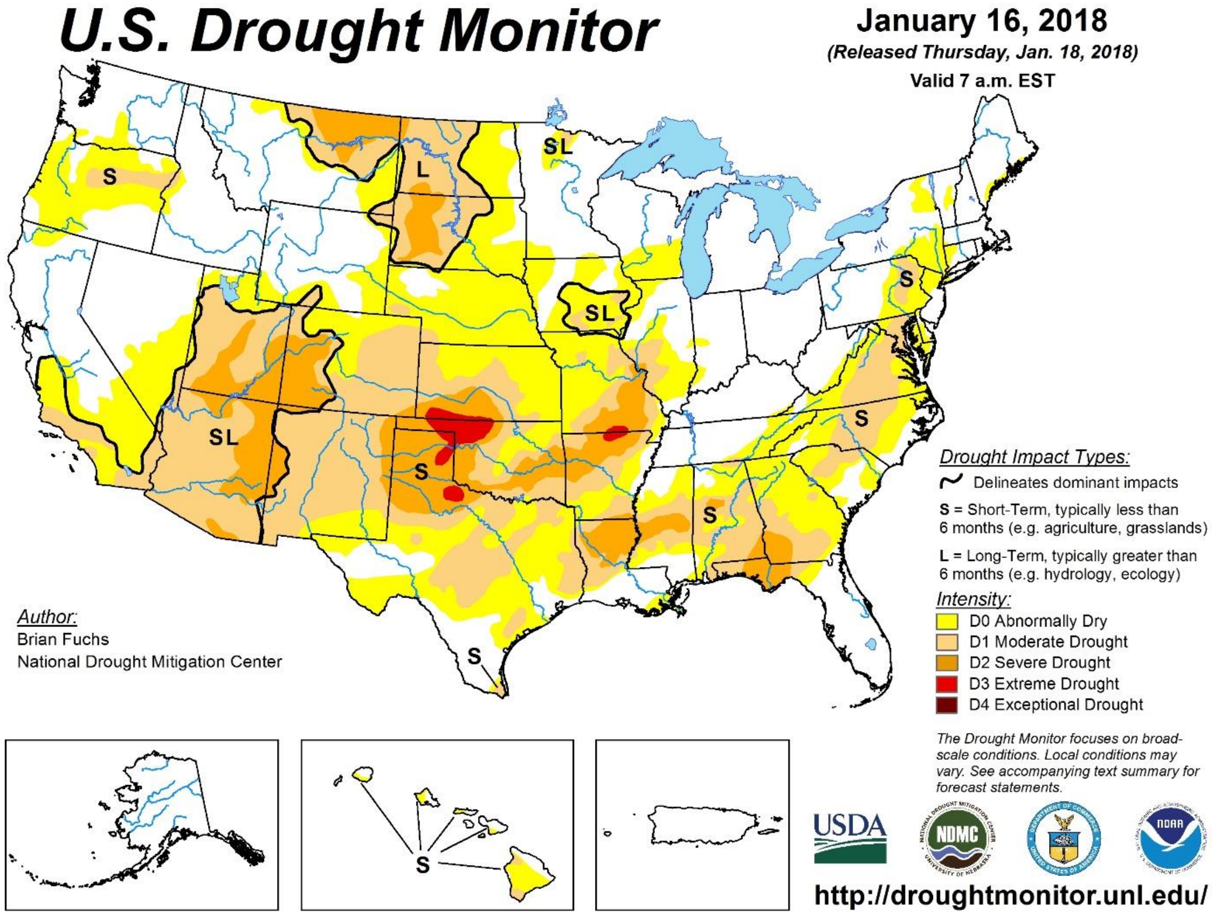
Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| OGE ENERGY CORP | OGE | 5,598,729 | 4,775,812 | 3,296,839 | 4,382,988 | 3,939,793 | 2,981,343 | 2,954,099 | 2,768,183 | 2,486,339 | 1,696,186 | 2,041,236 | 3,771,011 | 1,034,915 | 5 |
| ONEOK, INC. | OKE | 12,483,746 | 18,851,614 | 19,773,430 | 22,257,988 | 20,156,029 | 24,364,024 | 14,275,327 | 12,708,814 | 13,252,141 | 11,054,576 | 12,419,904 | 12,112,381 | 2,867,216 | 7 |
| NISOURCE | NI | 5,939,904 | 6,726,689 | 5,942,696 | 8,750,931 | 9,083,794 | 6,714,317 | 5,187,139 | 4,417,064 | 3,664,748 | 3,550,476 | 10,266,004 | 8,253,518 | 2,907,819 | 2 |
| SEMPRA ENERGY | SRE | 5,181,531 | 5,261,847 | 4,612,359 | 5,310,495 | 6,828,494 | 5,510,848 | 5,704,185 | 5,993,907 | 4,916,629 | 5,824,093 | 6,620,338 | 7,391,010 | 2,067,344 | 3 |
| **UGI CORP** | **UGI** | **1,928,934** | **1,957,314** | **3,556,214** | **2,997,409** | **1,823,833** | **1,330,248** | **1,302,095** | **1,723,837** | **1,351,056** | **1,067,524** | **1,637,548** | **2,218,726** | **863,046** | **2** |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT




## Recent Research

- *Janney/Grid Resiliency from Electromagnetic Threats; the Infrastructure Plan Provides an Opportunity for Substantial Investment – January 18 2018*
- *Janney/Utilities and Infrastructure Weekly – January 16 2018*
- *Janney/Utilities and Infrastructure Weekly – January 8 2018*
- *Janney/MWA: Adjusting Estimates to Reflect Tax Reform, Raising Fair Value to $16 – January 2 2018*
- *Janney/UTL: Valuation/Yield Compelling; Upgrading to BUY, Fair Value Remains $50 – December 26 2017*
- *Janney/RGCO: Initiating Coverage with NEUTRAL Rating, $29 Fair Value – December 20 2017*
- *Janney/Utilities and Infrastructure Weekly – December 18 2017*
- *Janney/Utilities and Infrastructure Weekly – December 11 2017*
- *Janney/XYL: HQ Visit Highlights, Maintain BUY Rating, $70 Fair Value – December 11 2017*
- *Janney/MWA: Investor Meeting Takeaways; Maintain BUY Rating, $15 Fair Value – December 6 2017*
- *Janney/Utilities and Infrastructure Weekly – December 4 2017*
- *Janney/Utilities and Infrastructure Weekly – November 20 2017*
- *Janney/SBSP3: Billed Volume/Profitability Continues to Improve; Maintain BUY Rating, R$38 Fair Value – November 20 2017*

- *Janney/Utilities and Infrastructure Weekly – November 13 2017*
- *Janney/CWCO: 3Q17 Reported Results Below Expectations; Maintain BUY Rating, $15 Fair Value – November 13 2017*
- *Janney/CPK: 3Q17 Results Above Expectations; Maintain BUY Rating, Raising Fair Value from $83 to $88 – November 10 2017*
- *Janney/APU: Equity Commitment Provides Future Backstop; Maintain BUY Rating, $58 Fair Value – November 9 2017*
- *Janney/UGI: FY18 Guidance Better Than Expected; Maintain BUY Rating, $56 Fair Value – November 9 2017*
- *Janney/AWR: 3Q17 Results Just Below Expectations; Maintain NEUTRAL Rating, Raising F.V. to $48 – November 8 2017*
- *Janney/AP: Growing Pains Materialized in 3Q; Maintaining BUY Rating, $21 Fair Value – November 7 2017*
- *Janney/MSEX: Adjusting Estimates; Maintaining BUY Rating, Raising Fair Value from $44 to $46 – November 3 2017*
- *Janney/SJI: Forward Outlook Strengthening; Maintain BUY Rating, $38 Fair Value – November 3 2017*
- *Janney/ES: 3Q17 Results Just Below Expectations; Maintain BUY Rating, $71 Fair Value – November 3 2017*
- *Janney/AWK: Lowering to NEUTRAL, Maintaining $90 Fair Value; Inline Quarter, Fair Value Achieved – November 3 2017*
- *Janney/WTS: 3Q17 Results Above Expectations; Raising Estimate, Fair Value from $67 to $69 – November 2 2017*
- *Janney/RXN: FY2Q18 Results Inline; Maintain BUY Rating, Raising Fair Value Target to $29 – November 2 2017*
- *Janney/MWA: Solid 4Q17 Results; Adjusting Estimates, Lowering Fair Value from $15.50 to $15 – November 2 2017*
- *Janney/WTR: 3Q17 Results Meet Expectations; Reiterate BUY Rating, $41 Fair Value – November 1 2017*
- *Janney/XYL: Solid Results, Positive Guidance Revision; Maintain BUY Rating, $70 Fair Value – October 31 2017*
- *Janney/UTL: 3Q17 Results Above Forecasts Maintain NEUTRAL Rating, Fair Value Raised from $50 to $52 – October 27 2017*
- *Janney/SJW: Excellent 3Q17 Results; Raising Fair Value from $59 to $68 – October 27 2017*
- *Janney/CWT: Solid 3Q17 Performance; Maintain NEUTRAL Rating, Fair Value Raised from $36 to $40 – October 27 2017*
- *Janney/AGR: Momentum Building; Reiterating BUY Rating, Raising Fair Value to $55 – October 24 2017*
- *Janney/Utilities and Infrastructure Weekly – October 23 2017*
- *Janney/IEX: Solid 3Q17 Results; 2017 Guidance Increased; Raising Fair Value to $117 – October 17 2017*
- *Janney/SJI: The "Go Big or Go Home" Question is Answered; Maintaining BUY Rating – October 17 2017*
- *Janney/Utilities and Infrastructure Weekly – October 16 2017*
- *Janney/Utilities and Infrastructure Weekly – October 09 2017*

## IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

Chesapeake Utilities Corporation currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

South Jersey Industries, Inc. currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Unitil currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Janney Montgomery Scott LLC currently acts as a market-maker in the securities of AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Consolidated Water Co., California Water Service, IDEX Corporation, Middlesex Water Co., Mueller Water Products, New Jersey Resources Corp., Rexnord Corporation, Companhia de Saneamento Basico do Estado de Sao Paulo (ADR), South Jersey Industries, Inc., SJW Corp, Unitil, Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc..

Janney Montgomery Scott LLC managed or co-managed a public offering of securities for Chesapeake Utilities Corporation, South Jersey Industries, Inc. and Unitil in the past 12 months.

Janney Montgomery Scott LLC received compensation for investment banking services from Chesapeake Utilities Corporation and South Jersey Industries, Inc. in the past 12 months.

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Avangrid, Inc., AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Chesapeake Utilities Corporation, Consolidated Water Co., California Water Service, Eversource Energy, IDEX Corporation, Middlesex Water Co., Mueller Water Products, New Jersey Resources Corp., Rexnord Corporation, South Jersey Industries, Inc., SJW Corp, UGI Corporation, Unitil, WGL Holdings Inc., Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

Individual disclosures for the companies mentioned in this report can be obtained by accessing our Firm's Disclosure Site

Disclosure Site

## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

### Janney Montgomery Scott Ratings Distribution as of 12/31/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 111 | 48.05 | 31 | 27.93 |
| **NEUTRAL [N]** | 117 | 50.65 | 22 | 18.80 |
| **SELL [S]** | 3 | 1.30 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

Janney Montgomery Scott LLC, is a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the New York Stock Exchange, the Financial Industry Regulatory Authority and the Securities Investor Protection Corp.

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Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

Michael Gaugler 215-665-1359 mgaugler@janney.com

January 29, 2018

INFRASTRUCTURE

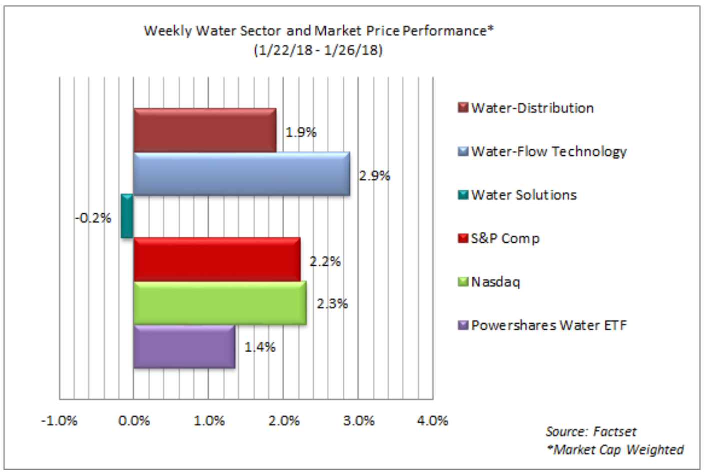
# Utility & Infrastructure Weekly

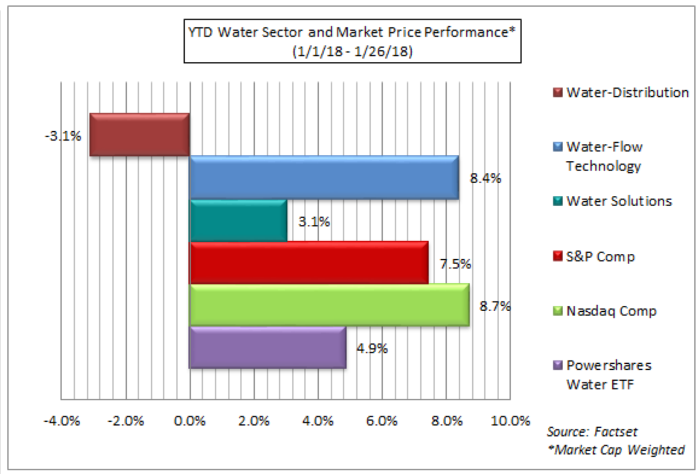
| Janney Coverage Universe | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ticker | Name | Rating | Price | Fair Value | Upside | 17 EPS/ (P/E) | 18 EPS/ (P/E) | 19 EPS/ (P/E) |
| | | | WATER UTILITIES | | | | | |
| AWR | American States Water Company | Neutral | $56.22 | $48.00 | -15% | $1.89 (34.7) | $1.80 (29.7) | $1.92 (31.2) |
| AWK | American Water Works Company, Inc. | Neutral | $84.94 | $90.00 | 6% | $2.99 (29.8) | $3.25 (28.4) | $3.48 (26.1) |
| WTR | Aqua America, Inc. | Buy | $36.69 | $41.00 | 12% | $1.36 (27.6) | $1.44 (27.0) | $1.56 (25.5) |
| CWCO | Consolidated Water Co. Ltd. | Buy | $13.20 | $15.00 | 14% | $0.56 (22.8) | $0.76 (23.6) | $0.76 (17.4) |
| CWT | California Water Service Group | Neutral | $41.70 | $40.00 | -4% | $1.39 (41.3) | $1.47 (30.0) | $1.57 (28.4) |
| MSEX | Middlesex Water Company | Buy | $38.30 | $46.00 | 20% | $1.40 (25.9) | $1.71 (27.4) | $1.78 (22.4) |
| SBS | Companhia de Saneamento Basico do Estado de | Buy | $11.47 | $11.85 | 3% | $1.14 (8.7) | $1.20 (10.1) | $1.50 (9.5) |
| SBSP3-BR | Companhia de Saneamento Basico do Estado de | Buy | R$36.20 | R$38.00 | 5% | $3.65 (8.4) | $3.86 (9.9) | $4.80 (9.4) |
| SJW | SJW Group | Buy | $59.80 | $68.00 | 14% | $2.48 (23.3) | $2.52 (24.1) | $2.73 (23.7) |
| | | | INDUSTRIALS | | | | | |
| AME | AMETEK, Inc. | Buy | $78.08 | $71.00 | -9% | $2.57 (33.9) | $2.93 (30.4) | $3.21 (26.6) |
| AP | Ampco-Pittsburgh Corporation | Buy | $14.95 | $21.00 | 40% | ($0.62) (NM) | $0.95 (NM) | $1.29 (15.7) |
| CCC | Calgon Carbon Corporation | Sell | $21.35 | $21.50 | 1% | $0.51 (34.4) | $0.63 (41.9) | $0.78 (33.9) |
| IEX | IDEX Corporation | Neutral | $142.43 | $117.00 | -18% | $4.26 (NM) | $4.60 (33.4) | $4.89 (31.0) |
| MWA | Mueller Water Products, Inc. Class A | Buy | $11.79 | $16.00 | 36% | $0.44 (24.6) | $0.58 (26.8) | $0.75 (20.3) |
| RXN | Rexnord Corporation | Buy | $28.58 | $29.00 | 1% | $1.19 (NM) | $1.38 (24.0) | $1.60 (20.7) |
| WTS | Watts Water Technologies, Inc. Class A | Neutral | $82.15 | $69.00 | -16% | $3.04 (30.8) | $3.29 (27.0) | $3.45 (25.0) |
| XYL | Xylem Inc. | Buy | $74.41 | $70.00 | -6% | $2.40 (36.7) | $2.66 (31.0) | $3.05 (28.0) |
| | | | ELECTRIC & GAS UTILITIES | | | | | |
| AGR | Avangrid, Inc. | Buy | $48.68 | $55.00 | 13% | $2.14 (23.9) | $2.46 (22.7) | $2.63 (19.8) |
| CPK | Chesapeake Utilities Corporation | Buy | $74.75 | $88.00 | 18% | $2.74 (26.1) | $3.33 (27.3) | $3.95 (22.4) |
| ES | Eversource Energy | Buy | $64.07 | $71.00 | 11% | $3.14 (21.6) | $3.35 (20.4) | $3.53 (19.1) |
| NJR | New Jersey Resources Corporation | Buy | $39.50 | $50.00 | 27% | $1.73 (24.5) | $1.85 (22.8) | $2.07 (21.4) |
| RGCO | RGC Resources, Inc. | Neutral | $25.78 | $29.00 | 12% | N/A | $0.92 (NM) | $1.01 (28.0) |
| SJI | South Jersey Industries, Inc. | Buy | $29.49 | $38.00 | 29% | $1.14 (22.0) | $1.46 (25.9) | $1.79 (20.2) |
| UGI | UGI Corporation | Buy | $46.86 | $56.00 | 20% | $2.29 (NM) | $2.57 (20.5) | $2.79 (18.2) |
| UTL | Unitil Corporation | Buy | $43.92 | $50.00 | 14% | $2.03 (22.6) | $2.05 (21.6) | $2.25 (21.4) |
| WGL | WGL Holdings, Inc. | Neutral | $84.31 | $71.00 | -16% | $3.11 (25.8) | $3.68 (27.1) | $3.78 (22.3) |
| | | | MLPs | | | | | |
| APU | AmeriGas Partners, L.P. | Buy | $48.06 | $58.00 | 21% | $2.13 (22.6) | $3.13 (15.4) | $2.83 (17.0) |

Sources: FactSet (pricing, estimates), Janney Montgomery Scott, LLC Ratings/Fair Values

**<u>Water utilities continued to rebound, while the industrials raced ahead.</u>** The industrials (Water-Flow Technology) segment turned in another outstanding performance, finishing +2.9%. Water utilities (the Water-Distribution) segment continued to rebound, gaining back +1.9%, while the Water Solutions segment finished down slightly (-0.2%). Despite political turmoil in Brazil, water utility SABESP added another +4.0% to the week prior's +4.9% gain, and the shares/ADR's are now up 9.8% since January 1. The general market benchmarks again finished higher (the S&P Composite and NASDAQ gained +2.2 and +2.3%, respectively) while the Powershares Water ETF added +1.4%.

YTD, the Water Flow Technology (industrials) segment continues to outperform, at +8.4%. The Water Solutions segment is +3.1%, while the Water-Distribution segment is lower at -3.1%. The market benchmarks are all positive, with the S&P Composite +7.5%, the NASDAQ Composite +8.7% and the Powershares Water ETF at +4.9%. The general market rally continues onward, but we note valuation across our industrial coverage universe continues to expand to levels not seen previously.



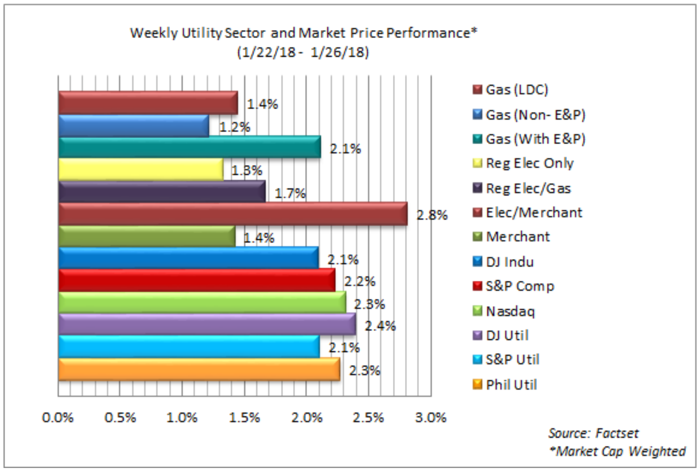



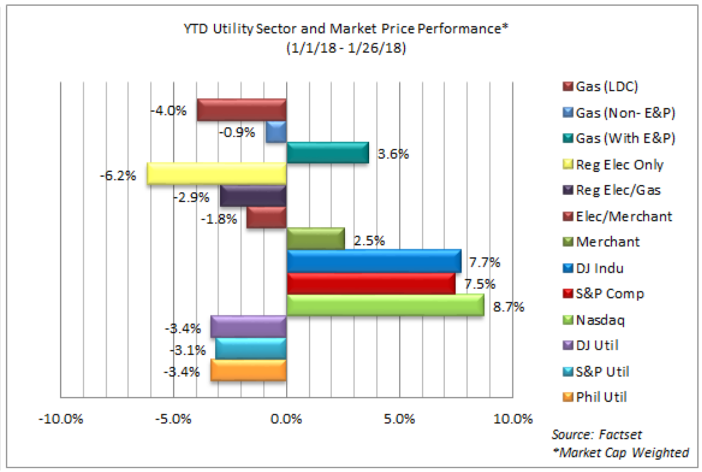

| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Water Distribution** | | | **Water Distribution** | | |
| **Companhia de Saneamento Ba:** | **SBS** | **4.0%** | **California Water Service Group** | **CWT** | **-4.8%** |
| **Water Flow Technology** | | | **Water Flow Technology** | | |
| Flowserve Corp. | FLS | 4.3% | Energy Recovery, Inc. | ERII | -7.9% |
| **Water Solutions** | | | **Water Solutions** | | |
| Cantel Medical Corp. | CMN | 2.4% | Ashland Global Holdings, Inc. | ASH | -2.6% |

*Source:Factset*

**Utilities and market benchmarks all finished higher.** Utilities reversed last week's losses, with a 7 segments rallying substantially higher. The Electric/Merchant segment turned in the best performance, finishing up +2.8% (which also outperformed the benchmarks). The remaining segments finished in a range from +1.2% to +2.1%. Performance across the general market benchmarks was positive (the DJ Indu +2.1%, the S&P Composite +2.2% and the NASDAQ +2.3%), while the utility indexes all finished higher in a range of +2.1% to +2.4%.

YTD, utilities continue to struggle, with 5 of 7 utility segments lower. The Gas (with E&P) segment holds best-performer status at +3.6%, with the Regulated Electric Only segment as the worst-performer at -6.2%. The market benchmarks continue to post strong positive returns thus far in 2018; the DJ Industrials are up +7.7%, the S&P 500 is +7.5%, and the NASDAQ is +8.7%. The utility benchmarks are all negative, in a range of -3.1% to -3.4%.



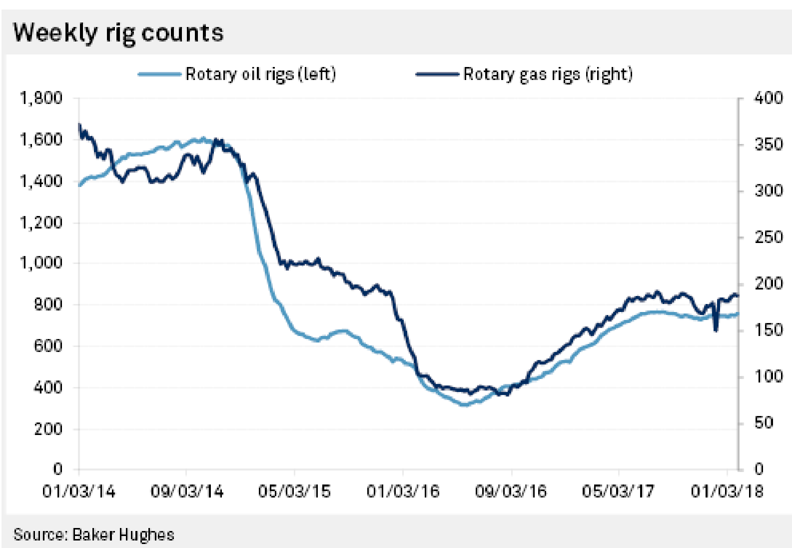




| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Gas Distribution (LDC)** | | | **Gas Distribution (LDC)** | | |
| Atmos Energy Corp. | ATO | 2.7% | **RGC Resources, Inc.** | **RGCO** | **-4.5%** |
| **Gas (Non-E&P)** | | | **Gas (Non-E&P)** | | |
| ONEOK, Inc. | OKE | 3.1% | Sempra Energy | SRE | -0.4% |
| **Gas (With E&P)** | | | **Gas (With E&P)** | | |
| Black Hills Corp. | BKH | 6.4% | Energen Corp. | EGN | -0.5% |
| **Regulated Electric Only** | | | **Regulated Electric Only** | | |
| PNM Resources, Inc. | PNM | 3.0% | Portland General Electric Co. | POR | -0.3% |
| **Regulated Electric/Gas** | | | **Regulated Electric/Gas** | | |
| **Chesapeake Utilities Corp.** | **CPK** | **8.2%** | PG&E Corp. | PCG | -1.9% |
| **Electric/Merchant** | | | **Electric/Merchant** | | |
| FirstEnergy Corp. | FE | 9.1% | | | |
| **Merchant** | | | **Merchant** | | |
| Ormat Technologies, Inc. | ORA | 4.4% | Covanta Holding Corp. | CVA | -2.4% |

*Source:Factset*

**Commentary** – The biggest news last week in our coverage universe came from **Eversource Energy (ES)**, which was selected by the State of Massachusetts to supply renewable energy via its Northern Pass Transmission (NPT) project. The next important hurdle to overcome for this much-needed project is to gain approval from the New Hampshire Site Evaluation Committee (NHSEC), which could arrive in the next few weeks/months. The shares rallied strongly on the news, probably on expectations that construction can finally begin in 2018 and the line placed in-service by 2020. The new transmission line bringing hydroelectric power can't arrive soon enough for the New England ISO, which in a recent study of energy needs found "*that energy shortfalls occurred in almost every scenario in winter 2024/2025, which would require using emergency actions "to keep power flowing and protect the grid". The emergency actions range from requests for energy conservation to load shedding. All but four of the scenarios studied resulted in fuel shortages that required load shedding, which suggests the trends impacting New England may intensify the region's fuel security risk".* This risk assessment couldn't be more blunt and to the point.

Moving on to a different topic, it's been awhile since we looked meaningfully at the U.S. rig count, so we'll do so this week. It dipped a bit at year-end 2017, but now looks to continue its upward trend, given new natural gas pipelines and higher oil prices should provide a tailwind in terms of the demand outlook (FERC authorized work on both the Atlantic Coast Pipeline and the Mountain Valley Pipeline recently). It's unfortunate that new takeaway capacity from the Marcellus Shale region takes so long to construct and place into operation; as we referenced in our above commentary on the challenges in the New England ISO's forward outlook, it could very well take a sustained blackout/grid failure in that region to finally spur the political will to build new pipeline capacity into the Northeast. Escalating the rig count in the Marcellus Shale is likely to be a long, drawn-out affair; Pennsylvania Governor Tom Wolf proposed on Friday to hike fees for new natural gas well permits so the state can hire 35 new environmental regulators to reduce the backlog of new well applications (unfortunately that could take up to 18 months to complete given the necessity of formal rule-making processes).




Our chart of the week is **AmeriGas Partners (APU)**. The units have been trending solidly higher since the extreme cold weather that appeared in late December/early January gripped much of the United States. The company reports quarterly results on January 31st after-market-close.


*Source: FactSet*

**TOP IDEAS**

### Electric/Gas Utilities

**SJI:** recently announced regulated utility acquisitions, ongoing midstream investment opportunities, a generous yield and favorable valuation all factor into our positive investment thesis on SJI shares.

### Industrials

**MWA:** Ongoing cost-out activities and free cash flow capability to support future growth, coupled with an attractive valuation are the primary determinants for MWA's position as our #1 pick in our industrial coverage universe.

### Water Utilities

**WTR**: Within the U.S. water utility group, Aqua America is our top pick. We see several future catalysts, including M&A transactions across its regulated business platforms, and a significant rate case filing in Pennsylvania (approximately two-thirds of total rate base) in 2H18. We consider the company's asset base to be very high quality, and we assign the shares the highest price-to-earnings multiple within its sector. Valuation remains favorable, with an attractive yield.

## COMPANY SNAPSHOTS

**Avangrid** — **AGR** **$48.68**
**Buy/$55 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $15,045 | 2017E | $0.73 | $0.46 | $0.40 | $0.55 | $2.14 | 22.7x |
| Avg. Daily Vol (MM): | | 474,030 | 2018E | $0.81 | $0.48 | $0.47 | $0.70 | $2.46 | 19.8x |
| 52-wk Range: | $53.46 | $37.42 | 2019E | $0.86 | $0.50 | $0.49 | $0.78 | $2.63 | 18.5x |

Avangrid is a diversified energy and utility company. The company operates regulated utilities, electricity generation, and natural gas storage through three primary lines of business.

**Ametek** — **AME** **$78.08**
**Buy/$71 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $18,046 | 2017E | $0.61 | $0.65 | $0.66 | $0.66 | $2.57 | 30.4x |
| Avg. Daily Vol (MM): | | 1,058,281 | 2018E | $0.69 | $0.74 | $0.78 | $0.71 | $2.93 | 26.6x |
| 52-wk Range: | $78.09 | $50.44 | 2019E | $0.75 | $0.82 | $0.85 | $0.79 | $3.21 | 24.3x |

Ametek is a global, diversified manufacturer of high technology products serving a diverse set of niche markets and applications. It reports results though two segments, Electronic Instruments Group (EIG) and Electromechanical Group (EMG).

**Ampco-Pittsburgh** — **AP** **$14.95**
**Buy/$21 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $185 | 2017E | ($0.39) | ($0.16) | ($0.18) | $0.11 | ($0.62) | NA |
| Avg. Daily Vol: | | 30,665 | 2018E | $0.07 | $0.22 | $0.24 | $0.43 | $0.95 | NA |
| 52-wk Range: | $18.60 | $12.15 | 2019E | $0.25 | $0.41 | $0.25 | $0.37 | $1.29 | 11.6x |

Ampco-Pittsburgh is a global manufacturer of cast and forged steel rolls, open-die forge products and air & liquid processing products. It reports results through two segments: Forged and Engineered Products and Air & Liquid Processing. The company is headquartered in Carnegie, Pennsylvania.

**AmeriGas Partners, LP** — **APU** **$48.06**
**Buy/$58 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $4,468 | 2017 | $0.95 | $1.33 | ($0.62) | ($0.62) | $1.04 | 46.2x |
| Avg. Daily Vol: | | 164,253 | 2018E | $1.06 | $2.10 | ($0.58) | $0.54 | $3.13 | 15.4x |
| 52-wk Range: | $50.00 | $42.00 | 2019E | N/A | N/A | N/A | N/A | N/A | |

AmeriGas Partners, L.P. is the largest retail marketer of propane in the United States, serving approximately 2 million customers from nearly 2000 distribution locations in all 50 states. UGI Corporation owns 26% of AmeriGas Partners, L.P.

*Source: Company data Janney Montgomery Scott, LLC estimates*

**American Water Works Co.** | **AWK** | **$84.94**
**Neutral/$90 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $15,151 | 2017E | $0.52 | $0.73 | $1.08 | $0.65 | $2.99 | 28.4x |
| Avg. Daily Vol: | | 1,210,336 | 2018E | $0.53 | $0.77 | $1.17 | $0.78 | $3.25 | 26.1x |
| 52-wk Range: | $92.37 | $71.55 | 2019E | $0.57 | $0.84 | $1.24 | $0.84 | $3.48 | 24.4x |

American Water Works Co. provides water and wastewater services to residential, commercial, and industrial customers in the U.S. and Canada, servicing 20 states of the U.S. and Ontario, Canada. It also enters into public/private partnerships, including operation and maintenance contracts, design, build, and operate contracts for the provision of services to water and wastewater facilities.

**American States Water Co.** | **AWR** | **$56.22**
**Neutral/$48 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,062 | 2017E | $0.34 | $0.62 | $0.57 | $0.36 | $1.89 | 29.7x |
| Avg. Daily Vol: | | 290,832 | 2018E | $0.37 | $0.48 | $0.58 | $0.37 | $1.80 | 31.2x |
| 52-wk Range: | $60.00 | $41.14 | 2019E | $0.39 | $0.52 | $0.61 | $0.39 | $1.92 | 29.3x |

American States Water Co. pumps, purchases, distributes and sells water and electricity primarily to residential and commercial customers. Approximately 90% of its business is conducted in the State of California. The company also manages water/wastewater systems on U.S. military

**Calgon Carbon Corporation** | **CCC** | **$21.35**
**Sell/$21.50 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,085 | 2017E | $0.10 | $0.12 | $0.10 | $0.14 | $0.51 | 41.9x |
| Avg. Daily Vol: | | 1,607,347 | 2018E | $0.14 | $0.15 | $0.19 | $0.16 | $0.63 | 33.9x |
| 52-wk Range: | $22.10 | $12.00 | 2019E | $0.17 | $0.18 | $0.23 | $0.20 | $0.78 | 27.4x |

Calgon Carbon provides services and solutions for purifying water & air, food, beverage and industrial process streams. It operates three business segments: Activated Carbon, Advanced Water Purification and Alternative Materials. The Activated Carbon segment manufactures granular activated carbon (GAC), which is used to remove inorganic compounds from water, air, liquids and gases, and powdered activated carbon (PAC), used for mercury removal from coal-fired electric powerplant emissions (MATS compliance). The Advanced Water Purification segment designs and fabricates systems that provide solutions to water problems. The Alternative Materials segment manufactures and sells carbon cloth, diatomaceous earth and perlite

**Chesapeake Utilities** | **CPK** | **$74.75**
**Buy/$88 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,222 | 2017E | $1.23 | $0.37 | $0.42 | $0.73 | $2.74 | 27.3x |
| Avg. Daily Vol: | | 81,789 | 2018E | $1.34 | $0.50 | $0.52 | $1.03 | $3.33 | 22.4x |
| 52-wk Range: | $86.35 | $63.80 | 2019E | $1.48 | $0.65 | $0.65 | $1.17 | $3.95 | 18.9x |

CPK's regulated energy business delivers natural gas to customers located in central and southern Delaware, Maryland's Eastern Shore, and Florida and electricity to customers in northeast and northwest Florida. CPK's regulated energy business also offers natural gas transmission service primarily through a 400+-mile interstate pipeline from various points in Pennsylvania and northern Delaware to natural gas distribution affiliates in Delaware and Maryland as well as to other utility and industrial customers in Pennsylvania, Delaware and the Eastern Shore of Maryland. CPK's unregulated energy business includes propane distribution and propane wholesale marketing operations. The natural gas marketing operation sells natural gas supplies directly to commercial and industrial customers in Florida, Delaware and Maryland. CPK distributes propane to customers in Delaware, the Eastern Shore of Maryland and Virginia, southeastern Pennsylvania and Florida. The propane wholesale marketing operation markets propane to wholesale customers including large independent oil and petrochemical companies, resellers and propane distribution companies in the

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Consolidated Water Co., Ltd.** **CWCO** **$13.20**
**Buy/$15 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $197 | 2016 | $0.14 | $0.15 | $0.18 | $0.11 | $0.58 | 22.8x |
| Avg. Daily Vol: | | 50,137 | 2017E | $0.18 | $0.11 | $0.08 | $0.20 | $0.56 | 23.6x |
| 52-wk Range: | $13.95 | $10.00 | 2018E | $0.22 | $0.16 | $0.16 | $0.23 | $0.76 | 17.4x |

Consolidated Water processes and supplies water to public utilities, commercial & tourist properties, residential properties and government facilities. It uses reverse osmosis technology to produce freshwater from seawater. The Retail water segment produces and supplies water to end users, including residential, commercial and government customers in the Cayman Islands and the Bahamas. The Bulk water segment produces and supplies water to government owned distribution systems in the Cayman Islands, Belize, the British Virgin Islands and The Bahamas. the Services segment provides engineering and management services for desalination projects.

**California Water Service Group** **CWT** **$41.70**
**Neutral/$40 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,001 | 2017E | 0.02 | 0.39 | 0.70 | 0.27 | 1.39 | 30.0x |
| Avg. Daily Vol: | | 265,454 | 2018E | 0.04 | 0.37 | 0.75 | 0.31 | 1.47 | 28.4x |
| 52-wk Range: | $46.15 | $32.75 | 2019E | 0.06 | 0.39 | 0.78 | 0.34 | 1.57 | 26.6x |

California Water Services Group provides water supply and related services through its subsidiaries. Its services include the production, purchase, storage, treatment, testing, distribution and sale of water for domestic, industrial, [public and irrigation uses. The company has operations in the states of California, Hawaii, New Mexico and Washington.

**Eversource Energy** **ES** **$64.07**
**Buy/$71 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $20,303 | 2017E | $0.82 | $0.72 | $0.82 | $0.78 | $3.14 | 20.4x |
| Avg. Daily Vol: | | 2,346,132 | 2018E | $0.87 | $0.71 | $0.94 | $0.83 | $3.35 | 19.1x |
| 52-wk Range: | $66.15 | $54.10 | 2019E | $0.91 | $0.73 | $1.00 | $0.88 | $3.53 | 18.2x |

Eversource Energy is a diversified energy holding company that primarily comprises electric transmission, electric and gas distribution assets in the States of New Hampshire, Connecticut and Massachusetts.

**IDEX Corp.** **IEX** **$142.43**
**Neutral/$117 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $10,882 | 2017E | $1.03 | $1.08 | $1.08 | $1.07 | $4.26 | 33.4x |
| Avg. Daily Vol: | | 236,314 | 2018E | $1.12 | $1.17 | $1.17 | $1.14 | $4.60 | 31.0x |
| 52-wk Range: | $143.17 | $88.29 | 2019E | $1.19 | $1.24 | $1.24 | $1.21 | $4.89 | 29.1x |

IDEX manufactures pump products and engineered equipment. It operates and reports through three segments: Fluid & Metering, Health & Science and Fire Safety/Diversified Products. The Fluid & Metering segment designs, produces and distributes positive displacement pumps and flow meters, compressors, injectors and other fluid handling equipment. The Health & Science segment designs, produces and distributes a wide range of precision fluidics solutions for a wide range of applications. The FireSafety/Diversified Products segment produces firefighting pumps and controls, rescue tools

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Middlesex Water Company** | **MSEX** | **$38.30**
**Buy/$46 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $626 | 2017E | $0.27 | $0.32 | $0.46 | $0.33 | $1.40 | 27.4x |
| Avg. Daily Vol: | | 62,776 | 2018E | $0.30 | $0.40 | $0.60 | $0.40 | $1.71 | 22.4x |
| 52-wk Range: | $46.74 | $32.23 | 2019E | $0.32 | $0.43 | $0.62 | $0.42 | $1.78 | 21.5x |

Middlesex Water Company conducts water, wastewater and contract service operations in New Jersey, Delaware and Pennsylvania. The current revenue mix is 95% regulated operations, 5% non-regulated.

**Mueller Water Products, Inc.** | **MWA** | **$11.79**
**Buy/$16 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,869 | 2017E | $0.04 | $0.09 | $0.16 | $0.15 | $0.44 | 26.8x |
| Avg. Daily Vol: | | 1,195,843 | 2018E | $0.06 | $0.12 | $0.20 | $0.20 | $0.58 | 20.3x |
| 52-wk Range: | $14.02 | $10.84 | 2019E | $0.10 | $0.17 | $0.25 | $0.24 | $0.75 | 15.7x |

Mueller Water Products manufactures a broad range of water infrastructure and flow control products for use in water distribution networks, water and wastewater treatment facilities, gas distribution systems and fire protection piping systems. The company reports through through 2 segments: Mueller Co, and Mueller Technologies. The Mueller Co. segment primarily designs and manufactures fire hydrants and valves; the Mueller Technologies segment contains the metering, metering systems and leak detection operations.

**New Jersey Resources** | **NJR** | **$39.50**
**Buy/$50 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | Adj EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $3,433 | 2017E | $0.47 | $1.21 | $0.20 | ($0.14) | $1.73 | 22.8x |
| Avg. Daily Vol: | | 617,486 | 2018E | $0.59 | $1.02 | $0.17 | $0.07 | $1.85 | 21.4x |
| 52-wk Range: | $45.45 | $36.40 | 2019E | $0.62 | $1.20 | $0.16 | $0.08 | $2.07 | 19.1x |

New Jersey Resources is an energy services holding company providing retail and wholesale energy services to customers in states from the Gulf Coast and Mid-Continent regions to the Appalachian and Northeast regions, the West Coast and Canada. The natural gas segment provides natural gas service to customers in central and northern New Jersey. Its energy services segment maintains and transacts around a portfolio of physical assets consisting of natural gas storage and transportation contracts. The company's clean energy ventures segment installs, operates, and maintains solar equipment on residential and commercial properties. Its midstream assets segment invests in natural gas midstream assets, such as natural gas

**Rexnord** | **RXN** | **$28.58**
**Buy $29 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS ($R) | Jun | Sep | Dec | Mar | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,970 | 2018E | $0.27 | $0.32 | $0.26 | $0.34 | $1.19 | 24.0x |
| Avg. Daily Vol (MM): | | 837,401 | 2019E | $0.30 | $0.36 | $0.31 | $0.41 | $1.38 | 20.7x |
| 52-wk Range: | $28.85 | $21.07 | 2020E | $0.36 | $0.42 | $0.37 | $0.45 | $1.60 | 17.9x |

Rexnord is a global diversified manufacturer that reports results through two segments: Process & Motion Control and Water Infrastructure. The company sells its products into a wide variety of end markets, including material handling, water infrastructure, food & beverage and aerospace.

**RGC Resources** | **RGCO** | **$25.78**
**Neutral $29 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS ($R) | Jun | Sep | Dec | Mar | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $186 | 2018E | $0.34 | $0.50 | $0.09 | $0.03 | $0.92 | 28.0x |
| Avg. Daily Vol (MM): | | 8,515 | 2019E | $0.35 | $0.53 | $0.10 | $0.04 | $1.01 | 25.5x |
| 52-wk Range: | $31.99 | $16.83 | 2020E | $0.38 | $0.57 | $0.12 | $0.06 | $1.11 | 23.2x |

RGC Resources is the local gas distribution utility serving the greater Roanoke, VA region. The company also has a 1% ownership interest in the Mountain Valley Pipeline.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**Sabesp** | **SBSP3-BR** | **$36.20**
**Buy/R$38 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS ($R) | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $24,743 | 2017E | $0.99 | $0.49 | $1.32 | $0.86 | $3.65 | 9.9x |
| Avg. Daily Vol (MM): | | 970,360 | 2018E | $0.95 | $0.85 | $0.99 | $1.07 | $3.86 | 9.4x |
| 52-wk Range: | $36.61 | $25.61 | 2019E | $1.19 | $1.08 | $1.24 | $1.29 | $4.80 | 7.5x |

Companhia de Saneamento Basico do Estado de Sao Paulo (aka SABESP) collects and distributes water and provides sewage treatment services. It operates in 367 counties in the State of Sao Paulo.

**South Jersey Industries** | **SJI** | **$29.49**
**Buy/$38 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,344 | 2017E | $0.72 | $0.06 | ($0.05) | $0.41 | $1.14 | 25.9x |
| Avg. Daily Vol (MM): | | 451,401 | 2018E | $0.75 | $0.12 | $0.05 | $0.54 | $1.46 | 20.2x |
| 52-wk Range: | $38.40 | $29.00 | 2019E | $0.78 | $0.22 | $0.22 | $0.57 | $1.79 | 16.5x |

South Jersey Industries, Inc. is an energy services holding company that provides energy-related products and services through its subsidiaries, South Jersey Gas Company (SJG), South Jersey Resources Group (SJRG), Marina Energy (Marina), South Jersey Energy Company, and South Jersey Energy Service Plus. SJG distributes natural gas in the 7 southernmost counties of New Jersey. SJRG markets wholesale nautral gas storage, commodity and transportation in the mid-Atlantic, Appalachian and southern states. Marina develops and operates onsitge energy-related projects. SJE acquires and markets natural gas and electricity to retail end users and provides total energy management services to commercial and industrial customers. SJESP provides residential and light commercial service and installation of heating, ventilation, and air conditioning (HVAC) systems, plumbing services and

**SJW Corp.** | **SJW** | **$59.80**
**Buy/$68 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,227 | 2017E | $0.18 | $0.91 | $0.95 | $0.44 | $2.48 | 24.1x |
| Avg. Daily Vol (MM): | | 59,680 | 2018E | $0.23 | $0.75 | $1.00 | $0.54 | $2.52 | 23.7x |
| 52-wk Range: | $69.29 | $45.39 | 2019E | $0.27 | $0.77 | $1.11 | $0.58 | $2.73 | 21.9x |

SJW is not the typical water utility. Although the bulk of the company's revenues and earnings are derived from regulated water utility operations, other operations, including a real estate segment, add a non-regulated component to revenues. The company continues to look for external growth opportunities, and with its recent acquistion in Texas, has increased its geographic footprint.

**UGI Corp** | **UGI** | **$46.86**
**Buy/$56 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com

| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $8,114 | 2017 | $0.91 | $1.31 | $0.09 | ($0.02) | $2.29 | 20.5x |
| Avg. Daily Vol (MM): | | 852,311 | 2018E | $0.88 | $1.43 | $0.16 | $0.11 | $2.57 | 18.2x |
| 52-wk Range: | $52.00 | $45.04 | 2019E | $0.84 | $1.60 | $0.19 | $0.16 | $2.79 | 16.8x |

UGI Corp. is a distributor and marketer of energy products and services including natural gas, propane, butane and electricity. The company reports results in the following segments: AmeriGas Propane, Gas Utility, Midstream & Marketing, and UGI International.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Unitil Corp** | | | **UTL** | **$43.92** | | | | | |
| **Buy/$50 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $647 | 2017E | $0.88 | $0.22 | $0.16 | $0.76 | $2.03 | 21.6x |
| Avg. Daily Vol (MM): | | 86,967 | 2018E | $0.88 | $0.26 | $0.15 | $0.76 | $2.05 | 21.4x |
| 52-wk Range: | $52.84 | $43.03 | 2019E | $0.95 | $0.31 | $0.21 | $0.80 | $2.25 | 19.5x |

UTL's regulated operating utilities serve approximately 109,900 electric and 70,800 gas customers in the states of Maine, New Hampshire and Massachusetts under various subsidiaries. The company also has non-regulated business operations (Usource) that provides energy brokering and management services.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Watts Water Technologies** | | | **WTS** | **$82.15** | | | | | |
| **Neutral/$69 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $2,805 | 2017E | $0.65 | $0.83 | $0.80 | $0.76 | $3.04 | 27.0x |
| Avg. Daily Vol (MM): | | 87,170 | 2018E | $0.77 | $0.86 | $0.82 | $0.84 | $3.29 | 25.0x |
| 52-wk Range: | $82.35 | $59.15 | 2019E | $0.83 | $0.90 | $0.86 | $0.87 | $3.45 | 23.8x |

Watts Water Technologies is a global manufacturer of products and systems focused on the control, conservation and quality of water and the comfort and safety of people using it. Its strategy is to be the preferred supplier of differentiated products and systems that manage and conserve the flow of fluids and energy into, through and out of buildings in the residential and commercial markets of the Americas, EMEA, and Asia Pacific.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **WGL Holdings, Inc.** | | | **WGL** | **$84.31** | | | | | |
| **Neutral/$71 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **Adj EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
| Market Cap (MM): | | $4,330 | 2016 | $1.18 | $1.78 | $0.33 | ($0.01) | $3.27 | 25.8x |
| Avg. Daily Vol (MM): | | 243,466 | 2017E | $1.13 | $1.87 | $0.26 | ($0.17) | $3.11 | 27.1x |
| 52-wk Range: | $86.89 | $80.67 | 2018E | $1.28 | $2.16 | $0.38 | ($0.15) | $3.68 | 22.9x |

WGL Holdings is comprised of both regulated and non-regulated energy-related businesses. Its regulated public utility, Washington Gas, provides natural gas service to over one million customers in the Washington, D.C. metro region, Maryland and Virginia. Its unregulated operations provide energy-related services to residential and commercial customers.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Aqua America, Inc.** | | | **WTR** | **$36.69** | | | | | |
| **Buy/$41 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $6,519 | 2017E | $0.28 | $0.34 | $0.43 | $0.32 | $1.36 | 27.0x |
| Avg. Daily Vol (MM): | | 737,833 | 2018E | $0.31 | $0.37 | $0.44 | $0.32 | $1.44 | 25.5x |
| 52-wk Range: | $39.55 | $29.53 | 2019E | $0.34 | $0.41 | $0.47 | $0.34 | $1.56 | 23.5x |

Aqua America provides water and wastewater services to residential, commercial and industrial customers. The company serves approximately 3 million customers in Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana and North Carolina. The company also has a non-regulated business that are complementary to its core water services.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Xylem, Inc.** | | | **XYL** | **$74.41** | | | | | |
| **Buy/$70 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $13,364 | 2017E | $0.39 | $0.59 | $0.65 | $0.77 | $2.40 | 31.0x |
| Avg. Daily Vol (MM): | | 806,829 | 2018E | $0.44 | $0.66 | $0.72 | $0.84 | $2.66 | 28.0x |
| 52-wk Range: | $75.16 | $46.67 | 2019E | $0.54 | $0.74 | $0.83 | $0.93 | $3.05 | 24.4x |

Xylem is a global leader in water application solutions that focuses on the technology-intensive equipment and services end market (a sector of the $500 billion global water market), and should see increasing long-term demand from a favorable end market environment for investment in water due to population growth, economic development, and increasing (and tighter) water quality regulations. The company has exposure to many different end markets, including industrial, public utility, commercial, residential, and agriculture.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

# Industry Valuation

## Water Utilities

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/26/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | AWR | $56.22 | Neutral | 4 | 48.00 | -15% |
| AMERICAN WATER WORKS | AWK | $84.94 | Neutral | 14 | 90.00 | 6% |
| AQUA AMERICA | WTR | $36.69 | Buy | 9 | 41.00 | 12% |
| ARTESIAN RESOURCES | ARTNA | $37.53 | NR | 1 | | |
| CALIFORNIA WATER | CWT | $41.70 | Neutral | 6 | 40.00 | -4% |
| CONNECTICUT WATER | CTWS | $52.50 | NR | 1 | | |
| MIDDLESEX WATER | MSEX | $38.30 | Buy | 1 | 46.00 | 20% |
| PURE CYCLE | PCYO | $8.70 | NR | 0 | | |
| SABESP | SBSP3-BR | R$ 36.20 | Buy | 9 | 38.00 | 5% |
| SJW | SJW | $59.80 | Buy | 1 | 68.00 | 14% |
| YORK WATER | YORW | $31.40 | NR | 1 | | |
| MEDIAN | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 438 | 2,062 | 60 | 41 | 37 | 36 | 1% | 67% | 5 | 0.7 | 2,433 |
| AMERICAN WATER WORKS | 870 | 15,151 | 92 | 72 | 178 | 178 | 0% | 86% | 5 | 0.5 | 22,554 |
| AQUA AMERICA | 627 | 6,519 | 40 | 30 | 178 | 177 | 0% | 54% | 12 | 0.6 | 8,589 |
| ARTESIAN RESOURCES | 38 | 345 | 43 | 30 | 8 | 8 | 4% | 43% | 2 | 0.6 | 463 |
| CALIFORNIA WATER | 383 | 2,001 | 46 | 33 | 48 | 47 | 1% | 72% | 5 | 0.7 | 2,724 |
| CONNECTICUT WATER | 65 | 634 | 65 | 51 | 12 | 12 | 3% | 48% | 7 | 0.6 | 906 |
| MIDDLESEX WATER | 64 | 626 | 47 | 32 | 16 | 16 | 4% | 53% | 3 | 0.7 | 798 |
| PURE CYCLE | 15 | 207 | 9 | 5 | 24 | 23 | 4% | 68% | 9 | 0.7 | 182 |
| SABESP | 1,491 | 24,743 | 37 | 26 | 684 | 340 | 50% | 16% | 0 | 0.8 | 34,359 |
| SJW | 107 | 1,227 | 69 | 45 | 21 | 15 | 28% | 56% | 1 | 0.7 | 1,674 |
| YORK WATER | 38 | 404 | 40 | 31 | 13 | 13 | 1% | 35% | 8 | 0.8 | 493 |
| MEDIAN | 107 | 1,227 | | | | | N/A | 54% | 5 | 0.7 | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 3.9 | 15.8 | 14.7 | 13.7 | 34.7 | 32.1 | 31.4 |
| AMERICAN WATER WORKS | 2.7 | 14.6 | 13.0 | 12.6 | 32.5 | 28.2 | 25.9 |
| AQUA AMERICA | 3.4 | 18.7 | 17.9 | 16.6 | 27.8 | 27.1 | 25.7 |
| ARTESIAN RESOURCES | 2.4 | 12.7 | 12.6 | 11.9 | 26.6 | 26.2 | 24.1 |
| CALIFORNIA WATER | 2.9 | 16.4 | 13.4 | 12.3 | 41.3 | 31.4 | 29.5 |
| CONNECTICUT WATER | 2.2 | 20.3 | 20.1 | 18.8 | 25.2 | 23.9 | 22.3 |
| MIDDLESEX WATER | 2.8 | 14.7 | NA | NA | 27.8 | 27.4 | 22.4 |
| PURE CYCLE | 3.0 | -103.4 | NA | NA | -157.3 | -124.3 | NA |
| SABESP | 1.4 | 7.6 | 6.4 | 5.8 | 8.4 | 9.9 | 8.8 |
| SJW | 2.7 | 12.0 | NA | NA | 23.3 | 24.1 | 23.7 |
| YORK WATER | 3.4 | 16.8 | 16.9 | 16.0 | 34.1 | NA | 31.4 |
| MEDIAN | 2.8 | 14.7 | 14.0 | 13.1 | 27.8 | 26.7 | 24.9 |

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 55% | 0% | 0% | 35% | 10% | A+ |
| AMERICAN WATER WORKS | 42% | 0% | 0% | 46% | 11% | A |
| AQUA AMERICA | 49% | 0% | 0% | 46% | 4% | |
| ARTESIAN RESOURCES | 56% | 0% | 0% | 41% | 3% | |
| CALIFORNIA WATER | 50% | 0% | 0% | 40% | 9% | |
| CONNECTICUT WATER | 50% | 0% | 0% | 42% | 8% | A |
| MIDDLESEX WATER | 100% | 0% | 0% | 0% | 0% | A |
| PURE CYCLE | 57% | 0% | 0% | 39% | 4% | |
| SABESP | 49% | 0% | 0% | 50% | 2% | BB |
| SJW | 57% | 0% | 0% | 43% | 0% | |
| YORK WATER | 57% | 0% | 0% | 43% | 0% | A- |
| MEDIAN | 50% | 0% | 0% | 41% | 8% | |

### Liquidity and Profitability Ratios

| | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 1.02 | 1.8% | 54 | 1.0 | 0.9 | 7 | 4% | 12% | -2% | 4% |
| AMERICAN WATER WORKS | 1.66 | 2.0% | 55 | 0.5 | 0.5 | 5 | 2% | 9% | 0% | 4% |
| AQUA AMERICA | 0.82 | 2.2% | 59 | 0.5 | 0.5 | 5 | 4% | 13% | 0% | 4% |
| ARTESIAN RESOURCES | 0.94 | 2.5% | 66 | 0.7 | 0.6 | 6 | 3% | 10% | 1% | 4% |
| CALIFORNIA WATER | 0.72 | 1.7% | 50 | 0.5 | 0.5 | 6 | 2% | 7% | -4% | 3% |
| CONNECTICUT WATER | 1.19 | 2.3% | 56 | 1.2 | 1.1 | 6 | 3% | 10% | -5% | 4% |
| MIDDLESEX WATER | 0.90 | 2.3% | 68 | 0.5 | 0.4 | 10 | 4% | 11% | 0% | 3% |
| PURE CYCLE | 0.00 | 0.0% | 0 | 43.6 | 43.6 | 0 | -2% | -2% | -2% | -1% |
| SABESP | 0.00 | 0.0% | 0 | 1.1 | 1.1 | 4 | 8% | 20% | 15% | 15% |
| SJW | 0.87 | 1.5% | 32 | 0.9 | 0.9 | 6 | 4% | 13% | -3% | 5% |
| YORK WATER | 0.67 | 2.1% | 66 | 0.9 | 0.8 | 5 | 4% | 11% | 1% | 2% |
| MEDIAN | $0.87 | 2.0% | 55 | 0.9 | 0.8 | 6 | 4% | 11% | 0% | 4% |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| AMERICAN STATES WATER | 14.34 | 154 | 166 | 177 | 1.62 | 1.75 | 1.79 |
| AMERICAN WATER WORKS | 30.94 | 1540 | 1735 | 1794 | 2.61 | 3.01 | 3.28 |
| AQUA AMERICA | 10.91 | 459 | 480 | 519 | 1.32 | 1.35 | 1.43 |
| ARTESIAN RESOURCES | 15.73 | 36 | 37 | 39 | 1.41 | 1.43 | 1.56 |
| CALIFORNIA WATER | 14.32 | 166 | 203 | 221 | 1.01 | 1.33 | 1.42 |
| CONNECTICUT WATER | 24.39 | 45 | 45 | 48 | 2.08 | 2.20 | 2.35 |
| MIDDLESEX WATER | 13.89 | 54 | 0 | 0 | 1.38 | 1.40 | 1.71 |
| PURE CYCLE | 2.89 | -2 | 0 | 0 | -0.06 | -0.07 | 0.00 |
| SABESP | 25.26 | 4524 | 5351 | 5889 | 4.31 | 3.65 | 4.10 |
| SJW | 22.05 | 139 | 0 | 0 | 2.57 | 2.48 | 2.52 |
| YORK WATER | 9.14 | 29 | 29 | 31 | 0.92 | 0.00 | 1.00 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Flow Technology

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/26/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| 3M CORPORATION | MMM | $258.63 | NR | 15 | | |
| **AMETEK** | **AME** | **$78.08** | **Buy** | **15** | **71.00** | **-9%** |
| BADGER METER | BMI | $49.65 | NR | 6 | | |
| CIRCOR INTERNATIONAL | CIR | $53.98 | NR | 4 | | |
| CRANE COMPANY | CR | $94.09 | NR | 10 | | |
| DXP ENTERPRISES | DXPE | $34.48 | NR | 4 | | |
| EMERSON ELECTRIC | EMR | $74.05 | NR | 20 | | |
| ENERGY RECOVERY | ERII | $8.11 | NR | 4 | | |
| FLOWSERVE | FLS | $45.58 | NR | 16 | | |
| FRANKLIN ELECTRIC | FELE | $45.90 | NR | 6 | | |
| **IDEX** | **IEX** | **$142.43** | **Neutral** | **11** | **117.00** | **-18%** |
| ITRON | ITRI | $74.95 | NR | 9 | | |
| MUELLER INDUSTRIES | MLI | $34.55 | NR | 0 | | |
| **MUELLER WATER PRODUCTS** | **MWA** | **$11.79** | **Buy** | **12** | **16.00** | **36%** |
| NORTHWEST PIPE | NWPX | $20.06 | NR | 1 | | |
| PENTAIR | PNR | $74.02 | NR | 17 | | |
| **REXNORD** | **RXN** | **$28.58** | **Buy** | **9** | **29.00** | **1%** |
| ROPER INDUSTRIES | ROP | $284.14 | NR | 14 | | |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$82.15** | **Neutral** | **10** | **69.00** | **-16%** |
| **XYLEM** | **XYL** | **$74.41** | **Buy** | **17** | **70.00** | **-6%** |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 3,731 | 154,042 | 260 | 174 | 596 | 595 | 0% | 69% | 4 | 0.9 | 168,283 |
| **AMETEK** | **775** | **18,046** | **78** | **50** | **231** | **227** | **2%** | **88%** | **2** | **1.1** | **19,828** |
| BADGER METER | 117 | 1,445 | 52 | 34 | 29 | 28 | 3% | 86% | 10 | 1.1 | 1,477 |
| CIRCOR INTERNATIONAL | 74 | 891 | 73 | 42 | 17 | 13 | 21% | 104% | 11 | 1.4 | 1,095 |
| CRANE COMPANY | 319 | 5,584 | 94 | 68 | 59 | 51 | 15% | 69% | 1 | 1.2 | 5,868 |
| DXP ENTERPRISES | 114 | 600 | 42 | 25 | 17 | 16 | 10% | 76% | 6 | 1.5 | 848 |
| EMERSON ELECTRIC | 3,587 | 47,291 | 74 | 57 | 639 | 635 | 1% | 72% | 2 | 1.1 | 49,290 |
| ENERGY RECOVERY | 614 | 435 | 11 | 6 | 54 | 36 | 33% | 35% | 19 | 1.7 | 353 |
| FLOWSERVE | 846 | 5,954 | 52 | 38 | 131 | 130 | 0% | 109% | 7 | 1.3 | 7,093 |
| FRANKLIN ELECTRIC | 56 | 2,139 | 47 | 36 | 47 | 39 | 17% | 79% | 4 | 1.3 | 2,331 |
| **IDEX** | **295** | **10,882** | **143** | **88** | **76** | **76** | **0%** | **100%** | **4** | **1.1** | **11,614** |
| ITRON | 257 | 2,902 | 80 | 58 | 39 | 38 | 1% | 98% | 2 | 1.0 | 3,165 |
| MUELLER INDUSTRIES | 193 | 1,997 | 44 | 28 | 58 | 56 | 3% | 93% | 5 | 1.2 | 2,292 |
| **MUELLER WATER PRODUCTS** | **900** | **1,869** | **14** | **11** | **159** | **155** | **3%** | **90%** | **1** | **1.3** | **2,028** |
| NORTHWEST PIPE | 54 | 193 | 21 | 12 | 10 | 9 | 3% | 87% | 19 | 1.1 | 188 |
| PENTAIR | 637 | 13,433 | 75 | 57 | 181 | 181 | 0% | 88% | 3 | 1.3 | 14,978 |
| **REXNORD** | **369** | **2,970** | **29** | **21** | **104** | **103** | **1%** | **104%** | **3** | **1.3** | **4,101** |
| ROPER INDUSTRIES | 297 | 29,085 | 284 | 188 | 102 | 100 | 2% | 96% | 5 | 1.1 | 34,188 |
| **WATTS WATER TECHNOLOGIES** | **75** | **2,805** | **82** | **59** | **28** | **27** | **1%** | **100%** | **3** | **1.2** | **3,102** |
| **XYLEM** | **804** | **13,364** | **75** | **47** | **180** | **179** | **1%** | **91%** | **4** | **1.1** | **15,479** |
| **MEDIAN** | **308** | **2,936** | | | | | **2%** | **89%** | **4** | **1.2** | |

**Valuation Statistics**

| | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 12.7 | 19.8 | 18.2 | 17.1 | 31.7 | 28.20 | 24.9 |
| **AMETEK** | **4.8** | **19.7** | **18.1** | **16.7** | **35.7** | **30.3** | **27.0** |
| BADGER METER | 5.3 | 20.2 | 20.3 | 18.1 | 44.7 | 42.0 | 35.6 |
| CIRCOR INTERNATIONAL | 2.0 | 19.0 | 17.7 | 9.2 | 88.5 | 33.4 | 22.4 |
| CRANE COMPANY | 4.0 | 12.6 | 11.8 | 10.6 | 45.5 | 20.8 | 18.0 |
| DXP ENTERPRISES | 2.3 | 17.2 | 14.0 | 11.4 | 71.1 | 56.8 | 32.5 |
| EMERSON ELECTRIC | 5.5 | 14.7 | 15.2 | 13.8 | 29.3 | 28.0 | 24.9 |
| ENERGY RECOVERY | 6.4 | 87.4 | 9.8 | 9.3 | 405.5 | 129.8 | 17.9 |
| FLOWSERVE | 3.4 | NA | NA | 13.6 | 45.1 | NA | 24.7 |
| FRANKLIN ELECTRIC | 3.1 | 16.2 | 15.5 | 13.5 | 27.8 | 24.2 | 21.5 |
| **IDEX** | **6.0** | **21.6** | **19.9** | **18.5** | **40.3** | **33.4** | **29.9** |
| ITRON | 3.8 | 14.8 | 13.5 | 11.2 | 91.4 | 25.2 | 22.5 |
| MUELLER INDUSTRIES | 3.9 | 12.0 | NA | NA | 19.9 | NA | NA |
| **MUELLER WATER PRODUCTS** | **3.8** | **10.2** | **12.3** | **10.9** | **30.2** | **26.8** | **21.6** |
| NORTHWEST PIPE | 1.0 | -18.9 | -55.1 | 12.9 | -20.8 | -20.1 | 57.3 |
| PENTAIR | 2.7 | 16.3 | 15.0 | 14.2 | 26.0 | 20.9 | 18.8 |
| **REXNORD** | **2.5** | **12.5** | **10.8** | **9.8** | **44.7** | **22.6** | **17.8** |
| ROPER INDUSTRIES | 4.5 | 26.2 | 21.3 | 19.6 | 44.2 | 30.5 | 27.7 |
| **WATTS WATER TECHNOLOGIES** | **3.4** | **15.9** | **13.8** | **13.0** | **33.7** | **27.4** | **24.1** |
| **XYLEM** | **5.4** | **23.5** | **18.0** | **16.0** | **51.5** | **31.0** | **26.4** |
| **MEDIAN** | **3.8** | **16.3** | **15.1** | **13.5** | **42.3** | **28.1** | **24.7** |

**Balance Sheet and Credit Ratings**

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| 3M CORPORATION | 47% | 0% | 0% | 49% | 4% | AA- |
| **AMETEK** | **58%** | **0%** | **0%** | **37%** | **5%** | **BBB+** |
| BADGER METER | 87% | 0% | 0% | 0% | 13% | |
| CIRCOR INTERNATIONAL | 62% | 0% | 0% | 38% | 0% | |
| CRANE COMPANY | 60% | 0% | 1% | 39% | 0% | BBB |
| DXP ENTERPRISES | 53% | 0% | 0% | 36% | 11% | B |
| EMERSON ELECTRIC | 65% | 0% | 0% | 28% | 6% | A |
| ENERGY RECOVERY | 100% | 0% | 0% | 0% | 0% | |
| FLOWSERVE | 50% | 0% | 1% | 46% | 3% | BBB |
| FRANKLIN ELECTRIC | 75% | 0% | 1% | 19% | 4% | |
| **IDEX** | **60%** | **0%** | **0%** | **40%** | **0%** | **BBB** |
| ITRON | 66% | 0% | 2% | 30% | 1% | |
| MUELLER INDUSTRIES | 77% | 0% | 3% | 18% | 1% | |
| **MUELLER WATER PRODUCTS** | **50%** | **0%** | **0%** | **49%** | **1%** | **BB-** |
| NORTHWEST PIPE | 100% | 0% | 0% | 0% | 0% | |
| PENTAIR | 50% | 0% | 0% | 50% | 0% | BBB- |
| **REXNORD** | **40%** | **0%** | **0%** | **60%** | **1%** | |
| ROPER INDUSTRIES | 48% | 0% | 0% | 48% | 3% | BBB |
| **WATTS WATER TECHNOLOGIES** | **53%** | **0%** | **0%** | **37%** | **10%** | |
| **XYLEM** | **48%** | **0%** | **0%** | **46%** | **6%** | **BBB** |
| **MEDIAN** | **59%** | **0%** | **0%** | **38%** | **2%** | |

**Liquidity and Profitability Ratios**

| | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 5.44 | 2.1% | 52 | 2.1 | 1.5 | 0 | 15% | 46% | 5% | 5% |
| **AMETEK** | **0.36** | **0.5%** | **15** | **2** | **1** | **11** | **7%** | **16%** | **6%** | **5%** |
| BADGER METER | 0.52 | 1.0% | 41 | 1.8 | 0.9 | 97 | 9% | 13% | 4% | 3% |
| CIRCOR INTERNATIONAL | 0.15 | 0.3% | 16 | 3.2 | 1.9 | 8 | 1% | 3% | 4% | 1% |
| CRANE COMPANY | 1.32 | 1.4% | 59 | 2.7 | 2.0 | 14 | 4% | 11% | 6% | 3% |
| DXP ENTERPRISES | 0.00 | 0.0% | 0 | 2.5 | 1.8 | 4 | 1% | 3% | 8% | 1% |
| EMERSON ELECTRIC | 1.94 | 2.6% | 81 | 1.6 | 1.3 | 16 | 7% | 20% | 7% | 5% |
| ENERGY RECOVERY | 0.00 | 0.0% | 0 | 6.7 | 6.4 | 2171 | 1% | 2% | 1% | 0% |
| FLOWSERVE | 0.76 | 1.7% | 62 | 2.1 | 1.3 | 8 | 3% | 8% | 2% | 2% |
| FRANKLIN ELECTRIC | 0.43 | 0.9% | 22 | 2.3 | 1.1 | 15 | 8% | 13% | 4% | 4% |
| **IDEX** | **1.48** | **1.0%** | **37** | **2.8** | **2.0** | **17** | **9%** | **18%** | **5%** | **4%** |
| ITRON | 0.00 | 0.0% | 0 | 1.7 | 1.3 | 22 | 2% | 5% | 3% | 1% |
| MUELLER INDUSTRIES | 0.40 | 1.2% | 24 | 2.8 | 1.7 | 13 | 7% | 12% | 5% | 4% |
| **MUELLER WATER PRODUCTS** | **0.20** | **1.7%** | **44** | **4.7** | **3.8** | **7** | **4%** | **11%** | **4%** | **3%** |
| NORTHWEST PIPE | 0.00 | 0.0% | 0 | 11.3 | 9.8 | -3 | -3% | -4% | 0% | -6% |
| PENTAIR | 1.40 | 1.9% | 62 | 1.6 | 1.1 | 8 | 4% | 11% | 7% | 5% |
| **REXNORD** | **0.00** | **0.0%** | **0** | **3.1** | **2.2** | **5** | **2%** | **9%** | **6%** | **3%** |
| ROPER INDUSTRIES | 1.65 | 0.6% | 20 | 1.1 | 0.9 | 9 | 5% | 12% | 5% | 4% |
| **WATTS WATER TECHNOLOGIES** | **0.76** | **0.9%** | **27** | **2.6** | **1.7** | **11** | **5%** | **12%** | **5%** | **4%** |
| **XYLEM** | **0.72** | **1.0%** | **41** | **1.8** | **1.3** | **10** | **5%** | **3%** | **4%** | **3%** |
| **MEDIAN** | **$0.48** | **1.0%** | **26** | **2** | **2** | | **4%** | **11%** | **5%** | **3%** |

**Financial Statistics/Estimates**

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| 3M CORPORATION | 20.39 | 8493 | 9260 | 9826 | 8.16 | 9.17 | 10.40 |
| **AMETEK** | **16.30** | **1007** | **1093** | **1185** | **2.19** | **2.58** | **2.89** |
| BADGER METER | 9.42 | 73 | 73 | 81 | 1.11 | 1.18 | 1.39 |
| CIRCOR INTERNATIONAL | 27.39 | 58 | 62 | 120 | 0.61 | 1.62 | 2.41 |
| CRANE COMPANY | 23.25 | 465 | 497 | 554 | 2.07 | 4.52 | 5.21 |
| DXP ENTERPRISES | 15.03 | 49 | 60 | 74 | 0.49 | 0.61 | 1.06 |
| EMERSON ELECTRIC | 13.59 | 3358 | 3243 | 3563 | 2.53 | 2.64 | 2.97 |
| ENERGY RECOVERY | 1.27 | 4 | 36 | 38 | 0.02 | 0.06 | 0.45 |
| FLOWSERVE | 13.42 | 542 | 0 | 521 | 1.01 | 0.00 | 1.84 |
| FRANKLIN ELECTRIC | 14.99 | 144 | 151 | 173 | 1.65 | 1.90 | 2.13 |
| **IDEX** | **23.62** | **538** | **584** | **629** | **3.53** | **4.26** | **4.77** |
| ITRON | 19.89 | 214 | 235 | 284 | 0.82 | 2.98 | 3.32 |
| MUELLER INDUSTRIES | 8.94 | 192 | 0 | 0 | 1.74 | 0.00 | 0.00 |
| **MUELLER WATER PRODUCTS** | **3.08** | **198** | **164** | **186** | **0.39** | **0.44** | **0.55** |
| NORTHWEST PIPE | 21.04 | -10 | -3 | 15 | -0.97 | -1.00 | 0.35 |
| PENTAIR | 27.58 | 920 | 999 | 1052 | 2.85 | 3.53 | 3.93 |
| **REXNORD** | **11.22** | **328** | **380** | **417** | **0.64** | **1.26** | **1.61** |
| ROPER INDUSTRIES | 63.10 | 1304 | 1608 | 1745 | 6.43 | 9.32 | 10.26 |
| **WATTS WATER TECHNOLOGIES** | **24.33** | **195** | **224** | **238** | **2.44** | **3.00** | **3.41** |
| **XYLEM** | **13.71** | **660** | **861** | **967** | **1.44** | **2.40** | **2.82** |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Water Solutions

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/26/18 ($) | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| AIR PRODUCTS & CHEM | APD | $169.85 | NR | 21 | | |
| ASHLAND | ASH | $72.43 | NR | 11 | | |
| CADIZ | CDZI | $14.30 | NR | 0 | | |
| **CALGON CARBON** | **CCC** | **$21.35** | **Sell** | **2** | **21.50** | **1%** |
| CANTEL MEDICAL | CMD | $115.82 | NR | 4 | | |
| **CONSOLIDATED WATER** | **CWCO** | **$13.20** | **Buy** | **2** | **15.00** | **14%** |
| ECHOLAB | ECL | $138.15 | NR | 23 | | |
| FORTIVE | FTV | $76.57 | NR | 18 | | |
| LAYNE CHRISTENSEN | LAYN | $13.54 | NR | 1 | | |
| STANTEC, INC. | STN | $28.35 | NR | 11 | | |
| TETRA TECH | TTEK | $50.20 | NR | 7 | | |
| VEOLIA ENVIRONNEMENT | VE | $25.44 | NR | 18 | | |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume (1000) | Market Capital ($ (mil)) | 52-Week High ($) | 52-Week Low ($) | Avg Shs Out ((mil)) | Free Float ((mil)) | Insider Hldg (%) | Inst. Hldg (%) | % of Float Short (%) | Beta (X) | TEV ($ (mil)) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AIR PRODUCTS & CHEM | 2,701 | 37,166 | 175 | 134 | 219 | NA | 0% | 90% | 2 | 1.0 | 37,924 |
| ASHLAND | 1,654 | 4,507 | 128 | 60 | 62 | 62 | 1% | 93% | 4 | 1.0 | 6,714 |
| CADIZ | 42 | 326 | 16 | 10 | 23 | 22 | 4% | 53% | 27 | 0.6 | 446 |
| **CALGON CARBON** | **1,661** | **1,085** | **22** | **12** | **51** | **50** | **2%** | **99%** | **4** | **1.0** | **1,297** |
| CANTEL MEDICAL | 75 | 4,842 | 117 | 69 | 42 | 37 | 11% | 88% | 3 | 1.1 | 4,948 |
| **CONSOLIDATED WATER** | **28** | **197** | **14** | **10** | **15** | **14** | **3%** | **54%** | **3** | **0.8** | **161** |
| ECHOLAB | 1,189 | 39,913 | 141 | 119 | 289 | 287 | 0% | 90% | 7 | 1.0 | 47,930 |
| FORTIVE | 2,205 | 26,613 | 77 | 55 | 348 | 307 | 12% | 81% | 5 | 1.1 | 29,787 |
| LAYNE CHRISTENSEN | 91 | 269 | 14 | 7 | 20 | 19 | 5% | 114% | 28 | 1.3 | 408 |
| STANTEC, INC. | 14 | 3,230 | 29 | 22 | 114 | 113 | 1% | 63% | 21 | 0.9 | 3,727 |
| TETRA TECH | 164 | 2,808 | 51 | 39 | 56 | 54 | 3% | 89% | 2 | 1.0 | 3,072 |
| VEOLIA ENVIRONNEMENT | 0 | 13,980 | 26 | 16 | 563 | 0 | 0% | 0% | 0 | 0.8 | 27,150 |
| **MEDIAN** | **164** | **3,230** | | | | | **3%** | **89%** | **4** | **1** | |

### Valuation Statistics

| | Mkt/ Book (X) | TEV/EBITDA 2016 (X) | TEV/EBITDA 2017 (X) | TEV/EBITDA 2018 (X) | P/EPS 2016 (X) | P/EPS 2017 (X) | P/EPS 2018 (X) |
|---|---|---|---|---|---|---|---|
| AIR PRODUCTS & CHEM | 3.7 | 12.4 | 13.7 | 12.5 | 25.1 | 26.9 | 23.9 |
| ASHLAND | 1.3 | 9.1 | 11.8 | 10.1 | -159.9 | 29.7 | 21.6 |
| CADIZ | -4.2 | -50.0 | NA | NA | -10.1 | NA | NA |
| **CALGON CARBON** | **2.6** | **16.9** | **NA** | **NA** | **79.1** | **41.5** | **29.9** |
| CANTEL MEDICAL | 8.9 | 40.7 | 32.3 | 27.7 | 80.4 | 55.7 | 48.2 |
| **CONSOLIDATED WATER** | **1.3** | **12.6** | **NA** | **NA** | **48.9** | **24.7** | **18.2** |
| ECHOLAB | 5.5 | 16.8 | 16.2 | 15.2 | 33.4 | 29.43 | 25.9 |
| FORTIVE | 7.7 | 20.6 | 19.3 | 17.0 | 30.5 | 26.8 | 23.4 |
| LAYNE CHRISTENSEN | 5.0 | 150.1 | 11.0 | 7.7 | -5.1 | -26.5 | 37.6 |
| STANTEC, INC. | 2.1 | 13.9 | 11.9 | 10.4 | 30.8 | 18.9 | 16.2 |
| TETRA TECH | 3.0 | 14.4 | 13.3 | 12.3 | 35.4 | 24.6 | 21.5 |
| VEOLIA ENVIRONNEMENT | 2.0 | 126.9 | 117.4 | 108.4 | 27.6 | 12.5 | 10.9 |
| **MEDIAN** | **3.0** | **14.4** | **13.5** | **12.4** | **30.8** | **26.9** | **23.6** |

### Balance Sheet and Credit Ratings

| | Common Equity (%) | Pref Stock (%) | Minority Interest (%) | LT Debt (%) | ST Debt (%) | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| AIR PRODUCTS & CHEM | N/A | N/A | N/A | N/A | N/A | A |
| ASHLAND | NA | NA | NA | NA | NA | BB |
| CADIZ | -90% | 0% | 0% | 189% | 0% | |
| **CALGON CARBON** | **63%** | **0%** | **0%** | **36%** | **1%** | |
| CANTEL MEDICAL | 81% | 0% | 0% | 19% | 0% | |
| **CONSOLIDATED WATER** | **94%** | **0%** | **6%** | **0%** | **0%** | |
| ECHOLAB | 51% | 0% | 1% | 45% | 4% | A- |
| FORTIVE | NA | NA | NA | NA | NA | |
| LAYNE CHRISTENSEN | 34% | 0% | 0% | 66% | 0% | |
| STANTEC, INC. | 66% | 0% | 0% | 31% | 3% | |
| TETRA TECH | 5% | 0% | 7% | 58% | 30% | |
| VEOLIA ENVIRONNEMENT | 29% | 0% | 5% | 43% | 23% | BBB |
| **MEDIAN** | **57%** | **0%** | **0%** | **41%** | **1%** | |

### Liquidity and Profitability Ratios

| | Annual Rate ($) | Div Yield (%) | Div Payout (%) | Current Ratio (X) | Quick Ratio (X) | Interest Coverage (X) | 2016 ROA (%) | 2016 ROE (%) | FCF 2016 Yield (%) | EPS 2016 Yield (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| AIR PRODUCTS & CHEM | 4.40 | 2.6% | 67 | 2.4 | 2.2 | 20 | 6% | 15% | 4% | 5% |
| ASHLAND | 0.90 | 1.2% | 7,640 | 2.0 | 1.3 | 2 | -3% | -9% | 2% | 0% |
| CADIZ | 0.00 | 0.0% | 0 | 1.8 | 1.8 | -1 | -43% | 0% | -4% | -11% |
| **CALGON CARBON** | **0.20** | **0.9%** | **182** | **2.8** | **1.7** | **12** | **2%** | **4%** | **4%** | **2%** |
| CANTEL MEDICAL | 0.17 | 0.1% | 8 | 2.4 | 1.5 | 34 | 9% | 14% | 2% | 2% |
| **CONSOLIDATED WATER** | **0.34** | **2.6%** | **73** | **9.4** | **9.1** | **675** | **2%** | **3%** | **3%** | **2%** |
| ECHOLAB | 1.64 | 1.2% | 33 | 1.2 | 0.8 | 11 | 7% | 18% | 3% | 4% |
| FORTIVE | 0.28 | 0.4% | 11 | 2.0 | 1.5 | 17 | 11% | 22% | 5% | 5% |
| LAYNE CHRISTENSEN | 0.00 | 0.0% | 0 | 1.5 | 1.3 | 1 | -11% | -50% | -4% | -25% |
| STANTEC, INC. | 0.40 | 1.4% | 48 | 1.5 | 1.5 | 10 | 4% | 8% | 6% | 4% |
| TETRA TECH | 0.40 | 0.8% | 19 | 1.9 | 1.9 | 20 | 5% | 10% | 6% | 4% |
| VEOLIA ENVIRONNEMENT | 0.68 | 2.7% | 0 | 0.0 | 0.0 | 0 | 1% | 5% | 9% | 4% |
| **MEDIAN** | **$0.34** | **0.9%** | | **2** | **2** | | **4%** | **8%** | **3%** | **2%** |

### Financial Statistics/Estimates

| | Book Value ($) | EBITDA 2016 ($) | EBITDA 2017 ($) | EBITDA 2018 ($) | EPS 2016 ($) | EPS 2017 ($) | EPS 2018 ($) |
|---|---|---|---|---|---|---|---|
| AIR PRODUCTS & CHEM | 46.19 | 3060 | 2768 | 3027 | 6.77 | 6.31 | 7.11 |
| ASHLAND | 54.94 | 739 | 570 | 666 | -0.45 | 2.44 | 3.36 |
| CADIZ | -3.39 | -9 | 0 | 0 | -1.41 | 0.00 | 0.00 |
| **CALGON CARBON** | **8.07** | **77** | **0** | **0** | **0.27** | **0.52** | **0.72** |
| CANTEL MEDICAL | 12.98 | 122 | 153 | 179 | 1.44 | 2.08 | 2.40 |
| **CONSOLIDATED WATER** | **9.87** | **13** | **0** | **0** | **0.27** | **0.53** | **0.73** |
| ECHOLAB | 25.00 | 2858 | 2950 | 3155 | 4.14 | 4.69 | 5.33 |
| FORTIVE | 10.00 | 1445 | 1546 | 1747 | 2.51 | 2.86 | 3.27 |
| LAYNE CHRISTENSEN | 2.72 | 3 | 37 | 53 | -2.64 | -0.51 | 0.36 |
| STANTEC, INC. | 13.21 | 268 | 314 | 357 | 0.92 | 1.50 | 1.75 |
| TETRA TECH | 16.62 | 214 | 231 | 250 | 1.42 | 2.04 | 2.33 |
| VEOLIA ENVIRONNEMENT | 0.00 | 3183 | 3746 | 3949 | 0.63 | 1.22 | 1.44 |
| **MEDIAN** | **12.98** | 214 | 231 | 250 | 0.92 | 2.04 | 2.33 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Electric Utilities (Regulated Electrics/Gas)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/26/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| ALLIANT | LNT | $40.30 | NR | 8 | | |
| AVANGRID | AGR | $48.68 | Buy | 10 | 55.00 | 13% |
| AVISTA | AVA | $51.14 | NR | 3 | | |
| CHESAPEAKE UTILITIES | CPK | $74.75 | Buy | 6 | 88.00 | 18% |
| CMS ENERGY | CMS | $44.79 | NR | 15 | | |
| CONEDISON INC | ED | $80.40 | NR | 14 | | |
| DTE CORP | DTE | $105.50 | NR | 11 | | |
| EVERSOURCE ENERGY | ES | $64.07 | Buy | 14 | 71.00 | 11% |
| MGE ENERGY | MGEE | $59.80 | NR | 1 | | |
| NORTHWESTERN | NWE | $54.36 | NR | 5 | | |
| PG&E CORP | PCG | $43.54 | NR | 15 | | |
| SCANA | SCG | $43.43 | NR | 10 | | |
| UNITIL CORP | UTL | $43.92 | Buy | 3 | 50.00 | 14% |
| VECTREN CORP | VVC | $62.00 | NR | 5 | | |
| WISCONSIN ENERGY | WEC | $64.01 | NR | 12 | | |
| XCEL ENERGY | XEL | $45.70 | NR | 12 | | |
| MEDIAN | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ALLIANT | 1,480 | 9,318 | 46 | 37 | 231 | 231 | 0% | 69% | 6 | 0.6 | 14,346 |
| AVANGRID | 368 | 15,045 | 53 | 37 | 309 | 56 | 82% | 15% | 9 | 0.7 | 20,786 |
| AVISTA | 274 | 3,294 | 53 | 38 | 64 | 64 | 1% | 80% | 0 | 0.6 | 5,232 |
| CHESAPEAKE UTILITIES | 39 | 1,222 | 86 | 64 | 16 | 16 | 4% | 63% | 3 | 0.7 | 1,637 |
| CMS ENERGY | 4,511 | 12,631 | 51 | 42 | 282 | 280 | 1% | 90% | 3 | 0.5 | 22,812 |
| CONEDISON INC | 2,505 | 24,930 | 90 | 73 | 310 | 309 | 0% | 59% | 6 | 0.3 | 40,460 |
| DTE CORP | 1,125 | 18,926 | 117 | 97 | 179 | 178 | 1% | 70% | 5 | 0.5 | 31,766 |
| EVERSOURCE ENERGY | 3,695 | 20,303 | 66 | 54 | 317 | 314 | 1% | 74% | 3 | 0.5 | 31,845 |
| MGE ENERGY | 84 | 2,073 | 69 | 58 | 35 | 35 | 0% | 39% | 4 | 0.7 | 2,365 |
| NORTHWESTERN | 357 | 2,642 | 64 | 53 | 49 | 48 | 1% | 94% | 2 | 0.6 | 4,713 |
| PG&E CORP | 4,230 | 22,328 | 72 | 42 | 513 | 512 | 0% | 84% | 1 | 0.5 | 40,709 |
| SCANA | 2,159 | 6,207 | 71 | 37 | 143 | - | 0% | 71% | 2 | 0.6 | 12,853 |
| UNITIL CORP | 79 | 647 | 53 | 43 | 15 | 14 | 2% | 58% | 2 | 0.6 | 1,062 |
| VECTREN CORP | 522 | 5,146 | 70 | 54 | 83 | 83 | 0% | 66% | 1 | 0.7 | 7,184 |
| WISCONSIN ENERGY | 1,967 | 20,200 | 70 | 56 | 316 | 315 | 0% | 74% | 6 | 0.5 | 30,824 |
| XCEL ENERGY | 2,656 | 23,205 | 40 | 508 | 508 | 507 | 0% | 74% | 4 | 0.5 | 38,422 |
| MEDIAN | | 10,974 | | | | | 44% | - | 3 | 0.6 | 17566 |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| ALLIANT | 2.4 | 13.7 | 12.5 | 11.3 | 21.6 | 20.8 | 19.1 |
| AVANGRID | 1.0 | 10.2 | 10.2 | 9.5 | 23.5 | 21.9 | 20.1 |
| AVISTA | 2.0 | 11.7 | 11.8 | 10.4 | 23.8 | 26.6 | 25.0 |
| CHESAPEAKE UTILITIES | 4.9 | 0.8 | 0.7 | 0.7 | 37.0 | 34.4 | 32.1 |
| CMS ENERGY | 2.9 | 10.9 | 10.4 | 9.8 | 22.2 | 20.6 | 19.2 |
| CONEDISON INC | 1.7 | 10.7 | 10.1 | 10.0 | 20.2 | 19.6 | 18.8 |
| DTE CORP | 2.1 | 12.8 | 11.9 | 11.0 | 20.0 | 19.1 | 18.5 |
| EVERSOURCE ENERGY | 1.9 | 12.0 | 11.5 | 11.1 | 21.6 | 20.5 | 19.3 |
| MGE ENERGY | 2.9 | NA | NA | NA | 27.4 | 27.2 | 26.0 |
| NORTHWESTERN | 1.6 | 11.4 | 10.8 | 10.5 | 16.5 | 16.1 | 15.9 |
| PG&E CORP | 1.2 | 7.3 | 6.6 | 6.4 | 11.6 | 11.8 | 11.4 |
| SCANA | 1.1 | 8.3 | 8.3 | 9.6 | 10.4 | 10.7 | 13.6 |
| UNITIL CORP | 2.1 | 9.5 | 9.0 | 8.4 | 22.6 | 21.5 | 21.0 |
| VECTREN CORP | 2.9 | NA | 10.8 | 10.1 | 24.3 | 23.6 | 22.0 |
| WISCONSIN ENERGY | 2.3 | 12.1 | 11.7 | 11.3 | 21.6 | 20.6 | 19.5 |
| XCEL ENERGY | 2.1 | 10.8 | 10.3 | 9.9 | 20.7 | 19.8 | 18.7 |
| MEDIAN | 2.1 | NA | 10.4 | 10.0 | 21.6 | 20.6 | 19.3 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| ALLIANT | 42% | 2% | 0% | 49% | 6% | A- |
| AVANGRID | 69% | 0% | 0% | 26% | 5% | BBB+ |
| AVISTA | 42% | 0% | 0% | 48% | 10% | BBB |
| CHESAPEAKE UTILITIES | 42% | 0% | 0% | 38% | 20% | |
| CMS ENERGY | 28% | 0% | 0% | 64% | 8% | BBB+ |
| CONEDISON INC | 47% | 0% | 0% | 49% | 3% | A- |
| DTE CORP | 41% | 0% | 0% | 55% | 3% | BBB+ |
| EVERSOURCE ENERGY | 47% | 0% | 0% | 49% | 4% | A |
| MGE ENERGY | 65% | 0% | 0% | 34% | 1% | |
| NORTHWESTERN | 42% | 0% | 0% | 51% | 7% | BBB |
| PG&E CORP | N/A | N/A | N/A | N/A | N/A | A- |
| SCANA | N/A | N/A | N/A | N/A | N/A | BBB+ |
| UNITIL CORP | 33% | 0% | 0% | 51% | 16% | BBB+ |
| VECTREN CORP | 43% | 0% | 0% | 48% | 9% | A- |
| WISCONSIN ENERGY | 43% | 0% | 0% | 49% | 8% | A- |
| XCEL ENERGY | N/A | N/A | N/A | N/A | N/A | A- |
| MEDIAN | | | | | | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| ALLIANT | 1.34 | 3.3% | 66 | 0.7 | 0.1 | 5 | 3% | 10% | (4%) | 6% |
| AVANGRID | 1.73 | 3.5% | 80 | 0.8 | 2.0 | 7 | 2% | 4% | (1%) | 6% |
| AVISTA | 1.43 | 2.8% | 71 | 0.6 | 0.1 | 5 | 3% | 9% | (2%) | 7% |
| CHESAPEAKE UTILITIES | | 0.0% | 47 | 0.4 | 0.1 | 11 | 4% | 11% | (6%) | 6% |
| CMS ENERGY | 1.33 | 3.0% | 68 | 0.6 | 2.5 | 5 | 3% | 13% | (0%) | 6% |
| CONEDISON INC | 2.86 | 3.6% | 69 | 0.7 | 7.8 | 6 | 3% | 9% | (1%) | 7% |
| DTE CORP | 3.53 | 3.3% | 60 | 0.6 | 1.6 | 5 | 3% | 10% | 0% | 6% |
| EVERSOURCE ENERGY | 1.9 | 3.0% | 61 | 0.6 | 0.5 | 6 | 3% | 9% | 1% | 6% |
| MGE ENERGY | 1.29 | 2.2% | 57 | 0.6 | 1.0 | 9 | 4% | 11% | 3% | 6% |
| NORTHWESTERN | 2.10 | 3.9% | 63 | 0.6 | 0.1 | 4 | 3% | 10% | (0%) | 6% |
| PG&E CORP | 0.00 | 0.0% | 47 | 0.7 | 1.8 | 7 | 2% | 8% | (4%) | 5% |
| SCANA | 1.73 | 4.0% | 77 | 0.6 | 2 | 5 | 3% | 11% | (5%) | 7% |
| UNITIL CORP | 1.44 | 3.3% | 72 | 0.7 | 0.1 | 5 | 3% | 9% | (5%) | 5% |
| VECTREN CORP | 1.80 | 2.9% | 62 | 0.6 | 0.7 | 8 | 4% | 12% | (0%) | 5% |
| WISCONSIN ENERGY | 2.21 | 3.5% | 68 | 0.7 | 0.4 | 6 | 3% | 11% | 4% | 6% |
| XCEL ENERGY | 1.44 | 3.2% | 61 | 0.6 | | 6 | 3% | 10% | (1%) | 7% |
| MEDIAN | | 3.2% | 64 | 0.6 | | 6 | 3% | 10% | (1%) | 6% |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| ALLIANT | 16.96 | 1050 | 1149 | 1265 | 1.87 | 1.94 | 2.11 |
| AVANGRID | 48.90 | 2038 | 2036 | 2196 | 2.07 | 2.23 | 2.43 |
| AVISTA | 25.69 | 449.1 | 442 | 504 | 2.15 | 1.92 | 2.05 |
| CHESAPEAKE UTILITIES | 27.36 | 116.1 | 126 | 148 | 2.86 | 2.87 | 3.40 |
| CMS ENERGY | 15.23 | 2097 | 2196 | 2333 | 2.02 | 2.17 | 2.33 |
| CONEDISON INC | 46.88 | 3771 | 4014 | 4058 | 3.99 | 4.09 | 4.27 |
| DTE CORP | 50.22 | 2488 | 2679 | 2879 | 5.28 | 5.53 | 5.71 |
| EVERSOURCE ENERGY | 33.80 | 2651 | 2779 | 2878 | 2.96 | 3.13 | 3.32 |
| MGE ENERGY | 20.89 | 0 | 0 | 0 | 2.18 | 2.20 | 2.30 |
| NORTHWESTERN | 34.68 | 412.9 | 434 | 449 | 3.30 | 3.38 | 3.42 |
| PG&E CORP | 35.39 | 5599 | 6165 | 6340 | 3.76 | 3.68 | 3.82 |
| SCANA | 40.06 | 1551 | 1555 | 1343 | 4.16 | 4.06 | 3.19 |
| UNITIL CORP | 20.82 | 111.6 | 119 | 126 | 1.94 | 2.04 | 2.09 |
| VECTREN CORP | 21.33 | 0 | 668 | 710 | 2.55 | 2.62 | 2.82 |
| WISCONSIN ENERGY | 28.29 | 2541 | 2628 | 2735 | 2.97 | 3.11 | 3.29 |
| XCEL ENERGY | 21.73 | 3547 | 3744 | 3868 | 2.21 | 2.31 | 2.44 |
| MEDIAN | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

## Rating Data / Trading & Market Data / Valuation Statistics

| | Symbol | Price 1/26/18 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALLETE | ALE | $72.84 | NR | 5 | | | 182 | 3,705 | 81 | 64 | 51 | 51 | 1% | 74% | 3 | 0.6 | 5,127 | 1.9 | 11.9 | 11.0 | 11.1 | 23.3 | 22.3 | 20.1 |
| CENTERPOINT ENERGY | CNP | $28.46 | NR | 15 | | | 3,053 | 12,267 | 30 | 26 | 431 | 409 | 5% | 80% | 0 | 0.8 | 19,646 | 3.5 | 9.7 | 9.5 | 9.1 | 24.5 | 21.3 | 19.3 |
| DUKE ENERGY | DUK | $78.83 | NR | 17 | | | 3,945 | 55,172 | 92 | 76 | 700 | 699 | 0% | 58% | 3 | 0.4 | 108,223 | 1.3 | 11.8 | 11.0 | 10.5 | 16.8 | 17.3 | 16.4 |
| EL PASO ELECTRIC | EE | $51.60 | NR | 4 | | | 146 | 2,095 | 61 | 45 | 41 | 40 | 1% | #### | 3 | 0.6 | 3,449 | 1.9 | 12.4 | 11.7 | 11.6 | 21.5 | 20.8 | 19.7 |
| GREAT PLAINS | GXP | $31.27 | NR | 8 | | | 1,054 | 6,744 | 35 | 27 | 216 | 215 | 0% | 88% | 5 | 0.6 | 9,676 | 1.3 | 9.9 | 10.2 | 9.7 | 16.9 | 18.7 | 18.5 |
| HAWAIIAN ELECTRIC | HE | $34.50 | NR | 6 | | | 728 | 3,753 | 39 | 32 | 109 | 108 | 1% | 51% | 9 | 0.6 | 5,374 | 1.8 | 9.6 | 9.7 | 9.5 | 19.7 | 21.1 | 18.8 |
| IDACORP | IDA | $86.07 | NR | 4 | | | 240 | 4,337 | 100 | 78 | 50 | 50 | 1% | 75% | 3 | 0.6 | 5,988 | 2.0 | 14.0 | 12.8 | 12.6 | 21.8 | 21.1 | 20.7 |
| PINNACLE WEST | PNW | $80.94 | NR | 14 | | | 524 | 9,043 | 92 | 76 | 112 | 111 | 0% | 84% | 4 | 0.5 | 14,052 | 1.9 | 10.5 | 9.7 | 9.1 | 20.5 | 19.0 | 18.3 |
| PNM RESOURCES | PNM | $38.10 | NR | 9 | | | 580 | 3,035 | 46 | 33 | 80 | 79 | 1% | 93% | 1 | 0.7 | 5,801 | 1.8 | 11.0 | 9.9 | 10.0 | 23.1 | 20.3 | 21.6 |
| PORTLAND GENERAL | POR | $42.27 | NR | 8 | | | 705 | 3,766 | 50 | 42 | 89 | 89 | 1% | 94% | 1 | 0.6 | 6,049 | 1.6 | 9.1 | 8.5 | 8.3 | 19.6 | 18.7 | 18.4 |
| SOUTHERN COMPANY | SO | $44.31 | NR | 18 | | | 8,852 | 44,471 | 54 | 43 | 1,004 | 1,003 | 0% | 56% | 6 | 0.4 | 95,315 | 1.8 | 12.8 | 10.7 | 10.6 | 15.3 | 15.0 | 14.8 |
| WESTAR ENERGY | WR | $51.35 | NR | 8 | | | 516 | 7,294 | 57 | 49 | 142 | 141 | 1% | 74% | 2 | 0.5 | 11,251 | 1.9 | 10.8 | 10.6 | 8.7 | 21.1 | 20.8 | 19.6 |
| **MEDIAN** | | | | | | | **642** | **5,541** | **55** | **44** | **110** | **109** | | **-** | **3** | **1** | **7,862** | **1.8** | **NA** | **10.4** | **9.9** | **20.8** | **20.5** | **19.1** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Balance Sheet and Credit Ratings / Liquidity and Profitability Ratios / Financial Statistics/Estimates

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALLETE | 56% | 0% | 0% | 42% | 2% | BBB+ | 2.24 | 3.1% | 61 | 0.7 | 0.3 | 6 | 3% | 8% | 2% | 5% | 38.20 | 429 | 468 | 461 | 3.13 | 3.27 | 3.62 |
| CENTERPOINT ENERGY | 27% | 0% | 0% | 65% | 9% | A- | 1.11 | 3.9% | 77 | NA | 13.9 | 5 | 2% | 12% | 8% | 4% | 8.03 | 2,029 | 2,072 | 2,168 | 1.16 | 1.34 | 1.48 |
| DUKE ENERGY | 42% | 0% | 0% | 54% | 4% | A- | 3.56 | 4.5% | 91 | 0.9 | 3.9 | 5 | 2% | 6% | (2%) | 5% | 58.62 | 9,184 | 9,828 | ###### | 4.69 | 4.56 | 4.80 |
| EL PASO ELECTRIC | 43% | 0% | 0% | 51% | 6% | BBB | 1.34 | 2.6% | 54 | 0.5 | 0.1 | 5 | 3% | 9% | (3%) | 5% | 26.52 | 279 | 295 | 298 | 2.40 | 2.48 | 2.62 |
| GREAT PLAINS | 51% | 0% | 0% | 41% | 8% | BBB+ | 1.10 | 3.5% | 611 | 0.7 | 23.7 | 5 | 2% | 6% | 4% | 6% | 24.73 | 973 | 950 | 995 | 1.85 | 1.67 | 1.69 |
| HAWAIIAN ELECTRIC | 53% | 1% | 0% | 45% | 1% | BBB- | 1.24 | 3.6% | 76 | 0.5 | N/A | 7 | 2% | 12% | 5% | 7% | 19.03 | 558 | 551 | 568 | 1.75 | 1.63 | 1.83 |
| IDACORP | 56% | 0% | 0% | 44% | 0% | BBB | 2.36 | 2.7% | 54 | 0.5 | 0.6 | 5 | 3% | 9% | 1% | 5% | 42.74 | 428 | 468 | 477 | 3.94 | 4.09 | 4.16 |
| PINNACLE WEST | 50% | 0% | 0% | 47% | 3% | A- | 2.78 | 3.4% | 56 | 0.6 | 0.3 | 7 | 3% | 9% | (3%) | 5% | 43.14 | 1,344 | 1,444 | 1,542 | 3.95 | 4.27 | 4.42 |
| PNM RESOURCES | 36% | 0% | 0% | 55% | 9% | BBB+ | 1.06 | 2.8% | 49 | 0.6 | 0.1 | 4 | 2% | 7% | (7%) | 4% | 21.04 | 526 | 584 | 577 | 1.65 | 1.88 | 1.76 |
| PORTLAND GENERAL | 49% | 0% | 0% | 49% | 2% | BBB | 1.36 | 3.2% | 57 | 0.6 | 0.2 | 5 | 3% | 8% | (1%) | 5% | 26.35 | 667 | 708 | 729 | 2.16 | 2.26 | 2.30 |
| SOUTHERN COMPANY | NA | NA | NA | NA | NA | A- | 2.32 | 5.2% | 418 | 0.9 | 19.8 | 6 | 3% | 11% | (6%) | 5% | 25.00 | 7,464 | 8,915 | 8,951 | 2.89 | 2.96 | 2.98 |
| WESTAR ENERGY | 48% | 0% | 0% | 49% | 3% | BBB+ | 1.60 | 3.1% | 66 | 0.6 | 0.0 | 6 | 3% | 9% | (3%) | 4% | 26.84 | 1,038 | 1,060 | 1,293 | 2.43 | 2.47 | 2.62 |
| **MEDIAN** | **49%** | **0%** | **0%** | **49%** | **3%** | | | | **63** | **1** | **0** | **5** | **3%** | **9%** | **(1%)** | **5%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Combination Electrics With Merchant)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Price | JMS | Analyst | Fair | Disc To | Daily | Market | 52-Week | | Avg | Free | Insider | Inst. | % of Float | | | Mkt/ | TEV/EBITDA | | | P/EPS | | |
| | Symbol | 1/26/18 | Rating | Coverage | Value | FV | Volume | Capital | High | Low | Shs Out | Float | Hldg | Hldg | Short | Beta | TEV | Book | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| AMEREN | AEE | $56.92 | NR | 8 | | | 1,617 | 13,811 | 65 | 51 | 243 | 242 | 0% | 33% | 4 | 0.5 | 22,206 | 1.9 | 9.9 | 9.4 | 9.1 | 21.2 | 20.3 | 18.9 |
| AMERICAN ELECTRIC POWER | AEP | $68.75 | NR | 18 | | | 4,901 | 33,817 | 78 | 62 | 492 | 492 | 0% | 28% | 2 | 0.5 | 54,910 | NA | 10.0 | 10.1 | 9.8 | 17.4 | 18.7 | 17.7 |
| DOMINION | D | $75.50 | NR | 17 | | | 5,245 | 48,665 | 85 | 71 | 645 | 641 | 0% | 35% | 7 | 0.5 | 87,238 | 3.2 | 15.5 | 13.6 | 12.1 | 19.9 | 21.1 | 18.7 |
| EDISON INTERNATIONAL | EIX | $62.46 | NR | 15 | | | 2,638 | 20,350 | 83 | 61 | 326 | 325 | 0% | 36% | 2 | 0.5 | 35,670 | 1.7 | 8.5 | 8.0 | 7.5 | 15.7 | 14.5 | 14.7 |
| ENTERGY | ETR | $78.29 | NR | 11 | | | 1,370 | 14,112 | 88 | 70 | 180 | 180 | 0% | 41% | 4 | 0.5 | 30,010 | 1.7 | 9.2 | 9.0 | 8.6 | 11.0 | 11.3 | 15.3 |
| EXELON | EXC | $38.86 | NR | 17 | | | 7,515 | 37,309 | 43 | 33 | 960 | 958 | 0% | 36% | 2 | 0.6 | 73,459 | 1.4 | 9.3 | 8.7 | 8.2 | 14.5 | 14.6 | 13.2 |
| FIRST ENERGY | FE | $32.09 | NR | 16 | | | 19,394 | 14,275 | 35 | 28 | 445 | 444 | 0% | 39% | 3 | 0.6 | 36,507 | 2.3 | 8.4 | 8.2 | 8.8 | 12.2 | 10.5 | 12.9 |
| NEXTERA ENERGY | NEE | $157.69 | NR | 17 | | | 3,647 | 74,177 | 159 | 119 | 470 | 469 | 0% | 33% | 3 | 0.5 | 108,755 | NA | 13.3 | 12.6 | 11.5 | 25.5 | 23.5 | 21.4 |
| PPL CORP | PPL | $32.01 | NR | 14 | | | 5,026 | 21,868 | 40 | 30 | 683 | 683 | 0% | 32% | 3 | 0.6 | 42,083 | 2.2 | 10.0 | 10.8 | 10.0 | 13.1 | 14.7 | 13.7 |
| PUBLIC SERVICE ENT GROUP | PEG | $51.20 | NR | 13 | | | 2,883 | 25,909 | 53 | 42 | 506 | 505 | 0% | 30% | 3 | 0.6 | 38,322 | 2.0 | 10.3 | 10.3 | 9.9 | 17.7 | 17.6 | 16.6 |
| **MEDIAN** | | | | | | | **4,274** | **23,889** | | | | | | | **3** | **1** | **40,203** | **2.0** | **NA** | **9.8** | **9.4** | **16.6** | **16.1** | **16.0** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | FCF | EPS | | | | | | | |
| | Common | Pref | Minority | LT | ST | Credit | Annual | Div | Div | Current | Quick | Interest | 2016 | 2016 | 2016 | 2016 | Book | EBITDA | | | EPS | | |
| | Equity | Stock | Interest | Debt | Debt | Rating | Rate | Yield | Payout | Ratio | Ratio | Coverage | ROA | ROE | Yield | Yield | Value | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| AMEREN | 44% | 0% | 0% | 49% | 7% | BBB+ | 1.83 | 3.2% | 70 | 0.6 | 0.1 | 6 | 3% | 9% | (0%) | 5% | 29.28 | 2252 | 2354 | 2441 | 2.68 | 2.80 | 3.02 |
| AMERICAN ELECTRIC POWER | 42% | 0% | 0% | 50% | 8% | A- | 2.48 | 3.6% | 0 | 0.6 | NA | 0 | 1% | 3% | (1%) | 2% | 0.0 | 5468 | 5438 | 5628 | 3.94 | 3.68 | 3.89 |
| DOMINION | N/A | N/A | N/A | N/A | N/A | BBB+ | 3.34 | 4.4% | 87 | 0.8 | NA | 5 | 3% | 16% | (4%) | 4% | 23.26 | 5644 | 6410 | 7238 | 3.80 | 3.58 | 4.04 |
| EDISON INTERNATIONAL | 46% | 0% | 0% | 49% | 6% | BBB+ | 2.42 | 3.9% | 49 | 0.5 | 1.7 | 7 | 3% | 11% | (2%) | 6% | 36.8 | 4207 | 4432 | 4730 | 3.97 | 4.31 | 4.26 |
| ENTERGY | 32% | 1% | 0% | 59% | 8% | BBB+ | 3.56 | 4.5% | -71 | NA | 11.9 | 5 | (1%) | (6%) | (8%) | (4%) | 45.12 | 3280 | 3345 | 3507 | 7.11 | 6.91 | 5.10 |
| EXELON | 41% | 0% | 0% | 53% | 6% | BBB | 1.31 | 3.4% | 58 | 1.0 | 18.1 | 6 | 1% | 4% | (0%) | 3% | 28.0 | 7903 | 8480 | 8972 | 2.68 | 2.66 | 2.95 |
| FIRST ENERGY | 21% | 0% | 0% | 74% | 5% | BBB- | 1.44 | 4.5% | -12 | NA | 4.0 | 4 | #### | (66%) | 3% | (47%) | 14.11 | 4369 | 4436 | 4165 | 2.63 | 3.04 | 2.49 |
| NEXTERA ENERGY | 42% | 0% | 0% | 53% | 5% | A- | 3.93 | 2.5% | 35 | 0.3 | 22.0 | 6 | 3% | 12% | 4% | 5% | 0.0 | 8177 | 8649 | 9461 | 6.19 | 6.70 | 7.35 |
| PPL CORP | 32% | 0% | 0% | 63% | 5% | A- | 1.58 | 4.9% | 71 | 0.5 | 4.0 | 5 | 5% | 19% | (0%) | 8% | 14.56 | 4188 | 3890 | 4193 | 2.45 | 2.18 | 2.33 |
| PUBLIC SERVICE ENT GROUP | 48% | 0% | 0% | 0% | 5% | BBB+ | 1.72 | 3.4% | 165 | 0.9 | 5.9 | 8 | 2% | 7% | (4%) | 4% | 26.0 | 3718 | 3712 | 3858 | 2.90 | 2.91 | 3.08 |
| **MEDIAN** | **42%** | **0%** | **0%** | **53%** | **6%** | | | | **54** | **1** | **5** | **5** | **2%** | **8%** | **(1%)** | **4%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Merchant Generators)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 1/26/18 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2016 | TEV/EBITDA 2017 | TEV/EBITDA 2018 | P/EPS 2016 | P/EPS 2017 | P/EPS 2018 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| CALPINE | CPN | $15.12 | NR | 7 | | | 2,151 | 5,452 | 15 | 15 | 361 | 341 | 5% | 35% | 2 | 1.0 | 16,327 | 1.7 | 9.0 | 8.9 | 8.1 | ##### | 72.9 | 17.3 |
| COVANTA | CVA | $16.60 | NR | 8 | | | 718 | 2,175 | 17 | 17 | 131 | 129 | 1% | 51% | 11 | 0.7 | 5,035 | 4.6 | 12.3 | 12.3 | 11.1 | ##### | -67.1 | 150.9 |
| DYNEGY | DYN | $12.80 | NR | 5 | | | 2,075 | 1,847 | 13 | 13 | 144 | 128 | 10% | 41% | 4 | 1.2 | 10,450 | 0.9 | 10.4 | 8.8 | 7.0 | -1.3 | 13.5 | 20.9 |
| NRG ENERGY | NRG | $27.40 | NR | 5 | | | 5,814 | 8,676 | 30 | 30 | 317 | 305 | 4% | 43% | 4 | 1.2 | 26,085 | 4.2 | 8.0 | 10.6 | 9.1 | 22.4 | 30.4 | 12.2 |
| ORMAT TECHNOLOGIES | ORA | $69.54 | NR | 6 | | | 130 | 3,519 | 70 | 70 | 51 | 36 | 29% | 36% | 4 | 0.9 | 4,408 | 3.2 | 13.6 | 12.8 | 11.8 | 37.2 | 29.9 | 27.3 |
| VISTA ENERGY | VSTE | $19.79 | NR | 4 | | | 2,235 | 8,478 | 21 | 21 | 428 | NA | 16% | 59% | NA | 0.5 | 11,760 | 1.3 | 7.3 | 8.3 | 8.4 | -52.1 | 18.3 | 24.3 |
| **MEDIAN** | | | | | | | **2,113** | **4,485** | **19** | **19** | **230** | **129** | **8** | **42** | **4** | **1** | **11,105** | **2.4** | **9.7** | **9.8** | **8.7** | **-26.7** | **24.1** | **22.6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2016 ROA | 2016 ROE | FCF 2016 Yield | EPS 2016 Yield | Book Value | EBITDA 2016 | EBITDA 2017 | EBITDA 2018 | EPS 2016 | EPS 2017 | EPS 2018 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| CALPINE | 21% | 0% | 0% | 76% | 2% | B+ | 0.00 | 0% | 0 | 0.0 | 23.2 | 1 | 0% | 3% | 15% | 2% | 9.10 | 1815 | 1836 | 2009 | -0.08 | 0.21 | 0.88 |
| COVANTA | 10% | 0% | 0% | 89% | 1% | BB- | 1.00 | 6% | -195 | 0.0 | 1.4 | 2 | (0%) | (1%) | (4%) | (0%) | 3.61 | 410 | 409 | 452 | -0.15 | -0.25 | 0.11 |
| DYNEGY | 15% | 4% | 0% | 81% | 1% | B+ | 0.00 | 0% | 0 | 0.0 | 19.7 | 1 | (10%) | (50%) | 34% | ##### | 14.00 | 1007 | 1187 | 1492 | -9.78 | 0.95 | 0.61 |
| NRG ENERGY | 6% | 0% | 0% | 87% | 6% | BB- | 0.24 | 0% | -2 | 0.0 | 34.8 | 2 | (2%) | (31%) | 21% | NA | 6.47 | 3257 | 2458 | 2867 | 1.23 | 0.90 | 2.24 |
| ORMAT TECHNOLOGIES | 54% | 0% | 0% | 42% | 4% | | 0.52 | 0% | 17 | 0.3 | 2.7 | 5 | 4% | 9% | 0% | 3% | 21.71 | 323.8 | 344 | 373 | 1.87 | 2.33 | 2.54 |
| VISTA ENERGY | 60% | 0% | 0% | 40% | 0% | | 0.00 | 0% | 0 | 0.0 | NA | 1 | 147% | 0% | (8%) | 342% | 15.43 | 1601 | 1423 | 1403 | -0.38 | 1.08 | 0.82 |
| **MEDIAN** | **15%** | **0%** | **0%** | **81%** | **2%** | | **$0.24** | 0.4% | **0** | **0** | **20** | **2** | **(0%)** | **(1%)** | **15%** | **1%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Gas Utilities - Downstream (Gas Distribution Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/26/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| ATMOS ENERGY | ATO | $83.02 | NR | 9 | | |
| LACLEDE GROUP | LG | $69.25 | NR | 9 | | |
| **NEW JERSEY RESOURCES** | **NJR** | **$39.50** | **Buy** | 6 | **$50.00** | **27%** |
| NORTHWEST NATURAL GAS | NWN | $58.45 | NR | 7 | | |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$29.49** | **Buy** | 7 | **$38.00** | **29%** |
| **RGC RESOURCES** | **RGCO** | **$25.78** | **Neutral** | 1 | **$29.00** | **12%** |
| SOUTHWEST GAS | SWX | $75.19 | NR | 5 | | |
| **WGL HOLDINGS, INC.** | **WGL** | **$84.31** | **Neutral** | 5 | **$71.00** | **-16%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 643 | 9,212 | 94 | 73 | 111 | 110 | 1.2% | 69% | 3 | 0.6 | 12,294 |
| LACLEDE GROUP | 238 | 3,344 | 83 | 62 | 48 | N/A | 3.0% | 81% | 3 | 0.5 | 5,814 |
| **NEW JERSEY RESOURCES** | **668** | **3,433** | **45** | **36** | **87** | **86** | **1.3%** | **65%** | **5** | **0.7** | **4,813** |
| NORTHWEST NATURAL GAS | 114 | 1,678 | 70 | 56 | 29 | 28 | 1.4% | 68% | 11 | 0.6 | 2,438 |
| **SOUTH JERSEY INDUSTRIES** | **510** | **2,344** | **38** | **29** | **79** | **79** | **0.7%** | **72%** | **3** | **0.7** | **3,761** |
| **RGC RESOURCES** | **5** | **186** | **32** | **17** | **7** | **6** | **13.0%** | **23%** | **101** | **0.1** | **248** |
| SOUTHWEST GAS | 215 | 3,589 | 87 | 72 | 48 | 47 | 1.1% | 80% | 6 | 0.7 | 5,418 |
| **WGL HOLDINGS, INC.** | **214** | **4,330** | **87** | **81** | **51** | **51** | **1.1%** | **71%** | **12** | **0.7** | **6,592** |
| **MEDIAN** | **227** | **3,389** | | | | | **1.25%** | **70%** | **5** | **0.6** | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 2.3 | 12.2 | 11.8 | 10.9 | 24.6 | 23.1 | 21.7 |
| LACLEDE GROUP | 1.7 | 14.2 | 12.1 | 11.1 | 21.4 | 19.5 | 18.6 |
| **NEW JERSEY RESOURCES** | **2.8** | **23.1** | **19.3** | **15.7** | **26.0** | **22.8** | **21.8** |
| NORTHWEST NATURAL GAS | 2.0 | 9.6 | 10.6 | 10.1 | 27.6 | 26.8 | 25.7 |
| **SOUTH JERSEY INDUSTRIES** | **1.9** | **14.1** | **17.5** | **11.0** | **19.0** | **25.5** | **20.2** |
| **RGC RESOURCES** | **3.1** | **14.7** | **NA** | **NA** | **31.7** | **NA** | **28.0** |
| SOUTHWEST GAS | 2.1 | 9.4 | 10.0 | 9.5 | 23.6 | 21.7 | 20.7 |
| **WGL HOLDINGS, INC.** | **2.9** | **17.3** | **12.7** | **11.5** | **25.5** | **27.1** | **22.9** |
| **MEDIAN** | **2.2** | **14.1** | **12.1** | **11.0** | **25.0** | **23.1** | **21.7** |

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| ATMOS ENERGY | 53% | 0% | 0% | 41% | 6% | A |
| LACLEDE GROUP | 44% | 0% | 0% | 44% | 13% | |
| **NEW JERSEY RESOURCES** | **46%** | **0%** | **0%** | **37%** | **16%** | |
| NORTHWEST NATURAL GAS | 52% | 0% | 0% | 47% | 1% | A+ |
| **SOUTH JERSEY INDUSTRIES** | **45%** | **0%** | **0%** | **44%** | **11%** | **BBB+** |
| **RGC RESOURCES** | **48%** | **0%** | **0%** | **48%** | **4%** | |
| SOUTHWEST GAS | 48% | 0% | 0% | 48% | 4% | BBB+ |
| **WGL HOLDINGS, INC.** | **40%** | **1%** | **0%** | **38%** | **21%** | **A** |
| **MEDIAN** | **47%** | **0%** | **0%** | **44%** | **8%** | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | $1.94 | 2.3% | 49 | 0.5 | 0.3 | 9 | 3% | 10.4% | -4% | 5% |
| LACLEDE GROUP | $2.25 | 3.2% | 61 | 0.7 | 0.5 | 5 | 3% | 8.6% | 1% | 5% |
| **NEW JERSEY RESOURCES** | $1.09 | 2.8% | **68** | 0.7 | **0.5** | **5** | **4%** | **11.6%** | **-5%** | **5%** |
| NORTHWEST NATURAL GAS | $1.89 | 3.2% | 85 | 1.0 | 0.7 | 4 | 2% | 7.2% | 5% | 4% |
| **SOUTH JERSEY INDUSTRIES** | $1.12 | 3.8% | **221** | 0.5 | **0.4** | **3** | **3%** | **10.2%** | **-1%** | **5%** |
| **RGC RESOURCES** | $0.62 | 2.4% | **67** | 1.1 | **0.5** | **9** | **4%** | **10.7%** | **-3%** | **5%** |
| SOUTHWEST GAS | $1.98 | 2.6% | 56 | 0.8 | 0.8 | 7 | 3% | 9.3% | 2% | 4% |
| **WGL HOLDINGS, INC.** | $2.04 | 2.4% | **54** | **0.7** | **0.48** | **5** | **3%** | **12.6%** | **-9%** | **5%** |
| **MEDIAN** | **$1.92** | **2.7%** | **64** | **0.7** | **0.5** | 5 | **3%** | **10.3%** | **-2%** | **5%** |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 36.74 | 1,007 | 1,043 | 1,126 | 3.38 | 3.60 | 3.83 |
| LACLEDE GROUP | 41.26 | 410 | 479 | 525 | 3.24 | 3.56 | 3.71 |
| **NEW JERSEY RESOURCES** | **14.3** | **209** | **249** | **307** | **1.52** | **1.73** | **1.82** |
| NORTHWEST NATURAL GAS | 29.5 | 254 | 229 | 241 | 2.12 | 2.18 | 2.27 |
| **SOUTH JERSEY INDUSTRIES** | **15.4** | 267 | **215** | **343** | **1.55** | **1.16** | **1.46** |
| **RGC RESOURCES** | **8.3** | 17 | **0** | **0** | **0.81** | **0.00** | **0.92** |
| SOUTHWEST GAS | 35.9 | 578 | 544 | 569 | 3.18 | 3.47 | 3.64 |
| **WGL HOLDINGS, INC.** | **29.3** | **381** | **517** | **574** | **3.31** | **3.11** | **3.67** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Rating Data**

| | Symbol | Price 1/26/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| BLACK HILLS CORP | BKH | $57.10 | NR | 8 | | |
| ENERGEN | EGN | $57.22 | NR | 27 | | |
| EQUITABLE RESOURCES | EQT | $58.74 | NR | 19 | | |
| MDU RESOURCES, INC. | MDU | $26.46 | NR | 2 | | |
| NATIONAL FUEL GAS | NFG | $56.77 | NR | 7 | | |
| WILLIAMS COMPANIES | WMB | $32.53 | NR | 9 | | |
| **MEDIAN** | | | | | | |

**Trading & Market Data**

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 806 | 3,054 | 72 | 53 | 53 | 53 | 0.95% | 94.5% | 6 | 0.8 | 6,602 |
| ENERGEN | 1,665 | 5,562 | 60 | 46 | 97 | 96 | 0.82% | 95.8% | 1 | 1.6 | 6,323 |
| EQUITABLE RESOURCES | 2,927 | 15,138 | 68 | 50 | 258 | 254 | 1.47% | 74.3% | 1 | 1.0 | 16,386 |
| MDU RESOURCES, INC. | 573 | 5,168 | 30 | 25 | 195 | 194 | 0.92% | 64.9% | 2 | 1.1 | 6,884 |
| NATIONAL FUEL GAS | 226 | 4,869 | 61 | 53 | 86 | 80 | 6.07% | 73.9% | 3 | 0.9 | 6,710 |
| WILLIAMS COMPANIES | 4,728 | 26,894 | 34 | 27 | 827 | 825 | 0.21% | 86.5% | 1 | 1.7 | 53,649 |
| **MEDIAN** | **1,235** | **5,365** | | | | | **0.94%** | **80%** | **2** | **1.0** | |

**Valuation Statistics**

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 1.8 | 11.9 | 10.6 | 10.5 | 41.7 | 16.9 | 16.7 |
| ENERGEN | 1.8 | 20.4 | 10.2 | 6.6 | -32.3 | 108.0 | 23.6 |
| EQUITABLE RESOURCES | 1.7 | 18.0 | 9.1 | 4.8 | -21.7 | 60.6 | 26.7 |
| MDU RESOURCES, INC. | 2.2 | 10.9 | NA | NA | 80.2 | 22.2 | 20.1 |
| NATIONAL FUEL GAS | 2.9 | 9.6 | 8.5 | 8.9 | 17.2 | 17.2 | 18.9 |
| WILLIAMS COMPANIES | 3.3 | 15.3 | 12.0 | 11.3 | -57.6 | 45.5 | 33.9 |
| **MEDIAN** | **2.0** | **13.6** | **10.2** | **8.9** | **-2.2** | **33.9** | **21.9** |

**Balance Sheet and Credit Ratings**

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 33% | 0% | 2% | 61% | 4% | BBB |
| ENERGEN | 81% | 0% | 0% | 19% | 0% | BB |
| EQUITABLE RESOURCES | 47% | 0% | 26% | 21% | 6% | BBB |
| MDU RESOURCES, INC. | 57% | 0% | 0% | 39% | 4% | BBB+ |
| NATIONAL FUEL GAS | 42% | 0% | 0% | 51% | 7% | BBB |
| WILLIAMS COMPANIES | 23% | 0% | 19% | 57% | 1% | BB+ |
| **MEDIAN** | **45%** | **0%** | **1%** | **45%** | **4%** | |

**Liquidity and Profitability Ratios**

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | $1.90 | 3.33% | 67.0 | 0.695 | 0.5 | 4 | 1% | 5% | (5%) | 2% |
| ENERGEN | $0.00 | 0.00% | 0.0 | 0.578 | 0.5 | 13 | (4%) | (6%) | (3%) | (3%) |
| EQUITABLE RESOURCES | $0.12 | 0.20% | 63.2 | 0.598 | 0.6 | 9 | (3%) | (8%) | (14%) | (4%) |
| MDU RESOURCES, INC. | $0.79 | 2.99% | 65 | 1.283 | 1.0 | 8 | 4% | 10% | 1% | NA |
| NATIONAL FUEL GAS | $1.66 | 2.92% | 49.7 | 1.267 | 1.2 | 6 | (5%) | (16%) | (0%) | (6%) |
| WILLIAMS COMPANIES | $1.20 | 3.69% | 193 | 0.974 | 0.9 | 3 | (1%) | (8%) | 9% | (2%) |
| **MEDIAN** | **$1.00** | **2.95%** | **64** | **0.8** | **0.8** | **7** | | | | |

**Financial Statistics/Estimates**

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| BLACK HILLS CORP | 31.46 | 553 | 622 | 627 | 1.37 | 3.37 | 3.42 |
| ENERGEN | 32.67 | 311 | 618 | 964 | -1.77 | 0.53 | 2.42 |
| EQUITABLE RESOURCES | 35.12 | 911 | 1,795 | 3,415 | -2.71 | 0.97 | 2.20 |
| MDU RESOURCES, INC. | 12.05 | 629 | 0 | 0 | 0.33 | 1.19 | 1.32 |
| NATIONAL FUEL GAS | 19.92 | 702 | 790 | 756 | 3.30 | 3.30 | 3.00 |
| WILLIAMS COMPANIES | 9.82 | 3,513 | 4,478 | 4,738 | -0.56 | 0.72 | 0.96 |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Gas Utilities - Midstream (Non Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

### Rating Data

| | Symbol | Price 1/26/2018 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| OGE ENERGY CORP | OGE | $32.14 | NR | 5 | | |
| ONEOK, INC. | OKE | $60.15 | NR | 13 | | |
| NISOURCE | NI | $24.50 | NR | 14 | | |
| SEMPRA ENERGY | SRE | $105.53 | NR | 10 | | |
| **UGI CORP** | **UGI** | **$46.86** | **Buy** | **5** | **56.00** | **20%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 994 | 6,419 | 37 | 31 | 200 | 199 | 0.24% | 63.8% | 1 | 0.8 | 9,677 |
| ONEOK, INC. | 2,591 | 24,690 | 61 | 47 | 410 | 381 | 0.64% | 74.3% | 1 | 1.4 | 32,553 |
| NISOURCE | 4,493 | 8,251 | 28 | 22 | 337 | 335 | 0.62% | 84.6% | 1 | 0.7 | 16,767 |
| SEMPRA ENERGY | 3,059 | 28,992 | 123 | 100 | 275 | 251 | 0.16% | 83.6% | 2 | 0.7 | 47,277 |
| **UGI CORP** | **554** | **8,114** | **52** | **45** | **173** | **172** | **0.60%** | **79.9%** | **1** | **0.7** | **12,786** |
| **MEDIAN** | **2,591** | **8,251.5** | | | | | **N/A** | **80%** | **1** | **0.7** | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | TEV/EBITDA 2018 X | P/EPS 2016 X | P/EPS 2017 X | P/EPS 2018 X |
|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 1.8 | 11.7 | 11.4 | 11.6 | 19.0 | 16.7 | 16.9 |
| ONEOK, INC. | 4.3 | 19.8 | 16.5 | 16.5 | 36.2 | 34.5 | 34.9 |
| NISOURCE | 1.9 | 11.9 | 11.0 | 10.9 | 24.0 | 20.6 | 20.5 |
| SEMPRA ENERGY | 2.0 | 15.8 | 12.7 | 12.7 | 19.3 | 20.0 | 19.9 |
| **UGI CORP** | **2.6** | **10.4** | **8.5** | **8.3** | **19.0** | **18.9** | **18.5** |
| **MEDIAN** | **2.0** | **11.9** | **11.4** | **11.6** | **19.3** | **20.0** | **19.9** |

**covered by Janney Research*

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 53% | 0% | 0% | 40% | 7% | A- |
| ONEOK, INC. | 36% | 0% | 1% | 54% | 9% | BBB |
| NISOURCE | 34% | 0% | 0% | 58% | 9% | BBB+ |
| SEMPRA ENERGY | 39% | 0% | 6% | 43% | 11% | BBB+ |
| **UGI CORP** | **38%** | **0%** | **7%** | **48%** | **7%** | |
| **MEDIAN** | **38%** | **0%** | **1%** | **48%** | **9%** | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2016 ROA % | 2016 ROE % | FCF 2016 Yield % | EPS 2016 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | $1.33 | 4.14% | 64.92 | 0.629 | 0.46 | 5.08 | 3% | 10% | (0%) | 5% |
| ONEOK, INC. | $3.08 | 5.12% | 158.90 | 0.554 | 0.41 | 3.84 | 2% | 135% | 6% | 3% |
| NISOURCE | $0.78 | 3.18% | 84.15 | 0.519 | 0.32 | 4.05 | 2% | 8% | (9%) | 5% |
| SEMPRA ENERGY | $3.29 | 3.12% | 71.38 | 0.4 | 0.36 | 4.33 | 3% | 11% | (7%) | NA |
| **UGI CORP** | **$1.00** | **2.13%** | **39.63** | **1.004** | **0.84** | **5.59** | 3% | 13% | 5% | 5% |
| **MEDIAN** | **$1.33** | **3.18%** | **71** | **0.55** | **0.4** | 4 | | | | |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2016 $ | EBITDA 2017 $ | EBITDA 2018 $ | EPS 2016 $ | EPS 2017 $ | EPS 2018 $ |
|---|---|---|---|---|---|---|---|
| OGE ENERGY CORP | 18.11 | 826 | 848 | 833 | 1.69 | 1.93 | 1.90 |
| ONEOK, INC. | 14.06 | 1,642 | 1,973 | 1,971 | 1.66 | 1.74 | 1.72 |
| NISOURCE | 12.96 | 1,404 | 1,530 | 1,537 | 1.02 | 1.19 | 1.19 |
| SEMPRA ENERGY | 52.85 | 3,001 | 3,736 | 3,728 | 5.45 | 5.29 | 5.29 |
| **UGI CORP** | **18.27** | **1,228** | **1,512** | **1,539** | **2.46** | **2.48** | **2.54** |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Historicals

# Utilities

Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/18 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| **AMERICAN STATES WATER** | **AWR** | **$56.22** | **$60.00** | **$41.14** | **438** | **0.74** | **0.1** | **-0.7** | **4.2** | **-2.9** | **30.1** | **150.4** | **333.0** | **23.0** | **34.7** | **13.9** | **11.0** | **29.8** |
| **AMERICAN WATER WORKS** | **AWK** | **$84.94** | **$92.37** | **$71.55** | **870** | **0.47** | **2.3** | **-6.1** | **-2.5** | **-7.2** | **20.1** | **153.7** | **0.0** | **16.1** | **29.4** | **14.9** | **23.6** | **29.0** |
| **AQUA AMERICA** | **WTR** | **$36.69** | **$39.55** | **$29.53** | **627** | **0.61** | **2.7** | **-5.4** | **4.0** | **-6.5** | **24.7** | **93.6** | **217.2** | **18.8** | **16.1** | **14.5** | **3.2** | **33.8** |
| ARTESIAN RESOURCES | ARTNA | $37.53 | $43.22 | $29.83 | 38 | 0.55 | -4.3 | -1.6 | -8.3 | -2.7 | 18.8 | 98.1 | 196.3 | 6.1 | 2.4 | 27.5 | 18.9 | 23.9 |
| **CALIFORNIA WATER** | **CWT** | **$41.70** | **$46.15** | **$32.75** | **383** | **0.69** | **-4.8** | **-5.9** | **-1.6** | **-8.0** | **22.0** | **145.8** | **224.0** | **29.7** | **9.7** | **-2.7** | **49.2** | **36.4** |
| CONNECTICUT WATER | CTWS | $52.50 | $65.04 | $50.56 | 65 | 0.57 | -0.8 | -8.7 | -15.9 | -8.6 | -3.5 | 102.6 | 202.4 | 23.1 | 5.3 | 7.8 | 50.4 | 5.0 |
| **MIDDLESEX WATER** | **MSEX** | **$38.30** | **$46.74** | **$32.23** | **64** | **0.67** | **-0.6** | **-5.3** | **-13.4** | **-4.0** | **-0.2** | **131.8** | **195.0** | **11.1** | **14.2** | **19.0** | **65.6** | **-4.9** |
| PURE CYCLE | PCYO | $8.70 | $8.95 | $5.10 | 15 | 0.70 | 0.6 | 5.5 | 7.4 | 4.2 | 68.6 | 152.2 | 26.1 | 123.7 | -36.8 | 20.0 | 14.6 | 51.8 |
| **SABESP** | **SBSP3-BR** | **$36.20** | **$36.61** | **$25.61** | **1491** | **0.83** | **2.2** | **5.5** | **17.3** | **5.4** | **15.6** | **36.2** | **305.0** | **-6.3** | **-33.2** | **13.5** | **53.6** | **23.7** |
| **SJW** | **SJW** | **$59.80** | **$69.29** | **$45.39** | **107** | **0.73** | **-0.7** | **-5.6** | **-2.8** | **-6.3** | **18.5** | **154.8** | **167.2** | **15.1** | **10.8** | **-5.3** | **92.9** | **16.2** |
| YORK WATER | YORW | $31.40 | $39.86 | $31.00 | 38 | 0.77 | -3.1 | -7.1 | -10.5 | -7.4 | -15.1 | 93.2 | 172.0 | 22.5 | 14.0 | 10.2 | 56.2 | -9.6 |
| **Average** | | | | | **376** | **0.67** | **-0.6** | **-3.2** | **-2.0** | **-4.0** | **18.2** | **119.3** | **185.3** | **25.7** | **6.1** | **12.1** | **39.9** | **21.4** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2872.87 | 2872.87 | 2267.21 | ----- | 1.03 | 2.2 | 7.2 | 12.2 | 7.5 | 25.1 | 91.1 | 115.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26616.71 | 26616.71 | 19784.77 | ----- | 1.00 | 2.1 | 7.6 | 13.7 | 7.7 | 32.4 | 91.5 | 118.0 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7505.77 | 7505.77 | 5576.09 | ----- | 1.06 | 2.3 | 8.2 | 14.5 | 8.7 | 32.7 | 138.3 | 222.7 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | 31.75 | $31.75 | $25.01 | ----- | NA | 1.4 | 5.3 | 8.3 | 4.9 | 24.9 | 47.0 | 80.8 | 27.1 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/18 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % |
| 3M CORP | MMM | $258.63 | $259.77 | $173.55 | 3731 | 0.89 | 4.2 | 9.8 | 11.6 | 9.9 | 49.7 | 190.5 | 344.7 | 20.0 | -5.9 | 21.7 | 34.9 |
| **AMETEK** | **AME** | **$78.08** | **$78.09** | **$50.44** | **775** | **1.12** | **1.4** | **7.6** | **12.9** | **7.7** | **50.5** | **96.2** | **327.5** | **0.6** | **2.5** | **-8.6** | **50.0** |
| BADGER METER | BMI | $49.65 | $52.10 | $34.40 | 117 | 1.11 | -0.4 | 4.3 | 13.5 | 3.9 | 28.7 | 111.2 | 195.0 | 10.4 | 0.0 | 27.7 | 30.9 |
| CIRCOR INT'L | CIR | $53.98 | $72.96 | $42.25 | 74 | 1.39 | 0.8 | 10.8 | -0.5 | 10.9 | -13.5 | 31.6 | 40.3 | -25.2 | -29.9 | 54.4 | -24.8 |
| CRANE COMPANY | CR | $94.09 | $94.32 | $67.62 | 319 | 1.18 | 1.0 | 5.6 | 9.7 | 5.5 | 28.3 | 113.1 | 228.6 | -11.1 | -16.6 | 54.1 | 25.9 |
| EMERSON ELECTRIC | EMR | $74.05 | $74.45 | $56.77 | 3587 | 1.13 | 1.2 | 6.5 | 11.7 | 6.3 | 27.2 | 51.0 | 96.0 | -9.6 | -19.7 | 21.0 | 29.0 |
| ENERGY RECOVERY | ERII | $8.11 | $11.30 | $6.13 | 614 | 1.71 | -7.9 | -10.0 | -0.7 | -7.3 | -19.5 | 130.4 | 0.0 | -5.0 | 34.2 | 46.4 | -15.5 |
| FLOWSERVE | FLS | $45.58 | $51.92 | $37.51 | 846 | 1.32 | 4.3 | 9.6 | 2.3 | 8.7 | -10.0 | -5.4 | 88.7 | -23.4 | -28.6 | 16.0 | -11.2 |
| FRANKLIN ELECTRIC | FELE | $45.90 | $47.20 | $36.00 | 56 | 1.32 | 1.1 | 1.8 | 1.0 | 0.0 | 12.6 | 47.0 | 184.1 | -15.1 | -27.1 | 45.7 | 19.2 |
| **IDEX** | **IEX** | **$142.43** | **$143.17** | **$88.29** | **295** | **1.06** | **2.9** | **8.2** | **10.5** | **8.2** | **55.7** | **209.0** | **453.6** | **7.0** | **0.0** | **19.5** | **48.5** |
| ITRON | ITRI | $74.95 | $79.95 | $57.80 | 257 | 1.02 | 0.2 | 10.8 | -4.5 | 9.9 | 20.2 | 58.6 | -5.6 | 2.1 | -14.4 | 73.7 | 8.5 |
| LYDALL INC | LDL | $49.45 | $63.20 | $45.45 | 32 | 1.29 | -1.6 | -2.4 | -16.1 | -2.6 | -21.0 | 214.6 | 468.4 | 86.3 | 8.1 | 74.3 | -17.9 |
| MUELLER INDUSTRIES | MLI | $34.55 | $43.96 | $27.72 | 193 | 1.17 | -6.0 | -3.2 | 0.4 | -2.5 | 7.9 | 69.7 | 260.9 | 9.4 | -19.9 | 49.2 | 11.4 |
| **MUELLER WATER PRODUCTS** | **MWA** | **$11.79** | **$14.02** | **$10.84** | **900** | **1.34** | **-0.3** | **-6.3** | **-2.6** | **-5.9** | **-13.2** | **100.6** | **73.1** | **10.1** | **-15.3** | **56.4** | **-4.6** |
| NORTHWEST PIPE | NWPX | $20.06 | $21.11 | $12.41 | 54 | 1.15 | -0.6 | 11.1 | 6.7 | 4.8 | 3.5 | -18.1 | -52.2 | -20.2 | -62.8 | 53.9 | 11.1 |
| PENTAIR | PNR | $74.02 | $74.84 | $57.44 | 637 | 1.29 | 0.5 | 7.2 | 4.5 | 5.3 | 24.2 | 53.5 | 206.7 | -13.2 | -23.8 | 16.0 | 28.6 |
| **REXNORD** | **RXN** | **$28.58** | **$28.85** | **$21.07** | **369** | **1.31** | **-0.6** | **10.4** | **10.5** | **9.8** | **27.8** | **38.9** | **0.0** | **4.4** | **-35.8** | **8.1** | **32.8** |
| ROPER INDUSTRIES | ROP | $284.14 | $284.22 | $188.36 | 297 | 1.05 | 3.1 | 9.2 | 10.5 | 9.9 | 50.1 | 146.5 | 453.9 | 13.4 | 22.1 | -2.9 | 42.4 |
| SPX | SPW | $32.35 | $33.93 | $21.97 | 204 | 1.48 | -2.1 | 2.9 | 8.4 | 3.1 | 29.7 | 80.7 | 43.5 | -12.4 | -56.5 | 154.2 | 32.3 |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$82.15** | **$82.35** | **$59.15** | **75** | **1.20** | **2.0** | **8.2** | **21.7** | **8.2** | **29.2** | **91.3** | **244.1** | **3.6** | **-20.8** | **32.8** | **17.8** |
| **XYLEM** | **XYL** | **$74.41** | **$75.16** | **$46.67** | **804** | **1.11** | **3.5** | **10.2** | **15.1** | **9.1** | **50.5** | **189.1** | **0.0** | **11.6** | **-2.6** | **37.6** | **39.5** |
| **Average** | | | | | **678** | **1.22** | **0.3** | **5.4** | **5.7** | **4.8** | **19.9** | **95.2** | **173.9** | **2.1** | **-14.9** | **40.5** | **18.5** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2872.87 | 2872.87 | 2267.21 | ----- | 1.03 | 2.2 | 7.2 | 12.2 | 7.5 | 25.1 | 91.1 | 115.9 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26616.71 | 26616.71 | 19784.77 | ----- | 1.00 | 2.1 | 7.6 | 13.7 | 7.7 | 32.4 | 91.5 | 118.0 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7505.77 | 7505.77 | 5576.09 | ----- | 1.06 | 2.3 | 8.2 | 14.5 | 8.7 | 32.7 | 138.3 | 222.7 | 13.4 | 5.7 | 7.5 | 28.2 |
| Powershares Dyn Water | PHO-US | $31.75 | $31.75 | $25.01 | ----- | NA | 1.4 | 5.3 | 8.3 | 4.9 | 24.9 | 47.0 | 80.8 | -1.2 | -15.2 | 14.0 | 23.5 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Water Solutions
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/18 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AIR PRODUCTS & CHEM | APD | $169.85 | $175.17 | 01/25/18 | $133.63 | 03/27/17 | 2701 | 1.03 | 1.2 | 4.8 | 5.9 | 3.5 | 17.1 | 135.8 | 166.3 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| ASHLAND | ASH | $72.43 | $128.19 | 04/25/17 | $59.80 | 08/11/17 | 1654 | 0.98 | -2.6 | 1.6 | 6.2 | 1.7 | 29.1 | 83.5 | 295.4 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| BARNWELL INDUSTRIES | CDZI | $14.30 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | 42 | 0.64 | 1.2 | 1.4 | 12.6 | 0.4 | -3.4 | 107.8 | -16.0 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |
| **CALGON CARBON** | **CCC** | **$21.35** | **$22.10** | **10/05/17** | **$12.00** | **08/24/17** | **1661** | **1.01** | **-0.2** | **0.2** | **-0.5** | **0.2** | **35.2** | **38.1** | **42.4** | **45.1** | **1.0** | **-16.1** | **-0.1** | **27.0** |
| CANTEL MEDICAL | CMN | $115.82 | $116.64 | 01/26/18 | $69.21 | 05/17/17 | 75 | 1.15 | 2.4 | 13.5 | 21.0 | 12.7 | 49.0 | 437.4 | 2275.3 | 71.3 | 27.9 | 43.9 | 27.0 | 30.9 |
| **CONSOLIDATED WATER** | **CWCO** | **$13.20** | **$13.95** | **11/27/17** | **$10.00** | **02/03/17** | **28** | **0.82** | **1.1** | **5.9** | **6.7** | **5.5** | **31.4** | **68.9** | **-33.7** | **95.3** | **-22.3** | **17.6** | **-9.1** | **18.3** |
| FORTIVE | FTV | $76.57 | $76.68 | 01/24/18 | $54.50 | 02/02/17 | 2205 | 1.08 | 2.7 | 5.4 | 4.3 | 5.8 | 38.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 35.5 |
| LAYNE CHRISTENSEN | LAYN | $13.54 | $13.72 | 01/18/18 | $6.98 | 05/31/17 | 91 | 1.32 | 0.9 | 9.6 | 0.7 | 7.9 | 23.3 | -41.9 | -61.8 | -29.6 | -44.1 | -44.9 | 106.7 | 15.5 |
| STANTEC INC | STN | $28.35 | $29.00 | 01/24/18 | $22.25 | 05/18/17 | 14 | 0.94 | -1.0 | 2.9 | -0.7 | 1.4 | 6.1 | 52.2 | 96.4 | 56.6 | -10.6 | -8.4 | 3.3 | 12.3 |
| TETRA TECH | TTEK | $50.20 | $50.90 | 01/24/18 | $38.85 | 03/17/17 | 164 | 1.05 | 0.7 | 3.8 | 0.9 | 4.3 | 15.5 | 79.5 | 192.2 | 5.7 | -3.8 | -1.4 | 67.7 | 12.6 |
| VEOLIA ENVIRONNEMENT | VE | $25.44 | $26.43 | 01/08/18 | $15.99 | 02/24/17 | 0 | 0.76 | -1.2 | -0.2 | 8.6 | -0.4 | 55.3 | 142.5 | -51.6 | 41.9 | 12.1 | 38.9 | -26.2 | 55.2 |
| **Average** | | | | | | | **785** | **0.98** | **0.5** | **4.5** | **6.0** | **3.9** | **27.0** | **100.3** | **264.1** | **30.3** | **7.1** | **-4.0** | **30.7** | **24.8** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2872.87 | 2872.87 | 01/26/18 | 2267.21 | 01/31/17 | ----- | 1.00 | 2.2 | 7.2 | 12.2 | 7.5 | 25.1 | 91.1 | 115.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 169.85 | 175.17 | 01/25/18 | 133.63 | 03/27/17 | ----- | 1.03 | 1.2 | 4.8 | 5.9 | 3.5 | 17.1 | 135.8 | 166.3 | 36.9 | 32.1 | -7.6 | 22.5 | 17.0 |
| Nasdaq Composite | COMP | 72.43 | 128.19 | 04/25/17 | 59.80 | 08/11/17 | ----- | 0.98 | -2.6 | 1.6 | 6.2 | 1.7 | 29.1 | 83.5 | 295.4 | 22.4 | 25.0 | -13.2 | 8.0 | 34.9 |
| Powershares Dyn Water | PHO-US | $14.30 | $16.25 | 05/03/17 | $9.65 | 09/01/17 | ----- | 0.64 | 1.2 | 1.4 | 12.6 | 0.4 | -3.4 | 107.8 | -16.0 | -12.1 | 60.9 | -53.0 | 137.6 | 14.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLIANT | LNT | $40.30 | $45.55 | $36.56 | 1480 | 0.57 | 2.3 | -4.5 | -6.4 | -5.4 | 12.5 | 109.1 | 237.4 | 21.9 | 33.4 | -2.6 | 23.5 | 15.1 |
| **AVANGRID** | **AGR** | **$48.68** | **$53.46** | **$37.42** | **368** | **0.66** | **2.2** | **-3.4** | **-2.8** | **-3.8** | **31.5** | **112.9** | **220.7** | **13.2** | **17.7** | **18.0** | **3.4** | **38.5** |
| AVISTA | AVA | $51.14 | $52.83 | $37.78 | 274 | 0.60 | -0.7 | -0.6 | -1.4 | -0.7 | 36.7 | 145.1 | 294.8 | 22.3 | 30.5 | 4.2 | 15.0 | 32.2 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$74.75** | **$86.35** | **$63.80** | **39** | **0.70** | **8.2** | **-2.8** | **-6.4** | **-4.8** | **16.0** | **164.8** | **433.7** | **36.1** | **27.1** | **16.9** | **13.3** | **18.9** |
| CMS ENERGY | CMS | $44.79 | $50.85 | $41.72 | 4511 | 0.51 | 1.7 | -4.3 | -5.9 | -5.3 | 9.9 | 109.4 | 320.4 | 13.9 | 34.6 | 7.3 | 16.9 | 16.6 |
| CONEDISON | ED | $80.40 | $89.70 | $72.63 | 2505 | 0.34 | 2.7 | -4.5 | -5.2 | -5.4 | 13.9 | 73.3 | 191.4 | 3.8 | 24.8 | 1.4 | 17.1 | 18.6 |
| DTE CORPORATION | DTE | $105.50 | $116.74 | $96.56 | 1125 | 0.52 | 2.3 | -2.4 | -3.4 | -3.6 | 10.8 | 100.0 | 289.5 | 14.9 | 34.7 | -3.7 | 24.8 | 14.1 |
| **EVERSOURCE ENERGY** | **ES** | **$64.07** | **$66.15** | **$54.10** | **3695** | **0.50** | **5.4** | **3.4** | **3.7** | **1.4** | **21.2** | **87.8** | **224.4** | **12.4** | **30.6** | **-1.3** | **10.1** | **17.2** |
| MGE ENERGY | MGEE | $59.80 | $68.70 | $58.30 | 84 | 0.71 | 0.4 | -3.4 | -9.4 | -5.2 | -4.4 | 95.2 | 276.4 | 16.7 | 21.9 | 4.6 | 42.6 | -1.8 |
| NORTHWESTERN | NWE | $54.36 | $64.47 | $53.01 | 357 | 0.60 | 2.2 | -7.6 | -6.0 | -8.9 | -1.5 | 76.8 | 199.1 | 29.5 | 35.0 | -0.5 | 6.6 | 8.4 |
| PG&E CORPORATION | PCG | $43.54 | $71.57 | $41.61 | 4230 | 0.50 | -1.9 | -2.0 | -23.3 | -2.9 | -26.7 | 23.3 | 58.4 | 4.6 | 37.4 | 3.5 | 16.3 | -24.9 |
| SCANA | SCG | $43.43 | $71.28 | $37.10 | 2159 | 0.56 | 0.2 | 11.1 | -7.9 | 9.2 | -34.2 | 13.3 | 82.7 | 7.2 | 34.0 | 4.3 | 23.5 | -43.6 |
| TECO ENERGY | TE | $0.00 | $0.00 | $0.00 | 0 | 0.54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.1 | 24.9 | 35.6 | 0.0 | 0.0 |
| **UNITIL CORP** | **UTL** | **$43.92** | **$52.84** | **$43.03** | **79** | **0.59** | **0.3** | **-2.6** | **-14.8** | **-3.7** | **-3.1** | **101.3** | **175.6** | **23.2** | **25.4** | **1.8** | **29.5** | **3.5** |
| VECTREN CORP | VVC | $62.00 | $69.86 | $53.65 | 522 | 0.66 | 2.6 | -3.6 | -8.2 | -4.6 | 15.9 | 138.1 | 262.1 | 25.8 | 35.1 | -4.9 | 24.1 | 27.6 |
| WISCONSIN ENERGY | WEC | $64.01 | $70.09 | $56.05 | 1967 | 0.50 | 1.4 | -2.1 | -4.1 | -3.6 | 13.5 | 96.0 | 302.1 | 16.1 | 32.1 | 0.8 | 16.1 | 16.7 |
| XCEL ENERGY | XEL | $45.70 | $52.22 | $40.43 | 2656 | 0.47 | 1.3 | -3.7 | -6.1 | -5.0 | 15.2 | 98.2 | 237.3 | 8.8 | 33.5 | 3.8 | 15.6 | 21.2 |
| **Average** | | | | | **1532** | **0.56** | **1.8** | **-1.9** | **-6.3** | **-3.1** | **7.5** | **90.9** | **223.9** | **16.4** | **30.1** | **5.3** | **17.6** | **10.5** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2872.87 | 2872.87 | 2267.21 | ----- | 1.03 | 2.2 | 7.3 | 12.7 | 7.5 | 27.6 | 112.2 | 168.0 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26616.71 | 26616.71 | 19784.77 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7505.77 | 7505.77 | 5576.09 | ----- | 1.06 | 2.3 | 8.3 | 14.8 | 8.8 | 34.2 | 153.0 | 260.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | $651.76 | $726.43 | $611.83 | ----- | NA | 1.4 | 5.3 | 8.3 | 4.9 | 24.9 | 47.0 | 80.8 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLETE | ALE | $72.84 | $81.24 | $63.55 | 182 | 0.60 | 1.2 | -0.3 | -7.2 | -2.0 | 16.0 | 94.7 | 209.1 | 26.5 | 15.0 | -4.1 | 29.0 | 19.1 |
| CENTERPOINT ENERGY | CNP | $28.46 | $30.45 | $25.51 | 3053 | 0.78 | 2.4 | 1.5 | -2.6 | 0.4 | 13.8 | 73.1 | 195.2 | 24.8 | 5.1 | -17.6 | 41.3 | 19.2 |
| CLECO | CNL | $0.00 | $0.00 | $0.00 | 0 | 0.43 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.1 | 20.6 | -1.4 | 0.0 | 0.0 |
| DUKE ENERGY | DUK | $78.83 | $91.80 | $76.28 | 3945 | 0.43 | 2.6 | -5.7 | -8.9 | -6.3 | 6.6 | 43.8 | 137.8 | 13.0 | 26.4 | -10.8 | 12.2 | 12.4 |
| EL PASO ELECTRIC | EE | $51.60 | $61.15 | $44.70 | 146 | 0.63 | -0.1 | -5.5 | -10.5 | -6.8 | 17.0 | 77.7 | 194.4 | 13.4 | 17.6 | -0.7 | 21.7 | 21.2 |
| EMPIRE DISTRICT ELECTRIC | EDE | $0.00 | $0.00 | $0.00 | 0 | 0.54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.6 | 36.5 | -1.3 | 23.1 | 0.0 |
| GREAT PLAINS | GXP | $31.27 | $34.72 | $26.72 | 1054 | 0.56 | 1.0 | -2.2 | -2.7 | -3.0 | 19.8 | 79.1 | 81.4 | 24.1 | 21.6 | -0.2 | 2.2 | 21.1 |
| HAWAIIAN ELECTRIC | HE | $34.50 | $38.72 | $31.71 | 728 | 0.58 | 0.1 | -4.1 | -2.4 | -4.6 | 8.7 | 62.6 | 160.2 | 8.6 | 34.9 | -10.0 | 18.1 | 12.4 |
| IDACORP | IDA | $86.07 | $100.04 | $78.05 | 240 | 0.64 | 2.6 | -4.2 | -5.5 | -5.8 | 11.8 | 120.6 | 276.4 | 23.4 | 31.8 | 5.9 | 19.2 | 16.1 |
| PINNACLE WEST | PNW | $80.94 | $92.48 | $75.79 | 524 | 0.53 | 2.4 | -4.0 | -7.4 | -5.0 | 8.5 | 82.3 | 230.0 | 7.9 | 34.5 | -2.0 | 23.9 | 12.3 |
| PNM RESOURCES | PNM | $38.10 | $46.00 | $33.45 | 580 | 0.66 | 3.0 | -4.5 | -8.4 | -5.1 | 16.3 | 109.2 | 188.2 | 21.0 | 26.3 | 6.1 | 13.4 | 21.1 |
| PORTLAND GENERAL | POR | $42.27 | $50.11 | $41.89 | 705 | 0.59 | -0.3 | -6.2 | -7.2 | -7.3 | 0.7 | 74.0 | 166.2 | 14.5 | 29.4 | -0.6 | 19.9 | 7.9 |
| SOUTHERN COMPANY | SO | $44.31 | $53.51 | $43.16 | 8852 | 0.37 | -0.3 | -7.8 | -13.9 | -7.9 | -4.5 | 25.6 | 96.9 | 0.5 | 25.2 | -0.1 | 8.8 | 2.0 |
| WESTAR ENERGY | WR | $51.35 | $57.32 | $49.20 | 516 | 0.51 | 0.8 | -2.1 | -2.1 | -2.7 | -3.6 | 106.3 | 247.3 | 17.4 | 33.2 | 6.9 | 34.4 | -3.3 |
| **Average** | | | | | **1466** | **0.56** | **1.1** | **-3.2** | **-5.6** | **-4.0** | **7.9** | **67.8** | **155.9** | **16.6** | **25.6** | **-2.1** | **19.1** | **11.5** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2872.87 | 2872.87 | 2267.21 | ----- | 1.03 | 2.2 | 7.3 | 12.7 | 7.5 | 27.6 | 112.2 | 168.0 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26616.71 | 26616.71 | 19784.77 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7505.77 | 7505.77 | 5576.09 | ----- | 1.06 | 2.3 | 8.3 | 14.8 | 8.8 | 34.2 | 153.0 | 260.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 651.76 | 726.43 | 611.83 | ----- | NA | 1.4 | 5.3 | 8.3 | 4.9 | 24.9 | 47.0 | 80.8 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics with Merchant)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AMEREN | AEE | $56.92 | $64.89 | $51.35 | 1617 | 0.54 | 3.2 | -2.4 | -6.6 | -3.5 | 12.7 | 114.5 | 108.6 | 23.3 | 32.7 | -2.4 | 23.5 | 15.7 |
| AMERICAN ELECTRIC POWER | AEP | $68.75 | $78.07 | $62.48 | 4901 | 0.53 | 1.5 | -5.8 | -6.0 | -6.6 | 13.6 | 86.7 | 156.2 | 14.2 | 35.1 | -0.3 | 10.7 | 20.3 |
| DOMINION | D | $75.50 | $85.30 | $70.87 | 5245 | 0.52 | 0.7 | -6.0 | -5.2 | -6.9 | 3.6 | 68.8 | 175.5 | 29.8 | 23.0 | -8.8 | 15.9 | 9.3 |
| EDISON INTERNATIONAL | EIX | $62.46 | $83.38 | $60.64 | 2638 | 0.47 | 0.5 | -1.5 | -19.9 | -1.2 | -10.6 | 52.7 | 69.8 | 5.4 | 45.0 | -6.9 | 22.7 | -9.8 |
| ENTERGY | ETR | $78.29 | $87.95 | $69.63 | 1370 | 0.52 | 1.7 | -2.0 | -8.2 | -3.8 | 16.1 | 53.0 | 14.6 | 4.3 | 44.8 | -18.2 | 11.1 | 15.9 |
| EXELON | EXC | $38.86 | $42.67 | $33.30 | 7515 | 0.62 | 2.3 | 0.1 | -1.8 | -1.4 | 14.1 | 52.6 | -18.7 | -3.5 | 40.6 | -22.2 | 33.2 | 14.3 |
| FIRST ENERGY | FE | $32.09 | $35.22 | $27.93 | 19394 | 0.58 | 9.1 | 5.8 | 2.1 | 4.8 | 12.7 | 0.2 | -25.1 | -16.5 | 23.5 | -15.2 | 0.1 | 3.1 |
| NEXTERA ENERGY | NEE | $157.69 | $159.40 | $119.33 | 3647 | 0.55 | 5.0 | 2.4 | 3.5 | 1.0 | 36.5 | 152.9 | 260.2 | 28.0 | 27.9 | 0.7 | 17.3 | 33.6 |
| PPL CORP | PPL | $32.01 | $40.20 | $30.44 | 5026 | 0.57 | 1.3 | 4.1 | -14.1 | 3.4 | -3.0 | 46.0 | 17.1 | 10.3 | 26.2 | 6.2 | 3.5 | -5.8 |
| PUBLIC SERVICE ENT GROUP | PEG | $51.20 | $53.28 | $41.67 | 2883 | 0.59 | 2.8 | 0.5 | 4.6 | -0.6 | 22.6 | 104.3 | 69.4 | 9.4 | 34.4 | -2.8 | 16.9 | 21.3 |
| **Average** | | | | | **5424** | **0.55** | **2.8** | **-0.5** | **-5.2** | **-1.5** | **11.8** | **73.2** | **82.8** | **10.5** | **33.3** | **-7.0** | **15.5** | **11.8** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2872.87 | 2872.87 | 2267.21 | ----- | 1.03 | 2.2 | 7.3 | 12.7 | 7.5 | 27.6 | 112.2 | 168.0 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26616.71 | 26616.71 | 19784.77 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7505.77 | 7505.77 | 5576.09 | ----- | 1.06 | 2.3 | 8.3 | 14.8 | 8.8 | 34.2 | 153.0 | 260.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 651.76 | 726.43 | 611.83 | ----- | NA | 1.4 | 5.3 | 8.3 | 4.9 | 24.9 | 47.0 | 80.8 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Merchant Generators)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| CALPINE | CPN | $15.12 | $15.16 | $9.30 | 2151 | 0.95 | 0.0 | 0.1 | 1.3 | -0.1 | 28.5 | -21.0 | -4.9 | 7.6 | 13.4 | -34.6 | -19.6 | 30.0 |
| DYNEGY | DYN | $12.80 | $12.84 | $5.84 | 2075 | 1.22 | 1.7 | 12.0 | 14.5 | 8.0 | 28.8 | -36.1 | -99.4 | 12.5 | 41.0 | -55.8 | -33.9 | 38.8 |
| GENON | GEN | $0.92 | $4.26 | $0.60 | 262 | 1.35 | -7.6 | 26.6 | -10.3 | 21.1 | -78.5 | -81.8 | -93.5 | -24.5 | 78.2 | -59.5 | 15.8 | -81.6 |
| COVANTA | CVA | $16.60 | $17.30 | $13.00 | 718 | 0.74 | -2.4 | -1.8 | 10.5 | -1.8 | 12.6 | 12.5 | 1.1 | -0.3 | 29.4 | -25.8 | 7.1 | 17.3 |
| NRG | NRG | $27.40 | $29.78 | $14.52 | 5814 | 1.16 | 1.9 | -3.6 | 10.8 | -3.8 | 67.5 | 27.2 | -19.3 | 27.0 | -4.5 | -55.0 | 12.9 | 131.2 |
| ORMAT TECHNOLOGIES | ORA | $69.54 | $69.62 | $52.83 | 130 | 0.92 | 4.4 | 8.6 | 8.3 | 8.7 | 29.5 | 256.5 | 78.7 | 41.6 | 0.7 | 35.1 | 48.5 | 19.9 |
| **Average** | | | | | **1696** | **1.01** | **-0.6** | **5.7** | **6.5** | **4.3** | **14.4** | **24.3** | **-19.5** | **9.1** | **26.8** | **-31.6** | **5.4** | **24.7** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2872.87 | 2872.87 | 2267.21 | ----- | 1.03 | 2.2 | 7.3 | 12.7 | 7.5 | 27.6 | 112.2 | 168.0 | 32.4 | 13.7 | 1.4 | 10.9 | 21.3 |
| Dow Jones Industrials | DJIAK | 26616.71 | 26616.71 | 19784.77 | ----- | 1.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.6 | 10.0 | 0.0 | 0.0 | 0.0 |
| Nasdaq Composite | COMP | 7505.77 | 7505.77 | 5576.09 | ----- | 1.06 | 2.3 | 8.3 | 14.8 | 8.8 | 34.2 | 153.0 | 260.5 | 40.1 | 14.7 | 7.0 | 7.6 | 28.5 |
| Philadelphia Utility Index | UTY | 651.76 | 726.43 | 611.83 | ----- | NA | 1.4 | 5.3 | 8.3 | 4.9 | 24.9 | 47.0 | 80.8 | 27.1 | -1.2 | -15.2 | 13.3 | 23.1 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ATMOS ENERGY | ATO | $83.02 | $93.56 | 4-Dec-17 | $72.58 | 8-Feb-17 | 643 | 0.61 | 2.7 | -1.9 | -3.3 | -3.3 | 12.1 | 156.8 | 336.9 | 33.8 | 26.5 | 16.3 | 20.4 | 18.4 |
| LACLEDE GROUP | LG | $69.25 | $82.85 | 4-Dec-17 | $62.33 | 7-Feb-17 | 238 | 0.53 | 1.2 | -6.1 | -10.7 | -7.9 | 9.5 | 108.4 | 202.4 | 22.6 | 21.2 | 15.7 | 12.0 | 19.9 |
| **NEW JERSEY RESOURCES** | **NJR** | **$39.50** | **$45.45** | **15-Nov-17** | **$36.40** | **8-Feb-17** | **668** | **0.69** | **1.4** | **2.2** | **-8.1** | **-1.7** | **9.1** | **120.7** | **261.5** | **21.1** | **36.8** | **11.3** | **10.7** | **16.2** |
| NORTHWEST NATURAL GAS | NWN | $58.45 | $69.50 | 30-Nov-17 | $55.70 | 10-Jan-18 | 114 | 0.57 | 1.6 | -0.3 | -11.0 | -2.0 | 1.7 | 53.7 | 76.0 | 0.9 | 21.5 | 5.5 | 22.2 | 2.8 |
| **RGC RESOURCES** | **RGCO** | **$25.78** | **$31.99** | **13-Jun-17** | **$16.83** | **17-Feb-17** | **5** | **0.15** | **-4.5** | **-5.9** | **-9.9** | **-4.2** | **53.1** | **152.8** | **334.9** | **7.0** | **20.3** | **0.5** | **21.4** | **66.7** |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$29.49** | **$38.40** | **27-Apr-17** | **$29.00** | **22-Jan-18** | **510** | **0.66** | **0.7** | **-4.2** | **-10.7** | **-5.6** | **-6.2** | **30.4** | **134.6** | **14.8** | **8.9** | **-16.7** | **48.4** | **-4.3** |
| SOUTHWEST GAS | SWX | $75.19 | $86.87 | 4-Dec-17 | $72.32 | 29-Jun-17 | 215 | 0.65 | 1.3 | -6.0 | -6.5 | -6.6 | -3.6 | 93.1 | 261.2 | 35.3 | 13.5 | -8.2 | 42.5 | 7.6 |
| **WGL HOLDINGS, INC.** | **WGL** | **$84.31** | **$86.89** | **2-Aug-17** | **$80.67** | **27-Jan-17** | **214** | **0.68** | **-0.3** | **-1.0** | **-1.1** | **-1.2** | **6.9** | **138.7** | **285.7** | **6.3** | **42.2** | **19.1** | **24.7** | **15.4** |
| **Average** | | | | | | | **326** | **0.57** | **0.5** | **-2.9** | **-7.7** | **-4.1** | **10** | **106.82** | **237** | **18** | **24** | **5.44** | **25** | **17.82** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2,872.87 | 2,872.87 | 26-Jan-18 | 2,267.21 | 31-Jan-17 | ----- | 1.00 | 2.2 | 7.2 | 12.2 | 7.5 | 25.1 | 91.1 | 115.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26,616.71 | 26,616.71 | 26-Jan-18 | 19,784.77 | 31-Jan-17 | ----- | 0.93 | 2.1 | 7.6 | 13.7 | 7.7 | 32.4 | 91.5 | 118.0 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,505.77 | 7,505.77 | 26-Jan-18 | 5,576.09 | 31-Jan-17 | ----- | 1.10 | 2.3 | 8.2 | 14.5 | 8.7 | 32.7 | 138.3 | 222.7 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $651.76 | $726.43 | 15-Nov-17 | 611.83 | 1-Feb-17 | ----- | 0.51 | 2.3 | -2.5 | -6.4 | -3.4 | 6.1 | 37.1 | 27.4 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| BLACK HILLS CORP | BKH | $57.10 | $72.02 | 19-Jun-17 | $52.50 | 18-Jan-18 | 806 | 0.85 | 6.4 | -2.6 | -11.6 | -5.0 | -5.8 | 68.1 | 125.6 | 49.1 | 4.0 | -9.3 | 36.1 | 0.8 |
| ENERGEN | EGN | $57.22 | $60.07 | 9-Jan-18 | $46.16 | 7-Jul-17 | 1,665 | 1.60 | -0.5 | -2.5 | 15.6 | -0.6 | 5.5 | 20.7 | 2.0 | 58.5 | -9.3 | -35.6 | 40.7 | -0.2 |
| EQUITABLE RESOURCES | EQT | $58.74 | $67.84 | 28-Jul-17 | $49.63 | 21-Jun-17 | 2,927 | 1.01 | 4.8 | 5.9 | -2.2 | 3.2 | -9.8 | -4.4 | 29.7 | 52.5 | -15.6 | -31.0 | 25.7 | -12.8 |
| MDU RESOURCES, INC. | MDU | $26.46 | $29.74 | 30-Jan-17 | $25.14 | 3-Aug-17 | 573 | 1.08 | 1.5 | 1.2 | -0.5 | -1.6 | -7.5 | 35.6 | 40.4 | 47.7 | -21.2 | -18.9 | 62.2 | -3.8 |
| NATIONAL FUEL GAS | NFG | $56.77 | $61.25 | 15-Mar-17 | $53.03 | 18-Apr-17 | 226 | 0.88 | 2.3 | 4.3 | 0.0 | 3.4 | 1.5 | 20.9 | 80.3 | 44.1 | -0.5 | -36.6 | 36.5 | -0.2 |
| WILLIAMS COMPANIES | WMB | $32.53 | $33.67 | 24-Jan-18 | $26.82 | 17-Nov-17 | 4,728 | 1.69 | 0.7 | 6.7 | 15.7 | 6.7 | 17.0 | 21.8 | 86.4 | 22.8 | 21.4 | -39.2 | 31.4 | 2.0 |
| **Average** | | | | | | | **1821** | **1.19** | **2.5** | **2.2** | **2.8** | **1.0** | **0.1** | **27.1** | **60.7** | **45.8** | **-3.5** | **-28.4** | **38.8** | **-2.4** |
| S&P 500 | SPX | 2,872.87 | 2,872.87 | 26-Jan-18 | 2,267.21 | 31-Jan-17 | ----- | 1.00 | 2.2 | 7.2 | 12.2 | 7.5 | 25.1 | 91.1 | 115.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26,616.71 | 26,616.71 | 26-Jan-18 | 19,784.77 | 31-Jan-17 | ----- | 0.93 | 2.1 | 7.6 | 13.7 | 7.7 | 32.4 | 91.5 | 118.0 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,505.77 | 7,505.77 | 26-Jan-18 | 5,576.09 | 31-Jan-17 | ----- | 1.10 | 2.3 | 8.2 | 14.5 | 8.7 | 32.7 | 138.3 | 222.7 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $651.76 | $726.43 | 15-Nov-17 | 611.83 | 1-Feb-17 | ----- | 0.51 | 2.3 | -2.5 | -6.4 | -3.4 | 6.1 | 37.1 | 27.4 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 1/26/2018 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2013 | 2014 | 2015 | 2016 | 2017 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| OGE ENERGY CORP | OGE | $32.14 | $37.41 | 1-Mar-17 | $30.70 | 12-Jan-18 | 994 | 0.77 | 2.3 | -1.1 | -11.8 | -1.3 | -0.9 | 30.3 | 190.9 | 23.5 | 7.4 | -23.4 | 32.3 | 2.0 |
| ONEOK, INC. | OKE | $60.15 | $61.36 | 24-Jan-18 | $47.14 | 20-Jun-17 | 2,591 | 1.40 | 4.5 | 14.4 | 15.6 | 14.0 | 15.4 | 87.1 | 374.5 | 49.6 | -5.3 | -47.4 | 149.4 | -2.1 |
| NISOURCE | NI | $24.50 | $27.76 | 15-Nov-17 | $21.65 | 30-Jan-17 | 4,493 | 0.69 | 2.3 | -2.2 | -6.8 | -4.6 | 13.4 | 170.3 | 427.4 | 36.5 | 32.6 | 20.5 | 16.7 | 19.3 |
| QUESTAR, INC. | STR | $0.00 | $0.00 | 0-Jan-00 | $0.00 | 0-Jan-00 | 0 | 0.60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.9 | 13.5 | -19.8 | 0.0 | 0.0 |
| SEMPRA ENERGY | SRE | $105.53 | $122.98 | 15-Nov-17 | $99.71 | 30-Jan-17 | 3,059 | 0.66 | -0.4 | -1.5 | -7.6 | -1.3 | 6.3 | 63.5 | 164.7 | 30.3 | 27.3 | -13.2 | 10.1 | 9.4 |
| **UGI CORP** | **UGI** | **$46.86** | **$52.00** | **2-Jun-17** | **$45.04** | **30-Jan-17** | **554** | **0.74** | **2.5** | **0.8** | **-2.3** | **-0.2** | **3.0** | **129.9** | **277.0** | **30.5** | **40.8** | **-8.7** | **39.5** | **4.0** |
| SPECTRA ENERGY | SE | $13.29 | $16.99 | 20-Oct-17 | $10.79 | 29-Nov-17 | 1,606 | 1.72 | 8.0 | 2.2 | -5.2 | -0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Average** | | | | | | | **1900** | **0.94** | **2.7** | **1.8** | **-2.6** | **0.9** | **5.3** | **68.7** | **204.9** | **27.2** | **16.6** | **-13.1** | **35.4** | **4.7** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2,872.87 | 2,872.87 | 26-Jan-18 | 2,267.21 | 31-Jan-17 | ----- | 1.00 | 2.2 | 7.2 | 12.2 | 7.5 | 25.1 | 91.1 | 115.9 | 29.6 | 11.4 | -0.7 | 9.5 | 19.4 |
| Dow Jones Industrials | DJIAK | 26,616.71 | 26,616.71 | 26-Jan-18 | 19,784.77 | 31-Jan-17 | ----- | 0.93 | 2.1 | 7.6 | 13.7 | 7.7 | 32.4 | 91.5 | 118.0 | 26.5 | 7.5 | -2.2 | 13.4 | 25.1 |
| Nasdaq Composite | COMP | 7,505.77 | 7,505.77 | 26-Jan-18 | 5,576.09 | 31-Jan-17 | ----- | 1.10 | 2.3 | 8.2 | 14.5 | 8.7 | 32.7 | 138.3 | 222.7 | 38.3 | 13.4 | 5.7 | 7.5 | 28.2 |
| Philadelphia Utility Index | UTY | $651.76 | $726.43 | 15-Nov-17 | 611.83 | 1-Feb-17 | ----- | 0.51 | 2.3 | -2.5 | -6.4 | -3.4 | 6.1 | 37.1 | 27.4 | 6.5 | 24.2 | -9.8 | 13.2 | 9.0 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Short Interest Analysis

# Water Utilities

Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| **AMERICAN STATES WATER** | **AWR** | **870,080** | **952,796** | **942,848** | **851,432** | **693,156** | **710,608** | **615,654** | **570,128** | **770,311** | **937,632** | **959,428** | **194,511** | **5** |
| **AMERICAN WATER WORKS** | **AWK** | **4,931,704** | **4,066,020** | **4,652,422** | **3,911,499** | **3,937,971** | **3,533,813** | **3,516,181** | **3,834,363** | **3,922,123** | **4,791,649** | **4,745,403** | **867,627** | **5** |
| **AQUA AMERICA** | **WTR** | **6,375,600** | **6,916,987** | **7,989,370** | **7,315,021** | **7,074,672** | **7,037,294** | **6,947,532** | **6,737,429** | **7,156,442** | **6,856,908** | **7,321,666** | **615,615** | **12** |
| ARTESIAN RESOURCES | ARTNA | 49,224 | 65,918 | 81,240 | 96,103 | 97,693 | 91,398 | 105,398 | 70,302 | 61,305 | 62,843 | 49,719 | 23,142 | 2 |
| **CALIFORNIA WATER** | **CWT** | **981,206** | **847,003** | **906,581** | **910,728** | **701,897** | **1,137,562** | **887,333** | **879,195** | **827,776** | **1,017,607** | **931,332** | **194,468** | **5** |
| CONNECTICUT WATER | CTWS | 212,224 | 220,556 | 210,148 | 216,555 | 261,172 | 284,124 | 264,771 | 257,771 | 248,946 | 252,728 | 271,904 | 43,293 | 6 |
| **MIDDLESEX WATER** | **MSEX** | **130,417** | **169,824** | **171,256** | **169,910** | **226,424** | **246,976** | **253,461** | **191,538** | **158,957** | **132,669** | **133,494** | **39,302** | **3** |
| PURE CYCLE | PCYO | 59,369 | 72,402 | 74,549 | 124,772 | 667,673 | 628,093 | 741,772 | 576,577 | 583,311 | 583,495 | 486,569 | 43,610 | 11 |
| **SABESP** | **SBS** | **753,485** | **900,521** | **1,451,181** | **5,281,984** | **5,056,851** | **3,528,671** | **1,283,127** | **1,790,382** | **853,797** | **2,496,187** | **3,437,163** | **1,219,022** | **3** |
| **SJW** | **SJW** | **125,048** | **127,238** | **113,748** | **130,299** | **141,752** | **134,239** | **163,388** | **129,372** | **117,855** | **115,081** | **92,610** | **64,351** | **1** |
| YORK WATER | YORW | 146,716 | 179,867 | 181,363 | 160,975 | 220,139 | 207,237 | 198,634 | 163,494 | 157,889 | 168,552 | 199,986 | 29,506 | 7 |
| **MEDIAN** | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| 3M COMPANY | MMM | 7,060,241 | 7,991,822 | 8,115,913 | 8,700,072 | 8,453,661 | 8,033,770 | 8,166,891 | 8,372,423 | 6,879,576 | 6,196,511 | 7,279,191 | 1,981,503 | 4 |
| **AMETEK** | **AME** | **6,008,002** | **4,640,428** | **5,756,651** | **5,785,745** | **4,015,506** | **2,755,300** | **2,974,705** | **2,190,704** | **2,211,752** | **3,285,049** | **2,456,937** | **1,082,161** | **2** |
| BADGER METER | BMI | 1,348,369 | 1,418,807 | 1,737,265 | 1,649,292 | 1,539,559 | 1,400,535 | 1,374,378 | 1,399,327 | 1,523,037 | 1,501,582 | 1,434,606 | 107,014 | 13 |
| CIRCOR INT'L | CIR | 1,029,159 | 1,245,319 | 1,301,177 | 1,339,803 | 1,334,092 | 1,279,463 | 1,358,578 | 1,262,950 | 1,213,659 | 1,112,866 | 1,084,984 | 84,632 | 13 |
| CRANE COMPANY | CR | 373,832 | 356,022 | 300,823 | 247,795 | 378,337 | 380,251 | 611,864 | 476,296 | 475,499 | 248,274 | 286,335 | 287,341 | 1 |
| DXP ENTERPRISES | DXPE | 595,679 | 569,261 | 544,173 | 440,356 | 530,801 | 494,781 | 504,017 | 552,078 | 457,900 | 517,701 | 560,111 | 93,380 | 6 |
| EMERSON ELECTRIC | EMR | 9,338,410 | 10,689,037 | 9,423,388 | 10,093,391 | 12,331,903 | 12,292,291 | 10,912,723 | 9,168,764 | 9,899,094 | 6,496,944 | 8,345,432 | 3,317,324 | 3 |
| ENERGY RECOVERY | ERII | 3,540,863 | 4,543,898 | 5,271,394 | 5,665,089 | 6,069,327 | 6,111,623 | 7,540,770 | 7,869,263 | 7,937,256 | 7,626,452 | 7,925,249 | 467,759 | 17 |
| FLOWSERVE | FLS | 8,469,450 | 10,195,773 | 10,681,323 | 10,282,725 | 9,840,089 | 9,601,983 | 9,325,164 | 8,660,318 | 8,147,318 | 10,491,400 | 10,324,441 | 1,097,147 | 9 |
| FRANKLIN ELECTRIC | FELE | 898,169 | 877,467 | 798,183 | 977,987 | 532,078 | 623,483 | 644,133 | 569,372 | 762,472 | 626,169 | 634,632 | 138,351 | 5 |
| **IDEX** | **IEX** | **1,774,073** | **1,589,033** | **1,598,363** | **2,023,395** | **2,045,446** | **1,695,968** | **1,812,624** | **1,524,056** | **1,417,596** | **1,435,747** | **1,353,559** | **239,824** | **6** |
| ITRON | ITRI | 672,061 | 719,772 | 775,355 | 647,437 | 454,344 | 243,650 | 364,484 | 344,625 | 233,561 | 417,029 | 574,159 | 372,640 | 2 |
| LYDALL | LDL | 111,619 | 150,883 | 209,013 | 128,237 | 104,682 | 129,693 | 164,250 | 105,006 | 116,911 | 126,926 | 159,591 | 55,853 | 3 |
| MUELLER INDUSTRIES | MLI | 545,073 | 507,365 | 565,846 | 672,420 | 441,980 | 500,098 | 632,443 | 659,552 | 766,612 | 780,434 | 1,022,662 | 143,931 | 7 |
| **MUELLER WATER PRODUCTS** | **MWA** | **2,497,680** | **1,651,893** | **2,012,601** | **2,315,005** | **2,216,528** | **1,693,026** | **2,320,152** | **1,961,379** | **1,911,692** | **1,583,011** | **2,250,937** | **1,038,810** | **2** |
| NORTHWEST PIPE | NWPX | 360,230 | 271,752 | 253,727 | 298,029 | 527,802 | 506,427 | 556,642 | 589,226 | 619,874 | 609,873 | 610,063 | 28,903 | 21 |
| PENTAIR | PNR | 5,149,425 | 4,768,789 | 3,882,106 | 4,355,636 | 2,789,645 | 2,898,693 | 1,610,699 | 1,657,527 | 2,456,559 | 2,925,363 | 2,340,069 | 949,057 | 2 |
| **REXNORD** | **RXN** | **5,394,645** | **5,846,206** | **5,881,331** | **5,226,577** | **6,196,141** | **5,514,131** | **5,128,239** | **4,183,640** | **3,557,460** | **2,945,598** | **2,654,266** | **908,155** | **3** |
| ROPER INDUSTRIES | ROP | 2,980,370 | 2,895,527 | 3,001,494 | 2,479,680 | 2,003,001 | 2,006,101 | 1,754,208 | 1,835,095 | 1,940,004 | 2,328,990 | 2,243,080 | 415,759 | 5 |
| **WATTS WATER TECH** | **WTS** | **832,524** | **826,260** | **664,627** | **653,092** | **710,635** | **771,218** | **763,117** | **825,097** | **962,792** | **874,103** | **555,068** | **112,129** | **5** |
| **XYLEM** | **XYL** | **4,265,010** | **4,167,410** | **5,285,429** | **5,300,282** | **6,421,238** | **6,220,619** | **5,433,356** | **4,143,245** | **4,085,866** | **3,385,470** | **3,451,789** | **773,737** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | **6.3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Short Interest** | | | | | | | | | | | | | |
| AIR PRODUCTS & CHEM | APD | 3,797,416 | 3,344,957 | 2,782,034 | 2,861,809 | 2,854,313 | 2,373,474 | 2,177,366 | 2,361,939 | 2,427,163 | 2,203,956 | 2,143,958 | 845,188 | 3 |
| ASHLAND | ASH | 1,959,211 | 1,787,667 | 1,646,723 | 2,671,828 | 3,094,775 | 2,781,073 | 2,404,418 | 2,599,338 | 2,143,664 | 2,004,011 | 2,288,244 | 610,710 | 4 |
| BARNWELL INDUSTRIES | BRN | 29,603 | 21,450 | 26,469 | 24,987 | 16,405 | 4,744 | 5,443 | 5,138 | 2,043 | 6,277 | 6,184 | 31,224 | 0 |
| **CALGON CARBON** | **CCC** | **522,521** | **868,350** | **712,094** | **1,027,245** | **984,990** | **1,573,723** | **1,593,148** | **4,837,563** | **4,548,875** | **5,378,243** | **5,361,344** | **1,209,881** | **4** |
| CANTEL MEDICAL | CMN | 947,003 | 963,167 | 1,057,166 | 1,076,278 | 1,106,028 | 1,098,519 | 1,184,947 | 1,175,114 | 731,860 | 628,264 | 608,782 | 154,810 | 4 |
| **CONSOLIDATED WATER** | **CWCO** | **244,548** | **267,212** | **250,504** | **326,135** | **241,999** | **256,986** | **288,445** | **268,093** | **227,333** | **249,844** | **219,728** | **53,516** | **4** |
| ECHOLAB | ECL | 5,569,238 | 4,904,398 | 4,322,535 | 4,816,198 | 3,852,231 | 4,287,351 | 4,668,295 | 4,726,957 | 5,228,558 | 6,169,021 | 6,841,745 | 1,031,187 | 7 |
| FORTIVE | FTV | 1,139,385 | 1,617,188 | 2,064,897 | 2,131,077 | 2,793,149 | 2,337,385 | 2,084,376 | 3,535,942 | 4,855,830 | 6,005,448 | 6,282,169 | 1,125,063 | 6 |
| LAYNE CHRISTENSEN | LAYN | 3,130,509 | 3,156,754 | 3,263,580 | 3,302,461 | 3,227,324 | 3,207,864 | 3,357,098 | 3,514,975 | 3,719,639 | 3,696,505 | 3,722,899 | 156,674 | 24 |
| STANTEC, INC. | STN | 337,202 | 420,859 | 470,870 | 324,778 | 352,097 | 338,854 | 793,114 | 660,883 | 606,555 | 412,544 | 412,813 | 18,130 | 23 |
| TETRA TECH | TTEK | 925,508 | 1,005,039 | 1,185,072 | 925,648 | 671,846 | 623,254 | 1,091,115 | 873,277 | 810,805 | 596,094 | 664,793 | 269,201 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | **7** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| ALLIANT | LNT | 5,409,345 | 4,566,482 | 3,645,885 | 4,342,726 | 3,513,512 | 2,899,307 | 3,159,484 | 3,975,745 | 5,378,873 | 5,928,608 | 7,528,290 | 7,089,148 | 1,259,743 | 6 |
| **AVANGRID** | **AGR** | **2,149,170** | **1,637,777** | **1,929,679** | **1,453,776** | **1,801,384** | **1,660,426** | **1,374,446** | **1,347,442** | **2,567,954** | **4,702,306** | **4,950,129** | **4,862,961** | **409,060** | **12** |
| AVISTA | AVA | 1,409,708 | 1,525,533 | 1,580,040 | 1,569,496 | 1,686,391 | 1,715,671 | 1,933,013 | 3,291,609 | 3,343,721 | 3,092,739 | 3,338,423 | 3,932,055 | 430,986 | 9 |
| **CHESAPEAKE UTILITIES** | **CPK** | **233,478** | **262,773** | **264,080** | **239,420** | **251,742** | **192,332** | **240,501** | **278,329** | **216,129** | **172,718** | **166,885** | **154,867** | **47,597** | **3** |
| CMS ENERGY | CMS | 4,877,715 | 4,147,871 | 3,311,656 | 4,131,055 | 4,928,316 | 5,333,775 | 4,634,626 | 4,875,954 | 5,589,775 | 5,878,501 | 5,000,479 | 6,102,223 | 1,853,120 | 3 |
| CONEDISON | ED | 10,295,176 | 10,226,704 | 11,182,177 | 10,306,460 | 11,016,473 | 11,080,156 | 10,486,678 | 10,783,195 | 9,740,969 | 9,967,953 | 9,413,607 | 9,286,045 | 1,571,010 | 6 |
| DTE CORP | DTE | 3,528,022 | 3,886,211 | 3,225,916 | 3,193,239 | 3,475,283 | 4,310,239 | 3,824,650 | 4,099,232 | 4,834,270 | 4,044,631 | 3,108,937 | 3,784,494 | 928,824 | 4 |
| **EVERSOURCE ENERGY** | **ES** | **3,907,531** | **4,127,245** | **6,018,776** | **5,131,876** | **4,770,610** | **4,461,304** | **3,445,193** | **4,582,399** | **4,457,768** | **4,944,028** | **5,409,923** | **5,874,654** | **1,824,964** | **3** |
| MGE ENERGY | MGEE | 485,353 | 344,716 | 387,046 | 493,046 | 304,509 | 254,303 | 397,535 | 414,763 | 358,462 | 246,161 | 267,706 | 300,314 | 108,232 | 3 |
| NORTHWESTERN | NWE | 1,457,184 | 1,362,452 | 1,148,403 | 1,010,991 | 1,136,951 | 1,141,000 | 1,246,942 | 1,182,741 | 927,547 | 1,097,612 | 878,905 | 852,890 | 321,800 | 3 |
| PG&E CORP | PCG | 4,897,045 | 4,586,203 | 5,851,355 | 6,330,839 | 6,404,365 | 5,783,070 | 6,826,275 | 6,328,202 | 6,261,203 | 6,120,553 | 9,187,359 | 7,690,225 | 7,077,220 | 1 |
| SCANA | SCG | 4,346,492 | 5,317,636 | 6,352,230 | 6,255,402 | 5,098,031 | 4,923,704 | 4,572,666 | 3,588,508 | 3,798,159 | 3,375,158 | 5,004,371 | 5,149,655 | 3,476,500 | 1 |
| **UNITIL CORP** | **UTL** | **266,528** | **216,642** | **181,586** | **144,622** | **146,510** | **130,306** | **143,194** | **160,952** | **120,185** | **100,468** | **242,378** | **262,023** | **91,053** | **3** |
| VECTREN CORP | VVC | 1,059,831 | 1,044,273 | 651,262 | 733,242 | 589,207 | 779,635 | 363,789 | 462,301 | 1,016,032 | 650,093 | 592,791 | 922,140 | 318,180 | 3 |
| WISCONSIN ENERGY | WEC | 12,231,228 | 9,192,076 | 8,760,561 | 8,868,864 | 7,714,249 | 7,539,614 | 8,257,052 | 8,033,126 | 7,445,885 | 7,527,488 | 9,086,165 | 9,683,643 | 1,660,764 | 6 |
| XCEL ENERGY | XEL | 10,023,854 | 8,685,773 | 10,603,959 | 12,027,677 | 12,211,867 | 10,463,422 | 11,633,439 | 12,663,254 | 12,538,128 | 10,873,280 | 12,700,090 | 12,035,574 | 2,988,324 | 4 |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Regulated Electrics Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| ALLETE | ALE | 1,115,994 | 881,360 | 965,111 | 725,494 | 516,265 | 654,632 | 791,051 | 768,040 | 839,027 | 762,541 | 955,842 | 228,469 | 4 |
| CENTERPOINT ENERGY | CNP | 8,612,470 | 10,111,969 | 12,483,776 | 7,630,157 | 7,744,874 | 8,745,790 | 14,073,575 | 8,621,283 | 5,239,680 | 7,647,101 | 9,234,812 | 2,863,668 | 3 |
| DUKE ENERGY | DUK | 9,753,550 | 10,540,986 | 10,914,102 | 12,673,350 | 11,006,808 | 10,377,598 | 10,400,623 | 9,949,927 | 9,029,066 | 7,311,625 | 8,747,231 | 2,712,312 | 3 |
| EL PASO ELECTRIC | EE | 394,243 | 370,106 | 437,501 | 582,511 | 332,765 | 311,243 | 420,431 | 352,717 | 468,227 | 575,595 | 689,098 | 243,547 | 3 |
| GREAT PLAINS | GXP | 8,889,673 | 7,636,648 | 5,722,006 | 6,816,518 | 5,830,269 | 7,373,200 | 6,296,938 | 6,184,183 | 5,115,012 | 6,192,697 | 6,742,150 | 1,136,515 | 6 |
| HAWAIIAN ELECTRIC | HE | 3,305,063 | 4,254,164 | 4,400,640 | 4,738,841 | 4,342,411 | 3,621,742 | 3,276,486 | 3,158,482 | 5,687,461 | 5,241,557 | 5,157,973 | 396,218 | 13 |
| IDACORP | IDA | 1,050,865 | 828,083 | 1,009,862 | 941,326 | 881,708 | 890,037 | 857,947 | 706,377 | 596,488 | 590,778 | 769,555 | 214,110 | 4 |
| PINNACLE WEST | PNW | 2,519,950 | 2,854,378 | 3,630,631 | 3,920,359 | 3,189,290 | 2,989,754 | 2,533,351 | 2,442,849 | 2,203,539 | 2,539,516 | 2,594,468 | 599,666 | 4 |
| PNM RESOURCES | PNM | 3,299,198 | 2,959,507 | 2,635,769 | 3,191,323 | 2,004,069 | 2,068,319 | 2,449,370 | 1,934,545 | 1,553,172 | 1,756,204 | 1,746,943 | 630,600 | 3 |
| PORTLAND GENERAL | POR | 1,552,707 | 1,940,728 | 2,011,685 | 1,855,791 | 1,273,088 | 1,273,355 | 1,323,565 | 1,091,394 | 951,097 | 828,240 | 861,274 | 588,680 | 1 |
| SOUTHERN COMPANY | SO | 22,557,114 | 24,271,529 | 19,172,442 | 22,185,758 | 20,983,957 | 24,011,404 | 21,347,185 | 21,231,835 | 21,701,897 | 22,431,431 | 22,476,645 | 5,322,571 | 4 |
| WESTAR ENERGY | WR | 1,617,176 | 1,503,389 | 1,896,950 | 1,594,058 | 1,211,804 | 1,137,106 | 1,185,547 | 1,195,571 | 1,302,071 | 1,184,282 | 1,530,373 | 596,058 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics With Merchant)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg. Vol** | **SIR** |
| AMEREN | AEE | 6,616,420 | 7,191,279 | 8,036,282 | 7,662,727 | 6,558,632 | 5,310,411 | 5,175,354 | 8,159,133 | 7,914,491 | 6,431,806 | 6,909,765 | 6,912,244 | 1,397,876 | 5 |
| AMERICAN ELECTRIC POWER | AEP | 4,959,061 | 6,028,096 | 5,569,001 | 5,907,106 | 7,079,343 | 6,742,651 | 6,698,363 | 7,975,185 | 6,281,152 | 5,846,064 | 6,061,533 | 7,038,320 | 2,319,131 | 3 |
| DOMINION | D | 17,513,374 | 19,845,221 | 20,816,617 | 18,808,504 | 20,677,436 | 20,045,461 | 13,926,442 | 14,446,396 | 13,393,722 | 12,930,154 | 14,791,027 | 14,945,885 | 2,982,885 | 5 |
| EDISON INTERNATIONAL | EIX | 5,887,214 | 5,821,026 | 4,846,557 | 4,596,357 | 4,820,943 | 4,439,686 | 3,862,212 | 3,887,172 | 3,905,069 | 3,864,737 | 4,182,479 | 4,767,939 | 4,347,563 | 1 |
| ENTERGY | ETR | 6,044,081 | 5,949,562 | 4,627,930 | 5,672,944 | 4,580,172 | 3,362,524 | 3,200,009 | 3,337,890 | 2,925,352 | 3,275,675 | 3,768,372 | 4,475,765 | 1,362,118 | 3 |
| EXELON | EXC | 14,470,087 | 15,671,760 | 16,535,402 | 14,492,733 | 22,764,138 | 11,923,333 | 12,992,968 | 13,021,851 | 12,796,336 | 13,879,272 | 12,661,197 | 14,652,089 | 5,317,714 | 3 |
| FIRST ENERGY | FE | 7,077,948 | 8,717,118 | 9,670,222 | 7,788,907 | 7,808,568 | 11,513,982 | 12,031,084 | 11,580,120 | 13,572,934 | 14,779,336 | 15,388,419 | 15,583,507 | 4,105,689 | 4 |
| NEXTERA ENERGY | NEE | 5,684,692 | 11,012,068 | 10,817,723 | 11,388,891 | 10,912,637 | 6,533,446 | 6,949,002 | 7,239,465 | 6,333,172 | 6,483,212 | 6,014,445 | 6,253,272 | 1,846,090 | 3 |
| PPL CORP | PPL | 11,308,934 | 10,784,419 | 11,478,638 | 10,441,674 | 10,562,779 | 9,515,443 | 6,373,595 | 7,853,542 | 9,315,783 | 8,632,942 | 12,061,035 | 15,467,162 | 6,397,282 | 2 |
| PUBLIC SERVICE ENT GROUP | PEG | 9,020,650 | 7,988,900 | 8,325,899 | 8,732,216 | 7,765,149 | 6,172,778 | 7,764,136 | 6,896,227 | 7,903,726 | 8,951,766 | 8,259,093 | 8,072,237 | 3,655,935 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | **3** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| CALPINE | CPN | 28,771,379 | 27,743,654 | 28,117,884 | 31,406,984 | 29,236,409 | 22,388,843 | 20,689,060 | 12,412,637 | 8,581,513 | 9,445,678 | 11,634,251 | 17,728,993 | 5,396,789 | 3 |
| COVANTA | CVA | 12,069,855 | 12,163,837 | 12,520,510 | 12,670,673 | 14,793,868 | 18,867,258 | 17,329,973 | 16,624,697 | 16,432,324 | 15,770,544 | 12,430,455 | 12,429,285 | 959,149 | 13 |
| DYNERGY | DYN | 18,153,185 | 17,049,127 | 20,385,768 | 20,771,130 | 20,303,380 | 22,532,771 | 20,500,812 | 19,405,468 | 20,354,821 | 21,669,181 | 23,015,480 | 22,540,907 | 4,872,464 | 5 |
| NRG ENERGY | NRG | 15,853,043 | 13,016,231 | 12,848,957 | 13,234,169 | 16,655,481 | 13,260,349 | 21,717,853 | 20,487,685 | 15,864,456 | 21,767,034 | 21,796,149 | 20,751,077 | 5,160,801 | 4 |
| ORMAT TECHNOLOGIES | ORA | 876,947 | 635,189 | 596,787 | 592,572 | 528,923 | 513,203 | 318,691 | 474,961 | 411,204 | 367,678 | 336,031 | 486,068 | 165,860 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Downstream (Gas Distribution Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| ATMOS ENERGY | ATO | 891,329 | 879,310 | 1,224,711 | 944,101 | 782,821 | 874,210 | 922,806 | 642,008 | 730,106 | 700,794 | 860,615 | 1,143,367 | 645,888 | 1 |
| LACLEDE GROUP | LG | 773,830 | 886,008 | 1,343,875 | 909,387 | 755,155 | 588,216 | 423,462 | 556,576 | 772,291 | 897,395 | 1,124,149 | 1,434,175 | 178,247 | 5 |
| **NEW JERSEY RESOURCES** | **NJR** | **3,570,296** | **4,675,510** | **4,262,104** | **4,484,868** | **3,846,891** | **3,125,675** | **2,703,452** | **2,406,915** | **2,328,469** | **2,602,464** | **2,289,053** | **2,479,972** | **532,734** | **9** |
| NORTHWEST NATURAL GAS | NWN | 937,071 | 921,642 | 1,070,206 | 1,247,218 | 1,289,283 | 1,144,690 | 1,021,318 | 1,034,393 | 670,492 | 968,567 | 821,751 | 956,438 | 159,383 | 6 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **2,687,074** | **2,739,222** | **3,181,251** | **2,983,179** | **3,198,941** | **2,367,331** | **2,205,944** | **2,075,551** | **1,882,462** | **1,883,598** | **2,156,510** | **2,169,796** | **334,816** | **8** |
| SOUTHWEST GAS | SWX | 917,894 | 1,012,872 | 541,515 | 296,021 | 296,957 | 265,152 | 739,734 | 485,210 | 483,679 | 591,548 | 672,821 | 711,373 | 210,333 | 5 |
| **WGL HOLDINGS, INC.** | **WGL** | **1,035,527** | **1,035,562** | **1,263,546** | **1,256,904** | **1,247,446** | **1,017,413** | **1,179,588** | **1,646,717** | **1,874,013** | **2,119,186** | **2,692,852** | **2,746,315** | **265,331** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Upstream (Exploration & Production)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-17 | Feb-17 | Mar-17 | Apr-17 | May-17 | Jun-17 | Jul-17 | Aug-17 | Sep-17 | Oct-17 | Nov-17 | Dec-17 | Avg Vol. | SIR |
| BLACK HILLS CORP | BKH | 4,643,767 | 4,894,837 | 5,495,973 | 5,741,527 | 4,831,594 | 4,505,354 | 4,778,655 | 4,733,876 | 4,637,706 | 4,807,053 | 5,094,782 | 5,449,917 | 531,212 | 9 |
| ENERGEN | EGN | 3,104,889 | 4,581,398 | 4,247,728 | 4,098,572 | 5,668,191 | 5,547,969 | 6,206,161 | 5,867,869 | 4,536,944 | 3,264,249 | 3,245,921 | 3,146,329 | 724,058 | 6 |
| EQUITABLE RESOURCES | EQT | 7,989,000 | 7,696,050 | 7,503,067 | 6,843,069 | 7,003,638 | 22,173,567 | 30,943,828 | 31,673,417 | 29,685,306 | 29,171,342 | 6,724,882 | 5,640,962 | 3,264,458 | 2 |
| MDU RESOURCES, INC. | MDU | 3,034,771 | 2,423,864 | 3,738,525 | 3,049,397 | 2,938,686 | 2,369,999 | 2,362,615 | 1,416,439 | 1,543,244 | 1,431,957 | 1,754,874 | 1,488,862 | 855,070 | 3 |
| NATIONAL FUEL GAS | NFG | 3,240,432 | 4,255,148 | 4,841,475 | 4,800,950 | 5,409,021 | 6,638,013 | 6,072,594 | 5,813,455 | 5,813,027 | 5,113,474 | 4,576,608 | 4,430,728 | 352,786 | 12 |
| WILLIAMS COMPANIES | WMB | 11,131,044 | 9,528,546 | 11,432,419 | 10,687,025 | 10,065,013 | 12,586,010 | 14,895,321 | 14,178,400 | 14,540,022 | 12,978,105 | 15,289,920 | 16,241,860 | 5,827,346 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | | 6 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Short Interest

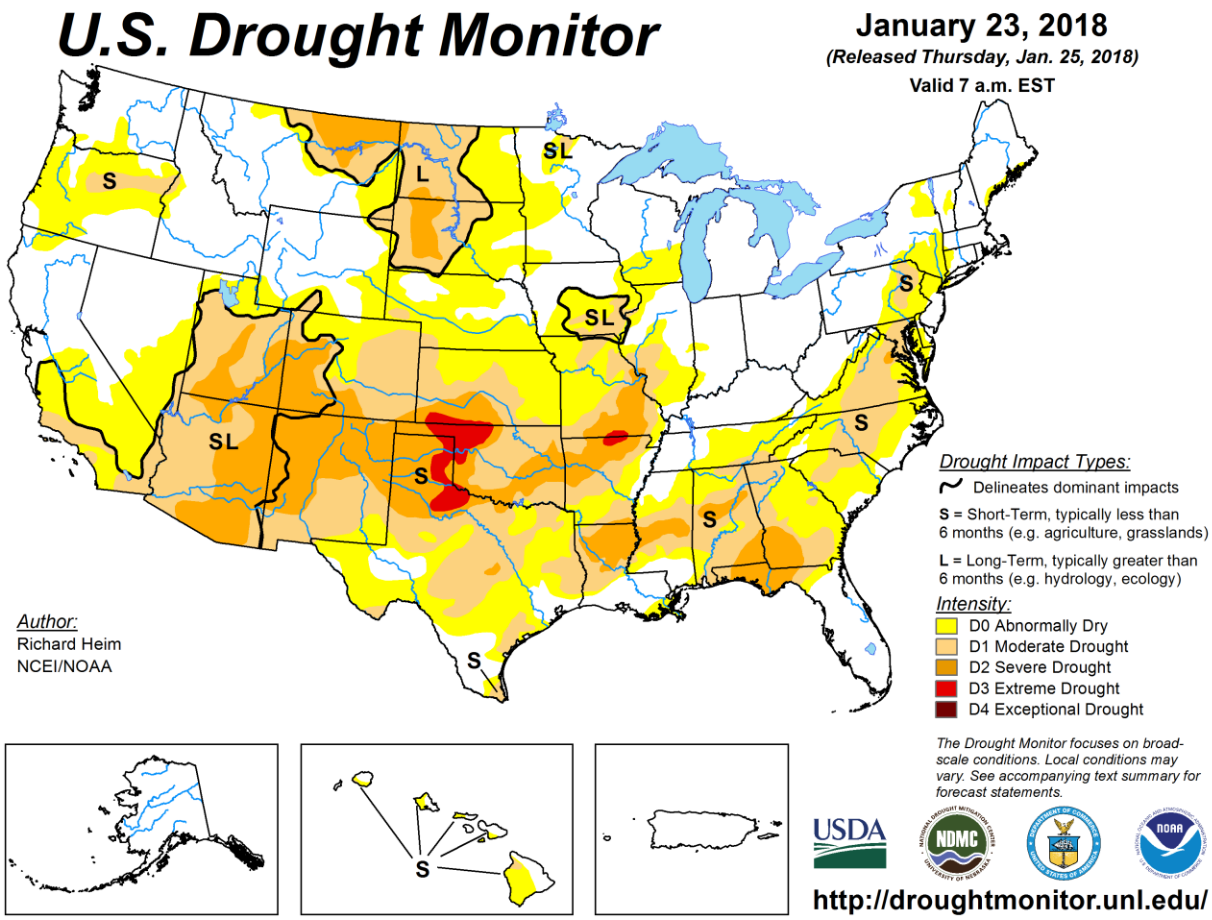
**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-17** | **Feb-17** | **Mar-17** | **Apr-17** | **May-17** | **Jun-17** | **Jul-17** | **Aug-17** | **Sep-17** | **Oct-17** | **Nov-17** | **Dec-17** | **Avg Vol.** | **SIR** |
| OGE ENERGY CORP | OGE | 5,598,729 | 4,775,812 | 3,296,839 | 4,382,988 | 3,939,793 | 2,981,343 | 2,954,099 | 2,768,183 | 2,486,339 | 1,696,186 | 2,041,236 | 3,771,011 | 1,034,915 | 5 |
| ONEOK, INC. | OKE | 12,483,746 | 18,851,614 | 19,773,430 | 22,257,988 | 20,156,029 | 24,364,024 | 14,275,327 | 12,708,814 | 13,252,141 | 11,054,576 | 12,419,904 | 12,112,381 | 2,867,216 | 7 |
| NISOURCE | NI | 5,939,904 | 6,726,689 | 5,942,696 | 8,750,931 | 9,083,794 | 6,714,317 | 5,187,139 | 4,417,064 | 3,664,748 | 3,550,476 | 10,266,004 | 8,253,518 | 2,907,819 | 2 |
| SEMPRA ENERGY | SRE | 5,181,531 | 5,261,847 | 4,612,359 | 5,310,495 | 6,828,494 | 5,510,848 | 5,704,185 | 5,993,907 | 4,916,629 | 5,824,093 | 6,620,338 | 7,391,010 | 2,067,344 | 3 |
| **UGI CORP** | **UGI** | **1,928,934** | **1,957,314** | **3,556,214** | **2,997,409** | **1,823,833** | **1,330,248** | **1,302,095** | **1,723,837** | **1,351,056** | **1,067,524** | **1,637,548** | **2,218,726** | **863,046** | **2** |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT




## Recent Research

- *Janney/Utilities and Infrastructure Weekly – January 22 2018*
- *Janney/Grid Resiliency from Electromagnetic Threats; the Infrastructure Plan Provides an Opportunity for Substantial Investment – January 18 2018*
- *Janney/Utilities and Infrastructure Weekly – January 16 2018*
- *Janney/Utilities and Infrastructure Weekly – January 8 2018*
- *Janney/MWA: Adjusting Estimates to Reflect Tax Reform, Raising Fair Value to $16 – January 2 2018*
- *Janney/UTL: Valuation/Yield Compelling; Upgrading to BUY, Fair Value Remains $50 – December 26 2017*
- *Janney/RGCO: Initiating Coverage with NEUTRAL Rating, $29 Fair Value – December 20 2017*
- *Janney/Utilities and Infrastructure Weekly – December 18 2017*
- *Janney/Utilities and Infrastructure Weekly – December 11 2017*
- *Janney/XYL: HQ Visit Highlights, Maintain BUY Rating, $70 Fair Value – December 11 2017*
- *Janney/MWA: Investor Meeting Takeaways; Maintain BUY Rating, $15 Fair Value – December 6 2017*
- *Janney/Utilities and Infrastructure Weekly – December 4 2017*
- *Janney/Utilities and Infrastructure Weekly – November 20 2017*

- *Janney/SBSP3: Billed Volume/Profitability Continues to Improve; Maintain BUY Rating, R$38 Fair Value – November 20 2017*
- *Janney/Utilities and Infrastructure Weekly – November 13 2017*
- *Janney/CWCO: 3Q17 Reported Results Below Expectations; Maintain BUY Rating, $15 Fair Value – November 13 2017*
- *Janney/CPK: 3Q17 Results Above Expectations; Maintain BUY Rating, Raising Fair Value from $83 to $88 – November 10 2017*
- *Janney/APU: Equity Commitment Provides Future Backstop; Maintain BUY Rating, $58 Fair Value – November 9 2017*
- *Janney/UGI: FY18 Guidance Better Than Expected; Maintain BUY Rating, $56 Fair Value – November 9 2017*
- *Janney/AWR: 3Q17 Results Just Below Expectations; Maintain NEUTRAL Rating, Raising F.V. to $48 – November 8 2017*
- *Janney/AP: Growing Pains Materialized in 3Q; Maintaining BUY Rating, $21 Fair Value – November 7 2017*
- *Janney/MSEX: Adjusting Estimates; Maintaining BUY Rating, Raising Fair Value from $44 to $46 – November 3 2017*
- *Janney/SJI: Forward Outlook Strengthening; Maintain BUY Rating, $38 Fair Value – November 3 2017*
- *Janney/ES: 3Q17 Results Just Below Expectations; Maintain BUY Rating, $71 Fair Value – November 3 2017*
- *Janney/AWK: Lowering to NEUTRAL, Maintaining $90 Fair Value; Inline Quarter, Fair Value Achieved – November 3 2017*
- *Janney/WTS: 3Q17 Results Above Expectations; Raising Estimate, Fair Value from $67 to $69 – November 2 2017*
- *Janney/RXN: FY2Q18 Results Inline; Maintain BUY Rating, Raising Fair Value Target to $29 – November 2 2017*
- *Janney/MWA: Solid 4Q17 Results; Adjusting Estimates, Lowering Fair Value from $15.50 to $15 – November 2 2017*
- *Janney/WTR: 3Q17 Results Meet Expectations; Reiterate BUY Rating, $41 Fair Value – November 1 2017*
- *Janney/XYL: Solid Results, Positive Guidance Revision; Maintain BUY Rating, $70 Fair Value – October 31 2017*
- *Janney/UTL: 3Q17 Results Above Forecasts Maintain NEUTRAL Rating, Fair Value Raised from $50 to $52 – October 27 2017*
- *Janney/SJW: Excellent 3Q17 Results; Raising Fair Value from $59 to $68 – October 27 2017*
- *Janney/CWT: Solid 3Q17 Performance; Maintain NEUTRAL Rating, Fair Value Raised from $36 to $40 – October 27 2017*
- *Janney/AGR: Momentum Building; Reiterating BUY Rating, Raising Fair Value to $55 – October 24 2017*
- *Janney/Utilities and Infrastructure Weekly – October 23 2017*
- *Janney/IEX: Solid 3Q17 Results; 2017 Guidance Increased; Raising Fair Value to $117 – October 17 2017*
- *Janney/SJI: The "Go Big or Go Home" Question is Answered; Maintaining BUY Rating – October 17 2017*
- *Janney/Utilities and Infrastructure Weekly – October 16 2017*
- *Janney/Utilities and Infrastructure Weekly – October 09 2017*

## IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

Chesapeake Utilities Corporation currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

South Jersey Industries, Inc. currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Unitil currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Janney Montgomery Scott LLC currently acts as a market-maker in the securities of AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Consolidated Water Co., California Water Service, IDEX Corporation, Middlesex Water Co., Mueller Water Products, New Jersey Resources Corp., Companhia de Saneamento Basico do Estado de Sao Paulo (ADR), South Jersey Industries, Inc., SJW Corp, Unitil, Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc..

Janney Montgomery Scott LLC managed or co-managed a public offering of securities for Chesapeake Utilities Corporation, South Jersey Industries, Inc. and Unitil in the past 12 months.

Janney Montgomery Scott LLC received compensation for investment banking services from Chesapeake Utilities Corporation and South Jersey Industries, Inc. in the past 12 months.

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Avangrid, Inc., AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Chesapeake Utilities Corporation, Consolidated Water Co., California Water Service, Eversource Energy, IDEX Corporation, Middlesex Water Co., Mueller Water Products, New Jersey Resources Corp., South Jersey Industries, Inc., SJW Corp, UGI Corporation, Unitil, WGL Holdings Inc., Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

Individual disclosures for the companies mentioned in this report can be obtained by accessing our Firm's Disclosure Site

Disclosure Site

## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

### Janney Montgomery Scott Ratings Distribution as of 12/31/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 111 | 48.05 | 31 | 27.93 |
| **NEUTRAL [N]** | 117 | 50.65 | 22 | 18.80 |
| **SELL [S]** | 3 | 1.30 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

Janney Montgomery Scott LLC, is a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the New York Stock Exchange, the Financial Industry Regulatory Authority and the Securities Investor Protection Corp.

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Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

Michael Gaugler 215-665-1359 mgaugler@janney.com
Katherine Burke 646-840-3207 kburke@janney.com

Water Utilities

| | |
|---|---|
| Price: | $30.47 |
| Fair Value Estimate: | $38.00 |
| 52-Week Range: | $28.03 - $35.83 |
| Market Cap (MM): | $5,405 |
| Shr.O/S-Diluted (mm): | 177.4 |
| Average Daily Volume: | 618,255 |
| Book Value: | $10.33 |
| Dividend: | $0.77 |
| Yield: | 2.5% |

| FYE: Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33A | $1.37E | $1.46E |
| Prior EPS: | | $1.42 | $1.51 |
| P/E Ratio: | 22.9x | 22.2x | 20.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.29E | $0.32E |
| Q2 | $0.33A | $0.33E | $0.35E |
| Q3 | $0.41A | $0.44E | $0.47E |
| Q4 | $0.28A | $0.31E | $0.32E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $196E | $216E |
| Q2 | $204A | $214E | $235E |
| Q3 | $227A | $245E | $257E |
| Q4 | $197A | $207E | $217E |
| Year: | $820A | $852E | $926E |

1 Year Price History for WTR

February 23, 2017

# Aqua America, Inc. (WTR) - BUY

## Adjusting Forward Estimates; Trimming Fair Value from $39 to $38

### PORTFOLIO MANAGER BRIEF

WTR's 4Q16 results were just a touch below expectations, but within its previously communicated guidance range. Given the company just held its 2017 guidance call last month, the 4Q16 results provided reinforcement of the major themes and outlook presented back in January, which were 1) 2017 EPS guidance, 2) potential timing surrounding the filing of an infrastructure surcharge in Pennsylvania, and 3) potential timing surrounding the filing of a Pennsylvania rate case. We've made minor adjustments to our forward estimates, which did have a slight impact on valuation. We reiterate our BUY rating on WTR shares, but trim our Fair Value target from $39 to $38, based on a P/E of 26x our 2018 EPS estimate of $1.46.

### ANALYST NOTES

- 4Q16 results Just Shy of Expectations. Revenues of approximately $197MM were just below consensus of $208MM, but we noted looking through FactSet forecasts one outlier estimate pulled consensus higher. Most line items through the income statement met our expectations, and EPS of $0.28 was $0.01 below our forecast and consensus. We consider the shortfalls irrelevant, given 4Q and 1Q results are the seasonally lowest for WTR and typically do not impact valuation.
- 2016/2017/2018: Years of Significant Change at Aqua America. 2016 represented the first full year under CEO Christopher Franklin, and the company has undergone changes in operational personnel and strategic direction. Aqua has divested non-core non-regulated businesses that it determined were not scalable, and has fine tuned its acquisition target list by region and customer size. Beyond the positive long-term implications of a focused acquisition strategy, fair value legislation in many states should aid the process of growth through asset purchases. For 2017, the company has already essentially reached its acquisition target goal if it closes the deals already in process. Aqua has also indicated it would be open to utility acquisitions outside of the water space, but our view is that with generous valuations across the utility sector, there just isn't much to look at right now, and we don't see that changing anytime soon.
- Beyond acquisitions, 2017 marks the year that Aqua should file for an infrastructure surcharge in the all important State of Pennsylvania, signaling a future rate case perhaps in 2018, with a targeted decision (and new rates) potentially in 2019. With 2017 fairly de-risked given the acquisitions already underway and 2018 set-up for a PA rate case, we consider Aqua a very low-risk

proposition on a go forward basis, with upside into 2018 if additional sizable acquisitions are put under agreement.

- Adjusting Estimates. We chose to wait until 4Q16 results were posted before adjusting our forward estimates post last month's guidance call, and those changes had a minor impact on valuation (see table, this page).
- Summary/Valuation. Despite the downward revision to our Fair Value estimate by $1, we still consider Aqua America our top pick in the water utility sector. The business model has been de-risked further (not that we ever considered it to be risky), and the company appears to be on a glide path to higher earnings with some significant tailwinds to carry it along. Given the extremely warm end to February across much of Aqua's service territory, an early Spring could drive upside to water sales in 1Q and 2Q, and we note water supplies in Pennsylvania are at reasonably healthy levels. If the aforementioned scenario develops, we'd expect earnings at the top range (or beyond). We reiterate our BUY rating, and consider valuation attractive relative to other water utilities in the peer group.

## Company Description

Aqua America, Inc., serves residential, commercial, fire protection, industrial, other water, wastewater, and other utility customers in Pennsylvania, Texas, North Carolina, Ohio, Illinois, New Jersey, Indiana and Virginia. It also provides water and wastewater services through operating and maintenance contracts with municipal authorities and other parties, as well as offers sludge hauling, septage and grease services, backflow prevention services, and other non-regulated water and wastewater services.

## IMPORTANT DISCLOSURES

## Research Analyst Certification

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## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

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Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Aqua America, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

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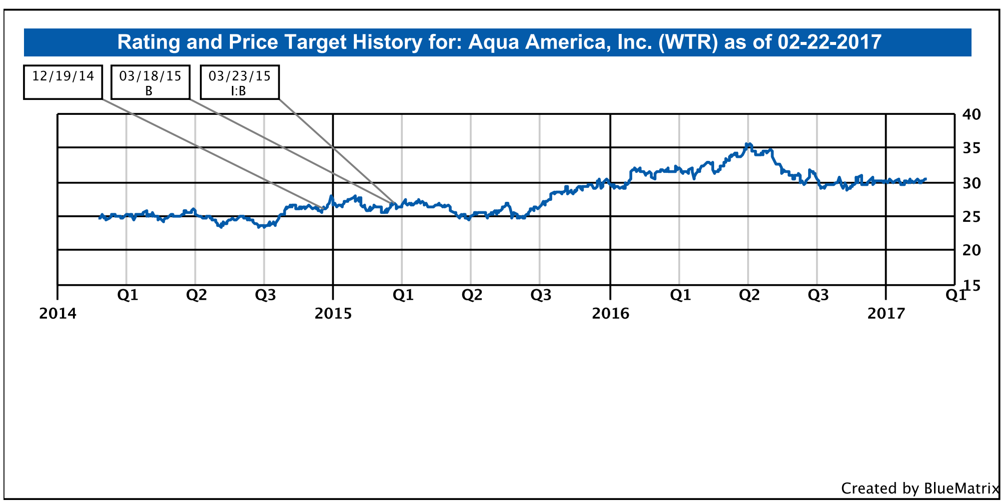
SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

## Price Charts




## Janney Montgomery Scott Ratings Distribution as of 12/31/16

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 109 | 48.66 | 27 | 24.77 |
| **NEUTRAL [N]** | 111 | 49.55 | 18 | 16.22 |
| **SELL [S]** | 4 | 1.79 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

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Water Utilities

February 23, 2017

# American Water Works (AWK) - BUY

## Reports Solid 4Q16 Results, Maintain BUY Rating, $80 Fair Value

| | |
|---|---|
| Price: | $74.92 |
| Fair Value Estimate: | $80.00 |
| 52-Week Range: | $64.65 - $85.24 |
| Market Cap (MM): | $13,352 |
| Shr.O/S-Diluted (mm): | 178.2 |
| Average Daily Volume: | 965,656 |
| Book Value: | $29.43 |
| Dividend: | $1.50 |
| Yield: | 2.0% |

| FYE: Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| EPS: | $2.85A | $3.05E | $3.22E |
| Prior EPS: | $2.83 | $3.04 | NC |
| P/E Ratio: | 26.3x | 24.6x | 23.3x |

Quarterly EPS:

| | | | |
|---|---|---|---|
| Q1 | $0.46A | $0.51E | $0.51E |
| Q2 | $0.77A | $0.81E | $0.82E |
| Q3 | $1.05A | $1.11E | $1.11E |
| Q4 | $0.57A | $0.62E | $0.76E |

Quarterly Revenue (M):

| | | | |
|---|---|---|---|
| Q1 | $743A | $760E | $771E |
| Q2 | $827A | $858E | $866E |
| Q3 | $930A | $986E | $1,022E |
| Q4 | $802A | $825E | $881E |
| Year: | $3,302A | $3,429E | $3,541E |


1 Year Price History for AWK

### PORTFOLIO MANAGER BRIEF

American Water Works reported solid 4Q and fiscal 2016 results that were in line with our and consensus expectations. Adjusted EPS of $0.57 for the quarter was up $0.02, or 3.6% YoY, while adjusted 2016 fiscal year results of $2.84 were up $0.20, or 7.6%, YoY. Looking forward, the company's strong capital spending plans that extend well beyond our forecasts reinforces our positive investment thesis. We maintain our BUY rating and $80 Fair Value on AWK shares, based on a P/E of 25x our 2018 EPS estimate of $3.22.

### ANALYST NOTES

- One-Time Settlement Expense Creates Unfavorable YoY Comparisons on Non-adjusted Earnings. A one-time expense of $39MM, which equaled $0.22 in EPS, was taken in 2016 relating to the settlement of the Freedom Industries chemical spill in West Virginia. Excluding the settlement, net income for the year was up almost 8% versus 2015. The Regulated Business reported solid results for the both 4Q16 and fiscal year 2016; net income for 4Q16 increased slightly YoY, driven primarily by revenue from authorized rate increases and surcharges.
- Impressive Capital Spending Creates Earnings Visibility. In 2016, American Water Works made capital expenditures of $1.5B, a record for the company; $1.3B of that spend was for the regulated business. The company sees a potential to invest $10B over the next 5 years, and perhaps as much as $40B over 25 years based on a study by the American Water Works Association. The runway to higher earnings for AWK appears to be very, very long.
- 2017 Guidance Reaffirmed. Management reaffirmed 2017 guidance of EPS from $2.98 to $3.08. It also sees EPS CAGR of 7-10% for the 2017-2021 timeframe, with the bulk of the growth originating from regulated investment CAPEX and regulated acquisitions. Commentary from both AWK and its competitors in recent quarters indicates fair value legislation has significantly increased opportunities for water/wastewater acquisitions, which improves visibility as it pertains to asset purchase targets.
- Rate Case Updates. AWK is currently awaiting decisions on rate cases in four states, with proposed revenue increases totaling $57MM, $5MM in step increases, and $10MM in infrastructure surcharges. Surcharge mechanisms in many states where AWK operates has slowed the need for rate case filings, which lowers costs while allowing for faster recovery of investments. We note the company received $92MM in annual authorized revenues in 2016.


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 3 - 4 OF THIS REPORT

- Summary/Valuation. Our view on AWK has evolved substantially since we first began covering the company after its IPO. In those days, it was an under-earning story, and the upside would be driven by continual rate case activity, which turned out to be correct. Years later, as the company pulled closer to its achievable ROE, a prevailing view we heard often was that the "easy" money had been made by investors, and that growth would slow.
- As we look forward, we see an entirely different story, and more compelling with a longer time line than the "ROE catch-up" period referenced previously. The long term capital investment needs, coupled with a national focus on infrastructure, augmented by fair value legislation to encourage acquisitions should drive consistent rate base growth for many years. Surcharge mechanisms reducing regulatory lag and extending the intervals between rate cases de-risks the long term earnings profile, and the market-based businesses provide a capital-lite source of additional cash flow to increase dividends or re-invest.
- With that thought process framing our investment thesis, all we're left with is valuation. We're currently using a P/E of 25x our 2018 EPS forecast to derive an $80 Fair Value, but we're actively reconsidering that multiple with an upward bias. Utilities in general have been trading at elevated multiples despite the turn higher in the macro interest rate environment, and continued investor enthusiasm may drive utility multiples higher given the strong long-term investment trends.

## Company Description

American Water is the largest investor-owned water and wastewater utility in the U.S., serving 14 million people across 40 states (16 regulated). Its primary business as a regulated utility accounts for 90% of revenue, supplemented by growing, non-regulated businesses such as service line protection and military base operations.

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### Definition of Ratings

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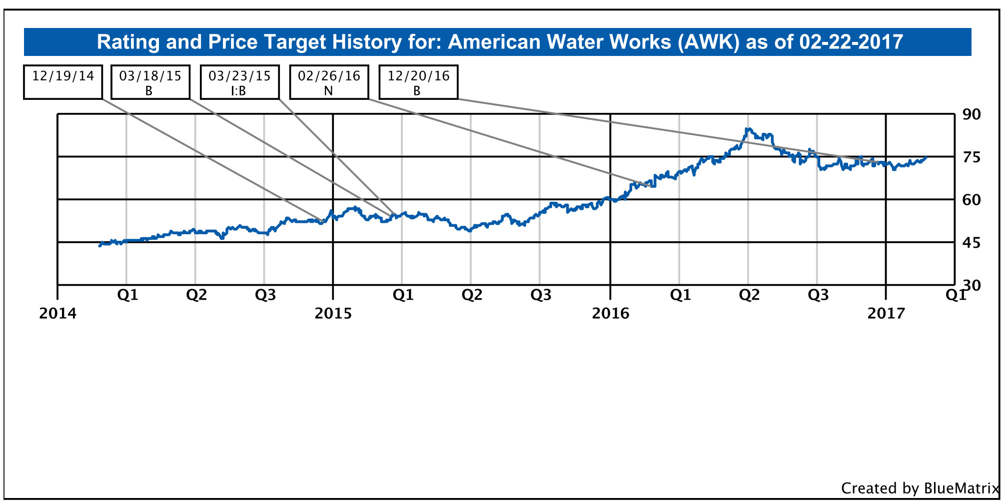
### Price Charts




### Janney Montgomery Scott Ratings Distribution as of 12/31/16

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 109 | 48.66 | 27 | 24.77 |
| **NEUTRAL [N]** | 111 | 49.55 | 18 | 16.22 |
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Water Utilities

August 3, 2017

# Aqua America, Inc. (WTR) - BUY

## WTR: 2Q17 Results "On the Money"; Maintain BUY Rating, Raising Fair Value from $38 to $41

| | |
|---|---|
| Price: | $33.58 |
| Fair Value Estimate: | $41.00 |
| 52-Week Range: | $28.03 - $34.41 |
| Market Cap (MM): | $5,964 |
| Shr.O/S-Diluted (mm): | 177.6 |
| Average Daily Volume: | 573,739 |
| Book Value: | $10.51 |
| Dividend: | $0.82 |
| Yield: | 2.4% |

| FYE: Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33A | $1.36E | $1.47E |
| Prior EPS: | | NC | $1.46 |
| P/E Ratio: | 25.2x | 24.7x | 22.8x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.28A | $0.31E |
| Q2 | $0.33A | $0.34A | $0.37E |
| Q3 | $0.41A | $0.45E | $0.46E |
| Q4 | $0.28A | $0.30E | $0.32E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $188A | $207E |
| Q2 | $204A | $203A | $224E |
| Q3 | $227A | $229E | $240E |
| Q4 | $197A | $201E | $211E |
| Year: | $820A | $821E | $881E |

1 Year Price History for WTR

### PORTFOLIO MANAGER BRIEF

WTR's 2Q17 EPS results met consensus expectations, and the company reaffirmed 2017 guidance. During the quarter, the company wrapped up its portfolio optimization, jettisoning the last market-based businesses that were slated for divestiture. Looking forward, rate activity continues in the form of rate awards and infrastructure surcharges, and WTR anticipates filing of a Pennsylvania Distribution System Improvement Charge (DSIC) this year, a rate case in 2018 and new rates effective in 2019. We've made minor adjustments to our forward estimates, and introduced 2019 forecasts, which we move to for valuation purposes. We reiterate our BUY rating on WTR shares, and raise our Fair Value estimate from $38 to $41.

### ANALYST NOTES

- 2Q17 EPS Matched Consensus Expectations. EPS of $0.34 met the consensus forecast and was $0.01 above our estimate. Notable items affecting 2Q17 results included the divestiture of previously identified market-based businesses, and on a go forward basis, non-regulated operations will only comprise approximately $4MM of annual revenues. OPEX expenses were significantly lower YoY (down $2.1MM) due to the aforementioned exit of some market-based businesses, lower production and employee related expenses.
- Regulatory Update. The company remains busy on the regulatory front, already receiving an additional $11.1MM in additional annualized revenue in 2017. Pending rate activity in two states (IL and VA) requests another $14MM in annualized revenue. WTR plans to file for its DSIC later this year in Pennsylvania, and then a rate case shortly thereafter in 2018 with new rates effective in 2019.
- Quarterly Dividend Increased. WTR increased its quarterly dividend 7%, which marks the 27th increase in the last 26 years. The company has paid continuous dividends for the last 72 years. We currently project a pay-out ratio of 58%, leaving sufficient capacity for future dividend increases.
- Summary/Valuation. We remain impressed with Aqua America's recent performance. The narrowed focus, centered on regulated operations and building rate base through investments and acquisitions should continue to expand the company's market capitalization for the benefit of shareholders. Looking forward, we've introduced (and moved to) 2019 estimates for valuation purposes, and the upward trajectory we see in the company's earnings allows us to raise our Fair Value on the shares from $38 to $41, based on a P/E of 26x our $1.59 EPS estimate. We see plenty of upside in WTR shares, especially in the coming quarters as the company begins to enter the rate case "window" in Pennsylvania, its largest state.

## IMPORTANT DISCLOSURES

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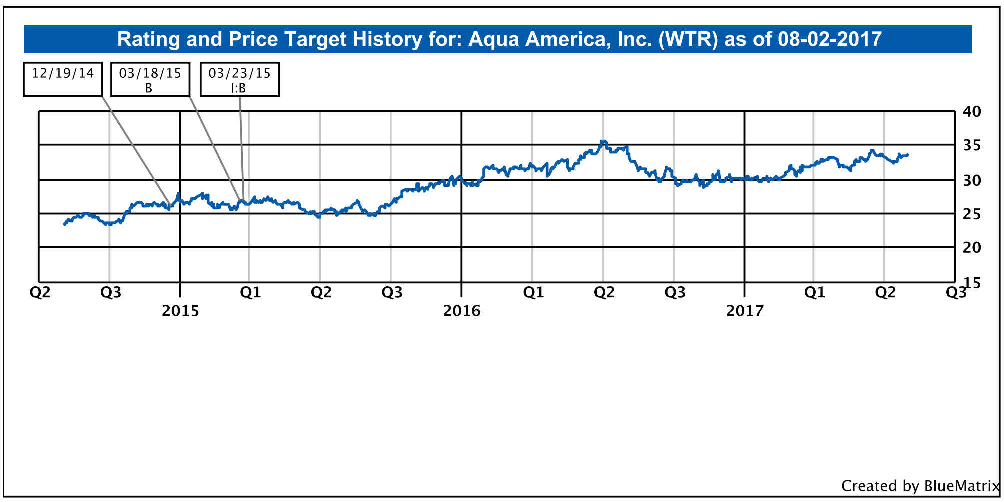


### Janney Montgomery Scott Ratings Distribution as of 6/30/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 117 | 48.55 | 28 | 23.93 |
| **NEUTRAL [N]** | 120 | 49.79 | 21 | 17.50 |
| **SELL [S]** | 4 | 1.66 | 0 | 0.00 |

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### Other Disclosures

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Water Utilities

November 1, 2017

# Aqua America, Inc. (WTR) - BUY

## WTR: 3Q17 Results Meet Expectations; Reiterate BUY Rating, $41 Fair Value

| | |
|---|---|
| Price: | $35.48 |
| Fair Value Estimate: | $41.00 |
| 52-Week Range: | $28.03 - $36.27 |
| Market Cap (MM): | $6,303 |
| Shr.O/S-Diluted (mm): | 177.7 |
| Average Daily Volume: | 446,939 |
| Book Value: | $10.68 |
| Dividend: | $0.82 |
| Yield: | 2.3% |

| FYE: Dec | 2017E | 2018E | 2019E |
|---|---|---|---|
| EPS: | $1.36E | $1.44E | $1.56E |
| Prior EPS: | NC | $1.47 | $1.59 |
| P/E Ratio: | 26.1x | 24.6x | 22.7x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.28A | $0.31E | $0.34E |
| Q2 | $0.34A | $0.37E | $0.41E |
| Q3 | $0.43A | $0.44E | $0.47E |
| Q4 | $0.32E | $0.32E | $0.34E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $188A | $207E | $227E |
| Q2 | $203A | $224E | $246E |
| Q3 | $215A | $226E | $237E |
| Q4 | $201E | $211E | $221E |
| Year: | $807E | $867E | $932E |


### PORTFOLIO MANAGER BRIEF

Aqua America's 3Q17 EPS results of $0.43 met expectations, although revenues of $215MM came in below the $234MM consensus forecast due primarily to unfavorable weather during the all-important summer season. Looking forward, the company continues to roll-up water/wastewater systems, and its recent DSIC filing in Pennsylvania puts the company solidly on the path to its next (and long-awaited) Pennsylvania rate case filing. We've made minor adjustments to our forward estimates, and reiterate our BUY rating and $41 Fair Value target on WTR shares, our top pick in the water utility sector.

### ANALYST NOTES

- 3Q17 Results Met Expectations. The wet summer months experienced across a large portion of Aqua America's service territory negatively impacted financial performance, with revenues of $215MM below the consensus forecast of $234MM. Despite the weather, the company still managed to match the consensus EPS forecast of $0.43. In our forecast model, lower O&M and tax expenses offset the revenue shortfall and benefitted quarterly results (all other income statement line items were as expected).
- Regulatory Update. Aqua has received rate awards in Indiana, Illinois, New Jersey, North Carolina, Pennsylvania and Ohio totaling $21.4MM annually. It currently has in in-process rate/surcharge proceedings in Illinois, North Carolina and Virginia totaling $14.1MM. The company filed a Distribution System Improvement Charge (DSIC) on 10/1/17 in Pennsylvania for 2.5%, and WTR will mostly likely file for another 2.5% on 1/1/18 and then again on 4/1/18, with a Pennsylvania rate case filing in summer, 2018 with new permanent rates effective in 2019.
- Guidance Maintained. EPS guidance for 2017 remains $1.34 to $1.39, and WTR still expects customer growth of 1.5%-2% for 2017.
- Summary/Valuation. The company's forward outlook continues to improve, and that assessment is based on 1) the upcoming rate case in Pennsylvania, and 2) an ever-improving outlook for acquisitions. The company announced another sizable municipal asset purchase (3,800 customers) and we're aware of others like Hazleton, PA (which serves 15K customers) that are considering selling their systems. In terms of valuation, the shares represent excellent value; the 22.7x P/E multiple is one of the lowest in the peer group, and the dividend yield of 2.3% is the highest. We reiterate our BUY rating on WTR shares and $41 Fair Value, based on a P/E of 26x our 2019 EPS estimate of $1.56.

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 2 - 3 OF THIS REPORT

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## Definition of Ratings

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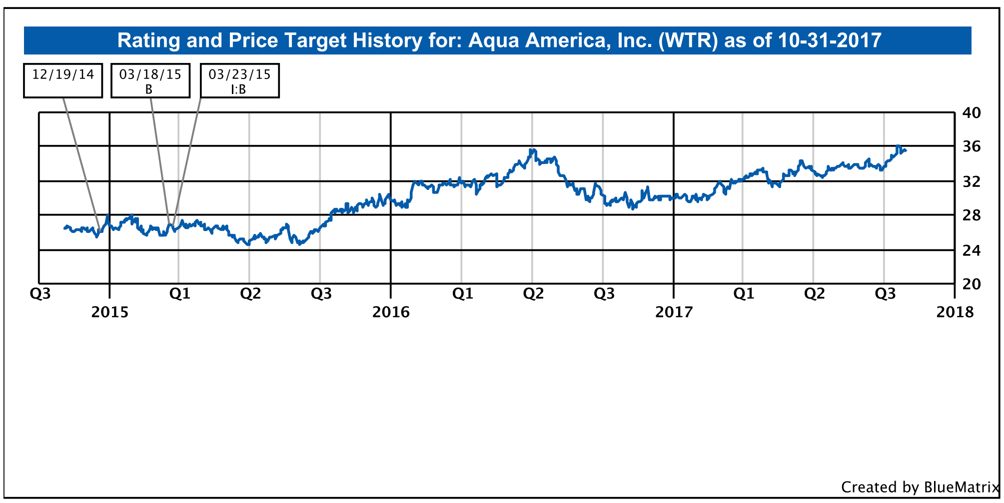
NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

## Price Charts




## Janney Montgomery Scott Ratings Distribution as of 9/30/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 115 | 49.57 | 32 | 27.83 |
| **NEUTRAL [N]** | 114 | 49.14 | 20 | 17.54 |
| **SELL [S]** | 3 | 1.29 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

## Other Disclosures

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Water Utilities

| | |
|---|---|
| Price: | $34.18 |
| Fair Value Estimate: | $39.00 |
| 52-Week Range: | $31.18 - $39.55 |
| Market Cap (MM): | 6,080 |
| Shr.O/S-Diluted (mm): | 177.9 |
| Average Daily Volume: | 604,634 |
| Book Value: | $11.02 |
| Dividend: | $0.82 |
| Yield: | 2.4% |

| FYE: Dec | 2017A | 2018E | 2019E |
|---|---|---|---|
| EPS: | $1.37A | $1.38E | $1.56E |
| Prior EPS: | | $1.39 | NC |
| P/E Ratio: | 24.9x | 24.8x | 21.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.28A | $0.29A | $0.35E |
| Q2 | $0.34A | $0.36E | $0.43E |
| Q3 | $0.43A | $0.42E | $0.46E |
| Q4 | $0.32A | $0.31E | $0.34E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $188A | $194A | $210E |
| Q2 | $203A | $212E | $233E |
| Q3 | $215A | $226E | $237E |
| Q4 | $203A | $213E | $224E |
| Year: | $810A | $845E | $904E |


May 10, 2018

# Aqua America, Inc. (WTR) - BUY

## WTR: 1Q18 Results Inline with Expectations; Maintain BUY Rating, $39 Fair Value

### PORTFOLIO MANAGER BRIEF

WTR's 1Q18 results met expectations, and the company reaffirmed its full year EPS guidance range. Upcoming personnel changes in two key roles are being phased-in to smooth the transition; the company's upcoming Pennsylvania rate case will be overseen by current CFO David Smeltzer before his pending retirement in October, with incoming CFO Dan Schuller assisting with the process. That aside, we've made only minor adjustments to our forward estimates, and maintain our BUY rating and $39 Fair Value on WTR shares.

### ANALYST NOTES

- 1Q18 Results Met Expectations. EPS of $0.29 met the consensus forecast, and increased modestly (+$0.01) YoY. Rate activity, organic growth, lower income tax expense and increased volumes contributed to the improvement versus 1Q17 in what is typically the seasonally weakest quarter for the company in terms of earnings.
- Regulatory Update. In 1Q18, the company received rate cases and surcharges in 7 states (IL, IN, NJ, NC, OH, PA & TX) totaling $23.6MM in annualized revenues. Pending rate case and surcharge requests in IN, NC, OH & VA total $8.6MM. On the call, the company noted that current CFO David Smeltzer (retiring in October, 2018) will oversee the upcoming PA rate case filing. Incoming CFO Dan Schuller (current EVP of Strategy & Corporate Development) will also be a part of this important submission to the Pennsylvania Public Utility Commission (PAPUC).
- Bulking Up for Future Corporate Development? Mr. Smeltzer's retirement has created new roles for several people, including current EVP of Strategy & Corporate Development, Dan Schuller, Mr. Smeltzer's named replacement. Taking over for Mr. Schuller is Matthew Rhodes, an 11-year veteran in the investment banking division at Goldman Sachs covering the utility sector. Mr. Schuller was quite successful in bringing acquisitions into Aqua; going forward, the company will now have 2 strong business development backgrounds in both the CFO and Strategy & Corporate Development roles. On the surface, it appears WTR will become much more active and devote more resources to acquisitive growth. We noted on the call that when asked about the current M&A activity in sector, CEO Chris Franklin indicated WTR will remain "disciplined" in terms of what its willing to pay for assets.
- Summary/Valuation. Although we're happy for Mr. Smeltzer and wish him the best in his pending retirement, we're also sad to see him go. He added a level of gravitas to the CFO role that few (if any) have ever achieved in the industry. His continued presence in guiding WTR through its upcoming PA rate case filing


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 3 - 4 OF THIS REPORT

is certainly a positive, and having a top-quality replacement for him already in-house is a substantial plus going forward. In terms of valuation, there was nothing in the 1Q18 results to alter our positive investment thesis; we maintain our BUY rating and $39 Fair Value on WTR shares, based on a P/E of 25x our 2019 EPS estimate of $1.56.

# IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

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## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

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SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

## Price Charts

**Rating and Price Target History for: Aqua America, Inc. (WTR) as of 05-09-2018**


Created by: BlueMatrix

## Janney Montgomery Scott Ratings Distribution as of 03/31/18

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 116 | 48.95 | 34 | 29.31 |
| **NEUTRAL [N]** | 119 | 50.21 | 26 | 21.85 |
| **SELL [S]** | 2 | 0.84 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

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Water Utilities

March 1, 2018

# Aqua America, Inc. (WTR) - BUY

## WTR: Analyst Day Takeaways; Maintain BUY Rating, $39 Fair Value

| | |
|---|---|
| Price: | $34.19 |
| Fair Value Estimate: | $39.00 |
| 52-Week Range: | $30.38 - $39.55 |
| Market Cap (MM): | 6,076 |
| Shr.O/S-Diluted (mm): | 177.7 |
| Average Daily Volume: | 723,555 |
| Book Value: | $10.91 |
| Dividend: | $0.82 |
| Yield: | 2.4% |

| FYE: Dec | 2017A | 2018E | 2019E |
|---|---|---|---|
| EPS: | $1.37A | $1.39E | $1.56E |
| Prior EPS: | $1.36 | $1.44 | NC |
| P/E Ratio: | 25.0x | 24.6x | 21.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.28A | $0.30E | $0.35E |
| Q2 | $0.34A | $0.36E | $0.42E |
| Q3 | $0.43A | $0.42E | $0.45E |
| Q4 | $0.32A | $0.31E | $0.34E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $188A | $207E | $223E |
| Q2 | $203A | $224E | $246E |
| Q3 | $215A | $226E | $237E |
| Q4 | $203A | $213E | $224E |
| Year: | $810A | $870E | $930E |

1 Year Price History for WTR

### PORTFOLIO MANAGER BRIEF

Aqua America's analyst day/year end results presentation was long on details and held few surprises. 2018 CAPEX will be higher than 2017, its all-important Pennsylvania rate case filing is still expected this year, and acquisitions are expected to continue to be a driver of organic growth. We maintain our BUY rating on WTR shares, and our $39 Fair Value is based on a P/E on 25x our 2019 EPS estimate of $1.56.

### ANALYST NOTES

- <u>4Q17 Adjusted Results Inline with Expectations</u>. WTR's 4Q17 adjusted EPS of $0.32 matched our forecast and was a penny above consensus. The GAAP number (+$0.30) was negatively impacted by tax legislation passed at year-end 2017, which nicked EPS by $0.02. All-in, it was a solid quarter that met expectations and held no surprises beyond the tax legislation impact.
- <u>Robust System Investment to Continue in 2018</u>. The company's planned CAPEX for 2018 is $500MM, which would represent a record level of investment. 2017's $478MM also represented a record level of investment, with the bulk of the CAPEX targeted to water mains and services. The enhanced levels of investment should allow for meaningful future growth in rate base, and surcharge mechanisms currently in place should allow for more speedy recovery.
- <u>It's All About the PA Rate Case</u>. Given how important the State of Pennsylvania is to Aqua America in terms of customers and rate base, the importance of its upcoming rate case there can't be understated. Aqua hasn't been in for rates in PA for 7 years, and the upcoming rate case will represent 8 years of capital investment totaling just over $2B. We expect the PA Public Utility Commission to treat Aqua fairly; its past adoption of tax repair accounting methodology at the Commission's request is a primary reason why earnings growth has lagged somewhat in recent years. We believe the most recent water rate case before the PAPUC (American Water Works) turned out well, and we expect no less of a result for Aqua.
- <u>Acquisition Pipeline Looks Robust.</u> During analyst day, EVP of Strategy & Corporate Development Dan Schuller highlighted how the company's Investment Committee sifts through potential acquisitions on a regular basis, to the point where the process looks fairly routine (from the outside). Acquisition activity has been steady, although two deals expected to close in 2017 have slipped into 2018. The company seems to have a lot of large targets, including 7 with customer counts of 10,000 or more. The largest, 85K water customers, would be a substantial deal of size if consummated.

- Summary/Valuation. We see lots of reasons to like the forward outlook for WTR and recommend continuing purchases at current price levels. A strong pipeline of acquisitions, robust CAPEX driving 7% rate base growth, anticipated benefits from its upcoming PA rate case (for $2B of investments in that state) and a favorable valuation are all solid reasons, in our opinion. We do note that expected rising interest rates in 2018 could be a headwind near-term; the steep ascent of the U.S. 10-year yield toward 3% has negatively impacted all of the utilities within our coverage universe. The pullback creates an opportunity to acquire at more reasonable valuations; WTR shares are trading at a P/E of 22x our 2019 forecast, 3 full turns below the 25x we'd normally expect them to trade at. We maintain our BUY rating and $39 Fair Value on WTR shares.

## IMPORTANT DISCLOSURES

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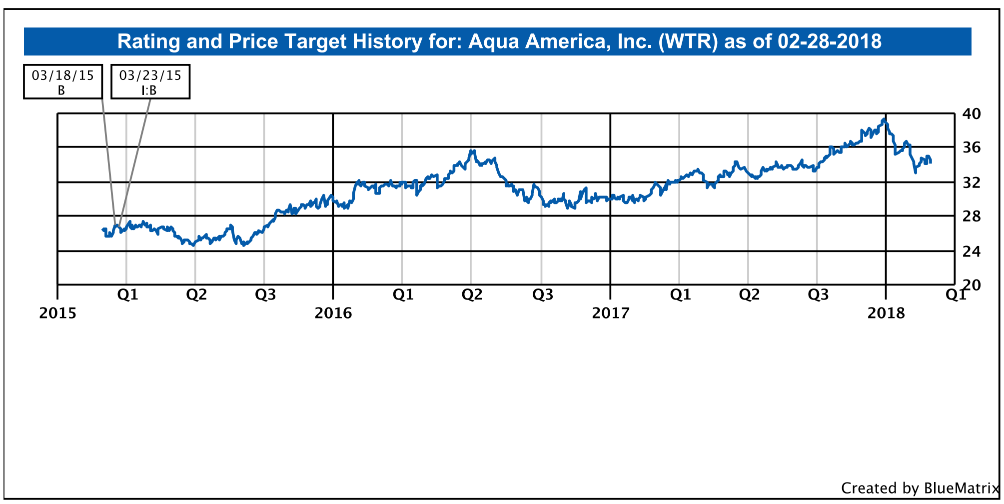


### Janney Montgomery Scott Ratings Distribution as of 12/31/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 111 | 48.05 | 31 | 27.93 |
| **NEUTRAL [N]** | 117 | 50.65 | 22 | 18.80 |
| **SELL [S]** | 3 | 1.30 | 0 | 0.00 |

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Katherine Burke 646-840-3207 kburke@janney.com

Water Utilities

May 30, 2017

# Aqua America, Inc. (WTR) - BUY

## WTR: Changing the Game Yet Again?

| | |
|---|---|
| Price: | $32.58 |
| Fair Value Estimate: | $38.00 |
| 52-Week Range: | $28.03 - $35.83 |
| Market Cap (MM): | $5,786 |
| Shr.O/S-Diluted (mm): | 177.6 |
| Average Daily Volume: | 653,464 |
| Book Value: | $10.51 |
| Dividend: | $0.77 |
| Yield: | 2.3% |

| FYE: Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33A | $1.36E | $1.46E |
| Prior EPS: | | NC | NC |
| P/E Ratio: | 24.5x | 24.0x | 22.3x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.28A | $0.29E |
| Q2 | $0.33A | $0.33E | $0.36E |
| Q3 | $0.41A | $0.44E | $0.48E |
| Q4 | $0.28A | $0.31E | $0.33E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $188A | $207E |
| Q2 | $204A | $214E | $235E |
| Q3 | $227A | $245E | $257E |
| Q4 | $197A | $207E | $217E |
| Year: | $820A | $853E | $916E |

1 Year Price History for WTR

### PORTFOLIO MANAGER BRIEF

We spent time recently with Aqua America CEO Christopher Franklin and Chief of Staff Brian Dingerdissen visiting investors in Boston. Just as its done in the past, Aqua appears to be re-inventing the utility model, this time by making unsolicited bids for municipal water and wastewater systems. It's a new method that could, at a minimum, augment what already appears to be an improving environment for municipal acquisitions under fair value legislation. We maintain our BUY rating and $38 Fair Value on WTR shares.

### ANALYST NOTES

- Unsolicited Bid an Innovative Way to "Start a Conversation". WTR's recent unsolicited bid for the Chester, PA water authority for $250MM marks a new path to strategic acquisitions of municipal water and wastewater systems. Previously, Aqua America would approach a municipality (or vice-versa), which would start a long gestation period that could include an open bid process or direct negotiation. Politics is always a factor as well, and a typical system purchase can take years. The unsolicited bid approach puts a large amount of cash in front of municipalities and ratepayers, which opens the discussion about what to do with the potential proceeds, which could range from infrastructure investments to returning funds to ratepayers. Municipal systems are noted as bastions of patronage; we see the potential for public information campaigns to enhance the narrative surrounding system sales (we're not aware of WTR choosing this tactic, but it could be a logical path for systems that push back). It's not hard to imagine ratepayers asking for a one-time benefit (sale proceeds) from municipalities, especially distressed municipalities.
- Is this a Game Changing Strategy, or a Trial Balloon? The only answer at this point we can offer is "time will tell". We got the sense that WTR has additional plans to use the unsolicited bid strategy to augment its current methodology as it relates to acquisitions. Aqua America was built on acquisitions, growing from a small regional suburban Philadelphia utility into a multi-state operation spanning a large portion of the United States. WTR's early-on innovative strategy of rolling up small municipal systems was copied by others; it was also the originator of the DSIC (Distribution System Improvement Charge), which has been copied by water, electric and gas utilities across the country. The use of Tax Repair Accounting Methodology (to the extent it's currently being utilized by WTR) was yet another innovation that created shareholder value. Aqua has shown a tendency to "shake things up" throughout the last few decades, and we believe this could be another inflection point in its growth trajectory.
- Upcoming Changes at the PAPUC Worth Watching. As many utility industry watchers are aware, Pennsylvania Public Utility Commission (PAPUC)

Commissioner Robert Powelson has been nominated to the Federal Energy Regulatory Commission (FERC), and could be seated as soon as July. That leaves an opening at the PAPUC, which Democrat Governor Tom Wolf will need to fill with a Republican. Commissioner Powelson is highly respected, and has been supportive of infrastructure investment within the state. His elevation comes at a time when American Water Works (AWK) has already filed a sizable rate case in Pennsylvania, and WTR is expected to file a sizable request in 2018 (WTR has not been in for rates since 2011). We'll be watching closely 1) the change in commissioners at the PAPUC and 2) how AWK is treated with its request. Pennsylvania is noted as a highly constructive state in terms of infrastructure investment and rate mechanisms, and comprises a large portion of WTR's overall geographic exposure.

- Interest in Potential Acquisitions in Other Regulated Arenas Appears Muted. In our meetings, the company was queried about potential acquisitions in regulated electric and gas utility operations. Based on clues in regulatory filings, WTR was widely speculated by investors as being interested in ITC Holdings when it was "in-play", and subsequent management commentary has left the door open for opportunities outside the water utility industry. The company indicated it would consider those types of opportunities, but valuation metrics have changed substantially, and our view based on the exchanges with investors in meetings we participated in lead us to conclude that something material isn't likely unless significant changes in valuation occur. WTR indicated the environment for municipal acquisitions has never been better, and there's plenty of opportunity within the water sector to grow meaningfully.
- Summary. We're thankful we had the opportunity to visit investors with WTR at this particular time, following its unsolicited bid for the Chester Water Authority. Our major takeaway from the meetings was that the environment for future growth from acquisitions remains exceptionally robust, with management indicating it's the strongest they've ever seen. Fair value legislation is a large part of that, but the unsolicited bid route could improve acquisition growth even more. We believe the tactic holds great promise, particularly if proceeds are returned to citizens/ratepayers or used for specific, targeted municipal purposes. Our positive investment thesis is maintained, and we reiterate our BUY rating and $38 Fair Value target on WTR shares, based on a P/E of 26x our 2018 EPS estimate of $1.46.


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 3 - 4 OF THIS REPORT

## Company Description

Aqua America, Inc., serves residential, commercial, fire protection, industrial, other water, wastewater, and other utility customers in Pennsylvania, Texas, North Carolina, Ohio, Illinois, New Jersey, Indiana and Virginia. It also provides water and wastewater services through operating and maintenance contracts with municipal authorities and other parties, as well as offers sludge hauling, septage and grease services, backflow prevention services, and other non-regulated water and wastewater services.

## IMPORTANT DISCLOSURES

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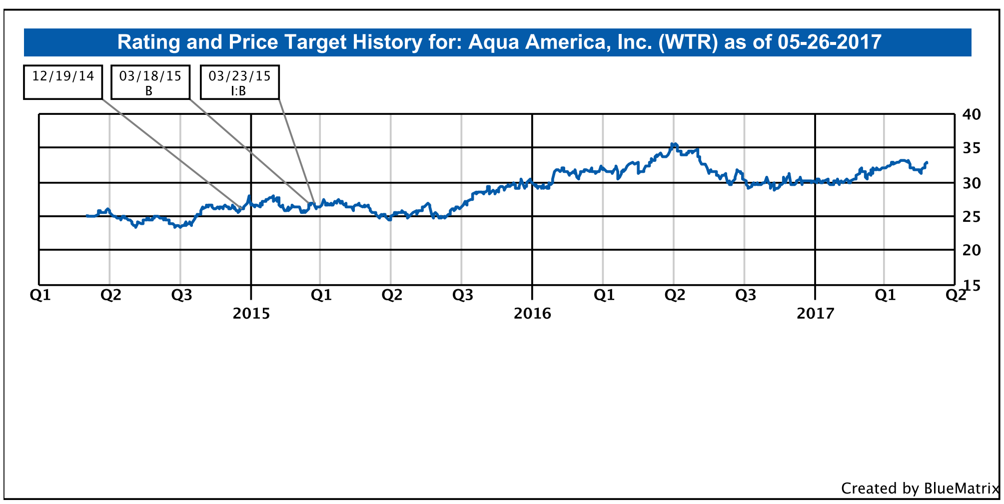

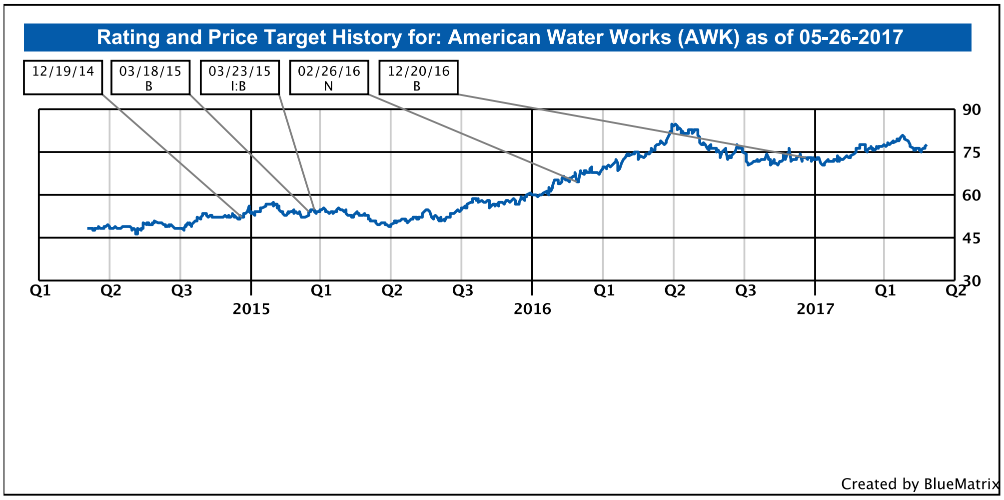


## Janney Montgomery Scott Ratings Distribution as of 3/31/17

| Rating | Count | Percent | IB Serv./Past 12 Mos.* Count | IB Serv./Past 12 Mos.* Percent |
|---|---|---|---|---|
| **BUY [B]** | 114 | 48.93 | 28 | 24.56 |
| **NEUTRAL [N]** | 114 | 48.93 | 18 | 15.79 |
| **SELL [S]** | 5 | 2.15 | 0 | 0.00 |

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Water Utilities

| | |
|---|---|
| Price: | $33.58 |
| Fair Value Estimate: | $41.00 |
| 52-Week Range: | $28.03 - $34.41 |
| Market Cap (MM): | $5,964 |
| Shr.O/S-Diluted (mm): | 177.6 |
| Average Daily Volume: | 573,739 |
| Book Value: | $10.51 |
| Dividend: | $0.82 |
| Yield: | 2.4% |

| FYE: Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33A | $1.36E | $1.47E |
| Prior EPS: | | NC | $1.46 |
| P/E Ratio: | 25.2x | 24.7x | 22.8x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.28A | $0.31E |
| Q2 | $0.33A | $0.34A | $0.37E |
| Q3 | $0.41A | $0.45E | $0.46E |
| Q4 | $0.28A | $0.30E | $0.32E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $188A | $207E |
| Q2 | $204A | $203A | $224E |
| Q3 | $227A | $229E | $240E |
| Q4 | $197A | $201E | $211E |
| Year: | $820A | $821E | $881E |


August 3, 2017

# Aqua America, Inc. (WTR) - BUY

## WTR: 2Q17 Results "On the Money"; Maintain BUY Rating, Raising Fair Value from $38 to $41

### PORTFOLIO MANAGER BRIEF

WTR's 2Q17 EPS results met consensus expectations, and the company reaffirmed 2017 guidance. During the quarter, the company wrapped up its portfolio optimization, jettisoning the last market-based businesses that were slated for divestiture. Looking forward, rate activity continues in the form of rate awards and infrastructure surcharges, and WTR anticipates filing of a Pennsylvania Distribution System Improvement Charge (DSIC) this year, a rate case in 2018 and new rates effective in 2019. We've made minor adjustments to our forward estimates, and introduced 2019 forecasts, which we move to for valuation purposes. We reiterate our BUY rating on WTR shares, and raise our Fair Value estimate from $38 to $41.

### ANALYST NOTES

- 2Q17 EPS Matched Consensus Expectations. EPS of $0.34 met the consensus forecast and was $0.01 above our estimate. Notable items affecting 2Q17 results included the divestiture of previously identified market-based businesses, and on a go forward basis, non-regulated operations will only comprise approximately $4MM of annual revenues. OPEX expenses were significantly lower YoY (down $2.1MM) due to the aforementioned exit of some market-based businesses, lower production and employee related expenses.
- Regulatory Update. The company remains busy on the regulatory front, already receiving an additional $11.1MM in additional annualized revenue in 2017. Pending rate activity in two states (IL and VA) requests another $14MM in annualized revenue. WTR plans to file for its DSIC later this year in Pennsylvania, and then a rate case shortly thereafter in 2018 with new rates effective in 2019.
- Quarterly Dividend Increased. WTR increased its quarterly dividend 7%, which marks the 27th increase in the last 26 years. The company has paid continuous dividends for the last 72 years. We currently project a pay-out ratio of 58%, leaving sufficient capacity for future dividend increases.
- Summary/Valuation. We remain impressed with Aqua America's recent performance. The narrowed focus, centered on regulated operations and building rate base through investments and acquisitions should continue to expand the company's market capitalization for the benefit of shareholders. Looking forward, we've introduced (and moved to) 2019 estimates for valuation purposes, and the upward trajectory we see in the company's earnings allows us to raise our Fair Value on the shares from $38 to $41, based on a P/E of 26x our $1.59 EPS estimate. We see plenty of upside in WTR shares, especially in the coming quarters as the company begins to enter the rate case "window" in Pennsylvania, its largest state.

# IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

Janney Montgomery Scott LLC currently acts as a market-maker in the securities of Aqua America, Inc..

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Aqua America, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

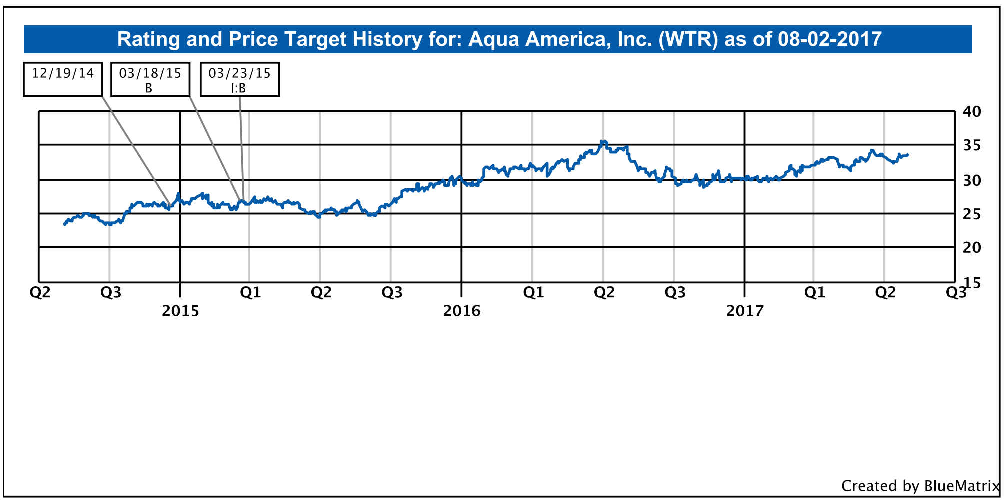
## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

## Price Charts




## Janney Montgomery Scott Ratings Distribution as of 6/30/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 117 | 48.55 | 28 | 23.93 |
| **NEUTRAL [N]** | 120 | 49.79 | 21 | 17.50 |
| **SELL [S]** | 4 | 1.66 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

## Other Disclosures

Janney Montgomery Scott LLC, is a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the New York Stock Exchange, the Financial Industry Regulatory Authority and the Securities Investor Protection Corp.

This report is for your information only and is not an offer to sell or a solicitation of an offer to buy the securities or instruments named or described in this report. Interested parties are advised to contact the entity with which they deal or the entity that provided this report to them, should they desire further information. The information in this report has been obtained or derived from sources believed by Janney Montgomery Scott LLC, to be reliable. Janney Montgomery Scott LLC, however, does not represent that this information is accurate or complete. Any opinions or estimates contained in this report represent the judgment of Janney Montgomery Scott LLC at this time and are subject to change without notice.

Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

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Water Utilities

November 2, 2016

# Aqua America, Inc. (WTR) - BUY

## WTR: Solid 3Q16 Results, Reaffirmed 2016 Guidance; Maintain BUY, $39 F.V.

| | |
|---|---|
| Price: | $29.99 |
| Fair Value Estimate: | $39.00 |
| 52-Week Range: | $28.05 - $35.83 |
| Market Cap (MM): | $5,317 |
| Shr.O/S-Diluted (mm): | 177.3 |
| Average Daily Volume: | 766,192 |
| Book Value: | $10.10 |
| Dividend: | $0.77 |
| Yield: | 2.6% |

| FYE: Dec | 2016E | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33E | $1.42E | $1.51E |
| Prior EPS: | $1.34 | $1.43 | $1.50 |
| P/E Ratio: | 22.5x | 21.1x | 19.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.29E | $0.32E |
| Q2 | $0.33A | $0.33E | $0.35E |
| Q3 | $0.41A | $0.45E | $0.48E |
| Q4 | $0.29E | $0.34E | $0.35E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $202E | $222E |
| Q2 | $204A | $214E | $235E |
| Q3 | $227A | $249E | $262E |
| Q4 | $207E | $228E | $239E |
| Year: | $830E | $893E | $959E |

1 Year Price History for WTR

### PORTFOLIO MANAGER BRIEF

Aqua America reported net income of $73.2MM and EPS of $0.41 for 3Q16, which was in line with consensus estimates. The company executed on key initiatives, including capex activity and acquisitions, as well as continuing its efforts to minimize the cost structure. Guidance for 2016 was reaffirmed, and while we made a few minor adjustments to our model the changes had no impact on valuation. We maintain our BUY rating and $39 Fair Value based on the shares trading to a P/E level of 26x our 2018 EPS forecast of $1.51.

### ANALYST NOTES

- Solid Quarter Across the Board. Aqua America reported a solid quarter with no surprises and in line results. Net income of $73MM was up 8.5% YoY, while reported EPS of $0.41 was up 7.9% YoY. The YoY growth was driven in part by increased revenues due to higher consumption, higher rates, and regulated growth. Additionally, Aqua America's continued focus on cost-cutting and cost-conscious decisions was also cited as having a positive impact on bottom line performance.
- Acquisitions Continue to Have a Positive Impact. Acquisitions and organic growth have increased Aqua's customer base by 1.3% so far in 2016, with acquisitions accounting for 5,700 of the 12,900 new customer connections. Aqua has made acquisitions this year in Pennsylvania, Indiana, North Carolina, Virginia, New Jersey, and Ohio. Of note was management's indication that opportunities for acquisitions are increasing as municipalities struggle to keep pace with necessary infrastructure improvements, and its current pending acquisition agreements will add another 4,700 customer connections.
- Continued Execution on Robust CAPEX Plan. Aqua America has continued to execute on its CAPEX plans; year to date, the company has invested $270MM in infrastructure improvements, with $80MM left in the budget to hit the $350MM goal for 2016 capital spending. These infrastructure improvements come as part of Aqua's $1.1B investment plan through 2018. As we have noted previously, the plan will add much needed improvements to infrastructure while also contributing to rate base growth.
- Guidance for 2016 Reaffirmed. Aqua reaffirmed guidance for the year, with EPS expected to be between $1.30 and $1.35. Customer growth is expected to be between 1.5% and 2.0%, while CAPEX will top $350MM. Aqua has not yet released 2017 guidance.


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 3 - 4 OF THIS REPORT

- Summary/Valuation - Aqua turned in yet another solid quarter with no surprises. Continued execution on initiatives, strong leadership, and growing opportunities for acquisitions all drive a strong story. As 2017 approaches, our focus now shifts to Aqua's next Pennsylvania rate case, which it expects to file in late 2018 with new rates effective in 2019. Given the ongoing capital program since they last visited with the PAPUC on the topic of rates, we note rate base should increase materially, which we'd expect to have a positive impact on WTR's bottom line. We maintain our Buy rating and $39 Fair Value target, based on the shares trading to a P/E of 26x our 2018 EPS estimate of $1.51.

## Company Description

Aqua America, Inc., serves residential, commercial, fire protection, industrial, other water, wastewater, and other utility customers in Pennsylvania, Texas, North Carolina, Ohio, Illinois, New Jersey, Indiana and Virginia. It also provides water and wastewater services through operating and maintenance contracts with municipal authorities and other parties, as well as offers sludge hauling, septage and grease services, backflow prevention services, and other non-regulated water and wastewater services.

## IMPORTANT DISCLOSURES

## Research Analyst Certification

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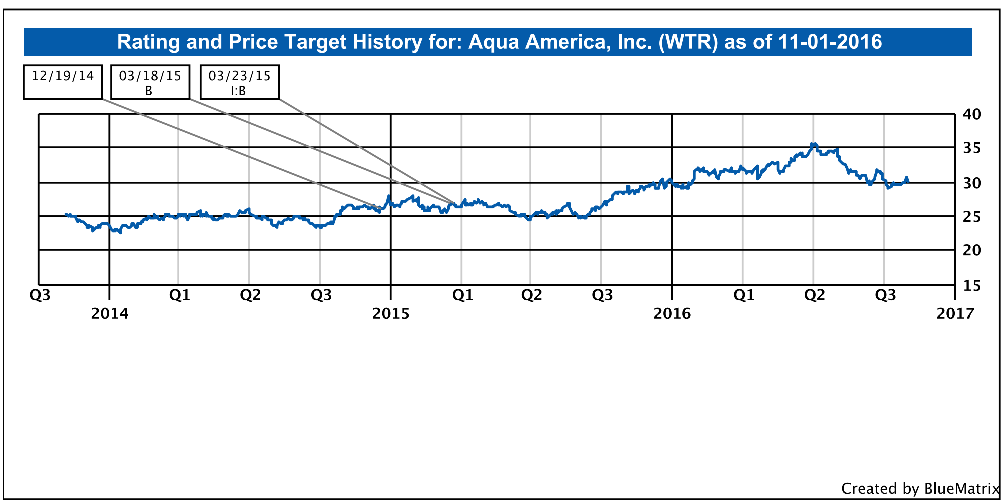
SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

## Price Charts




## Janney Montgomery Scott Ratings Distribution as of 09/30/16

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 124 | 52.54 | 28 | 22.58 |
| **NEUTRAL [N]** | 109 | 46.19 | 11 | 10.09 |
| **SELL [S]** | 3 | 1.27 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

Janney Montgomery Scott LLC, is a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the New York Stock Exchange, the Financial Industry Regulatory Authority and the Securities Investor Protection Corp.

This report is for your information only and is not an offer to sell or a solicitation of an offer to buy the securities or instruments named or described in this report. Interested parties are advised to contact the entity with which they deal or the entity that provided this report to them, should they desire further information. The information in this report has been obtained or derived from sources believed by Janney Montgomery Scott LLC, to be reliable. Janney Montgomery Scott LLC, however, does not represent that this information is accurate or complete. Any opinions or estimates contained in this report represent the judgment of Janney Montgomery Scott LLC at this time and are subject to change without notice.

Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

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January 3, 2017

INFRASTRUCTURE

# Utilities & Infrastructure Weekly

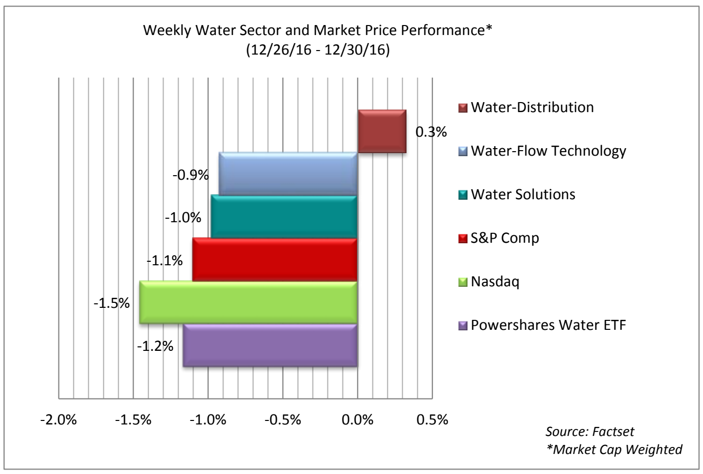
Janney Coverage Universe

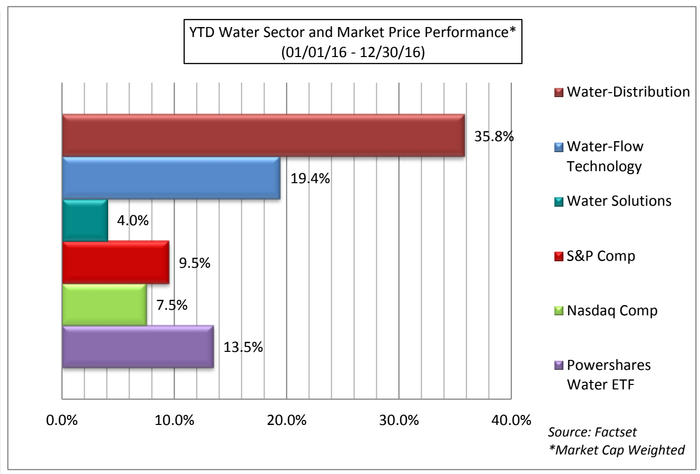
| Ticker | Name | Rating | Price | Fair Value | 16 EPS/(P/E) | 17 EPS/(P/E) |
|---|---|---|---|---|---|---|
| | **WATER UTILITIES** | | | | | |
| AWR | American States Water Company | Neutral | $45.56 | $39.00 | $1.64 (27.8) | $1.72 (26.5) |
| AWK | American Water Works Company, Inc. | Buy | $72.36 | $80.00 | $2.83 (25.6) | $3.04 (23.8) |
| WTR | Aqua America, Inc. | Buy | $30.04 | $39.00 | $1.33 (22.6) | $1.42 (21.2) |
| CWT | California Water Service Group | Neutral | $33.90 | $32.00 | $0.88 (38.5) | $1.38 (24.6) |
| SBS | Companhia de Saneamento Basico do Estado de Sao Paulo SAB | Neutral | $8.68 | $10.28 | $1.07 (8.1) | $1.03 (8.4) |
| SBSP3-BR | Companhia de Saneamento Basico do Estado de Sao Paulo SAB | Neutral | R$28.79 | R$35.00 | R$3.64 (7.9) | R$3.52 (8.2) |
| CWCO | Consolidated Water Co. Ltd. | Buy | $10.85 | $15.00 | $0.57 (19.0) | $0.67 (16.2) |
| SJW | SJW Group | Neutral | $55.98 | $49.00 | $2.27 (24.7) | $2.07 (27.0) |
| | **INDUSTRIALS** | | | | | |
| AME | AMETEK, Inc. | Buy | $48.60 | $56.00 | $2.30 (21.1) | $2.51 (19.4) |
| CCC | Calgon Carbon Corporation | Buy | $17.00 | $19.00 | $0.64 (26.6) | $0.90 (18.9) |
| IEX | IDEX Corporation | Buy | $90.06 | $96.00 | $3.73 (24.1) | $4.12 (21.9) |
| MWA | Mueller Water Products, Inc. Class A | Buy | $13.31 | $14.00 | $0.48 (27.7) | $0.61 (17.7) |
| WTS | Watts Water Technologies, Inc. Class A | Neutral | $65.20 | $64.00 | $2.60 (23.7) | $3.04 (20.3) |
| XYL | Xylem Inc. | Buy | $49.52 | $52.00 | $2.02 (24.5) | $2.29 (21.6) |
| | **ELECTRIC & GAS UTILITIES** | | | | | |
| AGR | Avangrid, Inc. | Neutral | $37.88 | $43.00 | $2.00 (18.9) | $2.24 (16.9) |
| CPK | Chesapeake Utilities Corporation | Buy | $66.95 | $73.00 | $2.79 (21.0) | $3.4 (17.2) |
| ES | Eversource Energy | Buy | $55.23 | $67.00 | $2.97 (18.6) | $3.23 (17.1) |
| NJR | New Jersey Resources Corporation | Neutral | $35.50 | $36.00 | $1.61 (22.0) | $1.71 (20.8) |
| SJI | South Jersey Industries, Inc. | Neutral | $33.69 | $33.00 | $1.33 (25.3) | $1.48 (22.8) |
| UGI | UGI Corporation | Buy | $46.08 | $47.00 | $2.05 (22.5) | $2.38 (19.4) |
| UTL | Unitil Corporation | Neutral | $45.34 | $44.00 | $1.93 (23.5) | $2.07 (21.9) |
| WGL | WGL Holdings, Inc. | Neutral | $76.28 | $71.00 | $3.27 (23.3) | $3.32 (23.0) |
| | **MLPs/YIELDCOS** | | | | | |
| APU | AmeriGas Partners, L.P. | Buy | $47.92 | $58.00 | $1.73 (27.7) | $3.05 (15.7) |
| CAFD | 8point3 Energy Partners LP Class A | Buy | $12.98 | $22.50 | $1.12 (11.6) | $1.35 (9.6) |

*Sources: FactSet (pricing), Janney Montgomery Scott, LLC Estimates/Ratings/Fair Values*

**2016 closes out on a negative note.** With the exception of the Water-Distribution segment (+0.3%), our water-related segments and market benchmarks finished decidedly lower. The Water-Flow Technology and Water Solutions segments finished down by -0.9% and -1.0%, respectively, which was inline with our benchmarks (the S&P Composite -1.1%, the NASDAQ -1.5% and the PowerShares Water ETF -1.2%). While we're unable to point to any specific reasons for the market pullback, we noted political statements and actions by the outgoing U.S. administration late in the week appeared to have a negative impact on U.S. markets.

With 2016 now in the rear view mirror, water-related equities all finished positive for the year despite last week's disappointing finish. The Water-Distribution sector again outperformed by a wide margin against all benchmarks and sub-segments, +35.8%. The Water-Flow Technology segment also turned in a stellar performance despite a weak 1H16, +19.4%. The Water Solutions segment disappointed all year long, spending a good part of the year in negative territory, but managed to finish higher at year-end +4.0%. All of our market benchmarks (the S&P Composite, NASDAQ Composite and Powershares Water ETF) finished in positive territory in 2016, +9.5%, +7.5% and +13.5%, respectively.



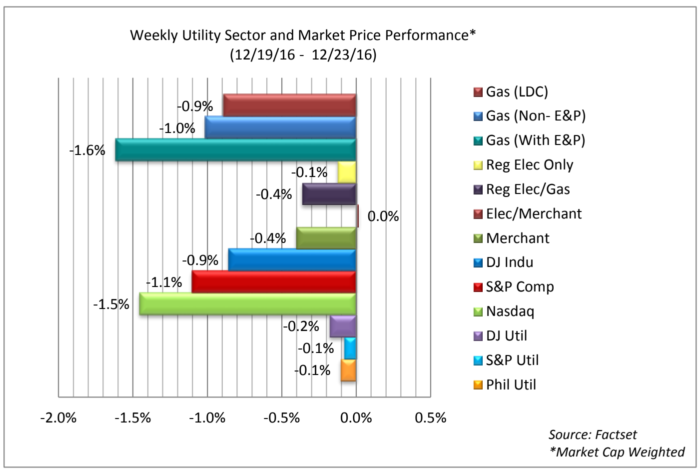



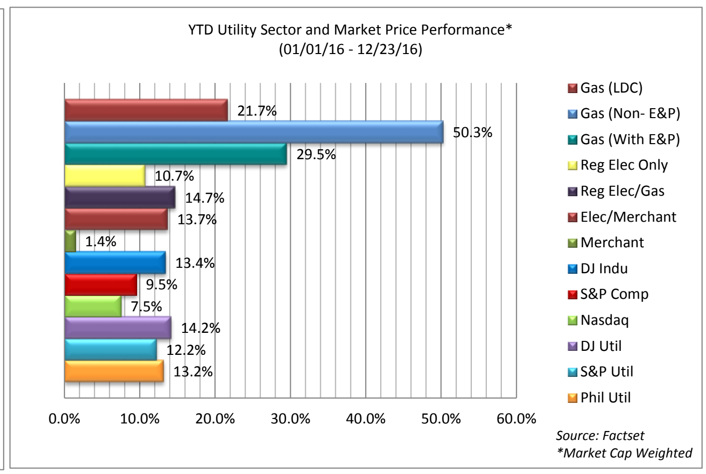

| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Water Distribution** | | | **Water Distribution** | | |
| **Companhia de Saneamento Bas** | **SBS** | **4.1%** | Pure Cycle Corp. | PCYO | -1.8% |
| **Water Flow Technology** | | | **Water Flow Technology** | | |
| | | | Aegion Corp. | AEGN | -4.8% |
| **Water Solutions** | | | **Water Solutions** | | |
| Veolia Environnement SA | VE | 2.3% | **Calgon Carbon Corp.** | **CCC** | **-4.0%** |

*Source:Factset*

**<u>Utilities experienced selling pressure as 2016 trading closed out.</u>** None of our utility segments closed higher last week, with the best performance coming from the Electric/Merchant names, which managed breakeven status. Performance was all over the map, with the worst performance coming from the Gas (with E&P) names at -1.6%. Our broad market benchmarks were all lower, with the DJIA -0.9%%, the S&P Composite -1.1% and the NASDAQ -1.5%. The utility indexes all finished lower in a range of -0.2% to -0.1%.

2016 was an impressive year for most of our utility segments, with 5 of our 8 segments outperforming all broad market benchmarks. The stand-out was the Gas (Non–E&P) segment, which was atop the leaderboard in terms of performance consistently throughout the year, +50.3%. Gas (with E&P) also turned in an exceptional performance, +29.5%. The remaining sectors finished up in a range from +1.4% to +21.7%. 7 of 8 segments finished with double-digit gains, with only the Merchant names struggling. It was a wild ride for Merchant segment shareholders in 2016, which at one point were among the best performing, only to give it all back. The broad market benchmarks all finished in positive territory, with the DJIA up 13.4%, the S&P Composite up 9.5% and the NASDAQ higher by 7.5%. The utility benchmarks had a great year, finishing up in a range from +12.2% to +14.2%.




| Largest Gains Last Week | | | Largest Losses Last Week | | |
|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **Gain** | **Company Name** | **Ticker** | **Loss** |
| **Gas Distribution (LDC)** | | | **Gas Distribution (LDC)** | | |
| Southwest Gas Corp. | SWX | 0.8% | **New Jersey Resources Corp.** | **NJR** | **-2.5%** |
| **Gas (Non-E&P)** | | | **Gas (Non-E&P)** | | |
| **UGI Corp.** | **UGI** | **0.6%** | ONEOK, Inc. | OKE | -2.2% |
| **Gas (With E&P)** | | | **Gas (With E&P)** | | |
| Black Hills Corp. | BKH | -0.5% | Energen Corp. | EGN | -3.2% |
| **Regulated Electric Only** | | | **Regulated Electric Only** | | |
| PNM Resources, Inc. | PNM | 0.7% | Hawaiian Electric Industries, Inc. | HE | -1.6% |
| **Regulated Electric/Gas** | | | **Regulated Electric/Gas** | | |
| Avista Corp. | AVA | 0.7% | SCANA Corp. | SCG | -1.9% |
| **Electric/Merchant** | | | **Electric/Merchant** | | |
| Entergy Corp. | ETR | 0.8% | FirstEnergy Corp. | FE | -1.0% |
| **Merchant** | | | **Merchant** | | |
| Dynegy, Inc. | DYN | 1.8% | Calpine Corp. | CPN | -1.8% |

*Source:Factset*

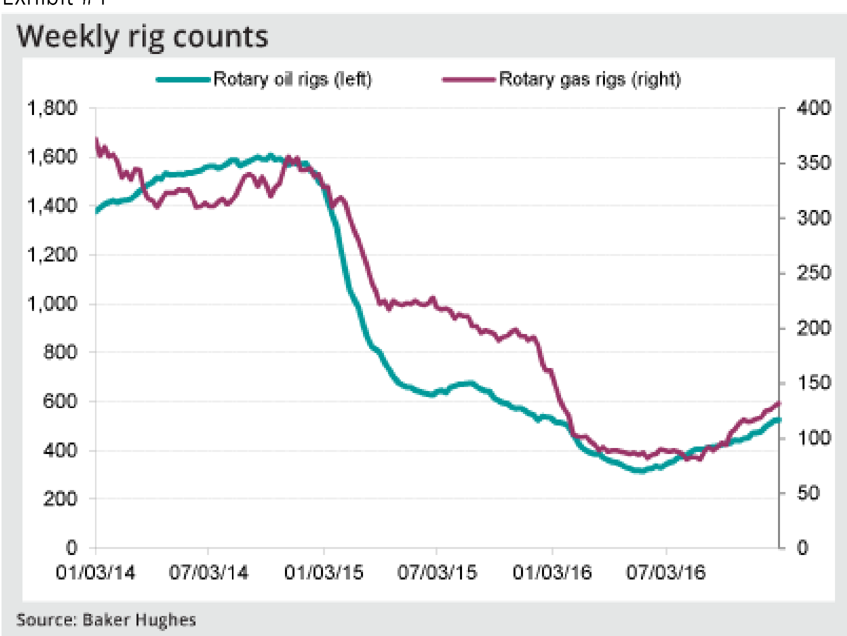
## WEEKLY COMMENTARY

For a holiday-shortened week, there were plenty of developments impacting our coverage universe. Among the water utilities, American Water Works announced it has closed its Scranton, Pennsylvania wastewater acquisition (purchase price, $195MM), and a story reported in the Pottstown Mercury highlighted that Aqua America would be purchasing the Limerick, Pennsylvania wastewater system for $75MM (expected to close in the fall of 2017) http://www.pottsmerc.com/general-news/20161228/2016-year-in-review-limerick-township-sells-sewer-system-for-751m. The Aqua/Limerick deal had been originally announced in the same publication on 11/16/16, which we didn't see at that time, and we found no press release from Aqua highlighting the transaction, which typically doesn't report acquisitions until they close.

Eversource Energy was also in the news last week, receiving approval from the Massachusetts DPU approving the construction of 62MW of solar facilities in 2016. The company expects to invest approximately $178.9MM.

The Federal Energy Regulatory Commission (FERC) was busy last week with positive commentary on two midstream projects, the Atlantic Coast and Atlantic Sunrise. FERC also authorized UGI Corp to put its Sunbury pipeline into service in Pennsylvania, which will provide service to Panda Power's Hummel Station in 2017. These important projects will help move Appalachian/Marcellus Shale gas to end markets where additional natural gas supply is needed, and should lead to improved drilling activity in the regions once brought online. The natural gas rig count has been steadily improving (Ex #1), which has incremental benefits across our utility and industrial coverage universe.

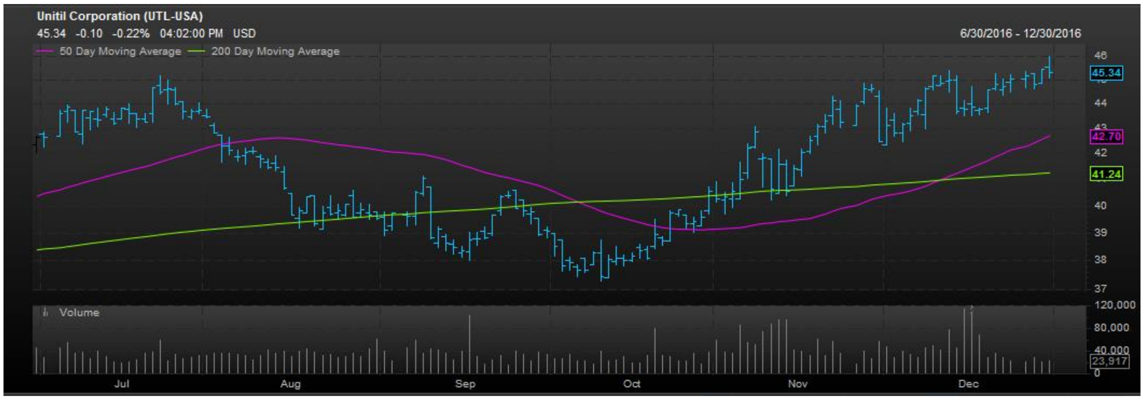
Exhibit #1




*Source: Baker Hughes*

Our chart of the week is Unitil (UTL). The chart is among the strongest in our coverage universe. We note the shares are trading above both the 50 and 200 day moving averages.

**Chart of the Week – Unitil (UTL)**




*Source: FactSet*

**TOP IDEAS**

**Electric/Gas Utilities**

**ES:** An attractive investment profile, strong track record of execution and favorable valuation all factor into our positive investment thesis. We consider ES a "best in class" combination electric and gas utility.

**Industrials**

**AME:** Recent acquisitions, ongoing cost-out activities and free cash flow capability to support future growth, coupled with an attractive valuation are the primary determinants for AME's position as our #1 pick in our industrial coverage universe.

**MLPs/Yieldcos**

**CAFD:** We consider CAFD "best-in-class" among the yieldcos in the sector. It's strong, multiple sponsors (First Solar, SunPower) provide superior opportunities for portfolio and distribution growth. Valuation relative to other yield-related investments remains extremely attractive.

**Water Utilities**

**WTR**: Within the U.S. water utility group, Aqua America is our top pick. We see several future catalysts, including M&A transactions across both its regulated and non-regulated business platforms, and a significant rate case filing in Pennsylvania (approximately two-thirds of total rate base) in late 2017 or 2018. We consider the company's asset base to be very high quality, and we assign the shares the highest price-to-earnings multiple within its sector. Valuation remains favorable, with an attractive yield.

## COMPANY SNAPSHOTS

**Avangrid** | **AGR** | **$37.88**
**Neutral/$43 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com
**Katherine Burke, 646.840.3207** | kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $11,705 | 2016E | $0.69 | $0.33 | $0.35 | $0.63 | $2.00 | 18.9x |
| Avg. Daily Vol (MM): | | 456,846 | 2017E | $0.75 | $0.41 | $0.44 | $0.63 | $2.24 | 16.9x |
| 52-wk Range: | $46.74 | $35.42 | 2018E | $0.83 | $0.54 | $0.48 | $0.64 | $2.49 | 15.2x |

Avangrid is a diversified energy and utility company. The company operates regualted utilities, electricity generation, and natural gas storage through three primary lines of business.

**Ametek** | **AME** | **$48.60**
**Buy/$56 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com
**Katherine Burke, 646.840.3207** | kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $11,248 | 2016E | $0.57 | $0.59 | $0.56 | $0.58 | $2.30 | 21.1x |
| Avg. Daily Vol (MM): | | 2,213,724 | 2017E | $0.60 | $0.62 | $0.58 | $0.62 | $2.42 | 20.1x |
| 52-wk Range: | $54.25 | $42.82 | 2018E | $0.65 | $0.69 | $0.64 | $0.67 | $2.65 | 18.3x |

Ametek is a global, diversified manufacturer of high technology products serving a diverse set of niche markets and applications. It reports results though two segments, Electronic Instruments Group (EIG) and Electromechanical Group (EMG).

**AmeriGas Partners, LP** | **APU** | **$47.92**
**Buy/$58 Fair Value**
**Michael Gaugler, 212.702.6539** | mgaugler@janney.com
**Katherine Burke, 212.702.6538** | kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $4,453 | 2016E | $0.77 | $1.74 | ($0.46) | ($1.04) | $1.73 | 27.7x |
| Avg. Daily Vol: | | 247,659 | 2017E | $0.89 | $1.96 | ($0.27) | $0.46 | $3.05 | 15.7x |
| 52-wk Range: | $50.11 | $32.36 | 2018E | $1.00 | $1.71 | ($0.16) | $0.60 | $3.15 | 15.2x |

AmeriGas Partners, L.P. is the largest retail marketer of propane in the United States, serving approximately 2 million customers from nearly 2000 distribution locations in all 50 states. UGI Corporation owns 26% of AmeriGas Partners, L.P.

**American Water Works Co.** | **AWK** | **$72.36**
**Buy/$80 Fair Value**
**Michael Gaugler, 215.665.1359** | mgaugler@janney.com
**Katherine Burke, 646.840.3207** | kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $12,880 | 2016E | $0.46 | $0.77 | $1.05 | $0.55 | $2.83 | 25.6x |
| Avg. Daily Vol: | | 994,145 | 2017E | $0.51 | $0.80 | $1.07 | $0.65 | $3.04 | 23.8x |
| 52-wk Range: | $85.24 | $58.90 | 2018E | $0.51 | $0.82 | $1.13 | $0.76 | $3.22 | 22.5x |

American Water Works Co. provides water and wastewater services to residential, commercial, and industrial customers in the U.S. and Canada, servicing 20 states of the U.S. and Ontario, Canada. It also enters into public/private partnerships, including operation and maintenance contracts, design, build, and operate contracts for the provision of services to water and wastewater facilities.

*Source: Company data Janney Montgomery Scott, LLC estimates*

**American States Water Co.** **AWR** **$45.56**
**Neutral/$39 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,666 | 2016E | $0.28 | $0.45 | $0.59 | $0.32 | $1.64 | 27.8x |
| Avg. Daily Vol: | | 146,279 | 2017E | $0.34 | $0.46 | $0.60 | $0.32 | $1.72 | 26.5x |
| 52-wk Range: | $47.24 | $37.28 | 2018E | $0.36 | $0.48 | $0.65 | $0.34 | $1.83 | 24.9x |

American States Water Co. pumps, purchases, distributes and sells water and electricity primarily to residential and commercial customers. Approximately 90% of its business is conducted in the State of California.

**8point3 Energy Partners, LLC** **CAFD** **$12.98**
**Buy/$22.50 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $364 | 2016E | $0.27 | $0.50 | $0.38 | ($0.02) | $1.12 | 11.6x |
| Avg. Daily Vol: | | 303,472 | 2017E | $0.31 | $0.58 | $0.38 | $0.08 | $1.35 | 9.6x |
| 52-wk Range: | $17.34 | $12.04 | 2018E | $0.36 | $0.56 | $0.63 | ($0.01) | $1.54 | 8.4x |

8point3 Energy Partners LP is a yieldco joint venture formed by two sponsors, SunPower and First Solar, to own, operate, and acquire solar energy generation projects. The primary objective of 8point3 Energy Partners is to generate predictable cash distributions that grow at a reasonable rate through acquiring high-quality solar assets developed by its sponsors. These assets are intended to generate long-term contracted cash flows and serve utility, commercial, and industrial and residential customers in the U.S. and other select markets, primarily within the countries that compromise the Organization for Economic Co-operation and Development (OECD).

**Calgon Carbon Corporation** **CCC** **$17.00**
**Buy/$19 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $861 | 2016E | $0.14 | $0.19 | $0.14 | $0.18 | $0.64 | 26.6x |
| Avg. Daily Vol: | | 271,841 | 2017E | $0.21 | $0.22 | $0.24 | $0.23 | $0.90 | 18.9x |
| 52-wk Range: | $18.80 | $12.70 | 2018E | $0.23 | $0.25 | $0.26 | $0.26 | $1.00 | 17.0x |

Calgon Carbon provides services and solutions for purifying water & air, food, beverage and industrial process streams. It operates three business segments: Activated Carbon & Services, Equipment and Consumer. The Activated Carbon and Services segment manufactures granular activated carbon (GAC), which is used to remove inorganic compounds from water, air, liquids and gases, and powdered activated carbon (PAC), used for mercury removal from coal-fired electric powerplant emissions (MATS compliance). The Equipment segment designs and fabricates systems that provide solutions to water and air process problems. The Consumer segment manufactures and sells carbon cloth for a variety of applications including medical and military.

**Chesapeake Utilities** **CPK** **$66.95**
**Buy/$73 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,091 | 2016E | $1.33 | $0.52 | $0.29 | $0.65 | $2.79 | 24.0x |
| Avg. Daily Vol: | | 49,989 | 2017E | $1.56 | $0.73 | $0.32 | $0.80 | $3.41 | 19.6x |
| 52-wk Range: | $70.00 | $52.25 | 2018E | $1.72 | $0.79 | $0.40 | $0.93 | $3.83 | 17.5x |

CPK's regulated energy business delivers natural gas to customers located in central and southern Delaware, Maryland's Eastern Shore, and Florida and electricity to customers in northeast and northwest Florida. CPK's regulated energy business also offers natural gas transmission service primarily through a 400+-mile interstate pipeline from various points in Pennsylvania and northern Delaware to natural gas distribution affiliates in Delaware and Maryland as well as to other utility and industrial customers in Pennsylvania, Delaware and the Eastern Shore of Maryland. CPK's unregulated energy business includes natural gas marketing, propane distribution and propane wholesale marketing operations. The natural gas marketing operation sells natural gas supplies directly to commercial and industrial customers in Florida, Delaware and Maryland. CPK distributes propane to customers in Delaware, the Eastern Shore of Maryland and Virginia, southeastern Pennsylvania and Florida. The propane wholesale marketing operation markets propane to wholesale customers including large independent oil and petrochemical companies, resellers and propane distribution companies in the southeastern United States.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Consolidated Water Co., Ltd.** | | | **CWCO** | **$10.85** | | | | | | |
| **Buy/$15 Fair Value** | | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | | |
| **Katherine Burke, 646.840.3207** | | | kburke@janney.com | | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** | |
| Market Cap (MM): | | $161 | 2016E | $0.14 | $0.15 | $0.18 | $0.12 | $0.57 | 19.0x | |
| Avg. Daily Vol: | | 100,396 | 2017E | $0.18 | $0.19 | $0.16 | $0.14 | $0.67 | 16.2x | |
| 52-wk Range: | $14.69 | $9.80 | 2018E | $0.19 | $0.19 | $0.18 | $0.15 | $0.70 | 15.5x | |

Consolidated Water processes and supplies water to public utilities, commercial & tourist properties, residential properties and government facilities. It uses reverse osmosis technology to produce freshwater from seawater. The Retail water segment produces and supplies water to end users, including residential, commercial and government customers in the Cayman Islands and the Bahamas. The Bulk water segment produces and supplies water to government owned distribution systems in the Cayman Islands, Belize, the British Virgin Islands and The Bahamas. the Services segment provides engineering and management services for desalination projects.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **California Water Service Group** | | | **CWT** | **$33.90** | | | | | |
| **Neutral/$32 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| **Katherine Burke, 646.840.3207** | | | kburke@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $1,626 | 2016E | ($0.02) | $0.24 | $0.48 | $0.18 | $0.88 | 38.5x |
| Avg. Daily Vol: | | 283,097 | 2017E | $0.08 | $0.34 | $0.72 | $0.24 | $1.38 | 24.6x |
| 52-wk Range: | $36.85 | $22.48 | 2018E | $0.08 | $0.36 | $0.75 | $0.26 | $1.45 | 23.4x |

California Water Services Group provides water supply and related services through its subsidiaries. Its services include the production, purchase, storage, treatment, testing, distribution and sale of water for domestic, industrial, [public and irrigation uses. The company has operations in the states of California, Hawaii, New Mexico and Washington.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Eversource Energy** | | | **ES** | **$55.23** | | | | | |
| **Buy/$67 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| **Katherine Burke, 646.840.3207** | | | kburke@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $17,519 | 2016E | $0.77 | $0.64 | $0.83 | $0.73 | $2.97 | 18.6x |
| Avg. Daily Vol: | | 1,502,750 | 2017E | $0.83 | $0.74 | $0.91 | $0.75 | $3.23 | 17.1x |
| 52-wk Range: | $60.44 | $50.01 | 2018E | $0.87 | $0.76 | $0.97 | $0.76 | $3.36 | 16.4x |

Eversource Energy is a diversified energy holding company that primarily comprises electric transmission, electric and gas distribution assets in the States of New Hampshire, Connecticut and Massachusetts.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **IDEX Corp.** | | | **IEX** | **$90.06** | | | | | |
| **Buy/$96 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| **Katherine Burke, 212.702.6538** | | | kburke@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $6,866 | 2016E | $0.89 | $0.99 | $0.92 | $0.92 | $3.73 | 24.1x |
| Avg. Daily Vol: | | 283,807 | 2017E | $0.99 | $1.04 | $1.03 | $1.07 | $4.12 | 21.9x |
| 52-wk Range: | $95.76 | $67.20 | 2018E | $1.12 | $1.16 | $1.13 | $1.16 | $4.57 | 19.7x |

IDEX manufactures pump products and engineered equipment. It operates and reports through three segments: Fluid & Metering, Health & Science and Fire Safety/Diversified Products. The Fluid & Metering segment designs, produces and distributes positive displacement pumps and flow meters, compressors, injectors and other fluid handling equipment. The Health & Science segment designs, produces and distributes a wide range of precision fluidics solutions for a wide range of applications. The FireSafety/Diversified Products segment produces firefighting pumps and controls, rescue tools and lifting bags.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

| Mueller Water Products, Inc. | | | MWA | $13.31 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Buy/$14 Fair Value | | | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | | mgaugler@janney.com | | | | | | | |
| Katherine Burke, 646.840.3207 | | | kburke@janney.com | | | | | | | |
| | | | EPS | Dec | Mar | Jun | Sep | FY | P/E | |
| Market Cap (MM): | | $2,157 | 2016 | $0.04 | $0.10 | $0.18 | $0.17 | $0.48 | 27.7x | |
| Avg. Daily Vol: | | 921,553 | 2017E | $0.08 | $0.14 | $0.20 | $0.18 | $0.61 | 21.8x | |
| 52-wk Range: | $14.20 | $7.52 | 2018E | $0.09 | $0.16 | $0.24 | $0.22 | $0.71 | 18.7x | |

Mueller Water Products manufactures a broad range of water infrastructure and flow control products for use in water distribution networks, water and wastewater treatment facilities, gas distribution systems and fire protection piping systems. The company reports through through 3 segments: Mueller Co, Mueller Technologies and Anvil. The Mueller Co. segment primarily designs and manufactures fire hydrants and valves; the Mueller Technologies segment contains the metering, metering systems and leak detection operations. The Anvil segment manufactures malleable and cast iron pipefittings, ductile iron couplings and fittings.

| New Jersey Resources | | | NJR | $35.50 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Neutral/$36 Fair Value | | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | | mgaugler@janney.com | | | | | | |
| Katherine Burke, 646.840.3207 | | | kburke@janney.com | | | | | | |
| | | | Adj EPS | Dec | Mar | Jun | Sep | FY | P/E |
| Market Cap (MM): | | $3,059 | 2016 | $0.58 | $0.91 | $0.13 | ($0.02) | $1.61 | 22.0x |
| Avg. Daily Vol: | | 495,448 | 2017E | $0.57 | $0.83 | $0.25 | $0.07 | $1.71 | 20.8x |
| 52-wk Range: | $38.92 | $30.46 | 2018E | $0.68 | $0.92 | $0.20 | $0.16 | $1.96 | 18.1x |

New Jersey Resources is an energy services holding company providing retail and wholesale energy services to customers in states from the Gulf Coast and Mid-Continent regions to the Appalachian and Northeast regions, the West Coast and Canada. The natural gas segment provides natural gas service to customers in central and northern New Jersey. Its energy services segment maintains and transacts around a portfolio of physical assets consisting of natural gas storage and transportation contracts. The company's clean energy ventures segment installs, operates, and maintains solar equipment on residential and commercial properties. Its midstream assets segment invests in natural gas midstream assets, such as natural gas transportation and storage facilities.

| Sabesp | | | SBSP3-BR | $28.79 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Neutral/R$35 Fair Value | | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | | mgaugler@janney.com | | | | | | |
| Katherine Burke, 646.840.3207 | | | kburke@janney.com | | | | | | |
| | | | EPS ($R) | Mar | Jun | Sep | Dec | FY | P/E |
| Market Cap (MM): | | $19,678 | 2016E | $0.88 | $1.17 | $0.84 | $0.72 | $3.64 | 7.9x |
| Avg. Daily Vol (MM): | | 1,530,283 | 2017E | $0.81 | $0.80 | $0.89 | $1.02 | $3.52 | 8.2x |
| 52-wk Range: | $34.00 | $16.27 | 2018E | $0.96 | $0.86 | $0.93 | $1.09 | $3.84 | 7.5x |

Companhia de Saneamento Basico do Estado de Sao Paulo (aka SABESP) collects and distributes water and provides sewage treatment services. It operates in 367 counties in the State of Sao Paulo.

| South Jersey Industries | | | SJI | $33.69 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Neutral/$33 Fair Value | | | | | | | | | |
| Michael Gaugler, 215.665.1359 | | | mgaugler@janney.com | | | | | | |
| Katherine Burke, 646.840.3207 | | | kburke@janney.com | | | | | | |
| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
| Market Cap (MM): | | $2,678 | 2016E | $0.80 | $0.12 | $0.05 | $0.37 | $1.33 | 25.3x |
| Avg. Daily Vol (MM): | | 477,000 | 2017E | $0.90 | $0.01 | $0.14 | $0.43 | $1.48 | 22.8x |
| 52-wk Range: | $34.85 | $22.06 | 2018E | $1.00 | $0.02 | $0.24 | $0.46 | $1.71 | 19.7x |

South Jersey Industries, Inc. is an energy services holding company that provides energy-related products and services through its subsidiaries, South Jersey Gas Company (SJG), South Jersey Resources Group (SJRG), Marina Energy (Marina), South Jersey Energy Company, and South Jersey Energy Service Plus. SJG distributes natural gas in the 7 southernmost counties of NEw Jersey. SJRG markets wholesale nautral gas storage, commodity and transportation in the mid-Atlantic, Appalachian and southern states. Marina develops and operates onsitge energy-related projects. SJE acquires and markets natural gas and electricity to retail end users and provides total energy management services to commercial and industrial customers. SJESP provides residential and light commercial service and installation of heating, ventilation, and air conditioning (HVAC) systems, plumbing services and appliance repair and service/maintenance contracts.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

**SJW Corp.** **SJW** **$55.98**
**Neutral/$49 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $1,145 | 2016E | $0.16 | $0.82 | $0.92 | $0.65 | $2.27 | 24.7x |
| Avg. Daily Vol (MM): | | 85,086 | 2017E | $0.22 | $0.67 | $0.73 | $0.45 | $2.07 | 27.0x |
| 52-wk Range: | $56.93 | $28.58 | 2018E | $0.26 | $0.69 | $0.76 | $0.50 | $2.21 | 25.3x |

SJW is not the typical water utility. Although the bulk of the company's revenues and earnings are derived from regulated water utility operations, other operations, including a real estate segment, add a non-regulated component to revenues. The company continues to look for external growth opportunities, and with its recent acquistion in Texas, has increased its geographic footprint.

**UGI Corp** **UGI** **$46.08**
**Buy/$47 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $7,971 | 2017E | $0.73 | $1.40 | $0.10 | $0.16 | $2.38 | 19.4x |
| Avg. Daily Vol (MM): | | 689,266 | 2018E | $0.79 | $1.45 | $0.15 | $0.09 | $2.48 | 18.6x |
| 52-wk Range: | $48.13 | $31.59 | 2019E | $0.92 | $1.58 | $0.17 | $0.12 | $2.78 | 16.6x |

UGI Corp. is a distributor and marketer of energy products and services including natural gas, propane, butane and electricity. The company reports results in the following segments: AmeriGas Propane, Gas Utility, Midstream & Marketing, and UGI International.

**Unitil Corp** **UTL** **$45.34**
**Neutral/$44 Fair Value**
**Michael Gaugler, 215.665.1359** mgaugler@janney.com
**Katherine Burke, 646.840.3207** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $637 | 2016E | $0.78 | $0.18 | $0.25 | $0.72 | $1.93 | 23.5x |
| Avg. Daily Vol (MM): | | 47,448 | 2017E | $0.86 | $0.21 | $0.21 | $0.79 | $2.07 | 21.9x |
| 52-wk Range: | $46.00 | $34.70 | 2018E | $0.91 | $0.20 | $0.29 | $0.80 | $2.20 | 20.6x |

UTL's regulated operating utilities serve approximately 109,900 electric and 70,800 gas customers in the states of Maine, New Hampshire and Massachusetts under various subsidiaries. The company also has non-regulated business operations (Usource) that provides energy brokering and management services.

**Watts Water Technologies** **WTS** **$65.20**
**Neutral/$64 Fair Value**
**Michael Gaugler, 212.702.6539** mgaugler@janney.com
**Katherine Burke, 212.702.6538** kburke@janney.com

| | | | EPS | Mar | Jun | Sep | Dec | FY | P/E |
|---|---|---|---|---|---|---|---|---|---|
| Market Cap (MM): | | $2,232 | 2016E | $0.57 | $0.75 | $0.63 | $0.64 | $2.60 | 25.1x |
| Avg. Daily Vol (MM): | | 147,961 | 2017E | $0.71 | $0.81 | $0.75 | $0.76 | $3.04 | 21.4x |
| 52-wk Range: | $71.05 | $44.51 | 2018E | $0.78 | $0.90 | $0.82 | $0.82 | $3.32 | 19.6x |

Watts Water Technologies is a global manufacturer of products and systems focused on the control, conservation and quality of water and the comfort and safety of people using it. Its strategy is to be the preferred supplier of differentiated products and systems that manage and conserve the flow of fluids and energy into, through and out of buildings in the residential and commercial markets of the Americas, EMEA, and Asia Pacific.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

 RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **WGL Holdings, Inc.** | | | **WGL** | **$76.28** | | | | | |
| **Neutral/$71 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| **Katherine Burke, 646.840.3207** | | | kburke@janney.com | | | | | | |
| | | | **Adj EPS** | **Dec** | **Mar** | **Jun** | **Sep** | **FY** | **P/E** |
| Market Cap (MM): | | $3,906 | 2016 | $1.18 | $1.78 | $0.33 | ($0.01) | $3.27 | 23.3x |
| Avg. Daily Vol (MM): | | 482,692 | 2017E | $1.34 | $1.97 | $0.12 | ($0.10) | $3.32 | 23.0x |
| 52-wk Range: | $79.97 | $58.66 | 2018E | $1.37 | $2.06 | $0.19 | $0.09 | $3.71 | 20.6x |

WGL Holdings is comprised of both regulated and non-regulated energy-related businesses. Its regulated public utility, Washington Gas, provides natural gas service to over one million customers in the Washington, D.C. metro region, Maryland and Virginia. Its unregulated operations provide energy-related services to residential and commercial customers.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Aqua America, Inc.** | | | **WTR** | **$30.04** | | | | | |
| **Buy/$39 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 215.665.1359** | | | mgaugler@janney.com | | | | | | |
| **Katherine Burke, 646.840.3207** | | | kburke@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $5,328 | 2016E | $0.29 | $0.33 | $0.41 | $0.29 | $1.33 | 22.6x |
| Avg. Daily Vol (MM): | | 705,757 | 2017E | $0.29 | $0.33 | $0.45 | $0.34 | $1.42 | 21.2x |
| 52-wk Range: | $35.83 | $28.03 | 2018E | $0.32 | $0.35 | $0.48 | $0.35 | $1.51 | 19.9x |

Aqua America provides water and wastewater services to residential, commercial and industrial customers. The company serves approximately 3 million customers in Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana and North Carolina. The company also has a non-regulated business that are complementary to its core water services.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Xylem, Inc.** | | | **XYL** | **$49.52** | | | | | |
| **Buy/$52 Fair Value** | | | | | | | | | |
| **Michael Gaugler, 212.702.6539** | | | mgaugler@janney.com | | | | | | |
| **Katherine Burke, 212.702.6538** | | | kburke@janney.com | | | | | | |
| | | | **EPS** | **Mar** | **Jun** | **Sep** | **Dec** | **FY** | **P/E** |
| Market Cap (MM): | | $8,884 | 2016E | $0.35 | $0.48 | $0.54 | $0.65 | $2.02 | 24.5x |
| Avg. Daily Vol (MM): | | 1,236,199 | 2017E | $0.40 | $0.54 | $0.55 | $0.82 | $2.29 | 21.6x |
| 52-wk Range: | $54.99 | $31.67 | 2018E | $0.46 | $0.62 | $0.61 | $0.94 | $2.62 | 18.9x |

Xylem is a global leader in water application solutions that focuses on the technology-intensive equipment and services end market (a sector of the $500 billion global water market), and should see increasing long-term demand from a favorable end market environment for investment in water due to population growth, economic development, and increasing (and tighter) water quality regulations. The company has exposure to many different end markets, including industrial, public utility, commercial, residential, and agriculture.

*Source: Company data and Janney Montgomery Scott, LLC estimates*

# Industry Valuation

## Water Utilities

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

### Rating Data

| | Symbol | Price 12/30/16 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| **SABESP** | **SBSP3-BR** | **R$ 28.79** | **Neutral** | **11** | **35.00** | **22%** |
| **AMERICAN WATER WORKS** | **AWK** | **$72.36** | **Buy** | **15** | **80.00** | **11%** |
| **AQUA AMERICA** | **WTR** | **$30.04** | **Buy** | **10** | **39.00** | **30%** |
| **CALIFORNIA WATER** | **CWT** | **$33.90** | **Neutral** | **7** | **32.00** | **-6%** |
| **AMERICAN STATES WATER** | **AWR** | **$45.56** | **Neutral** | **4** | **39.00** | **-14%** |
| **SJW** | **SJW** | **$55.98** | **Neutral** | **1** | **49.00** | **-12%** |
| MIDDLESEX WATER | MSEX | $42.94 | NR | 0 | | |
| CONNECTICUT WATER | CTWS | $55.85 | NR | 2 | | |
| YORK WATER | YORW | $38.20 | NR | 1 | | |
| ARTESIAN RESOURCES | ARTNA | $31.94 | NR | 0 | | |
| PURE CYCLE | PCYO | $5.50 | NR | 1 | | |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SABESP** | **N/A** | **19,678** | **34** | **16** | **684** | **340** | **50%** | **11%** | **--** | **0.8** | **30,052** |
| **AMERICAN WATER WORKS** | **776** | **12,880** | **85** | **59** | **178** | **178** | **0%** | **83%** | **5** | **0.5** | **19,668** |
| **AQUA AMERICA** | **920** | **5,328** | **36** | **28** | **177** | **177** | **0%** | **51%** | **8** | **0.6** | **7,196** |
| **CALIFORNIA WATER** | **142** | **1,626** | **37** | **22** | **48** | **47** | **1%** | **73%** | **6** | **0.7** | **2,222** |
| **AMERICAN STATES WATER** | **59** | **1,666** | **47** | **37** | **37** | **36** | **1%** | **66%** | **7** | **0.7** | **2,070** |
| **SJW** | **40** | **1,145** | **57** | **29** | **20** | **14** | **29%** | **48%** | **2** | **0.8** | **1,575** |
| MIDDLESEX WATER | 56 | 699 | 44 | 25 | 16 | **16** | **4%** | 49% | **4** | 0.7 | 858 |
| CONNECTICUT WATER | 13 | 615 | 58 | 37 | 11 | **11** | **3%** | 48% | 6 | 0.6 | 852 |
| YORK WATER | 13 | 491 | 40 | 24 | 13 | **13** | **1%** | 32% | 7 | 0.7 | 570 |
| ARTESIAN RESOURCES | 15 | 291 | 35 | 25 | 8 | **8** | **4%** | 42% | 3 | 0.6 | 402 |
| PURE CYCLE | 94 | 131 | 6 | 4 | 24 | **23** | **4%** | 65% | 3 | 0.8 | 103 |
| **MEDIAN** | **58** | **1,145** | | | | | **N/A** | **49%** | **6** | **0.7** | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | P/EPS 2015 X | P/EPS 2016 X | P/EPS 2017 X |
|---|---|---|---|---|---|---|---|
| **SABESP** | **1.3** | **9.3** | **6.8** | **5.5** | **36.7** | **7.9** | **8.2** |
| **AMERICAN WATER WORKS** | **2.5** | **13.0** | **12.3** | **11.3** | **27.4** | **25.4** | **23.8** |
| **AQUA AMERICA** | **2.9** | **16.0** | **15.4** | **14.6** | **26.4** | **22.7** | **21.5** |
| **CALIFORNIA WATER** | **2.5** | **14.0** | **13.4** | **10.7** | **36.1** | **36.0** | **25.8** |
| **AMERICAN STATES WATER** | **3.4** | **12.8** | **NA** | **NA** | **28.5** | **28.0** | **26.6** |
| **SJW** | **2.8** | **12.9** | **NA** | **NA** | **30.3** | **24.7** | **27.0** |
| MIDDLESEX WATER | 3.2 | 17.5 | NA | NA | 35.2 | NA | NA |
| CONNECTICUT WATER | 2.6 | 22.0 | 19.1 | 17.1 | 27.4 | 25.6 | 25.0 |
| YORK WATER | 4.3 | 19.8 | 19.3 | 18.3 | 39.4 | 40.2 | 37.1 |
| ARTESIAN RESOURCES | 2.1 | 11.7 | 11.3 | 10.8 | 25.3 | NA | NA |
| PURE CYCLE | 1.9 | **-94.5** | **NA** | **NA** | **-5.7** | **-99.5** | **-68.8** |
| **MEDIAN** | **2.6** | **13.0** | **13.4** | **11.3** | **28.5** | **25.4** | **25.0** |

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| **SABESP** | **51%** | **0%** | **0%** | **43%** | **5%** | **BB+** |
| **AMERICAN WATER WORKS** | **44%** | **0%** | **0%** | **51%** | **6%** | **A-** |
| **AQUA AMERICA** | **49%** | **0%** | **0%** | **50%** | **1%** | **A+** |
| **CALIFORNIA WATER** | **54%** | **0%** | **0%** | **43%** | **3%** | **A+** |
| **AMERICAN STATES WATER** | **57%** | **0%** | **0%** | **40%** | **3%** | **A+** |
| **SJW** | **48%** | **0%** | **0%** | **47%** | **5%** | |
| MIDDLESEX WATER | 53% | 0% | 0% | 42% | 4% | A- |
| CONNECTICUT WATER | 56% | 0% | 0% | 44% | 0% | A |
| YORK WATER | 53% | 0% | 0% | 42% | 5% | A- |
| ARTESIAN RESOURCES | 100% | 0% | 0% | 0% | 0% | |
| PURE CYCLE | 100% | 0% | 0% | 0% | 0% | |
| **MEDIAN** | **51%** | **0%** | **0%** | **43%** | **4%** | |

### Liquidity and Profitability Ratios

| | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2014 ROA % | 2014 ROE % | FCF 2014 Yield % | EPS 2014 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| **SABESP** | **0.00** | **0.0%** | **N/A** | **0.8** | **0.8** | **3** | **3%** | **7%** | **21%** | **8%** |
| **AMERICAN WATER WORKS** | **1.50** | **2.1%** | **56** | **0.4** | **0.4** | **5** | **3%** | **9%** | **1%** | **4%** |
| **AQUA AMERICA** | **0.77** | **2.5%** | **60** | **0.6** | **0.5** | **6** | **4%** | **13%** | **1%** | **5%** |
| **CALIFORNIA WATER** | **0.69** | **2.0%** | **78** | **0.7** | **0.7** | **5** | **3%** | **9%** | **0%** | **5%** |
| **AMERICAN STATES WATER** | **0.97** | **2.1%** | **55** | **0.8** | **0.7** | **7** | **5%** | **12%** | **6%** | **4%** |
| **SJW** | **0.81** | **1.4%** | **30** | **0.9** | **0.9** | **7** | **4%** | **15%** | **-6%** | **8%** |
| MIDDLESEX WATER | 0.85 | 2.0% | 54 | 0.7 | 0.6 | 10 | 3% | 9% | 3% | 5% |
| CONNECTICUT WATER | 1.13 | 2.0% | 50 | 0.9 | 0.8 | 6 | 3% | 10% | -4% | 5% |
| YORK WATER | 0.64 | 1.7% | 65 | 2.4 | 2.3 | 7 | 4% | 11% | 2% | 4% |
| ARTESIAN RESOURCES | 0.91 | 2.9% | 68 | 0.8 | 0.7 | 5 | 2% | 8% | -3% | 5% |
| PURE CYCLE | 0.00 | 0.0% | 0 | 60.3 | 60.3 | N/A | 0% | 0% | -2% | 0% |
| **MEDIAN** | **$0.81** | **2.0%** | **56** | **0.8** | **0.7** | 6 | **3%** | **9%** | **1%** | **5%** |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2015 $ | EBITDA 2016 $ | EBITDA 2017 $ | EPS 2015 $ | EPS 2016 $ | EPS 2017 $ |
|---|---|---|---|---|---|---|---|
| **SABESP** | **22.71** | **3230** | **4434** | **5470** | **0.78** | **3.65** | **3.52** |
| **AMERICAN WATER WORKS** | **29.43** | **1512** | **1601** | **1736** | **2.64** | **2.84** | **3.05** |
| **AQUA AMERICA** | **10.33** | **450** | **468** | **493** | **1.14** | **1.32** | **1.39** |
| **CALIFORNIA WATER** | **13.59** | **159** | **166** | **208** | **0.94** | **0.94** | **1.31** |
| **AMERICAN STATES WATER** | **13.42** | **161** | - | - | **1.60** | **1.63** | **1.71** |
| **SJW** | **20.12** | **122** | - | - | **1.85** | **2.27** | **2.07** |
| MIDDLESEX WATER | 13.40 | 49 | - | - | 1.22 | - | N/A |
| CONNECTICUT WATER | 21.14 | 39 | **45** | **50** | 2.04 | 2.18 | 2.24 |
| YORK WATER | 8.83 | 29 | **29** | **31** | 0.97 | 0.95 | 1.03 |
| ARTESIAN RESOURCES | 14.91 | 34 | **35** | **37** | 1.26 | - | N/A |
| PURE CYCLE | 2.90 | -1 | - | - | -0.96 | -0.06 | -0.08 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

## Rating Data

| Company | Symbol | Price 12/30/16 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| EMERSON ELECTRIC | EMR | $55.75 | NR | 25 | | |
| **XYLEM** | **XYL** | **$49.52** | **Buy** | **15** | **52.00** | **5%** |
| FLOWSERVE | FLS | $48.05 | NR | 18 | | |
| **AMETEK** | **AME** | **$48.60** | **Buy** | **17** | **56.00** | **15%** |
| ROPER INDUSTRIES | ROP | $183.08 | NR | 15 | | |
| PENTAIR | PNR | $56.07 | NR | 16 | | |
| **IDEX** | **IEX** | **$90.06** | **Buy** | **16** | **96.00** | **7%** |
| CRANE COMPANY | CR | $72.12 | NR | 12 | | |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$65.20** | **Neutral** | **9** | **64.00** | **-2%** |
| MUELLER INDUSTRIES | MLI | $39.96 | NR | 0 | | |
| **MUELLER WATER PRODUCTS** | **MWA** | **$13.31** | **Buy** | **10** | **14.00** | **5%** |
| FRANKLIN ELECTRIC | FELE | $38.90 | NR | 7 | | |
| CIRCOR INT'L | CIR | $64.88 | NR | 6 | | |
| BADGER METER | BMI | $36.95 | NR | 4 | | |
| NORTHWEST PIPE | NWPX | $17.22 | NR | 1 | | |
| 3M CORP | MMM | $178.57 | NR | 18 | | |
| CLARCOR INC | CLC | $82.47 | NR | 8 | | |
| LYDALL INC | LDL | $61.85 | NR | 3 | | |
| ENERGY RECOVERY | ERII | $10.35 | NR | 3 | | |
| DXP ENTERPRISES | DXPE | $34.74 | NR | 3 | | |
| **MEDIAN** | | | | | | |

## Trading & Market Data

| Company | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EMERSON ELECTRIC | 1,957 | 35,928 | 58 | 41 | 644 | 638 | 1% | 73% | 4 | 1.1 | 39,573 |
| **XYLEM** | **646** | **8,884** | **55** | **32** | **179** | **179** | **0%** | **93%** | **4** | **1.1** | **9,480** |
| FLOWSERVE | 497 | 6,268 | 53 | 34 | 130 | 130 | 0% | 100% | 8 | 1.3 | 7,630 |
| **AMETEK** | **1,046** | **11,248** | **54** | **43** | **231** | **227** | **2%** | **89%** | **3** | **1.1** | **13,019** |
| ROPER INDUSTRIES | 373 | 18,571 | 191 | 156 | 101 | 100 | 2% | 100% | 5 | 1.0 | 20,977 |
| PENTAIR | 887 | 10,190 | 67 | 42 | 182 | 181 | 1% | 90% | 3 | 1.3 | 14,535 |
| **IDEX** | **353** | **6,866** | **96** | **67** | **76** | **76** | **0%** | **100%** | **7** | **1.1** | **7,785** |
| CRANE COMPANY | 173 | 4,230 | 79 | 42 | 59 | 50 | 15% | 69% | 1 | 1.1 | 4,639 |
| **WATTS WATER TECHNOLOGIES** | **114** | **2,232** | **71** | **45** | **28** | **27** | **1%** | **104%** | **7** | **1.2** | **2,514** |
| MUELLER INDUSTRIES | 84 | 2,293 | 41 | 23 | 57 | 56 | 2% | 93% | 2 | 1.2 | 2,261 |
| **MUELLER WATER PRODUCTS** | **631** | **2,157** | **14** | **8** | **162** | **157** | **3%** | **93%** | **2** | **1.5** | **2,466** |
| FRANKLIN ELECTRIC | 144 | 1,801 | 45 | 24 | 46 | 38 | 18% | 81% | 6 | 1.3 | 1,945 |
| CIRCOR INT'L | 71 | 1,066 | 70 | 33 | 16 | 16 | 2% | 102% | 8 | 1.4 | 1,086 |
| BADGER METER | 108 | 1,076 | 39 | 26 | 29 | 28 | 4% | 80% | 6 | 1.1 | 1,113 |
| NORTHWEST PIPE | 106 | 165 | 19 | 7 | 10 | 9 | 4% | 76% | 6 | 1.2 | 155 |
| 3M CORP | 1,594 | 107,404 | 182 | 135 | 601 | 601 | 0% | 66% | 5 | 0.9 | 120,240 |
| CLARCOR INC | 319 | 4,005 | 83 | 44 | 49 | 48 | 1% | 92% | 1 | 1.1 | 4,244 |
| LYDALL INC | 84 | 1,061 | 65 | 25 | 17 | 16 | 4% | 91% | 2 | 1.4 | 1,078 |
| ENERGY RECOVERY | 843 | 542 | 17 | 5 | 52 | 32 | 39% | 29% | 6 | 1.6 | 443 |
| DXP ENTERPRISES | 171 | 602 | 39 | 13 | 17 | 16 | 9% | 69% | 3 | 1.5 | 853 |
| **MEDIAN** | **319** | **2,405** | | | | | **2%** | **91%** | **4** | **1.2** | |

## Valuation Statistics

| Company | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | P/EPS 2015 X | P/EPS 2016 X | P/EPS 2017 X |
|---|---|---|---|---|---|---|---|
| EMERSON ELECTRIC | 4.7 | 8.8 | 10.9 | 12.5 | 13.9 | 18.71 | 23.3 |
| **XYLEM** | **4.0** | **15.6** | **14.5** | **11.6** | **26.5** | **24.4** | **21.2** |
| FLOWSERVE | 3.7 | 10.1 | 13.2 | 12.8 | 24.0 | 22.3 | 21.9 |
| **AMETEK** | **3.3** | **11.9** | **13.2** | **12.7** | **19.8** | **21.1** | **19.9** |
| ROPER INDUSTRIES | 3.3 | 16.9 | 16.0 | 13.6 | 26.7 | 28.0 | 25.1 |
| PENTAIR | 2.3 | 13.1 | 15.4 | 14.9 | -146.9 | 18.6 | 16.3 |
| **IDEX** | **4.4** | **15.3** | **14.8** | **13.8** | **24.9** | **24.1** | **22.0** |
| CRANE COMPANY | 3.2 | 10.1 | 10.1 | 9.6 | 18.5 | 17.2 | 16.3 |
| **WATTS WATER TECHNOLOGIES** | **3.0** | **21.2** | **11.9** | **11.0** | **-20.1** | **24.5** | **21.8** |
| MUELLER INDUSTRIES | 2.6 | 14.0 | NA | NA | 25.9 | NA | NA |
| **MUELLER WATER PRODUCTS** | **5.1** | **13.0** | **12.5** | **10.8** | **70.1** | **27.2** | **22.1** |
| FRANKLIN ELECTRIC | 2.9 | 14.6 | 13.3 | 12.7 | 25.9 | 23.6 | 21.4 |
| CIRCOR INT'L | 2.6 | 14.2 | 19.0 | 12.4 | 111.9 | 33.9 | 27.7 |
| BADGER METER | 4.3 | 17.7 | 16.7 | 15.0 | 41.1 | 32.6 | 28.9 |
| NORTHWEST PIPE | 0.8 | -6.1 | -14.5 | 15.6 | -5.6 | -9.5 | -74.9 |
| 3M CORP | 8.9 | 14.5 | 13.8 | 13.4 | 23.6 | 21.9 | 20.7 |
| CLARCOR INC | 3.5 | 16.3 | 17.0 | 16.7 | 30.9 | 31.7 | 30.6 |
| LYDALL INC | 3.8 | 15.2 | 12.1 | 10.3 | 22.8 | 22.3 | 20.2 |
| ENERGY RECOVERY | 9.3 | -55.7 | NA | 8.7 | -47.0 | 776.3 | 15.7 |
| DXP ENTERPRISES | 2.5 | 10.5 | 18.5 | 15.9 | -13.0 | 613.1 | 102.9 |
| **MEDIAN** | **3.5** | **14.1** | **13.5** | **12.7** | **24.0** | **24.1** | **21.6** |

## Balance Sheet and Credit Ratings

| Company | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| EMERSON ELECTRIC | 53% | 0% | 0% | 28% | 18% | A |
| **XYLEM** | **62%** | **0%** | **0%** | **36%** | **2%** | **BBB** |
| FLOWSERVE | 50% | 0% | 1% | 47% | 2% | BBB- |
| **AMETEK** | **63%** | **0%** | **0%** | **30%** | **7%** | **BBB** |
| ROPER INDUSTRIES | 62% | 0% | 0% | 38% | 0% | BBB |
| PENTAIR | 46% | 0% | 0% | 54% | 0% | |
| **IDEX** | **63%** | **0%** | **0%** | **37%** | **0%** | **BBB** |
| CRANE COMPANY | 58% | 0% | 1% | 38% | 3% | BBB |
| WATTS WATER TECHNOLOGIES | 55% | 0% | 0% | 45% | 0% | |
| MUELLER INDUSTRIES | 77% | 0% | 3% | 19% | 1% | |
| **MUELLER WATER PRODUCTS** | **46%** | **0%** | **0%** | **53%** | **1%** | |
| FRANKLIN ELECTRIC | 71% | 0% | 1% | 24% | 4% | |
| CIRCOR INT'L | 82% | 0% | 0% | 18% | 0% | |
| BADGER METER | 76% | 0% | 0% | 0% | 24% | |
| NORTHWEST PIPE | 100% | 0% | 0% | 0% | 0% | |
| 3M CORP | 52% | 0% | 0% | 39% | 9% | AA- |
| CLARCOR INC | 73% | 0% | 0% | 26% | 1% | |
| LYDALL INC | 92% | 0% | 0% | 8% | 0% | |
| ENERGY RECOVERY | 100% | 0% | 0% | 0% | 0% | |
| DXP ENTERPRISES | 36% | 0% | 0% | 54% | 9% | |
| **MEDIAN** | **62%** | **0%** | **0%** | **36%** | **1%** | |

## Liquidity and Profitability Ratios

| Company | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2014 ROA % | 2014 ROE % | FCF 2014 Yield % | EPS 2014 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| EMERSON ELECTRIC | 1.92 | 3.4% | 75 | 1.2 | 1.1 | 16 | 9% | 21% | 7% | 5% |
| **XYLEM** | **0.62** | **1.3%** | **34** | **2** | **2** | **9** | **7%** | **15%** | **4%** | **5%** |
| FLOWSERVE | 0.76 | 1.6% | 65 | 2.0 | 1.1 | 8 | 10% | 27% | 5% | 6% |
| **AMETEK** | **0.36** | **0.7%** | **16** | **1.4** | **1.0** | **11** | **10%** | **18%** | **5%** | **5%** |
| ROPER INDUSTRIES | 1.40 | 0.8% | 18 | 2.3 | 2.0 | 12 | 8% | 14% | 5% | 4% |
| PENTAIR | 1.38 | 2.5% | -391 | 2.1 | 1.7 | 7 | 5% | 11% | 7% | 5% |
| **IDEX** | **1.36** | **1.5%** | **37** | **2.8** | **1.9** | **15** | **10%** | **18%** | **5%** | **4%** |
| CRANE COMPANY | 1.32 | 1.8% | 31 | 2.4 | 1.7 | 13 | 5% | 17% | 6% | 6% |
| WATTS WATER TECHNOLOGIES | 0.72 | 1.1% | -48 | 3.2 | 2.3 | 8 | 3% | 5% | 5% | 2% |
| MUELLER INDUSTRIES | 0.40 | 1.0% | 21 | 4.3 | 3.1 | 24 | 8% | 14% | 3% | 5% |
| **MUELLER WATER PRODUCTS** | **0.12** | **0.9%** | **26** | **3.3** | **2.1** | **7** | **4%** | **16%** | **8%** | **4%** |
| FRANKLIN ELECTRIC | 0.40 | 1.0% | 25 | 3.0 | 1.7 | 16 | 6% | 11% | 1% | 4% |
| CIRCOR INT'L | 0.15 | 0.2% | 13 | 3.2 | 1.9 | 30 | 7% | 10% | 5% | 5% |
| BADGER METER | 0.46 | 1.2% | 38 | 1.8 | 0.8 | 74 | 9% | 14% | 3% | 3% |
| NORTHWEST PIPE | 0.00 | 0.0% | N/A | 5.0 | 4.0 | -25 | -2% | -2% | 7% | -6% |
| 3M CORP | 4.44 | 2.5% | 55 | 1.9 | 1.3 | 37 | 15% | 32% | 5% | 5% |
| CLARCOR INC | 1.00 | 1.2% | 31 | 3.4 | 2.1 | 34 | 9% | 13% | 3% | 4% |
| LYDALL INC | 0.00 | 0.0% | 0 | 3.1 | 2.4 | 100 | 7% | 11% | 5% | 4% |
| ENERGY RECOVERY | 0.00 | 0.0% | 0 | 7.5 | 7.1 | 299 | -20% | -24% | -2% | -7% |
| DXP ENTERPRISES | 0.00 | 0.0% | N/A | 1.2 | 0.8 | 3 | -6% | -6% | 12% | -6% |
| **MEDIAN** | **$0.46** | **1.0%** | **25** | **2** | **2** | | **7%** | **14%** | **5%** | **4%** |

## Financial Statistics/Estimates

| Company | Book Value $ | EBITDA 2015 $ | EBITDA 2016 $ | EBITDA 2017 $ | EPS 2015 $ | EPS 2016 $ | EPS 2017 $ |
|---|---|---|---|---|---|---|---|
| EMERSON ELECTRIC | 11.77 | 4501 | 3631 | 3154 | 4.01 | 2.98 | 2.40 |
| **XYLEM** | **12.41** | **606** | **654** | **815** | **1.87** | **2.03** | **2.34** |
| FLOWSERVE | 13.05 | 752 | 579 | 596 | 2.00 | 2.16 | 2.20 |
| **AMETEK** | **14.58** | **1094** | **983** | **1025** | **2.45** | **2.30** | **2.45** |
| ROPER INDUSTRIES | 56.32 | 1238 | 1309 | 1542 | 6.85 | 6.55 | 7.28 |
| PENTAIR | 23.96 | 1111 | 944 | 974 | -0.38 | 3.01 | 3.43 |
| **IDEX** | **20.38** | **509** | **525** | **565** | **3.62** | **3.73** | **4.09** |
| CRANE COMPANY | 22.39 | 458 | 457 | 483 | 3.89 | 4.19 | 4.42 |
| WATTS WATER TECHNOLOGIES | 22.08 | 119 | 211 | 230 | -3.24 | 2.66 | 2.99 |
| MUELLER INDUSTRIES | 15.58 | 161 | - | - | 1.54 | - | N/A |
| **MUELLER WATER PRODUCTS** | **2.59** | **189** | **198** | **228** | **0.19** | **0.49** | **0.60** |
| FRANKLIN ELECTRIC | 13.40 | 133 | 146 | 154 | 1.50 | 1.65 | 1.82 |
| CIRCOR INT'L | 25.36 | 76 | 57 | 87 | 0.58 | 1.91 | 2.34 |
| BADGER METER | 8.67 | 63 | 67 | 74 | 0.90 | 1.14 | 1.28 |
| NORTHWEST PIPE | 21.15 | -25 | -11 | 10 | -3.07 | -1.81 | -0.23 |
| 3M CORP | 19.95 | 8306 | 8742 | 8991 | 7.58 | 8.16 | 8.64 |
| CLARCOR INC | 23.65 | 260 | 249 | 254 | 2.67 | 2.60 | 2.70 |
| LYDALL INC | 16.25 | 71 | 89 | 105 | 2.71 | 2.77 | 3.06 |
| ENERGY RECOVERY | 1.12 | -8 | - | 51 | -0.22 | 0.01 | 0.66 |
| DXP ENTERPRISES | 13.79 | 81 | 46 | 54 | -2.68 | 0.06 | 0.34 |
| **MEDIAN** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Water Solutions
Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 12/30/16 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2015 | TEV/EBITDA 2016 | TEV/EBITDA 2017 | P/EPS 2015 | P/EPS 2016 | P/EPS 2017 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| GENERAL ELECTRIC | GE | $31.60 | NR | 18 | | | 25,455 | 279,546 | 33 | 27 | 8,846 | 8,832 | 0% | 56% | 5 | 1.0 | 386,528 | 3.4 | 21.6 | 20.0 | 18.3 | 217.3 | 21.17 | 19.0 |
| VEOLIA ENVIRONNEMENT | VE | $17.06 | NR | 17 | | | 128 | 9,376 | 25 | 16 | 563 | NA | N/A | 0% | -- | 1.0 | 21,822 | NA | 7.7 | 6.8 | 6.4 | 22.4 | 16.1 | 13.7 |
| FORTIVE | FTV | $53.63 | NR | 16 | | | 705 | 18,542 | 56 | 43 | 346 | 304 | 12% | 77% | 2 | 1.1 | 21,515 | 7.3 | 14.6 | 15.2 | 14.4 | 21.4 | 21.5 | 20.0 |
| AIR PRODUCTS & CHEM | APD | $143.82 | NR | 17 | | | 726 | 31,263 | 158 | 115 | 217 | 217 | 0% | 86% | 3 | 1.0 | 36,254 | 4.4 | 13.0 | 11.2 | 12.8 | 24.5 | 19.0 | 22.5 |
| ECHOLAB | ECL | $117.22 | NR | 22 | | | 715 | 34,176 | 125 | 99 | 292 | 290 | 0% | 87% | 4 | 1.0 | 41,191 | 5.0 | 14.7 | 14.3 | 13.2 | 35.3 | 26.6 | 23.8 |
| ASHLAND | ASH | $109.29 | NR | 7 | | | 369 | 6,799 | 125 | 88 | 62 | 62 | 1% | 92% | 3 | 1.1 | 8,869 | 2.0 | 10.7 | 8.2 | 11.6 | 25.3 | 16.3 | 28.9 |
| TETRA TECH | TTEK | $43.15 | NR | 9 | | | 189 | 2,462 | 44 | 23 | 57 | 56 | 1% | 94% | 2 | 1.0 | 2,729 | 2.8 | 14.6 | 15.0 | 11.3 | 67.4 | 30.4 | 20.0 |
| LAYNE CHRISTENSEN | LAYN | $10.87 | NR | 1 | | | 194 | 215 | 11 | 4 | 20 | 19 | 3% | 102% | 29 | 1.2 | 302 | 1.9 | 62.1 | 11.8 | 7.1 | -4.1 | -11.44 | 181.2 |
| **CALGON CARBON** | **CCC** | **$17.00** | **Buy** | **3** | **19.00** | **12%** | **170** | **861** | **19** | **13** | **51** | **50** | **2%** | **91%** | **5** | **1.1** | **912** | **2.0** | **9.2** | **11.1** | **7.9** | **20.7** | **29.1** | **19.2** |
| **CONSOLIDATED WATER** | **CWCO** | **$10.85** | **Buy** | 2 | **15.00** | **38%** | **110** | **161** | **15** | **10** | **15** | **14** | **3%** | **47%** | **3** | **0.8** | **133** | **1.1** | **9.3** | **NA** | **NA** | **21.3** | **19.9** | **16.8** |
| CANTEL MEDICAL | CMN | $78.75 | NR | 3 | | | 165 | 3,285 | 89 | 55 | 42 | 36 | 13% | 85% | 6 | 1.1 | 3,401 | 7.1 | 31.9 | 25.3 | 21.4 | 68.5 | 45.0 | 39.2 |
| BARNWELL INDUSTRIES | BRN | $1.64 | NR | N/A | | | 7 | 14 | 2 | 1 | 8 | 4 | 58% | 10% | 4 | 0.3 | -2 | 1.0 | 3.9 | NA | NA | 10.9 | NA | NA |
| STANTEC, INC. | STN | $25.25 | NR | 11 | | | 3 | 2,877 | 28 | 21 | 114 | 113 | 1% | 62% | 17 | 1.0 | 3,615 | 2.6 | 7.1 | 2.9 | 3.2 | 31.9 | 16.9 | 12.6 |
| **MEDIAN** | | | | | | | **191** | **5,042** | | | | | **2%** | **86%** | **4** | **1** | | **2.8** | **13.8** | **13.0** | **12.2** | **23.4** | **21.2** | **20.0** |

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2014 ROA | 2014 ROE | FCF 2014 Yield | EPS 2014 Yield | Book Value | EBITDA 2015 | EBITDA 2016 | EBITDA 2017 | EPS 2015 | EPS 2016 | EPS 2017 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| GENERAL ELECTRIC | 33% | 0% | 2% | 49% | 17% | AA+ | 0.96 | 3.0% | 94 | 1.5 | 1.2 | 4 | 1% | 7% | 8% | 6% | 9.26 | 17867 | 19282 | 21083 | 0.15 | 1.49 | 1.66 |
| VEOLIA ENVIRONNEMENT | N/A | N/A | N/A | N/A | N/A | | 0.68 | 4.0% | N/A | N/A | N/A | N/A | 1% | 3% | 3% | 2% | N/A | 2843 | 3205 | 3402 | 0.76 | 1.06 | 1.25 |
| FORTIVE | NA | NA | NA | NA | NA | A+ | 0.28 | 0.5% | N/A | 1.7 | 1.3 | N/A | N/A | N/A | N/A | N/A | 7.39 | 1471 | 1418 | 1497 | 2.51 | 2.49 | 2.69 |
| AIR PRODUCTS & CHEM | 53% | 0% | 1% | 37% | 10% | A | 3.44 | 2.4% | 50 | 1.3 | 1.1 | 24 | 6% | 14% | 2% | 4% | 32.57 | 2786 | 3231 | 2822 | 5.88 | 7.55 | 6.39 |
| ECHOLAB | 51% | 0% | 1% | 32% | 16% | BBB+ | 1.48 | 1.3% | 39 | 1.0 | 0.7 | 10 | 6% | 16% | 3% | 4% | 23.56 | 2809 | 2888 | 3118 | 3.32 | 4.41 | 4.92 |
| ASHLAND | 52% | 0% | -3% | 48% | 3% | BB | 1.56 | 1.4% | -339 | 2.4 | 1.8 | 5 | 1% | 2% | 4% | 2% | 53.84 | 825 | 1079 | 766 | 4.32 | 6.71 | 3.78 |
| TETRA TECH | 71% | 0% | 0% | 27% | 1% | | 0.36 | 0.8% | 25 | 1.9 | 1.9 | 15 | 6% | 11% | 7% | 7% | 15.24 | 187 | 181 | 242 | 0.64 | 1.42 | 2.16 |
| LAYNE CHRISTENSEN | 45% | 0% | 0% | 55% | 0% | | 0.00 | 0.0% | 0 | 1.9 | 1.7 | 1 | -11% | -29% | -25% | -69% | 5.78 | 5 | 26 | 42 | -2.67 | -0.95 | 0.06 |
| **CALGON CARBON** | **78%** | **0%** | **0%** | **21%** | **1%** | | **0.20** | **1.2%** | **37** | **4.2** | **2.6** | **44** | **8%** | **12%** | **2%** | **4%** | **8.55** | **99** | **82** | **115** | **0.82** | **0.58** | **0.89** |
| **CONSOLIDATED WATER** | **93%** | **0%** | **2%** | **0%** | **5%** | | **0.30** | **2.8%** | **111** | **8.5** | **8.2** | **83** | **4%** | **4%** | **9%** | **4%** | **9.76** | **14** | **-** | **-** | **0.51** | **0.55** | **0.65** |
| CANTEL MEDICAL | 80% | 0% | 0% | 20% | 0% | | 0.14 | 0.2% | 8 | 2.4 | 1.4 | 34 | 8% | 12% | 4% | 3% | 11.04 | 107 | 135 | 159 | 1.15 | 1.75 | 2.01 |
| BARNWELL INDUSTRIES | 5% | 0% | 0% | 61% | 35% | | 0.00 | 0.0% | N/A | 4.5 | 3.8 | -35 | 1% | 3% | 9% | 3% | 1.60 | 0 | - | - | 0.15 | - | N/A |
| STANTEC, INC. | 78% | 0% | 0% | 14% | 8% | | 0.34 | 1.3% | 34 | 1.5 | 1.5 | 10 | 9% | 17% | 6% | 6% | 12.88 | 235 | 274 | 355 | 1.30 | 1.30 | 1.60 |
| **MEDIAN** | **52%** | **0%** | **0%** | **34%** | **4%** | | **$0.33** | **1.2%** | | **2** | **2** | | **4%** | **7%** | **4%** | **4%** | **9.76** | 506 | 1248 | 1132 | 0.79 | 1.49 | 2.01 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 12/30/16 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2014 | TEV/EBITDA 2015 | TEV/EBITDA 2016 | TEV/EBITDA 2017 | P/EPS 2014 | P/EPS 2015 | P/EPS 2016 | P/EPS 2017 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X | X | X |
| ALLIANT | LNT | $37.89 | NR | 7 | | | 772 | 8,620 | 41 | 30 | 228 | 227 | 0% | 68% | 5 | 0.6 | 13,093 | 2.3 | 64.4 | 12.9 | 12.4 | 11.0 | 21.9 | 21.8 | 20.1 | 19.0 |
| AVISTA | AVA | $39.99 | NR | 5 | | | 325 | 2,567 | 45 | 34 | 64 | 64 | 1% | 70% | 5 | 0.6 | 4,382 | 1.6 | 43.3 | 10.9 | 10.0 | 9.5 | 12.9 | 20.3 | 19.3 | 19.1 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$66.95** | **Buy** | **6** | **73.00** | **9%** | **79** | **1,091** | **70** | **52** | **16** | **15** | **5%** | **58%** | **0** | **0.7** | **1,340** | 2.9 | 52.6 | 12.4 | 11.5 | 10.1 | 27.1 | 24.6 | 23.3 | 21.0 |
| CMS ENERGY | CMS | $41.62 | NR | 16 | | | **1,681** | **11,650** | **46** | **35** | **280** | **278** | **1%** | **92%** | **3** | **0.5** | **21,202** | 0.9 | 40.4 | 5.9 | 5.7 | 5.2 | 11.2 | 10.2 | 10.5 | 10.0 |
| CONEDISON INC | ED | $73.68 | NR | 16 | | | 1,139 | 22,452 | 82 | 63 | 305 | 304 | 0% | 56% | 7 | 0.4 | 37,091 | 1.7 | 70.6 | 10.4 | 9.9 | 9.2 | 19.9 | 18.1 | 18.6 | 17.8 |
| DTE CORP | DTE | $98.51 | NR | 15 | | | 571 | 17,676 | 100 | 78 | 179 | 178 | 1% | 69% | 4 | 0.5 | 27,511 | 2.0 | 31.5 | 12.2 | 10.7 | 10.2 | 19.3 | 20.4 | 18.7 | 18.5 |
| MGE ENERGY | MGEE | $65.30 | NR | 0 | | | 69 | 2,264 | 67 | 45 | 35 | 35 | 0% | 37% | 6 | 0.7 | 2,540 | 3.3 | 60.8 | 14.3 | NA | NA | 28.1 | 31.7 | NA | NA |
| **EVERSOURCE ENERGY** | **ES** | **$55.23** | **Buy** | **15** | **67.00** | **21%** | **1,447** | **17,519** | **60** | **50** | **317** | 314 | **1%** | **71%** | **3** | **0.5** | **28,054** | 1.7 | 39.8 | 11.3 | 10.7 | 10.2 | 21.4 | 19.7 | 18.5 | 17.5 |
| NORTHWESTERN | NWE | $56.87 | NR | 6 | | | 277 | 2,748 | 64 | 52 | 48 | 48 | 1% | 98% | 3 | 0.6 | 4,788 | 1.7 | 57.5 | 11.8 | 11.5 | 10.8 | 19.0 | 18.1 | 17.6 | 16.8 |
| PG&E CORP | PCG | $60.77 | NR | 17 | | | 1,678 | 30,729 | 65 | 51 | 506 | 505 | 0% | 84% | 2 | 0.5 | 48,413 | 1.8 | 45.7 | 9.7 | 8.1 | 7.6 | 19.9 | 19.5 | 16.4 | 16.6 |
| SCANA | SCG | $73.28 | NR | 11 | | | 531 | 10,473 | 76 | 59 | 143 | 130 | 9% | 66% | 7 | 0.5 | 17,783 | 1.9 | 53.6 | 12.3 | 11.3 | 11.8 | 19.3 | 19.2 | 17.7 | 17.3 |
| **AVANGRID** | **AGR** | **$37.88** | **Neutral** | **7** | **43.00** | **14%** | **597** | **11,705** | **47** | **35** | **309** | - | **82%** | **13%** | **3** | **0.6** | **16,094** | 0.8 | 142.5 | 16.6 | 8.1 | 7.9 | 19.7 | 22.3 | 18.9 | 16.9 |
| **UNITIL CORP** | **UTL** | **$45.34** | **Neutral** | **2** | **44.00** | **-3%** | **24** | **637** | **46** | **35** | **14** | 14 | **2%** | **60%** | **7** | **0.6** | **1,032** | 2.2 | 33.3 | 9.5 | 9.3 | 8.7 | 25.4 | 24.0 | 23.6 | 22.1 |
| VECTREN CORP | VVC | $52.15 | NR | 7 | | | 228 | 4,322 | 53 | 39 | 83 | 83 | 0% | 64% | 2 | 0.6 | 6,129 | 2.6 | 38.4 | 9.6 | 9.2 | 8.0 | 25.8 | 21.8 | 20.9 | 19.6 |
| WISCONSIN ENERGY | WEC | $58.65 | NR | 13 | | | 1,222 | 18,511 | 66 | 50 | 316 | 315 | 0% | 71% | 8 | 0.5 | 28,558 | 2.1 | 84.1 | 14.7 | 11.5 | 11.1 | 22.6 | 21.5 | 19.9 | 18.9 |
| XCEL ENERGY | XEL | $40.70 | NR | 15 | | | 1,893 | 20,674 | 35 | 508 | 508 | 507 | 0% | 71% | 4 | 0.5 | 34,821 | 1.9 | 51.1 | 10.7 | 10.0 | 9.4 | 20.0 | 19.5 | 18.5 | 17.6 |
| **MEDIAN** | | | | | | | | **11,061** | | | | | **64%** | **-** | **4** | **0.6** | **16938** | **1.9** | **51.9** | **NA** | **10.0** | **9.5** | **20.0** | **20.4** | **18.7** | **17.8** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Dividend | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2014 ROA | 2014 ROE | FCF 2014 Yield | EPS 2014 Yield | Book Value | EBITDA 2014 | EBITDA 2015 | EBITDA 2016 | EBITDA 2017 | EPS 2014 | EPS 2015 | EPS 2016 | EPS 2017 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| ALLIANT | 43% | 2% | 0% | 49% | 6% | BBB+ | 1.18 | 3.1% | 77 | 0.7 | 0.1 | 5 | 3% | 11% | (0%) | 6% | 16.41 | 203 | 1013 | 1055 | 1186 | 1.73 | 1.74 | 1.88 | 1.99 |
| AVISTA | 46% | 0% | 0% | 51% | 2% | BBB- | 1.37 | 3.4% | 64 | 0.7 | 0.1 | 5 | 3% | 9% | (3%) | 7% | 24.53 | 101 | 401.2 | 439 | 461 | 3.10 | 1.97 | 2.07 | 2.10 |
| **CHESAPEAKE UTILITIES** | **48%** | **0%** | **0%** | **34%** | **18%** | **BBB-** | **1.22** | 1.8% | **44** | **0.4** | **0.0** | **11** | **4%** | **12%** | **(2%)** | **6%** | **23.45** | **25** | 107.7 | **117** | **133** | **2.47** | **2.72** | **2.87** | **3.19** |
| CMS ENERGY | 28% | 0% | 0% | 65% | 7% | | | 0.0% | 59 | 0.6 | 2.9 | 5 | 3% | 13% | (1%) | 6% | 14.21 | 455 | 1937 | 2068 | 2199 | 1.74 | 1.89 | 2.02 | 2.17 |
| CONEDISON INC | 48% | 0% | 0% | 49% | 3% | BBB- | 2.68 | 3.6% | 66 | 0.6 | 9.4 | 6 | 3% | 9% | 2% | 7% | 44.55 | 525 | 3566 | 3749 | 4050 | 3.71 | 4.08 | 3.97 | 4.15 |
| DTE CORP | 47% | 0% | 0% | 51% | 2% | BBB | 3.30 | 3.3% | 65 | 0.7 | 1.9 | 5 | 3% | 11% | (1%) | 6% | 48.88 | 872 | 2261 | 2569 | 2710 | 5.10 | 4.82 | 5.27 | 5.32 |
| MGE ENERGY | 65% | 0% | 0% | 35% | 0% | AA- | 1.23 | 1.9% | 57 | 0.6 | 0.8 | 9 | 5% | 13% | 2% | 6% | 19.92 | 42 | 177.1 | - | - | 2.32 | 2.06 | - | - |
| **EVERSOURCE ENERGY** | **48%** | **0%** | **0%** | **47%** | **5%** | **AA-** | 1.78 | 3.2% | **62** | **0.6** | **0.4** | **7** | 3% | 8% | **0%** | **6%** | **32.64** | **705** | 2474 | **2621** | **2740** | **2.58** | **2.81** | **2.98** | **3.15** |
| NORTHWESTERN | 42% | 0% | 0% | 52% | 6% | BBB | 2.00 | 3.5% | 59 | 0.6 | 0.2 | 4 | 3% | 10% | (1%) | 6% | 33.22 | 83 | 406 | 415 | 442 | 2.99 | 3.15 | 3.23 | 3.40 |
| PG&E CORP | 48% | 0% | 0% | 49% | 4% | ** | 1.96 | 3.2% | 114 | 1.0 | 3.6 | 6 | 2% | 10% | (5%) | 5% | 33.69 | 1060 | 5011 | 5993 | 6386 | 3.06 | 3.12 | 3.70 | 3.66 |
| SCANA | N/A | N/A | N/A | N/A | N/A | A- | 2.30 | 3.1% | 57 | 0.4 | 1.8 | 5 | 3% | 11% | (4%) | 7% | 38.09 | 332 | 1451 | 1570 | 1511 | 3.79 | 3.81 | 4.13 | 4.24 |
| **AVANGRID** | N/A | N/A | N/A | N/A | N/A | **BBB-** | **1.73** | 4.6% | **201** | **1.6** | **5.4** | **5** | **2%** | **8%** | **4%** | **-** | **48.74** | **113** | 967.1 | **1997** | **2046** | **1.92** | **1.70** | **2.00** | **2.24** |
| **UNITIL CORP** | **39%** | **0%** | **0%** | **54%** | **8%** | **BBB-** | **1.42** | 3.1% | **75** | **0.7** | **0.1** | **5** | **3%** | **9%** | **(2%)** | **5%** | **20.20** | **31** | 108.4 | **111** | **118** | **1.78** | **1.89** | **1.93** | **2.05** |
| VECTREN CORP | 47% | 0% | 0% | 50% | 4% | A- | 1.68 | 3.2% | 64 | 0.6 | 0.8 | 7 | 3% | 11% | 1% | 5% | 20.34 | 160 | 637.8 | 670 | 761 | 2.02 | 2.39 | 2.50 | 2.66 |
| WISCONSIN ENERGY | 45% | 0% | 0% | 50% | 4% | BBB+ | 2.08 | 3.5% | 67 | 0.7 | 0.5 | 6 | 4% | 14% | 4% | 6% | 27.42 | 340 | 1941 | 2476 | 2583 | 2.59 | 2.73 | 2.94 | 3.11 |
| XCEL ENERGY | N/A | N/A | N/A | N/A | N/A | BBB+ | 1.36 | 3.3% | 62 | 0.7 | | 6 | 3% | 10% | (3%) | 7% | 20.89 | 682 | 3257 | 3497 | 3700 | 2.03 | 2.09 | 2.20 | 2.31 |
| **MEDIAN** | | | | | | | | **3.2%** | **64** | **0.6** | | 5 | 3% | 10% | (1%) | **6%** | | | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Electric Utilities (Regulated Electrics Only)

Comparative Valuation Statistics


**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Katherine Burke**, 646-840-3207 kburke@janney.com


| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 12/30/16 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| ALLETE | ALE | $64.19 | NR | 6 | | | 223 | 3,172 | 67 | 48 | 49 | 46 | 6% | 73% | 4 | 0.6 | 4,609 |
| CENTERPOINT ENERGY | CNP | $24.64 | NR | 15 | | | 2,037 | 10,612 | 25 | 16 | 431 | 409 | 5% | 76% | 0 | 0.8 | 18,042 |
| CLECO | CNL | - | NR | 0 | | | - | - | 55 | 45 | - | N/A | - | - | NA | 0.5 | - |
| DUKE ENERGY | DUK | $77.62 | NR | 20 | | | 2,466 | 53,480 | 88 | 70 | 689 | 688 | 0% | 58% | 3 | 0.4 | 97,689 |
| EL PASO ELECTRIC | EE | $46.50 | NR | 4 | | | 139 | 1,884 | 49 | 37 | 41 | 40 | 1% | 99% | 2 | 0.6 | 3,203 |
| EMPIRE DISTRICT ELECTRIC | EDE | $34.09 | NR | 2 | | | 543 | 1,503 | 34 | 26 | 44 | 42 | 5% | 68% | 6 | 0.5 | 2,341 |
| GREAT PLAINS | GXP | $27.35 | NR | 10 | | | 1,470 | 5,888 | 33 | 26 | 215 | 215 | 0% | 92% | 3 | 0.6 | 8,420 |
| HAWAIIAN ELECTRIC | HE | $33.07 | NR | 7 | | | 411 | 3,596 | 35 | 27 | 109 | 107 | 1% | 45% | 5 | 0.6 | 5,182 |
| IDACORP | IDA | $80.55 | NR | 4 | | | 143 | 4,060 | 83 | 65 | 50 | 50 | 1% | 75% | 6 | 0.7 | 5,714 |
| PINNACLE WEST | PNW | $78.03 | NR | 16 | | | 432 | 8,685 | 83 | 63 | 111 | 111 | 1% | 84% | 4 | 0.5 | 13,111 |
| PNM RESOURCES | PNM | $34.30 | NR | 9 | | | 652 | 2,732 | 36 | 29 | 80 | 79 | 1% | 93% | 7 | 0.7 | 5,482 |
| PORTLAND GENERAL | POR | $43.33 | NR | 14 | | | 294 | 3,853 | 45 | 35 | 89 | 89 | 0% | 96% | 2 | 0.6 | 6,085 |
| SOUTHERN COMPANY | SO | $49.19 | NR | 21 | | | 3,485 | 48,245 | 55 | 46 | 981 | 980 | 0% | 53% | 3 | 0.4 | 92,565 |
| WESTAR ENERGY | WR | $56.35 | NR | 8 | | | 1,150 | 7,987 | 58 | 40 | 142 | 141 | 0% | 72% | 3 | 0.5 | 11,888 |
| **MEDIAN** | | | | | | | **543** | **4,060** | **52** | **39** | **109** | **107** | | **-** | **3** | **1** | **6085** |

| | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|
| | Mkt/ Book | TEV/EBITDA 2015 | TEV/EBITDA 2016 | TEV/EBITDA 2017 | P/EPS 2015 | P/EPS 2016 | P/EPS 2017 |
| | X | X | X | X | X | X | X |
| ALLETE | 1.7 | 12.0 | 11.0 | 10.5 | 18.4 | 20.5 | 18.6 |
| CENTERPOINT ENERGY | 3.1 | 9.5 | 8.7 | 8.3 | 22.4 | 20.8 | 19.7 |
| CLECO | NA | NA | NA | NA | NA | NA | NA |
| DUKE ENERGY | 1.3 | 10.8 | 10.3 | 10.0 | 17.1 | 16.6 | 16.7 |
| EL PASO ELECTRIC | 1.8 | 12.9 | 12.1 | 11.0 | 22.9 | 20.0 | 18.5 |
| EMPIRE DISTRICT ELECTRIC | 1.9 | 10.8 | 9.8 | 9.4 | 26.4 | 23.0 | 20.9 |
| GREAT PLAINS | 1.2 | 9.8 | 8.7 | 8.5 | 20.0 | 15.3 | 15.6 |
| HAWAIIAN ELECTRIC | 1.8 | 10.4 | 9.3 | 9.4 | 20.0 | 19.1 | 19.0 |
| IDACORP | 2.0 | 13.3 | 13.0 | 12.6 | 20.8 | 20.8 | 19.9 |
| PINNACLE WEST | 1.9 | 9.8 | 9.7 | 9.1 | 19.9 | 19.7 | 18.5 |
| PNM RESOURCES | 1.7 | 11.6 | 10.2 | 9.5 | 20.9 | 21.4 | 18.8 |
| PORTLAND GENERAL | 1.7 | 9.7 | 9.2 | 8.6 | 21.2 | 20.4 | 18.5 |
| SOUTHERN COMPANY | 2.2 | 13.8 | 12.4 | 10.9 | 17.0 | 16.9 | 16.5 |
| WESTAR ENERGY | 2.2 | 12.6 | 11.1 | 10.9 | 26.7 | 22.7 | 22.5 |
| **MEDIAN** | **1.8** | **NA** | **10.2** | **9.5** | **20.8** | **20.4** | **18.6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2014 ROA | 2014 ROE | FCF 2014 Yield | EPS 2014 Yield |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % |
| ALLETE | 52% | 0% | 0% | 43% | 5% | BBB+ | 2.08 | 3.2% | 79 | 0.7 | 1.0 | 7 | 3% | 8% | (13%) | 5% |
| CENTERPOINT ENERGY | 27% | 0% | 0% | 67% | 6% | | 1.03 | 4.2% | -243 | NA | 11.9 | 4 | 3% | 14% | 0% | 6% |
| CLECO | 42% | 0% | 0% | 57% | 0% | BBB | 1.60 | - | - | 0.7 | 0.9 | 5 | 4% | 10% | 4% | 5% |
| DUKE ENERGY | 42% | 0% | 0% | 52% | 6% | BBB | 3.42 | 4.4% | 79 | 0.8 | 8.6 | 5 | 2% | 6% | 2% | 5% |
| EL PASO ELECTRIC | 42% | 0% | 0% | 52% | 5% | BBB | 1.24 | 2.7% | 53 | 0.6 | 0.1 | 4 | 3% | 9% | (6%) | 6% |
| EMPIRE DISTRICT ELECTRIC | 48% | 0% | 0% | 50% | 1% | BBB- | 1.04 | 3.1% | 76 | 0.8 | 0.1 | 5 | 3% | 9% | (5%) | 5% |
| GREAT PLAINS | 43% | 0% | 0% | 48% | 9% | BBB | 1.10 | 4.0% | 76 | 0.7 | 0.1 | 5 | 2% | 7% | (2%) | 6% |
| HAWAIIAN ELECTRIC | 51% | 1% | 0% | 46% | 2% | BBB | 1.24 | 3.7% | 55 | 0.8 | N/A | 7 | 2% | 9% | (1%) | 5% |
| IDACORP | 55% | 0% | 0% | 45% | 0% | BBB | 2.20 | 2.7% | 52 | 0.5 | 1.2 | 5 | 3% | 10% | 3% | 6% |
| PINNACLE WEST | 52% | 0% | 0% | 46% | 1% | ** | 2.62 | 3.4% | 65 | 0.6 | 0.6 | 8 | 3% | 9% | 2% | 5% |
| PNM RESOURCES | 35% | 0% | 0% | 55% | 9% | BB- | 0.97 | 2.8% | 8,800 | 4.1 | 0.5 | 3 | 2% | 7% | (3%) | 5% |
| PORTLAND GENERAL | 50% | 0% | 0% | 50% | 0% | ** | 1.28 | 3.0% | 60 | 0.6 | 0.5 | 6 | 3% | 9% | (16%) | 6% |
| SOUTHERN COMPANY | NA | NA | NA | NA | NA | A | 2.24 | 4.6% | 83 | 0.8 | 14.0 | 7 | 3% | 10% | (1%) | 4% |
| WESTAR ENERGY | 48% | 0% | 0% | 48% | 4% | BBB- | 1.52 | 2.7% | 65 | 0.7 | 0.0 | 5 | 3% | 10% | (1%) | 6% |
| **MEDIAN** | **48%** | **0%** | **0%** | **50%** | **2%** | | | | **65** | **1** | **1** | **5** | **3%** | **9%** | **(1%)** | **5%** |

| | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|
| | Book Value | EBITDA 2015 | EBITDA 2016 | EBITDA 2017 | EPS 2015 | EPS 2016 | EPS 2017 |
| | $ | $ | $ | $ | $ | $ | $ |
| ALLETE | 37.09 | 385 | 418 | 439 | 3.48 | 3.13 | 3.46 |
| CENTERPOINT ENERGY | 8.05 | 1,903 | 2,070 | 2,175 | 1.10 | 1.18 | 1.25 |
| CLECO | 27.69 | - | - | - | 2.29 | - | - |
| DUKE ENERGY | 57.74 | 9,060 | 9,473 | 9,813 | 4.54 | 4.67 | 4.64 |
| EL PASO ELECTRIC | 25.21 | 248 | 264 | 292 | 2.03 | 2.33 | 2.51 |
| EMPIRE DISTRICT ELECTRIC | 18.32 | 217 | 238 | 250 | 1.29 | 1.48 | 1.63 |
| GREAT PLAINS | 23.68 | 856 | 971 | 987 | 1.37 | 1.79 | 1.75 |
| HAWAIIAN ELECTRIC | 17.94 | 500 | 558 | 549 | 1.65 | 1.73 | 1.74 |
| IDACORP | 40.88 | 428 | 440 | 452 | 3.87 | 3.88 | 4.05 |
| PINNACLE WEST | 41.30 | 1,345 | 1,353 | 1,444 | 3.92 | 3.96 | 4.23 |
| PNM RESOURCES | 20.78 | 474 | 537 | 579 | 1.64 | 1.61 | 1.82 |
| PORTLAND GENERAL | 25.43 | 625 | 662 | 707 | 2.04 | 2.12 | 2.34 |
| SOUTHERN COMPANY | 22.50 | 6,687 | 7,476 | 8,523 | 2.89 | 2.90 | 2.99 |
| WESTAR ENERGY | 25.87 | 940 | 1,071 | 1,094 | 2.11 | 2.48 | 2.51 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics With Merchant)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 12/30/16 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | P/EPS 2015 X | P/EPS 2016 X | P/EPS 2017 X |
| AMEREN | AEE | $52.46 | NR | 9 | | | 951 | 12,729 | 54 | 42 | 243 | 242 | 0% | 29% | 5 | 0.6 | 20,513 | 1.8 | 9.5 | 9.2 | 8.7 | 20.5 | 19.6 | 19.0 |
| AMERICAN ELECTRIC POWER | AEP | $62.96 | NR | 20 | | | 1,677 | 30,958 | 71 | 57 | 492 | 492 | 0% | 26% | 3 | 0.5 | 51,567 | 1.7 | 9.4 | 9.7 | 9.3 | 17.1 | 16.6 | 17.1 |
| DOMINION | D | $76.59 | NR | 19 | | | 2,460 | 48,003 | 79 | 66 | 627 | 624 | 0% | 36% | 8 | 0.5 | 83,663 | 3.6 | 15.9 | 14.4 | 12.9 | 22.3 | 20.2 | 19.9 |
| EDISON INTERNATIONAL | EIX | $71.99 | NR | 17 | | | 1,961 | 23,455 | 79 | 58 | 326 | 325 | 0% | 38% | 3 | 0.5 | 37,777 | 2.1 | 8.8 | 8.5 | 7.8 | 17.6 | 18.4 | 17.6 |
| ENTERGY | ETR | $73.47 | NR | 18 | | | 971 | 13,161 | 82 | 65 | 179 | 179 | 0% | 37% | 5 | 0.5 | 27,223 | 1.4 | 9.0 | 7.8 | 7.8 | 12.2 | 10.7 | 16.0 |
| EXELON | EXC | $35.49 | NR | 22 | | | 3,487 | 32,767 | 38 | 26 | 923 | 921 | 0% | 38% | 3 | 0.6 | 67,437 | 1.3 | 10.3 | 8.6 | 8.1 | 14.3 | 13.3 | 13.5 |
| FIRST ENERGY | FE | $30.97 | NR | 18 | | | 2,524 | 13,199 | 37 | 29 | 426 | 425 | 0% | 38% | 3 | 0.6 | 35,200 | 1.1 | 8.6 | 9.0 | 7.7 | 11.4 | 11.7 | 11.7 |
| NEXTERA ENERGY | NEE | $119.46 | NR | 18 | | | 1,424 | 55,820 | 132 | 102 | 467 | 466 | 0% | 29% | 3 | 0.5 | 86,933 | 2.4 | 11.6 | 10.8 | 10.1 | 20.9 | 19.2 | 18.2 |
| PPL CORP | PPL | $34.05 | NR | 17 | | | 2,752 | 23,141 | 40 | 32 | 680 | 679 | 0% | 29% | 3 | 0.5 | 41,820 | 2.3 | 10.7 | 10.4 | 10.5 | 15.4 | 14.4 | 15.7 |
| PUBLIC SERVICE ENT GROUP | PEG | $43.88 | NR | 17 | | | 2,000 | 22,199 | 47 | 38 | 506 | 505 | 0% | 28% | 4 | 0.6 | 32,644 | 1.7 | 8.0 | 8.5 | 8.0 | 15.1 | 15.3 | 15.1 |
| **MEDIAN** | | | | | | | **1,981** | **23,298** | | | | | | | **3** | **1** | **39798** | **1.8** | **NA** | **9.1** | **8.4** | **16.2** | **15.9** | **16.6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) | Annual Rate $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2013 ROA % | 2013 ROE % | FCF 2013 Yield % | EPS 2013 Yield % | Book Value $ | EBITDA 2015 $ | EBITDA 2016 $ | EBITDA 2017 $ | EPS 2015 $ | EPS 2016 $ | EPS 2017 $ |
| AMEREN | 45% | 0% | 0% | 48% | 7% | BBB- | 1.76 | 3.4% | 63 | 0.6 | 2.9 | 6 | 2% | 8% | 3% | 3% | 28.63 | 2159 | 2238 | 2352 | 2.56 | 2.68 | 2.76 |
| AMERICAN ELECTRIC POWER | 41% | 0% | 0% | 50% | 9% | BBB | 2.36 | 3.7% | 242 | 0.6 | 7.0 | 6 | 3% | 9% | 1% | 7% | 36.4 | 5475 | 5343 | 5524 | 3.69 | 3.79 | 3.68 |
| DOMINION | N/A | N/A | N/A | N/A | N/A | A- | 2.80 | 3.7% | 83 | 0.8 | 8.6 | 5 | 4% | 16% | (2%) | 5% | 21.25 | 5265 | 5793 | 6474 | 3.44 | 3.79 | 3.85 |
| EDISON INTERNATIONAL | 46% | 0% | 0% | 47% | 6% | BBB- | 2.17 | 3.0% | 71 | 0.6 | 2.4 | 7 | 2% | 9% | (3%) | 6% | 34.9 | 4270 | 4428 | 4854 | 4.10 | 3.91 | 4.10 |
| ENTERGY | 38% | 1% | 0% | 57% | 4% | BBB | 3.48 | 4.7% | 48 | NA | 13.5 | 5 | 2% | 8% | 3% | 6% | 51.89 | 3010 | 3476 | 3496 | 6.00 | 6.84 | 4.58 |
| EXELON | 40% | 0% | 0% | 55% | 5% | BBB+ | 1.272 | 3.6% | 95 | 0.5 | 80.7 | 6 | 2% | 8% | 5% | 7% | 28.0 | 6541 | 7856 | 8316 | 2.49 | 2.68 | 2.62 |
| FIRST ENERGY | 30% | 0% | 0% | 59% | 11% | BBB | 1.44 | 4.6% | -100 | 1.1 | 4.4 | 4 | 1% | 3% | (2%) | 3% | 29.33 | 4112 | 3893 | 4550 | 2.71 | 2.64 | 2.64 |
| NEXTERA ENERGY | 40% | 0% | 0% | 54% | 6% | A- | 3.48 | 2.9% | 64 | 0.5 | 15.3 | 5 | 3% | 10% | 5% | 5% | 49.0 | 7498 | 8069 | 8622 | 5.71 | 6.21 | 6.57 |
| PPL CORP | 33% | 0% | 0% | 63% | 4% | A- | 1.52 | 4.5% | 56 | 0.6 | 9.8 | 4 | 2% | 10% | (7%) | 6% | 14.72 | 3900 | 4007 | 3992 | 2.21 | 2.37 | 2.17 |
| PUBLIC SERVICE ENT GROUP | 55% | 0% | 0% | 0% | 1% | BBB | 1.64 | 3.7% | 64 | 0.5 | 6.4 | 10 | 4% | 11% | 2% | 8% | 25.9 | 4097 | 3822 | 4074 | 2.91 | 2.88 | 2.90 |
| **MEDIAN** | **40%** | **0%** | **0%** | **54%** | **6%** | | | | **64** | **1** | **8** | **5** | **2%** | **9%** | **2%** | **6%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 12/30/16 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2015 | TEV/EBITDA 2016 | TEV/EBITDA 2017 | P/EPS 2015 | P/EPS 2016 | P/EPS 2017 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| CALPINE | CPN | $11.43 | NR | 8 | | | 2,778 | 4,104 | 16 | 16 | 359 | 354 | 2% | 56% | 5 | 0.9 | 14,230 | 1.3 | 7.2 | 7.8 | 7.6 | 10.9 | 32.9 | 19.3 |
| COVANTA | CVA | $15.60 | NR | 9 | | | 1,246 | 2,034 | 18 | 18 | 130 | 116 | 11% | 47% | 8 | 0.7 | 4,659 | 3.2 | 10.9 | 11.4 | 11.2 | 222.9 | -161.4 | 608.5 |
| DYNEGY | DYN | $8.46 | NR | 6 | | | 1,400 | 992 | 22 | 22 | 117 | 116 | 1% | 63% | 5 | 1.1 | 9,487 | 0.4 | 11.2 | 9.3 | 7.2 | 38.5 | -7.1 | -8.5 |
| NRG ENERGY | NRG | $12.26 | NR | 8 | | | 3,449 | - | 18 | 18 | 315 | 313 | 1% | 57% | 4 | 1.1 | 21,700 | 1.4 | 6.5 | 6.6 | 7.9 | -11.6 | 10.7 | 27.1 |
| ORMAT TECHNOLOGIES | ORA | $53.62 | NR | 5 | | | 134 | 2,658 | 54 | 54 | 50 | 36 | 28% | 38% | 6 | 0.9 | 3,475 | 2.7 | 11.9 | 10.9 | 10.4 | 22.1 | 29.3 | 24.5 |
| **MEDIAN** | | | | | | | **1,400** | **2,346** | **18** | **18** | **130** | **116** | **2** | **56** | **5** | **1** | **9,487** | **1.4** | **NA** | **9.3** | **7.9** | **22.1** | **10.7** | **24.5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Rate | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2014 ROA | 2014 ROE | FCF 2014 Yield | EPS 2014 Yield | Book Value | EBITDA 2015 | EBITDA 2016 | EBITDA 2017 | EPS 2015 | EPS 2016 | EPS 2017 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| CALPINE | 21% | 0% | 0% | 78% | 1% | | 0.00 | 0% | - | 0.0 | 28.2 | 2 | 5% | 27% | 4% | 10% | 8.72 | 1976 | 1820 | 1884 | 1.05 | 0.35 | 0.59 |
| COVANTA | 15% | 0% | 0% | 84% | 1% | | 1.00 | 6% | 204 | 2.0 | 1.7 | 2 | (0%) | (0%) | 4% | (0%) | 4.87 | 428 | 408 | 417 | 0.07 | -0.10 | 0.03 |
| DYNEGY | 15% | 3% | 0% | 80% | 1% | | - | 0% | - | - | 6.4 | 1 | (3%) | (10%) | 1% | (9%) | 21.57 | 850 | 1023 | 1317 | 0.22 | -1.19 | -0.99 |
| NRG ENERGY | 13% | 0% | 0% | 82% | 5% | | 0.58 | 1% | -2 | - | 39.5 | 3 | 0% | 1% | 7% | 1% | 8.62 | 3340 | 3265 | 2761 | -1.06 | 1.15 | 0.45 |
| ORMAT TECHNOLOGIES | 54% | 0% | 0% | 43% | 3% | | 0.26 | 1% | 28 | 0.1 | 2.4 | 4 | 3% | 7% | 5% | 4% | 20.16 | 291.3 | 320 | 334 | 2.43 | 1.83 | 2.19 |
| **MEDIAN** | **15%** | **0%** | **0%** | **80%** | **1%** | | **$0.42** | 0.5% | **28** | **0** | **6** | **2** | **0%** | **1%** | **4%** | **1%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Gas Utilities - Downstream (Gas Distribution Only)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Katherine Burke**, 646-840-3207 kburke@janney.com

### Rating Data

| | Symbol | Price 12/30/2016 $ | JMS Rating | Analyst Coverage | Fair Value | Disc To FV |
|---|---|---|---|---|---|---|
| ATMOS ENERGY | ATO | $74.15 | NR | 11 | | |
| LACLEDE GROUP | LG | $64.55 | NR | 11 | | |
| **NEW JERSEY RESOURCES** | **NJR** | **$35.50** | **Neutral** | 9 | **$36.00** | **1%** |
| NORTHWEST NATURAL GAS | NWN | $59.80 | NR | 7 | | |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$33.69** | **Neutral** | 8 | **$33.00** | **-2%** |
| SOUTHWEST GAS | SWX | $76.62 | NR | 6 | | |
| **WGL HOLDINGS, INC.** | **WGL** | **$76.28** | **Buy** | 8 | **$71.00** | **-7%** |
| **MEDIAN** | | | | | | |

### Trading & Market Data

| | Daily Volume 1000 | Market Capital $ (mil) | 52-Week High $ | 52-Week Low $ | Avg Shs Out (mil) | Free Float (mil) | Insider Hldg % | Inst. Hldg % | % of Float Short % | Beta X | TEV $ (mil) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 332 | 7,793 | 82 | 60 | 105 | 103 | 1.3% | 73% | 3 | 0.6 | 10,888 |
| LACLEDE GROUP | 161 | 2,947 | 71 | 57 | 46 | N/A | 3.2% | 81% | 2 | 0.5 | 5,325 |
| **NEW JERSEY RESOURCES** | **711** | **3,059** | **39** | **30** | **86** | **85** | **1.3%** | **62%** | **5** | **0.7** | **4,210** |
| NORTHWEST NATURAL GAS | 94 | 1,708 | 66 | 49 | 29 | 28 | 1.5% | 61% | 12 | 0.6 | 2,427 |
| **SOUTH JERSEY INDUSTRIES** | **439** | **2,678** | **35** | **22** | **79** | **79** | **0.7%** | **71%** | **3** | **0.7** | **3,893** |
| SOUTHWEST GAS | 198 | 3,638 | 80 | 54 | 47 | 47 | 1.3% | 80% | 4 | 0.7 | 5,237 |
| **WGL HOLDINGS, INC.** | **332** | **3,906** | **80** | **59** | **51** | **51** | **1.0%** | **68%** | **10** | **0.7** | **5,637** |
| **MEDIAN** | **332** | **3,059** | | | | | **1.27%** | **71%** | **4** | **0.7** | |

### Valuation Statistics

| | Mkt/ Book X | TEV/EBITDA 2015 X | TEV/EBITDA 2016 X | TEV/EBITDA 2017 X | P/EPS 2015 X | P/EPS 2016 X | P/EPS 2017 X |
|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 2.2 | 11.5 | 11.4 | 10.5 | 24.0 | 22.0 | 20.9 |
| LACLEDE GROUP | 1.7 | 12.7 | 12.6 | 11.3 | 20.5 | 18.9 | 18.2 |
| **NEW JERSEY RESOURCES** | **2.6** | **20.8** | **16.9** | **14.7** | **16.9** | **22.0** | **20.9** |
| NORTHWEST NATURAL GAS | 2.1 | 9.2 | 10.9 | 10.4 | 30.5 | 27.1 | 25.9 |
| **SOUTH JERSEY INDUSTRIES** | **2.1** | **15.9** | **14.3** | **13.3** | **22.2** | **25.2** | **25.0** |
| SOUTHWEST GAS | 2.2 | 9.4 | 9.2 | 8.8 | 26.2 | 24.3 | 22.1 |
| **WGL HOLDINGS, INC.** | **2.8** | **12.0** | **12.6** | **11.4** | **29.1** | **23.3** | **22.6** |
| **MEDIAN** | **2.2** | **12.0** | **12.6** | **11.3** | **24.0** | **23.3** | **22.1** |

### Balance Sheet and Credit Ratings

| | Common Equity % | Pref Stock % | Minority Interest % | LT Debt % | ST Debt % | Credit Rating (S&P) |
|---|---|---|---|---|---|---|
| ATMOS ENERGY | 51% | 0% | 0% | 33% | 16% | BBB |
| LACLEDE GROUP | 42% | 0% | 0% | 43% | 15% | A |
| **NEW JERSEY RESOURCES** | **48%** | **0%** | **0%** | **44%** | **8%** | **A** |
| NORTHWEST NATURAL GAS | 50% | 0% | 0% | 34% | 17% | AA- |
| **SOUTH JERSEY INDUSTRIES** | **50%** | **0%** | **0%** | **32%** | **18%** | **BBB+** |
| SOUTHWEST GAS | 50% | 0% | 0% | 49% | 2% | BBB- |
| **WGL HOLDINGS, INC.** | **43%** | **1%** | **0%** | **45%** | **10%** | **AA-** |
| **MEDIAN** | **50%** | **0%** | **0%** | **43%** | **15%** | |

### Liquidity and Profitability Ratios

| | Annual Dividend $ | Div Yield % | Div Payout % | Current Ratio X | Quick Ratio X | Interest Coverage X | 2014 ROA % | 2014 ROE % | FCF 2014 Yield % | EPS 2014 Yield % |
|---|---|---|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | $1.80 | 2.4% | 50 | 0.4 | 0.2 | 9 | 3% | 10.2% | -2% | 6% |
| LACLEDE GROUP | $2.10 | 3.3% | 60 | 0.5 | 0.3 | 5 | 2% | 6.6% | -3% | 5% |
| **NEW JERSEY RESOURCES** | $1.02 | 2.9% | **64** | 1.1 | **0.7** | **6** | **5%** | **15.3%** | **4%** | **7%** |
| NORTHWEST NATURAL GAS | $1.88 | 3.1% | 85 | 0.5 | 0.3 | 4 | 2% | 7.7% | 7% | 4% |
| **SOUTH JERSEY INDUSTRIES** | $1.09 | 3.2% | **62** | 0.4 | **0.4** | **7** | **3%** | **11.1%** | **-9%** | **5%** |
| SOUTHWEST GAS | $1.80 | 2.3% | 53 | 0.9 | 0.8 | 8 | 3% | 9.7% | -2% | 5% |
| **WGL HOLDINGS, INC.** | $1.95 | 2.6% | **58** | **0.8** | **0.60** | **7** | **2%** | **8.3%** | **0%** | **5%** |
| **MEDIAN** | **$1.80** | **2.9%** | **60** | **0.5** | **0.4** | 7 | **3%** | **9.7%** | **-2%** | **5%** |

### Financial Statistics/Estimates

| | Book Value $ | EBITDA 2015 $ | EBITDA 2016 $ | EBITDA 2017 $ | EPS 2015 $ | EPS 2016 $ | EPS 2017 $ |
|---|---|---|---|---|---|---|---|
| ATMOS ENERGY | 33.32 | 949 | 958 | 1,036 | 3.09 | 3.37 | 3.54 |
| LACLEDE GROUP | 38.73 | 419 | 424 | 471 | 3.15 | 3.42 | 3.54 |
| **NEW JERSEY RESOURCES** | **13.6** | **202** | **249** | **286** | **2.10** | **1.61** | **1.70** |
| NORTHWEST NATURAL GAS | 28.3 | 264 | 223 | 233 | 1.96 | 2.21 | 2.31 |
| **SOUTH JERSEY INDUSTRIES** | **15.9** | 245 | **272** | **293** | **1.52** | **1.34** | **1.35** |
| SOUTHWEST GAS | 34.2 | 555 | 567 | 596 | 2.92 | 3.16 | 3.46 |
| **WGL HOLDINGS, INC.** | **26.9** | **469** | **447** | **495** | **2.62** | **3.27** | **3.37** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

## Rating Data / Trading & Market Data

| | Symbol | Price 12/30/2016 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) |
| BLACK HILLS CORP | BKH | $61.34 | NR | 7 | | | 238 | 3,260 | 65 | 45 | 53 | 53 | 1.05% | 91.5% | 10 | 0.8 | 6,641 |
| ENERGEN | EGN | $57.67 | NR | 30 | | | 653 | 5,598 | 64 | 21 | 97 | 96 | 0.62% | 94.1% | 1 | 1.6 | 5,723 |
| EQUITABLE RESOURCES | EQT | $65.40 | NR | 20 | | | 1,247 | 11,298 | 81 | 48 | 173 | 172 | 0.58% | 91.7% | 3 | 1.0 | 15,529 |
| MDU RESOURCES, INC. | MDU | $28.77 | NR | 6 | | | 711 | 5,619 | 30 | 16 | 195 | 194 | 0.92% | 66.9% | 1 | 1.0 | 7,491 |
| NATIONAL FUEL GAS | NFG | $56.64 | NR | 7 | | | 236 | 4,824 | 60 | 40 | 85 | 79 | 6.93% | 66.1% | 3 | 0.9 | 6,761 |
| WILLIAMS COMPANIES | WMB | $31.14 | NR | 7 | | | 3,982 | 23,381 | 32 | 10 | 751 | 749 | 0.25% | 87.7% | 1 | 1.6 | 57,419 |
| **MEDIAN** | | | | | | | **682** | **5,609** | | | | | **0.77%** | **90%** | **2** | **1.0** | |

## Valuation Statistics

| | Mkt/ Book | TEV/EBITDA 2015 | TEV/EBITDA 2016 | TEV/EBITDA 2017 | P/EPS 2015 | P/EPS 2016 | P/EPS 2017 |
|---|---|---|---|---|---|---|---|
| | X | X | X | X | X | X | X |
| BLACK HILLS CORP | 2.0 | 14.8 | 12.9 | 10.1 | -86.5 | 20.6 | 17.7 |
| ENERGEN | 1.8 | 17.9 | 19.6 | 10.3 | -4.6 | -45.7 | ###### |
| EQUITABLE RESOURCES | 1.9 | 15.5 | 12.5 | 9.0 | 116.8 | -114.1 | 88.3 |
| MDU RESOURCES, INC. | 2.5 | 15.1 | 12.3 | 10.5 | -9.0 | 25.2 | 20.7 |
| NATIONAL FUEL GAS | 3.2 | 12.1 | 8.5 | 8.3 | -16.5 | 18.3 | 18.8 |
| WILLIAMS COMPANIES | 4.8 | 17.4 | 13.2 | 12.5 | -41.0 | 45.0 | 31.5 |
| **MEDIAN** | **2.3** | **15.3** | **12.7** | **10.2** | **-12.8** | **19.5** | **19.8** |

## Balance Sheet and Credit Ratings / Liquidity and Profitability Ratios

| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Dividend | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 214 ROA | 2014 ROE | 2014 Yield | 2014 EPS Yield |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % |
| BLACK HILLS CORP | 32% | 0% | 2% | 64% | 2% | BBB- | $1.68 | 2.74% | 227.8 | 0.87 | 0.6 | 4 | -1% | -2.3% | -235% | -2% |
| ENERGEN | 85% | 0% | 0% | 14% | 1% | BBB+ | $0.00 | 0.00% | N/A | 1.954 | 1.9 | 7 | -18% | -30.0% | -1410% | -30% |
| EQUITABLE RESOURCES | 50% | 0% | 27% | 23% | 1% | BBB | $0.12 | 0.18% | -4.9 | 3.469 | 3.5 | 6 | 1% | 1.8% | -1527% | 1% |
| MDU RESOURCES, INC. | 54% | 0% | 0% | 43% | 2% | BBB+ | $0.77 | 2.68% | 288 | 1.538 | 1.2 | 6 | 2% | 5.4% | 44% | -17% |
| NATIONAL FUEL GAS | 42% | 0% | 0% | 58% | 0% | BBB+ | $1.62 | 2.86% | -46.6 | 1.36 | 1.1 | 5 | -5% | -16.4% | -5% | -6% |
| WILLIAMS COMPANIES | 12% | 0% | 24% | 61% | 2% | BBB- | $0.80 | 2.57% | -142 | 0.66 | 0.6 | 3 | -1% | -7.7% | -254% | -3% |
| **MEDIAN** | **46%** | **0%** | **1%** | **50%** | **1%** | | **$0.79** | **2.62%** | **-5** | **1.4** | **1.2** | **5** | **-1%** | **-5.0%** | **-245%** | **-5%** |

## Financial Statistics/Estimates

| | Book Value | EBITDA 2015 | EBITDA 2016 | EBITDA 2017 | EPS 2015 | EPS 2016 | EPS 2017 |
|---|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | $ | $ |
| BLACK HILLS CORP | 30.21 | 449 | 514 | 657 | -0.71 | 2.98 | 3.46 |
| ENERGEN | 32.70 | 321 | 293 | 554 | -12.43 | -1.26 | -0.01 |
| EQUITABLE RESOURCES | 35.00 | 1,004 | 1,240 | 1,725 | 0.56 | -0.57 | 0.74 |
| MDU RESOURCES, INC. | 11.62 | 497 | 610 | 711 | -3.20 | 1.14 | 1.39 |
| NATIONAL FUEL GAS | 17.94 | 560 | 794 | 816 | -3.43 | 3.09 | 3.01 |
| WILLIAMS COMPANIES | 6.48 | 3,291 | 4,364 | 4,590 | -0.76 | 0.69 | 0.99 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

Comparative Valuation Statistics

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Rating Data | | | | | | Trading & Market Data | | | | | | | | | | | Valuation Statistics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | Price 12/30/2016 | JMS Rating | Analyst Coverage | Fair Value | Disc To FV | Daily Volume | Market Capital | 52-Week High | 52-Week Low | Avg Shs Out | Free Float | Insider Hldg | Inst. Hldg | % of Float Short | Beta | TEV | Mkt/ Book | TEV/EBITDA 2015 | TEV/EBITDA 2016 | TEV/EBITDA 2017 | P/EPS 2015 | P/EPS 2016 | P/EPS 2017 |
| | | $ | | | | | 1000 | $ (mil) | $ | $ | (mil) | (mil) | % | % | % | X | $ (mil) | X | X | X | X | X | X | X |
| OGE ENERGY CORP | OGE | $33.45 | NR | 7 | | | 524 | 6,680 | 34 | 23 | 200 | 199 | 0.53% | 68.9% | 1 | 0.7 | 9,530 | 1.9 | 12.1 | 10.9 | 10.9 | 24.6 | 19.0 | 19.0 |
| ONEOK, INC. | OKE | $57.41 | NR | 10 | | | 1,271 | 12,086 | 59 | 19 | 211 | 208 | 1.09% | 73.6% | 2 | 1.3 | 24,684 | 56.4 | 18.3 | 14.1 | 14.1 | 49.5 | 33.9 | 33.9 |
| NISOURCE | NI | $22.14 | NR | 15 | | | 1,765 | 7,145 | 27 | 19 | 323 | 319 | 1.05% | 84.0% | 1 | 0.7 | 14,879 | 1.9 | 11.2 | 10.2 | 10.2 | 24.7 | 20.6 | 20.6 |
| SEMPRA ENERGY | SRE | $100.64 | NR | 13 | | | 940 | 25,166 | 115 | 87 | 250 | 250 | 0.15% | 82.5% | 3 | 0.7 | 42,957 | 2.0 | 12.9 | 12.5 | 12.5 | 18.7 | 20.8 | 20.8 |
| **UGI CORP** | **UGI** | **$46.08** | **Buy** | **5** | **47.00** | **2%** | **936** | **7,971** | **48** | **32** | **173** | **172** | **0.85%** | **79.8%** | **1** | **0.7** | **12,379** | **2.8** | **8.7** | **8.8** | **8.5** | **22.2** | **19.3** | **19.5** |
| SPECTRA ENERGY* | SE | $41.09 | Ex Review | 8 | | | 2,168 | 28,825 | 44 | 23 | 702 | 699 | 0.30% | 69.6% | 1 | 1.0 | 48,025 | 3.9 | 19.2 | 17.5 | 17.5 | 141.7 | 35.5 | 35.5 |
| **MEDIAN** | | | | | | | **1,106** | **10,028.6** | | | | | **N/A** | **77%** | **1** | **0.7** | | **2.4** | **12.5** | **11.7** | **11.7** | **24.7** | **20.7** | **20.7** |

**covered by Janney Research*

| | Balance Sheet and Credit Ratings | | | | | | Liquidity and Profitability Ratios | | | | | | | | | | Financial Statistics/Estimates | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common Equity | Pref Stock | Minority Interest | LT Debt | ST Debt | Credit Rating | Annual Dividend | Div Yield | Div Payout | Current Ratio | Quick Ratio | Interest Coverage | 2014 ROA | 2014 ROE | 2014 FCF Yield | 2014 EPS Yield | Book Value | EBITDA 2015 | EBITDA 2016 | EBITDA 2017 | EPS 2015 | EPS 2016 | EPS 2017 |
| | % | % | % | % | % | (S&P) | $ | % | % | X | X | X | % | % | % | % | $ | $ | $ | $ | $ | $ | $ |
| OGE ENERGY CORP | 55% | 0% | 0% | 40% | 5% | BBB+ | $1.21 | 3.62% | 72.74 | 0.688 | 0.48 | 5.23 | 2.78% | 8.26% | 605.24% | 5.17% | 17.25 | 789 | 872 | 872 | 1.36 | 1.76 | 1.76 |
| ONEOK, INC. | 2% | 0% | 25% | 64% | 9% | BBB | $2.46 | 4.28% | 182.22 | 0.585 | 0.46 | 3.42 | 1.63% | 54.11% | -349.26% | 4.70% | 1.02 | 1,348 | 1,747 | 1,747 | 1.16 | 1.70 | 1.70 |
| NISOURCE | 33% | 0% | 0% | 53% | 14% | | $0.66 | 2.98% | 68.38 | 0.473 | 0.29 | 3.85 | 0.94% | 3.96% | 154.01% | 4.59% | 11.82 | 1,326 | 1,461 | 1,461 | 0.90 | 1.07 | 1.07 |
| SEMPRA ENERGY | 40% | 0% | 3% | 44% | 12% | BBB+ | $3.02 | 3.00% | 55.01 | 0.43 | 0.39 | 4.57 | 3.34% | 11.65% | -100.05% | 5.71% | 49.38 | 3,318 | 3,443 | 3,443 | 5.37 | 4.83 | 4.83 |
| **UGI CORP** | **37%** | **0%** | **10%** | **49%** | **4%** | ** | **$0.95** | **2.06%** | **44.71** | **0.987** | **0.84** | **6.31** | **3.41%** | **13.16%** | **511.02%** | **4.60%** | **16.39** | **1,419** | **1,407** | **1,464** | **2.08** | **2.38** | **2.36** |
| SPECTRA ENERGY | 27% | 2% | 15% | 48% | 8% | BBB+ | $1.62 | 3.94% | 360.23 | 0.475 | 0.40 | 3.84 | 0.59% | 2.56% | -93.24% | 1.21% | 10.65 | 2,506 | 2,738 | 2,738 | 0.29 | 1.16 | 1.16 |
| **MEDIAN** | **35%** | **0%** | **6%** | **49%** | **8%** | | **$1.42** | **3.31%** | **71** | **0.53** | **0.4** | 4 | **N/A** | **10.0%** | **30%** | **5%** | | | | | | | |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

## Industry Historicals

# Utilities
Historical Change in Total Return


**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Katherine Burke**, 646-840-3207 kburke@janney.com


| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/16 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| **SABESP** | **SBSP3-BR** | **$28.79** | **$34.00** | **$16.27** | **N/A** | **0.76** | **5.0** | **-3.9** | **-4.6** | **53.6** | **53.6** | **89.3** | **218.1** | **22.2** | **73.5** | **-6.3** | **-33.2** | **13.5** |
| **AMERICAN WATER WORKS** | **AWK** | **$72.36** | **$85.24** | **$58.90** | **776** | **0.50** | **-0.8** | **-0.2** | **-2.8** | **23.6** | **22.2** | **157.3** | **N/A** | **30.0** | **20.6** | **16.1** | **29.4** | **14.9** |
| **AQUA AMERICA** | **WTR** | **$30.04** | **$35.83** | **$28.03** | **920** | **0.61** | **-0.6** | **1.0** | **-0.8** | **3.2** | **1.6** | **93.3** | **115.0** | **0.9** | **18.6** | **18.8** | **16.1** | **14.5** |
| **CALIFORNIA WATER** | **CWT** | **$33.90** | **$36.85** | **$22.48** | **142** | **0.67** | **-0.6** | **-1.9** | **6.2** | **49.2** | **45.4** | **115.1** | **128.0** | **1.4** | **4.1** | **29.7** | **9.7** | **-2.7** |
| **AMERICAN STATES WATER** | **AWR** | **$45.56** | **$47.24** | **$37.28** | **59** | **0.73** | **-0.2** | **7.5** | **14.5** | **11.0** | **8.1** | **197.3** | **209.9** | **4.5** | **41.8** | **23.0** | **34.7** | **13.9** |
| **SJW** | **SJW** | **$55.98** | **$56.93** | **$28.58** | **40** | **0.75** | **-0.2** | **4.3** | **28.7** | **92.9** | **87.3** | **169.9** | **87.0** | **-8.0** | **15.9** | **15.1** | **10.8** | **-5.3** |
| MIDDLESEX WATER | MSEX | $42.94 | $44.48 | $25.00 | 56 | 0.66 | 1.9 | 5.4 | 22.6 | 65.6 | 60.3 | 172.8 | 230.4 | 5.8 | 9.1 | 11.1 | 14.2 | 19.0 |
| CONNECTICUT WATER | CTWS | $55.85 | $58.32 | $37.48 | 13 | 0.64 | -0.2 | 2.4 | 12.9 | 50.4 | 46.8 | 138.4 | 243.2 | 0.9 | 13.4 | 23.1 | 5.3 | 7.8 |
| YORK WATER | YORW | $38.20 | $39.85 | $23.79 | 13 | 0.72 | -1.0 | 5.4 | 29.3 | 56.2 | 50.8 | 146.8 | 186.9 | 5.3 | 2.7 | 22.5 | 14.0 | 10.2 |
| ARTESIAN RESOURCES | ARTNA | $31.94 | $35.00 | $25.17 | 15 | 0.56 | 0.5 | 1.3 | 12.8 | 18.9 | 15.4 | 103.9 | 139.2 | 3.5 | 23.8 | 6.1 | 2.4 | 27.5 |
| PURE CYCLE | PCYO | $5.50 | $5.93 | $3.65 | 94 | 0.76 | -1.8 | 11.1 | -4.2 | 14.6 | 15.3 | 192.6 | -33.3 | -47.0 | 50.5 | 123.7 | -36.8 | 20.0 |
| **Average** | | | | | **213** | **0.67** | **0.2** | **3.0** | **10.4** | **39.9** | **37.0** | **143.3** | **152.4** | **1.8** | **24.9** | **25.7** | **6.1** | **12.1** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2238.83 | 2277.53 | 1810.10 | ----- | 1.03 | -1.1 | 1.8 | 3.3 | 9.5 | 8.5 | 78.0 | 57.9 | 0.0 | 13.4 | 29.6 | 11.4 | -0.7 |
| Dow Jones Industrials | DJIAK | 19762.60 | 19987.63 | 15450.56 | ----- | 1.00 | -0.9 | 3.3 | 7.9 | 13.4 | 12.3 | 61.8 | 58.6 | 5.5 | 7.3 | 26.5 | 7.5 | -2.2 |
| Nasdaq Composite | COMP | 5383.12 | 5512.37 | 4209.76 | ----- | 1.06 | -1.5 | 1.1 | 1.3 | 7.5 | 6.3 | 106.6 | 122.9 | -1.8 | 15.9 | 38.3 | 13.4 | 5.7 |
| Powershares Dyn Water | PHO-US | 24.59 | $25.55 | $18.15 | ----- | NA | -1.2 | -0.6 | 0.2 | 14.0 | 13.3 | 50.8 | 42.0 | -10.7 | 24.4 | 27.1 | -1.2 | -15.2 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology
## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com

**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/16 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % |
| EMERSON ELECTRIC | EMR | $55.75 | $58.28 | $41.25 | 1957 | 1.12 | -1.8 | -1.2 | 3.2 | 21.0 | 19.3 | 40.3 | 70.8 | 17.4 | 36.1 | -9.6 | -19.7 |
| **XYLEM** | **XYL** | **$49.52** | **$54.99** | **$31.67** | **646** | **1.12** | **-2.9** | **-4.0** | **-5.3** | **37.6** | **36.2** | **108.1** | **N/A** | **7.2** | **29.9** | **11.6** | **-2.6** |
| FLOWSERVE | FLS | $48.05 | $52.50 | $33.86 | 497 | 1.30 | -1.2 | 1.7 | 0.0 | 16.0 | 14.7 | 54.3 | 221.7 | 49.5 | 62.6 | -23.4 | -28.6 |
| SPX | SPW | $23.72 | $25.95 | $7.62 | 201 | 1.44 | -1.5 | -2.9 | 17.8 | 154.2 | 151.3 | 64.5 | 75.0 | 18.1 | 43.7 | -12.4 | -56.5 |
| ROPER INDUSTRIES | ROP | $183.08 | $191.16 | $155.79 | 373 | 1.05 | -1.5 | 1.1 | 0.5 | -2.9 | -3.3 | 117.1 | 286.6 | 29.3 | 24.9 | 13.4 | 22.1 |
| PENTAIR | PNR | $56.07 | $66.99 | $41.57 | 887 | 1.26 | -1.3 | -2.4 | -12.2 | 16.0 | 14.9 | 86.0 | 120.2 | 50.9 | 60.7 | -13.2 | -23.8 |
| **IDEX** | **IEX** | **$90.06** | **$95.76** | **$67.20** | **353** | **1.10** | **-0.8** | **-3.8** | **-3.4** | **19.5** | **18.7** | **163.8** | **236.4** | **27.9** | **61.3** | **7.0** | **0.0** |
| **AMETEK** | **AME** | **$48.60** | **$54.25** | **$42.82** | **1046** | **1.13** | **-1.7** | **2.8** | **1.9** | **-8.6** | **-9.6** | **78.8** | **265.7** | **34.7** | **40.9** | **0.6** | **2.5** |
| CRANE COMPANY | CR | $72.12 | $78.94 | $41.68 | 173 | 1.15 | -1.4 | -1.9 | 15.0 | 54.1 | 52.7 | 72.1 | 149.4 | 1.7 | 48.2 | -11.1 | -16.6 |
| ITRON | ITRI | $62.85 | $66.10 | $29.02 | 205 | 1.07 | -2.0 | -2.1 | 12.7 | 73.7 | 72.5 | 75.7 | 21.2 | 24.5 | -7.0 | 2.1 | -14.4 |
| **WATTS WATER TECHNOLOGIES** | **WTS** | **$65.20** | **$71.05** | **$44.51** | **114** | **1.21** | **-1.7** | **-4.5** | **0.8** | **32.8** | **31.1** | **101.4** | **80.7** | **27.2** | **45.3** | **3.6** | **-20.8** |
| MUELLER INDUSTRIES | MLI | $39.96 | $41.27 | $23.09 | 84 | 1.16 | -1.0 | 5.2 | 23.6 | 49.2 | 46.1 | 118.4 | 184.2 | 31.5 | 27.1 | 9.4 | -19.9 |
| **MUELLER WATER PRODUCTS** | **MWA** | **$13.31** | **$14.20** | **$7.52** | **631** | **1.46** | **-1.4** | **0.6** | **6.3** | **56.4** | **55.5** | **476.5** | **1.7** | **134.2** | **68.6** | **10.1** | **-15.3** |
| FRANKLIN ELECTRIC | FELE | $38.90 | $44.55 | $23.75 | 144 | 1.34 | -0.1 | -0.4 | -4.2 | 45.7 | 42.2 | 88.1 | 70.9 | 43.9 | 45.2 | -15.1 | -27.1 |
| CIRCOR INT'L | CIR | $64.88 | $69.54 | $32.79 | 71 | 1.40 | -1.6 | 2.4 | 9.0 | 54.4 | 53.5 | 86.6 | 83.2 | 12.6 | 104.6 | -25.2 | -29.9 |
| BADGER METER | BMI | $36.95 | $39.36 | $26.40 | 108 | 1.13 | -4.0 | 1.9 | 10.6 | 27.7 | 24.3 | 169.7 | 206.0 | 64.0 | 16.6 | 10.4 | 0.0 |
| NORTHWEST PIPE | NWPX | $17.22 | $18.92 | $7.46 | 106 | 1.16 | -1.8 | -1.7 | 45.8 | 53.9 | 52.9 | -24.7 | -48.8 | 4.4 | 58.3 | -20.2 | -62.8 |
| 3M CORP | MMM | $178.57 | $182.27 | $134.64 | 1594 | 0.90 | -0.1 | 4.0 | 2.0 | 21.7 | 20.7 | 147.7 | 197.4 | 16.7 | 54.5 | 20.0 | -5.9 |
| CLARCOR INC | CLC | $82.47 | $83.00 | $44.13 | 319 | 1.12 | 0.0 | 17.1 | 27.4 | 68.7 | 66.0 | 75.7 | 173.5 | -3.4 | 36.5 | 4.8 | -24.7 |
| LYDALL INC | LDL | $61.85 | $64.85 | $25.41 | 84 | 1.35 | -0.9 | 3.6 | 21.0 | 74.3 | 70.8 | 551.7 | 472.2 | 51.1 | 22.9 | 86.3 | 8.1 |
| ENERGY RECOVERY | ERII | $10.35 | $16.67 | $5.28 | 843 | 1.63 | -3.0 | -5.0 | -35.2 | 46.4 | 44.6 | 301.2 | N/A | 31.8 | 63.2 | -5.0 | 34.2 |
| **Average** | | | | | **497** | **1.22** | **-1.5** | **0.5** | **7.1** | **43.7** | **41.7** | **140.6** | **150.9** | **32.1** | **45.0** | **2.1** | **-14.4** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2238.83 | 2277.53 | 1810.10 | ----- | 1.03 | -1.1 | 1.8 | 3.3 | 9.5 | 8.5 | 78.0 | 57.9 | 13.4 | 29.6 | 11.4 | -0.7 |
| Dow Jones Industrials | DJIAK | 19762.60 | 19987.63 | 15450.56 | ----- | 1.00 | -0.9 | 3.3 | 7.9 | 13.4 | 12.3 | 61.8 | 58.6 | 7.3 | 26.5 | 7.5 | -2.2 |
| Nasdaq Composite | COMP | 5383.12 | 5512.37 | 4209.76 | ----- | 1.06 | -1.5 | 1.1 | 1.3 | 7.5 | 6.3 | 106.6 | 122.9 | 15.9 | 38.3 | 13.4 | 5.7 |
| Powershares Dyn Water | PHO-US | $24.59 | $25.55 | $18.15 | ----- | NA | -1.2 | -0.6 | 0.2 | 14.0 | 13.3 | 50.8 | 42.0 | 24.4 | 27.1 | -1.2 | -15.2 |



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Water Solutions
## Historical Change in Total Return

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| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/16 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2005 | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % | % |
| GENERAL ELECTRIC | GE | $31.60 | $33.00 | 07/20/16 | $27.10 | 02/11/16 | 25455 | 1.02 | -0.9 | 3.5 | 7.5 | 4.6 | 4.9 | 108.1 | 21.6 | -1.4 | 1.3 | 21.2 | 37.9 | -6.7 | 27.5 |
| VEOLIA ENVIRONNEMENT | VE | $17.06 | $24.70 | 02/01/16 | $16.24 | 12/16/16 | 128 | 1.03 | 2.3 | -1.4 | -25.9 | -26.2 | -27.2 | 92.1 | -65.8 | 26.7 | -60.5 | 17.8 | 41.9 | 12.1 | 38.9 |
| FORTIVE | FTV | $53.63 | $56.24 | 11/28/16 | $43.00 | 06/13/16 | 705 | 1.05 | -1.6 | -2.5 | 5.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| AIR PRODUCTS & CHEM | APD | $143.82 | $157.84 | 09/06/16 | $114.64 | 01/20/16 | 726 | 1.03 | -1.2 | 0.2 | 4.7 | 22.5 | 20.5 | 108.1 | 184.5 | 4.3 | -3.8 | 1.7 | 36.9 | 32.1 | -7.6 |
| ASHLAND | ASH | $109.29 | $125.00 | 09/21/16 | $88.30 | 02/11/16 | 369 | 1.06 | -0.7 | -3.0 | -5.4 | 8.0 | 6.5 | 104.4 | 84.0 | 22.5 | 13.7 | 42.4 | 22.4 | 25.0 | -13.2 |
| TETRA TECH | TTEK | $43.15 | $44.30 | 12/13/16 | $22.85 | 01/20/16 | 189 | 1.05 | -1.0 | 0.7 | 21.9 | 67.7 | 64.5 | 106.1 | 146.0 | -6.4 | -13.8 | 22.6 | 5.7 | -3.8 | -1.4 |
| LAYNE CHRISTENSEN | LAYN | $10.87 | $11.42 | 12/27/16 | $4.30 | 01/20/16 | 194 | 1.21 | -0.1 | 2.2 | 27.7 | 106.7 | 107.8 | -55.1 | -66.9 | 40.1 | -29.7 | 0.3 | -29.6 | -44.1 | -44.9 |
| **CALGON CARBON** | **CCC** | **$17.00** | **$18.80** | **12/08/16** | **$12.70** | **07/06/16** | **170** | **1.06** | **-4.0** | **-3.7** | **12.4** | **-0.1** | **-0.6** | **10.8** | **180.9** | **-36.6** | **3.9** | **-9.7** | **45.1** | **1.0** | **-16.1** |
| **CONSOLIDATED WATER** | **CWCO** | **$10.85** | **$14.69** | **05/10/16** | **$9.80** | 12/15/16 | **110** | **0.83** | **0.2** | **-0.2** | **-6.0** | **-9.1** | **-11.9** | **45.3** | **-44.4** | 32.6 | **-3.4** | **-10.4** | **95.3** | **-22.3** | **17.6** |
| CANTEL MEDICAL | CMN | $78.75 | $88.81 | 12/06/16 | $55.01 | 01/15/16 | 165 | 1.13 | -1.1 | -3.5 | 1.0 | 27.0 | 24.6 | 543.4 | 1021.3 | -28.1 | 19.9 | 60.6 | 71.3 | 27.9 | 43.9 |
| TRI-TECH HOLDINGS | TRIT | $0.00 | $0.02 | 01/13/16 | $0.00 | 12/20/16 | 5 | -17.14 | 0.0 | -99.0 | -99.9 | -100.0 | -99.9 | -100.0 | N/A | N/A | -57.2 | -40.3 | -47.6 | -89.6 | -86.7 |
| BARNWELL INDUSTRIES | BRN | $1.64 | $2.04 | 11/30/16 | $1.28 | 03/01/16 | 7 | 0.30 | -2.4 | -5.2 | -0.6 | -12.8 | -15.6 | -39.3 | -93.0 | 103.9 | -25.3 | 23.0 | -9.3 | -11.3 | -29.6 |
| STANTEC INC | STN | $25.25 | $27.70 | 12/01/16 | $20.71 | 02/29/16 | 3 | 1.02 | -0.3 | -4.9 | 7.7 | 3.3 | 2.0 | 98.6 | 148.9 | N/A | -2.6 | 49.9 | 56.6 | -10.6 | -8.4 |
| **Average** | | | | | | | **2171** | **-0.41** | **-0.8** | **-9.0** | **-3.8** | **7.6** | **6.3** | **85.2** | **137.9** | **16.5** | **-13.1** | **14.9** | **27.2** | **-7.5** | **-6.6** |
| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 31.60 | 33.00 | 07/20/16 | 27.10 | 02/11/16 | ----- | 1.02 | -0.9 | 3.5 | 7.5 | 4.6 | 4.9 | 108.1 | 21.6 | -1.4 | 1.3 | 21.2 | 37.9 | -6.7 | 27.5 |
| Dow Jones Industrials | DJIAK | 17.06 | 24.70 | 02/01/16 | 16.24 | 12/16/16 | ----- | 1.03 | 2.3 | -1.4 | -25.9 | -26.2 | -27.2 | 92.1 | -65.8 | 26.7 | -60.5 | 17.8 | 41.9 | 12.1 | 38.9 |
| Nasdaq Composite | COMP | 53.63 | 56.24 | 11/28/16 | 43.00 | 06/13/16 | ----- | 1.05 | -1.6 | -2.5 | 5.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Powershares Dyn Water | PHO-US | $143.82 | $157.84 | 09/06/16 | $114.64 | 01/20/16 | ----- | 1.03 | -1.2 | 0.2 | 4.7 | 22.5 | 20.5 | 108.1 | 184.5 | 4.3 | -3.8 | 1.7 | 36.9 | 32.1 | -7.6 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Historical Change in Total Return

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**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLIANT | LNT | $37.89 | $40.99 | $30.38 | 772 | 0.59 | 0.1 | 5.5 | -0.3 | 25.4 | 23.5 | 105.9 | 199.7 | 24.9 | 3.6 | 21.9 | 33.4 | -2.6 |
| AVISTA | AVA | $39.99 | $45.22 | $34.31 | 325 | 0.61 | 0.7 | -1.2 | -3.5 | 17.0 | 15.0 | 90.8 | 137.7 | 18.8 | -1.9 | 22.3 | 30.5 | 4.2 |
| **CHESAPEAKE UTILITIES** | **CPK** | **$66.95** | **$70.00** | **$52.25** | **79** | **0.69** | **-1.3** | **3.8** | **10.1** | **20.3** | **13.3** | **163.0** | **351.8** | **7.8** | **8.2** | **36.1** | **27.1** | **16.9** |
| CMS ENERGY | CMS | $41.62 | $46.25 | $34.96 | 1681 | 0.52 | -0.2 | 3.5 | -0.2 | 18.9 | 16.9 | 125.0 | 249.9 | 22.8 | 15.1 | 13.9 | 34.6 | 7.3 |
| CONEDISON | ED | $73.68 | $81.88 | $63.47 | 1139 | 0.35 | 0.1 | 5.6 | -1.2 | 18.9 | 17.1 | 45.7 | 143.8 | 31.2 | -6.7 | 3.8 | 24.8 | 1.4 |
| DTE CORP | DTE | $98.51 | $100.45 | $78.01 | 571 | 0.55 | -0.2 | 6.7 | 6.1 | 26.9 | 24.8 | 117.5 | 215.5 | 25.7 | 14.9 | 14.9 | 34.7 | -3.7 |
| MGE ENERGY | MGEE | $65.30 | $66.85 | $44.83 | 69 | 0.69 | 0.6 | 10.3 | 16.1 | 43.9 | 42.6 | 141.0 | 278.0 | 12.8 | 12.6 | 16.7 | 21.9 | 4.6 |
| **EVERSOURCE ENERGY** | **ES** | **$55.23** | **$60.44** | **$50.01** | **1447** | **0.53** | **-0.4** | **7.9** | **2.8** | **11.8** | **10.1** | **81.9** | **175.7** | **16.2** | **12.3** | **12.4** | **30.6** | **-1.3** |
| NORTHWESTERN | NWE | $56.87 | $63.75 | $52.16 | 277 | 0.59 | -0.5 | 2.3 | -0.3 | 8.5 | 6.6 | 90.8 | 148.0 | 28.8 | 1.2 | 29.5 | 35.0 | -0.5 |
| PG&E CORP | PCG | $60.77 | $65.43 | $50.65 | 1678 | 0.51 | 0.1 | 4.2 | 0.2 | 17.9 | 16.3 | 78.3 | 89.1 | -9.8 | 1.7 | 4.6 | 37.4 | 3.5 |
| SCANA | SCG | $73.28 | $76.41 | $59.46 | 531 | 0.54 | -1.9 | 4.7 | 2.1 | 25.2 | 23.5 | 98.3 | 181.9 | 15.8 | 5.7 | 7.2 | 34.0 | 4.3 |
| TECO ENERGY | TE | - | $27.83 | $26.50 | - | 0.54 | - | - | - | - | - | - | - | 12.7 | -8.0 | 8.1 | 24.9 | 35.6 |
| **AVANGRID** | **AGR** | **$37.88** | **$46.74** | **$35.42** | **597** | **0.64** | **0.0** | **6.0** | **-8.3** | **3.0** | **3.4** | **72.1** | **94.2** | **24.1** | **6.3** | **13.2** | **17.7** | **18.0** |
| **UNITIL CORP** | **UTL** | **$45.34** | **$46.00** | **$34.70** | **24** | **0.57** | **0.6** | **6.8** | **17.1** | **30.8** | **29.5** | **97.9** | **194.4** | **31.6** | **-3.9** | **23.2** | **25.4** | **1.8** |
| VECTREN CORP | VVC | $52.15 | $53.33 | $39.43 | 228 | 0.64 | -1.1 | 6.3 | 4.8 | 27.2 | 24.1 | 109.9 | 190.2 | 24.4 | 2.1 | 25.8 | 35.1 | -4.9 |
| WISCONSIN ENERGY | WEC | $58.65 | $66.10 | $50.44 | 1222 | 0.50 | -0.1 | 4.7 | -1.2 | 18.2 | 16.1 | 99.0 | 237.7 | 22.6 | 8.9 | 16.1 | 32.1 | 0.8 |
| XCEL ENERGY | XEL | $40.70 | $45.42 | $35.19 | 1893 | 0.49 | 0.1 | 5.2 | -0.2 | 17.1 | 15.6 | 77.4 | 166.6 | 22.3 | 0.5 | 8.8 | 33.5 | 3.8 |
| **Average** | | | | | **783** | **0.56** | **-0.2** | **5.1** | **2.8** | **20.7** | **18.7** | **99.7** | **190.9** | **19.6** | **4.3** | **16.4** | **30.1** | **5.3** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2238.83 | 2277.53 | 1810.10 | ----- | 1.03 | -1.1 | 2.0 | 3.8 | 12.0 | 10.9 | 98.2 | 95.7 | 2.1 | 16.0 | 32.4 | 13.7 | 1.4 |
| Dow Jones Industrials | DJIAK | 19762.60 | 19987.63 | 15450.56 | ----- | 1.00 | - | - | - | - | - | - | - | 8.4 | 10.2 | 29.6 | 10.0 | - |
| Nasdaq Composite | COMP | 5383.12 | 5512.37 | 4209.76 | ----- | 1.06 | -1.4 | 1.2 | 1.7 | 8.9 | 7.6 | 119.9 | 148.0 | -1.2 | 17.5 | 40.1 | 14.7 | 7.0 |
| Philadelphia Utility Index | UTY | $619.08 | $672.19 | $537.92 | ----- | NA | -1.2 | -0.6 | 0.2 | 14.0 | 13.3 | 50.8 | 42.0 | -11.3 | 24.4 | 27.1 | -1.2 | -15.2 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Historical Change in Total Return

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**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| ALLETE | ALE | $64.19 | $66.92 | $48.26 | 223 | 0.60 | 0.6 | 3.8 | 8.6 | 30.9 | 29.0 | 86.6 | 112.8 | 17.6 | 2.2 | 26.5 | 15.0 | -4.1 |
| CENTERPOINT ENERGY | CNP | $24.64 | $24.98 | $16.38 | 2037 | 0.76 | -0.8 | 3.3 | 7.3 | 40.9 | 41.3 | 52.1 | 136.3 | 33.1 | -0.2 | 24.8 | 5.1 | -17.6 |
| CLECO | CNL | - | $55.37 | $44.78 | - | 0.45 | - | - | - | - | - | - | - | 27.2 | 8.4 | 20.1 | 20.6 | -1.4 |
| DUKE ENERGY | DUK | $77.62 | $87.75 | $70.16 | 2466 | 0.43 | 0.0 | 5.2 | -1.9 | 13.5 | 12.2 | 46.6 | 118.0 | 30.3 | 1.4 | 13.0 | 26.4 | -10.8 |
| EL PASO ELECTRIC | EE | $46.50 | $48.75 | $37.19 | 139 | 0.58 | -1.3 | 3.9 | 0.1 | 24.1 | 21.7 | 56.0 | 126.4 | 27.0 | -5.1 | 13.4 | 17.6 | -0.7 |
| EMPIRE DISTRICT ELECTRIC | EDE | $34.09 | $34.49 | $26.20 | 543 | 0.54 | 0.0 | 0.2 | 0.6 | 25.3 | 23.1 | 99.5 | 128.4 | -1.8 | 1.5 | 16.6 | 36.5 | -1.3 |
| GREAT PLAINS | GXP | $27.35 | $32.74 | $25.85 | 1470 | 0.56 | -0.7 | 3.6 | 1.2 | 3.9 | 2.2 | 52.1 | 35.9 | 16.6 | -2.8 | 24.1 | 21.6 | -0.2 |
| HAWAIIAN ELECTRIC | HE | $33.07 | $34.98 | $27.30 | 411 | 0.58 | -1.6 | 7.4 | 11.9 | 19.0 | 18.1 | 56.3 | 101.8 | 21.5 | -0.4 | 8.6 | 34.9 | -10.0 |
| IDACORP | IDA | $80.55 | $83.40 | $65.03 | 143 | 0.66 | -0.6 | 5.8 | 3.6 | 21.8 | 19.2 | 121.4 | 192.0 | 17.7 | 5.6 | 23.4 | 31.8 | 5.9 |
| PINNACLE WEST | PNW | $78.03 | $82.78 | $62.51 | 432 | 0.54 | 0.5 | 5.5 | 3.6 | 25.3 | 23.9 | 96.5 | 146.9 | 21.8 | 10.3 | 7.9 | 34.5 | -2.0 |
| PNM RESOURCES | PNM | $34.30 | $36.15 | $29.22 | 652 | 0.65 | 0.7 | 8.5 | 5.6 | 15.4 | 13.4 | 116.5 | 56.6 | 42.6 | 15.8 | 21.0 | 26.3 | 6.1 |
| PORTLAND GENERAL | POR | $43.33 | $45.21 | $35.27 | 294 | 0.59 | 0.0 | 4.9 | 2.5 | 22.7 | 19.9 | 103.7 | 136.6 | 21.3 | 12.7 | 14.5 | 29.4 | -0.6 |
| SOUTHERN COMPANY | SO | $49.19 | $54.64 | $46.00 | 3485 | 0.38 | -0.3 | 5.1 | -3.0 | 9.9 | 8.8 | 33.4 | 113.5 | 26.7 | -3.5 | 0.5 | 25.2 | -0.1 |
| WESTAR ENERGY | WR | $56.35 | $57.50 | $40.01 | 1150 | 0.53 | 0.3 | -0.4 | 0.0 | 36.8 | 34.4 | 138.1 | 243.1 | 19.6 | 4.1 | 17.4 | 33.2 | 6.9 |
| **Average** | | | | | **1034** | **0.56** | **-0.3** | **4.4** | **3.1** | **22.3** | **20.6** | **81.5** | **126.8** | **22.9** | **3.6** | **16.6** | **25.6** | **-2.1** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2238.83 | 2277.53 | 1810.10 | ----- | 1.03 | -1.1 | 2.0 | 3.8 | 12.0 | 10.9 | 98.2 | 95.7 | 2.1 | 16.0 | 32.4 | 13.7 | 1.4 |
| Dow Jones Industrials | DJIAK | 19762.60 | 19987.63 | 15450.56 | ----- | 1.00 | - | - | - | - | - | - | - | 8.4 | 10.2 | 29.6 | 10.0 | - |
| Nasdaq Composite | COMP | 5383.12 | 5512.37 | 4209.76 | ----- | 1.06 | -1.4 | 1.2 | 1.7 | 8.9 | 7.6 | 119.9 | 148.0 | -1.2 | 17.5 | 40.1 | 14.7 | 7.0 |
| Philadelphia Utility Index | UTY | 619.08 | 672.19 | 537.92 | ----- | NA | -1.2 | -0.6 | 0.2 | 14.0 | 13.3 | 50.8 | 42.0 | -11.3 | 24.4 | 27.1 | -1.2 | -15.2 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Combination Electrics with Merchant)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AMEREN | AEE | $52.46 | $54.08 | $41.50 | 951 | 0.56 | 0.0 | 7.8 | 7.6 | 25.7 | 23.5 | 95.7 | 61.0 | 24.4 | -2.5 | 23.3 | 32.7 | -2.4 |
| AMERICAN ELECTRIC POWER | AEP | $62.96 | $71.32 | $56.75 | 1677 | 0.54 | -0.3 | 6.6 | -1.0 | 11.9 | 10.7 | 86.2 | 127.5 | 20.6 | 8.2 | 14.2 | 35.1 | -0.3 |
| DOMINION | D | $76.59 | $78.97 | $66.25 | 2460 | 0.53 | -0.2 | 4.5 | 4.1 | 17.7 | 15.9 | 74.3 | 172.2 | 28.9 | 1.7 | 29.8 | 23.0 | -8.8 |
| EDISON INTERNATIONAL | EIX | $71.99 | $78.72 | $57.97 | 1961 | 0.47 | 0.9 | 5.5 | 0.4 | 24.9 | 22.7 | 99.8 | 113.3 | 10.7 | 12.4 | 5.4 | 45.0 | -6.9 |
| ENTERGY | ETR | $73.47 | $82.09 | $65.38 | 971 | 0.53 | 0.8 | 6.9 | -3.1 | 12.5 | 11.1 | 27.4 | 21.3 | 8.3 | -8.4 | 4.3 | 44.8 | -18.2 |
| EXELON | EXC | $35.49 | $37.70 | $26.26 | 3487 | 0.59 | 0.5 | 9.2 | 7.7 | 32.8 | 33.2 | 1.9 | -13.3 | 9.8 | -27.4 | -3.5 | 40.6 | -22.2 |
| FIRST ENERGY | FE | $30.97 | $36.60 | $29.33 | 2524 | 0.56 | -1.0 | -1.0 | -5.4 | 1.9 | 0.1 | -11.9 | -19.1 | 25.3 | -1.1 | -16.5 | 23.5 | -15.2 |
| NEXTERA ENERGY | NEE | $119.46 | $131.98 | $102.20 | 1424 | 0.55 | 0.2 | 4.6 | -1.6 | 18.4 | 17.3 | 130.3 | 206.0 | 21.9 | 17.9 | 28.0 | 27.9 | 0.7 |
| PPL CORP | PPL | $34.05 | $39.92 | $32.08 | 2752 | 0.54 | -0.7 | 2.9 | -0.4 | 4.1 | 3.5 | 57.5 | 59.5 | 17.9 | 2.3 | 10.3 | 26.2 | 6.2 |
| PUBLIC SERVICE ENT GROUP | PEG | $43.88 | $47.41 | $37.85 | 2000 | 0.58 | 0.5 | 7.3 | 5.8 | 17.8 | 16.9 | 63.4 | 96.9 | 9.7 | -2.9 | 9.4 | 34.4 | -2.8 |
| **Average** | | | | | **2021** | **0.54** | **0.1** | **5.4** | **1.4** | **16.8** | **15.5** | **62.5** | **82.5** | **17.8** | **0.0** | **10.5** | **33.3** | **-7.0** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2238.83 | 2277.53 | 1810.10 | ----- | 1.03 | -1.1 | 2.0 | 3.8 | 12.0 | 10.9 | 98.2 | 95.7 | 2.1 | 16.0 | 32.4 | 13.7 | 1.4 |
| Dow Jones Industrials | DJIAK | 19762.60 | 19987.63 | 15450.56 | ----- | 1.00 | - | - | - | - | - | - | - | 8.4 | 10.2 | 29.6 | 10.0 | - |
| Nasdaq Composite | COMP | 5383.12 | 5512.37 | 4209.76 | ----- | 1.06 | -1.4 | 1.2 | 1.7 | 8.9 | 7.6 | 119.9 | 148.0 | -1.2 | 17.5 | 40.1 | 14.7 | 7.0 |
| Philadelphia Utility Index | UTY | 619.08 | 672.19 | 537.92 | ----- | NA | -1.2 | -0.6 | 0.2 | 14.0 | 13.3 | 50.8 | 42.0 | -11.3 | 24.4 | 27.1 | -1.2 | -15.2 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Electric Utilities (Merchant Generators)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Low | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | Per Share | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| CALPINE | CPN | $11.43 | $16.49 | $10.39 | 2778 | 0.90 | -1.8 | 2.5 | -9.6 | -21.0 | -19.6 | -30.0 | - | 22.5 | 11.0 | 7.6 | 13.4 | -34.6 |
| DYNEGY | DYN | $8.46 | $22.01 | $7.01 | 1400 | 1.14 | 1.8 | -2.2 | -31.7 | -36.9 | -33.9 | -95.3 | -99.6 | -51.3 | -89.3 | 12.5 | 41.0 | -55.8 |
| GENON | GEN | $4.25 | $4.44 | $1.38 | 133 | 1.45 | -1.8 | 18.1 | 59.2 | 22.5 | 15.8 | -22.2 | - | -39.9 | 16.7 | -24.5 | 78.2 | -59.5 |
| COVANTA | CVA | $15.60 | $17.75 | $12.48 | 1246 | 0.71 | 0.7 | 8.6 | 3.0 | 7.2 | 7.1 | 42.9 | -0.9 | -19.4 | 39.3 | -0.3 | 29.4 | -25.8 |
| NRG | NRG | $12.26 | $18.32 | $8.92 | 3449 | 1.12 | -0.6 | 8.1 | 9.7 | 6.4 | 12.9 | -25.7 | -51.9 | -7.3 | 28.0 | 27.0 | -4.5 | -55.0 |
| ORMAT TECHNOLOGIES | ORA | $53.62 | $53.89 | $32.25 | 134 | 0.95 | 1.7 | 12.1 | 10.9 | 48.8 | 48.5 | 207.6 | 55.7 | -38.5 | 7.4 | 41.6 | 0.7 | 35.1 |
| **Average** | | | | | **1484** | **1.00** | **0.1** | **8.0** | **6.4** | **4.9** | **5.4** | **17.2** | **-19.5** | **-21.9** | **7.5** | **9.1** | **26.8** | **-31.6** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2238.83 | 2277.53 | 1810.10 | ----- | 1.03 | -1.1 | 2.0 | 3.8 | 12.0 | 10.9 | 98.2 | 95.7 | 2.1 | 16.0 | 32.4 | 13.7 | 1.4 |
| Dow Jones Industrials | DJIAK | 19762.60 | 19987.63 | 15450.56 | ----- | 1.00 | - | - | - | - | - | - | - | 8.4 | 10.2 | 29.6 | 10.0 | - |
| Nasdaq Composite | COMP | 5383.12 | 5512.37 | 4209.76 | ----- | 1.06 | -1.4 | 1.2 | 1.7 | 8.9 | 7.6 | 119.9 | 148.0 | -1.2 | 17.5 | 40.1 | 14.7 | 7.0 |
| Philadelphia Utility Index | UTY | 619.08 | 672.19 | 537.92 | ----- | NA | -1.2 | -0.6 | 0.2 | 14.0 | 13.3 | 50.8 | 42.0 | -11.3 | 24.4 | 27.1 | -1.2 | -15.2 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| AGL RESOURCES, INC. | GAS | N/A | $66.49 | 3-May-16 | $63.07 | 8-Jan-16 | N/A | 0.31 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 23.6 | -1.1 | 23.3 | 20.0 | 21.7 |
| ATMOS ENERGY | ATO | $74.15 | $81.97 | 1-Jul-16 | $60.00 | 15-Jan-16 | 332 | 0.60 | -0.6 | 4.3 | 0.2 | 20.4 | 18.3 | 160.1 | 243.2 | 11.4 | 9.7 | 33.8 | 26.5 | 16.3 |
| LACLEDE GROUP | LG | $64.55 | $71.21 | 1-Jul-16 | $57.10 | 14-Jan-16 | 161 | 0.53 | -0.2 | 0.8 | 2.1 | 12.0 | 9.9 | 91.6 | 175.4 | 15.6 | -0.6 | 22.6 | 21.2 | 15.7 |
| **NEW JERSEY RESOURCES** | **NJR** | **$35.50** | **$38.92** | **6-Jul-16** | **$30.46** | **6-Oct-16** | **711** | **0.70** | **-2.5** | **3.8** | **8.8** | **10.7** | **8.3** | **70.4** | **207.0** | **18.0** | **-16.6** | **21.1** | **36.8** | **11.3** |
| NORTHWEST NATURAL GAS | NWN | $59.80 | $66.17 | 26-Jul-16 | $48.90 | 2-Mar-16 | 94 | 0.55 | -0.3 | 4.4 | 0.3 | 22.2 | 20.2 | 51.3 | 103.7 | 7.1 | -4.2 | 0.9 | 21.5 | 5.5 |
| PIEDMONT NATURAL GAS | PNY | N/A | $60.35 | 10-Jun-16 | $56.70 | 4-Jan-16 | N/A | 0.53 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 26.3 | -4.3 | 9.9 | 23.1 | 49.4 |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **$33.69** | **$34.85** | **20-Dec-16** | **$22.06** | **20-Jan-16** | **439** | **0.66** | **-1.6** | **2.9** | **14.9** | **48.4** | **45.3** | **41.3** | **180.0** | **10.6** | **-8.5** | **14.8** | **8.9** | **-16.7** |
| SOUTHWEST GAS | SWX | $76.62 | $79.58 | 1-Jul-16 | $53.51 | 5-Jan-16 | 198 | 0.65 | 0.8 | 3.4 | 10.4 | 42.5 | 40.6 | 106.2 | 166.7 | 19.1 | 2.6 | 35.3 | 13.5 | -8.2 |
| **WGL HOLDINGS, INC.** | **WGL** | **$76.28** | **$79.97** | **19-Dec-16** | **$58.66** | **11-Oct-16** | **332** | **0.70** | **-2.1** | **5.1** | **22.7** | **24.7** | **20.7** | **107.1** | **248.2** | **28.7** | **-7.9** | **6.3** | **42.2** | **19.1** |
| **Average** | | | | | | | **324** | **0.58** | **-0.9** | **3.5** | **8.5** | **25.9** | **23** | **89.71** | **189** | **18** | **-3** | **18.67** | **24** | **12.69** |

| Market Index Comparisons | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S&P 500 | SPX | 2,238.83 | 2,277.53 | 13-Dec-16 | 1,810.10 | 11-Feb-16 | ----- | 1.00 | -1.1 | 1.8 | 3.3 | 9.5 | 8.5 | 78.0 | 57.9 | 0.0 | 13.4 | 29.6 | 11.4 | -0.7 |
| Dow Jones Industrials | DJIAK | 19,762.60 | 19,987.63 | 20-Dec-16 | 15,450.56 | 20-Jan-16 | ----- | 0.93 | -0.9 | 3.3 | 7.9 | 13.4 | 12.3 | 61.8 | 58.6 | 5.5 | 7.3 | 26.5 | 7.5 | -2.2 |
| Nasdaq Composite | COMP | 5,383.12 | 5,512.37 | 27-Dec-16 | 4,209.76 | 11-Feb-16 | ----- | 1.10 | -1.5 | 1.1 | 1.3 | 7.5 | 6.3 | 106.6 | 122.9 | -1.8 | 15.9 | 38.3 | 13.4 | 5.7 |
| Philadelphia Utility Index | UTY | $619.08 | $672.19 | 6-Jul-16 | 537.92 | 20-Jan-16 | ----- | 0.52 | -0.1 | 5.0 | -0.5 | 13.2 | 11.9 | 28.6 | 25.5 | 14.1 | -4.7 | 6.5 | 24.2 | -9.8 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

# Gas Utilities - Upstream (Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| BLACK HILLS CORP | BKH | $61.34 | $64.58 | 5-Jul-16 | $44.65 | 21-Jan-16 | 238 | 0.85 | -0.5 | 4.4 | 0.9 | 36.1 | 34.4 | 116.5 | 149.1 | 17.3 | 13.2 | 49.1 | 4.0 | -9.3 |
| EL PASO CORP | EP | N/A | N/A | N/A | N/A | N/A | N/A | 0.55 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 93.5 | N/A | N/A | N/A | N/A |
| ENERGEN | EGN | $57.67 | $64.44 | 1-Dec-16 | $20.76 | 12-Feb-16 | 653 | 1.58 | -3.2 | -7.1 | -0.1 | 40.7 | 42.6 | 18.7 | 33.4 | 4.6 | -8.8 | 58.5 | -9.3 | -35.6 |
| EQUITABLE RESOURCES | EQT | $65.40 | $80.61 | 29-Jun-16 | $48.30 | 7-Jan-16 | 1,247 | 1.03 | -1.5 | -6.7 | -9.9 | 25.7 | 27.4 | 22.1 | 76.4 | 24.2 | 9.4 | 52.5 | -15.6 | -31.0 |
| MDU RESOURCES, INC. | MDU | $28.77 | $29.92 | 14-Dec-16 | $15.58 | 20-Jan-16 | 711 | 1.04 | -1.7 | 4.1 | 13.8 | 62.2 | 60.3 | 56.3 | 50.6 | 9.2 | 2.1 | 47.7 | -21.2 | -18.9 |
| NATIONAL FUEL GAS | NFG | $56.64 | $59.62 | 8-Sep-16 | $39.79 | 15-Jan-16 | 236 | 0.92 | -1.4 | 1.2 | 5.5 | 36.5 | 38.1 | 16.4 | 93.1 | -13.3 | -6.1 | 44.1 | -0.5 | -36.6 |
| WILLIAMS COMPANIES | WMB | $31.14 | $32.21 | 28-Dec-16 | $10.22 | 8-Feb-16 | 3,982 | 1.62 | -1.3 | 2.1 | 2.0 | 31.4 | 38.3 | 50.2 | 111.5 | 37.1 | 26.2 | 22.8 | 21.4 | -39.2 |
| **Average** | | | | | | | **1178** | **1.08** | **-1.6** | **-0.3** | **2.0** | **38.8** | **40.2** | **46.7** | **85.7** | **24.7** | **6.0** | **45.8** | **-3.5** | **-28.4** |
| S&P 500 | SPX | 2,238.83 | 2,277.53 | 13-Dec-16 | 1,810.10 | 11-Feb-16 | ----- | 1.00 | -1.1 | 1.8 | 3.3 | 9.5 | 8.5 | 78.0 | 57.9 | 0.0 | 13.4 | 29.6 | 11.4 | -0.7 |
| Dow Jones Industrials | DJIAK | 19,762.60 | 19,987.63 | 20-Dec-16 | 15,450.56 | 20-Jan-16 | ----- | 0.93 | -0.9 | 3.3 | 7.9 | 13.4 | 12.3 | 61.8 | 58.6 | 5.5 | 7.3 | 26.5 | 7.5 | -2.2 |
| Nasdaq Composite | COMP | 5,383.12 | 5,512.37 | 27-Dec-16 | 4,209.76 | 11-Feb-16 | ----- | 1.10 | -1.5 | 1.1 | 1.3 | 7.5 | 6.3 | 106.6 | 122.9 | -1.8 | 15.9 | 38.3 | 13.4 | 5.7 |
| Philadelphia Utility Index | UTY | $619.08 | $672.19 | 6-Jul-16 | 537.92 | 20-Jan-16 | ----- | 0.52 | -0.1 | 5.0 | -0.5 | 13.2 | 11.9 | 28.6 | 25.5 | 14.1 | -4.7 | 6.5 | 24.2 | -9.8 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

## Historical Change in Total Return

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
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| Company Information | | Closing Price | Trading Range (LTM) | | | | Trading Data | | Percentage Change In Total Return | | | | | | | Calendar Year Change | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Symbol | 12/30/2016 | High | Date | Low | Date | Volume | Beta | Week | Month | Qtr | YTD | LTM | 5 Yrs | 10 Yrs | 2011 | 2012 | 2013 | 2014 | 2015 |
| | | Per Share | Per Share | | Per Share | | (1,000) | | % | % | % | % | % | % | % | % | % | % | % | % |
| OGE ENERGY CORP | OGE | $33.45 | $34.23 | 14-Dec-16 | $23.37 | 20-Jan-16 | 524 | 0.74 | -0.9 | 5.7 | 6.9 | 32.3 | 30.5 | 37.4 | 138.6 | 28.4 | 2.2 | 23.5 | 7.4 | -23.4 |
| ONEOK, INC. | OKE | $57.41 | $59.47 | 27-Dec-16 | $18.88 | 11-Feb-16 | 1,271 | 1.30 | -2.2 | 4.5 | 13.1 | 149.4 | 162.3 | 88.8 | 359.1 | 61.2 | 1.5 | 49.6 | -5.3 | -47.4 |
| NISOURCE | NI | $22.14 | $26.94 | 5-Jul-16 | $19.05 | 20-Jan-16 | 1,765 | 0.69 | -0.7 | 0.9 | -7.5 | 16.7 | 14.9 | 176.1 | 260.3 | 41.4 | 8.6 | 36.5 | 32.6 | 20.5 |
| QUESTAR, INC. | STR | N/A | $25.38 | 30-Jun-16 | $18.38 | 20-Jan-16 | N/A | 0.59 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 18.0 | 2.9 | 19.9 | 13.5 | -19.8 |
| SEMPRA ENERGY | SRE | $100.64 | $114.66 | 6-Jul-16 | $86.72 | 8-Jan-16 | 940 | 0.66 | -0.3 | 1.6 | -5.4 | 10.1 | 9.2 | 112.3 | 141.4 | 8.7 | 33.8 | 30.3 | 27.3 | -13.2 |
| **UGI CORP** | **UGI** | **$46.08** | **$48.13** | **22-Sep-16** | **$31.59** | **20-Jan-16** | **936** | **0.71** | **0.6** | **3.4** | **2.4** | **39.5** | **37.5** | **169.8** | **240.8** | **-3.6** | **15.3** | **30.5** | **40.8** | **-8.7** |
| SPECTRA ENERGY | SE | $41.09 | $44.00 | 8-Sep-16 | $23.29 | 12-Jan-16 | 2,168 | 0.96 | -1.1 | 0.3 | -2.9 | 80.1 | 81.7 | 64.3 | 127.7 | 28.0 | -7.4 | 35.1 | 5.6 | -30.9 |
| **Average** | | | | | | | **1267** | **0.81** | **-0.8** | **2.7** | **1.1** | **54.7** | **56.0** | **108.1** | **211.3** | **26.0** | **8.1** | **32.2** | **17.4** | **-17.6** |
| **Market Index Comparisons** | | | | | | | | | | | | | | | | | | | | |
| S&P 500 | SPX | 2,238.83 | 2,277.53 | 13-Dec-16 | 1,810.10 | 11-Feb-16 | ----- | 1.00 | -1.1 | 1.8 | 3.3 | 9.5 | 8.5 | 78.0 | 57.9 | 0.0 | 13.4 | 29.6 | 11.4 | -0.7 |
| Dow Jones Industrials | DJIAK | 19,762.60 | 19,987.63 | 20-Dec-16 | 15,450.56 | 20-Jan-16 | ----- | 0.93 | -0.9 | 3.3 | 7.9 | 13.4 | 12.3 | 61.8 | 58.6 | 5.5 | 7.3 | 26.5 | 7.5 | -2.2 |
| Nasdaq Composite | COMP | 5,383.12 | 5,512.37 | 27-Dec-16 | 4,209.76 | 11-Feb-16 | ----- | 1.10 | -1.5 | 1.1 | 1.3 | 7.5 | 6.3 | 106.6 | 122.9 | -1.8 | 15.9 | 38.3 | 13.4 | 5.7 |
| Philadelphia Utility Index | UTY | $619.08 | $672.19 | 6-Jul-16 | 537.92 | 20-Jan-16 | ----- | 0.52 | -0.1 | 5.0 | -0.5 | 13.2 | 11.9 | 28.6 | 25.5 | 14.1 | -4.7 | 6.5 | 24.2 | -9.8 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT

## Industry Short Interest Analysis

# Water Utilities

Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| **SABESP** | **SBS** | **6,675,845** | **5,413,047** | **2,467,010** | **4,328,064** | **5,401,667** | **2,866,693** | **2,088,462** | **1,459,020** | **1,471,695** | **1,360,712** | **1,432,544** | **1,908,246** | **1** |
| **AMERICAN WATER WORKS** | **AWK** | **3,160,119** | **6,321,717** | **6,343,586** | **6,403,189** | **5,938,902** | **4,866,394** | **3,474,329** | **3,768,563** | **3,913,133** | **4,954,297** | **4,984,533** | **994,145** | **5** |
| **AQUA AMERICA** | **WTR** | **4,821,940** | **4,492,838** | **4,460,621** | **5,300,876** | **5,339,405** | **4,989,185** | **4,466,378** | **4,670,091** | **5,049,011** | **5,757,033** | **6,223,941** | **705,757** | **9** |
| **CALIFORNIA WATER** | **CWT** | **1,202,002** | **2,444,923** | **2,242,532** | **2,281,975** | **2,296,158** | **1,754,409** | **1,346,114** | **1,225,733** | **1,643,497** | **1,918,782** | **1,392,213** | **283,097** | **5** |
| **AMERICAN STATES WATER** | **AWR** | **886,628** | **806,955** | **991,514** | **991,807** | **932,678** | **887,125** | **736,280** | **738,563** | **948,300** | **1,025,000** | **1,053,435** | **146,279** | **7** |
| **SJW** | **SJW** | **377,553** | **322,219** | **382,463** | **386,854** | **425,480** | **463,816** | **530,934** | **420,114** | **386,972** | **216,494** | **149,418** | **85,086** | **2** |
| MIDDLESEX WATER | MSEX-US | 324,596 | 355,011 | 496,265 | 448,269 | 451,661 | 401,000 | 225,807 | 269,741 | 259,448 | 262,058 | 225,822 | 55,113 | 4 |
| CONNECTICUT WATER | CTWS | 236,740 | 279,053 | 373,866 | 433,993 | 425,845 | 364,255 | 320,152 | 319,999 | 346,775 | 265,080 | 248,970 | 36,798 | 7 |
| YORK WATER | YORW | 296,189 | 336,386 | 361,880 | 329,695 | 359,122 | 297,046 | 269,491 | 266,375 | 287,163 | 254,058 | 216,610 | 37,718 | 6 |
| ARTESIAN RESOURCES | ARTNA-US | 175,882 | 177,539 | 163,228 | 184,933 | 195,825 | 169,951 | 152,241 | 118,780 | 113,324 | 92,429 | 67,619 | 20,697 | 3 |
| PURE CYCLE | PCYO-US | 124,194 | 138,748 | 154,091 | 150,341 | 166,101 | 165,240 | 164,523 | 114,695 | 104,093 | 103,218 | 101,341 | 22,290 | 5 |
| **MEDIAN** | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Flow Technology

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| EMERSON ELECTRIC | EMR | 17,319,382 | 15,176,833 | 13,759,778 | 16,618,468 | 18,733,057 | 20,117,483 | 20,665,259 | 21,217,611 | 21,026,328 | 16,953,200 | 13,710,436 | 3,332,673 | 4 |
| **XYLEM** | **XYL** | **2,874,205** | **1,964,300** | **2,157,976** | **3,350,698** | **3,135,400** | **3,139,498** | **3,685,534** | **5,277,214** | **4,107,162** | **4,988,274** | **5,404,447** | **1,236,199** | **4** |
| FLOWSERVE | FLS | 9,154,323 | 8,050,984 | 6,752,298 | 5,557,361 | 5,655,191 | 5,438,458 | 7,115,092 | 7,162,258 | 7,182,957 | 8,122,774 | 9,498,146 | 1,212,255 | 8 |
| **AMETEK** | **AME** | **4,236,274** | **3,545,759** | **4,089,499** | **5,612,117** | **4,647,322** | **3,570,474** | **4,874,918** | **4,118,377** | **4,159,631** | **5,009,029** | **5,483,563** | **2,213,724** | **2** |
| ROPER INDUSTRIES | ROP | 2,233,089 | 2,775,492 | 2,477,858 | 2,788,911 | 3,053,051 | 2,786,953 | 3,116,299 | 3,476,696 | 3,771,532 | 2,860,723 | 2,780,627 | 598,948 | 5 |
| PENTAIR | PNR | 11,766,177 | 11,925,921 | 9,716,576 | 10,112,899 | 8,418,979 | 7,809,190 | 7,868,920 | 7,377,838 | 6,735,435 | 4,705,284 | 4,087,835 | 1,099,403 | 4 |
| **IDEX** | **IEX** | **2,950,605** | **2,413,520** | **2,223,870** | **2,167,401** | **2,082,583** | **2,019,382** | **2,282,528** | **1,835,230** | **2,094,957** | **2,423,541** | **2,335,752** | **283,807** | **8** |
| CRANE COMPANY | CR | 680,434 | 620,733 | 476,817 | 496,433 | 534,612 | 336,420 | 279,677 | 228,024 | 393,305 | 320,098 | 304,725 | 316,990 | 1 |
| ITRON | ITRI | 2,480,078 | 2,086,368 | 1,902,266 | 1,943,181 | 1,718,950 | 1,536,447 | 1,404,177 | 1,387,992 | 1,430,558 | 736,000 | 675,677 | 240,002 | 3 |
| **WATTS WATER TECH** | **WTS** | **1,362,020** | **1,302,946** | **1,239,866** | **1,213,054** | **1,162,389** | **1,250,327** | **1,220,468** | **1,240,952** | **1,159,548** | **1,039,747** | **943,912** | **147,961** | **6** |
| MUELLER INDUSTRIES | MLI | 834,922 | 869,057 | 865,122 | 1,035,191 | 941,539 | 870,457 | 886,919 | 548,422 | 540,582 | 417,589 | 296,309 | 185,135 | 2 |
| **MUELLER WATER PRODUCTS** | **MWA** | **4,694,739** | **4,447,231** | **4,228,205** | **4,332,392** | **4,116,425** | **3,919,485** | **3,013,254** | **2,398,062** | **2,287,079** | **1,943,893** | **1,613,801** | **921,553** | **2** |
| FRANKLIN ELECTRIC | FELE | 1,653,610 | 1,826,436 | 1,629,847 | 1,651,823 | 1,584,066 | 1,436,957 | 1,466,325 | 1,393,805 | 1,232,435 | 1,218,313 | 1,087,740 | 239,697 | 5 |
| CIRCOR INT'L | CR | 680,434 | 620,733 | 476,817 | 496,433 | 534,612 | 336,420 | 279,677 | 228,024 | 393,305 | 320,098 | 304,725 | 316,990 | 1 |
| 3M COMPANY | MMM | 6,618,835 | 6,068,551 | 5,899,231 | 6,592,376 | 7,639,854 | 6,784,582 | 6,886,865 | 7,326,641 | 7,712,129 | 8,441,645 | 8,793,354 | 1,806,597 | 5 |
| CLARCOR | CLC | 2,867,327 | 2,580,733 | 2,501,083 | 1,967,582 | 1,657,730 | 1,408,879 | 1,297,906 | 1,343,607 | 1,306,110 | 1,048,937 | 402,158 | 714,781 | 1 |
| LYDALL | LDL | 244,381 | 314,606 | 344,033 | 348,691 | 291,110 | 222,987 | 221,567 | 251,962 | 250,315 | 239,049 | 221,700 | 86,512 | 3 |
| BADGER METER | BMI | 1,880,076 | 1,729,704 | 1,728,048 | 1,508,838 | 1,269,936 | 1,138,280 | 891,658 | 767,346 | 989,709 | 1,018,211 | 1,070,705 | 167,291 | 6 |
| NORTHWEST PIPE | NWPX | 571,830 | 612,352 | 691,481 | 766,671 | 546,950 | 406,742 | 340,388 | 327,363 | 345,487 | 355,108 | 380,977 | 113,564 | 3 |
| ENERGY RECOVERY | ERII | 3,256,544 | 2,775,928 | 2,273,701 | 2,494,177 | 4,611,165 | 4,800,706 | 4,207,312 | 3,481,695 | 3,779,166 | 3,792,621 | 3,562,548 | 467,822 | 8 |
| DXP ENTERPRISES | DXPE | 811,604 | 833,217 | 985,007 | 1,290,275 | 2,443,658 | 2,576,269 | 1,952,080 | 1,654,096 | 1,110,641 | 756,936 | 746,377 | 206,202 | 4 |
| **MEDIAN** | | | | | | | | | | | | | | **4.0** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Water Solutions

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| GENERAL ELECTRIC | GE | 124,611,017 | 168,930,135 | 112,562,585 | 106,507,019 | 188,560,688 | 139,824,993 | 116,432,129 | 146,638,559 | 109,132,554 | 95,500,406 | 147,819,610 | 29,129,202 | 5 |
| FORTIVE | FTV | - | - | - | - | 6,255 | 4,079,951 | 3,736,344 | 3,145,569 | 2,818,216 | 2,616,436 | 2,379,500 | 1,615,026 | 1 |
| AIR PRODUCTS & CHEM | APD | 4,895,377 | 5,310,741 | 4,025,510 | 3,463,246 | 3,010,018 | 3,135,981 | 2,730,741 | 3,357,023 | 2,612,108 | 2,895,099 | 4,986,007 | 1,171,742 | 4 |
| ECHOLAB | ECL | 8,508,352 | 7,286,963 | 6,378,428 | 5,546,934 | 5,022,347 | 3,900,367 | 4,006,164 | 3,821,526 | 3,982,066 | 3,294,621 | 3,715,815 | 956,980 | 4 |
| ASHLAND | ASH | 3,265,738 | 2,583,245 | 1,993,421 | 2,011,945 | 1,861,997 | 1,411,175 | 1,508,435 | 2,311,604 | 1,704,424 | 2,071,379 | 2,239,290 | 625,831 | 4 |
| TETRA TECH | TTEK | 1,650,983 | 1,642,250 | 1,528,093 | 1,795,907 | 1,726,164 | 1,736,230 | 1,141,239 | 947,966 | 1,118,759 | 682,907 | 704,405 | 418,020 | 2 |
| LAYNE CHRISTENSEN | LAYN | 2,878,100 | 2,891,095 | 2,638,033 | 2,956,547 | 3,403,230 | 3,725,189 | 3,691,388 | 3,653,621 | 3,670,194 | 3,650,946 | 3,565,637 | 170,584 | 21 |
| **CALGON CARBON** | **CCC** | **1,762,966** | **1,553,712** | **1,458,169** | **1,599,904** | **1,151,006** | **1,021,059** | **1,065,501** | **1,022,727** | **1,003,098** | **1,365,601** | **1,295,580** | **271,841** | **5** |
| **CONSOLIDATED WATER** | **CWCO** | **346,983** | **353,323** | **371,583** | **356,097** | **297,381** | **286,596** | **244,431** | **239,820** | **266,291** | **282,884** | **232,297** | **100,396** | **2** |
| CANTEL MEDICAL | CMN | 933,890 | 940,108 | 768,355 | 664,859 | 657,088 | 568,449 | 473,090 | 523,853 | 884,099 | 1,145,150 | 1,027,147 | 173,772 | 6 |
| BARNWELL INDUSTRIES | BRN | 1,190 | 1,989 | 1,890 | 11,847 | 26,023 | 31,421 | 31,798 | 24,479 | 17,754 | 31,275 | 27,592 | 10,128 | 3 |
| STANTEC, INC. | STN | 1,008,089 | 842,294 | 775,795 | 560,961 | 596,169 | 176,353 | 154,700 | 166,812 | 265,368 | 288,070 | 283,950 | 14,796 | 19 |
| **MEDIAN** | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics/Gas)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| ALLIANT | LNT | 2,982,852 | 4,119,458 | 3,916,312 | 3,160,268 | 4,362,795 | 6,524,499 | 5,919,152 | 6,536,614 | 6,917,397 | 6,265,401 | 5,265,187 | 5,908,730 | 924,383 | 6 |
| AVISTA | AVA | 2,949,565 | 2,222,712 | 2,058,094 | 2,240,700 | 2,180,762 | 1,933,308 | 1,788,227 | 1,603,043 | 1,614,142 | 1,716,208 | 1,877,290 | 1,760,082 | 395,128 | 4 |
| **CHESAPEAKE UTILITIES** | **CPK** | **513,230** | **480,512** | **558,013** | **553,966** | **533,128** | **472,733** | **394,143** | **365,512** | **309,886** | **323,670** | **338,022** | **289,034** | **49,989** | **6** |
| CMS ENERGY | CMS | 10,510,391 | 11,247,896 | 8,627,074 | 7,505,515 | 8,218,097 | 9,607,792 | 10,066,945 | 9,806,691 | 9,722,404 | 8,378,748 | 6,919,174 | 6,550,259 | 1,858,371 | 4 |
| CONEDISON | ED | 13,273,911 | 14,686,807 | 15,168,598 | 14,523,056 | 11,068,116 | 12,086,086 | 11,252,947 | 10,685,859 | 10,975,088 | 9,875,690 | 11,986,857 | 11,195,221 | 1,578,391 | 7 |
| DTE CORP | DTE | 3,423,661 | 2,851,883 | 2,673,323 | 2,085,329 | 2,682,763 | 2,516,090 | 1,930,328 | 2,085,068 | 2,311,474 | 4,193,812 | 3,778,146 | 4,879,461 | 973,609 | 5 |
| MGE ENERGY | MGEE | 890,614 | 979,688 | 1,030,431 | 963,956 | 1,028,108 | 836,902 | 761,667 | 693,508 | 651,173 | 651,654 | 560,821 | 519,001 | 108,688 | 5 |
| **EVERSOURCE ENERGY** | **ES** | **7,506,546** | **8,440,980** | **6,295,059** | **4,490,174** | **4,276,683** | **4,314,421** | **3,376,237** | **3,866,097** | **4,312,839** | **5,229,014** | **4,096,037** | **5,005,018** | **1,502,750** | **3** |
| NORTHWESTERN | NWE | 1,788,761 | 2,180,139 | 2,025,976 | 1,428,518 | 1,238,462 | 1,214,498 | 1,262,121 | 845,808 | 1,100,876 | 1,214,874 | 1,125,794 | 1,270,391 | 393,916 | 3 |
| PG&E CORP | PCG | 5,399,144 | 5,861,227 | 4,631,787 | 4,761,812 | 5,621,692 | 4,612,342 | 4,345,471 | 6,353,925 | 5,443,366 | 7,816,203 | 5,537,055 | 5,020,511 | 2,134,445 | 2 |
| SCANA | SCG | 7,171,753 | 7,161,351 | 5,527,492 | 4,846,063 | 5,413,787 | 5,401,061 | 4,630,754 | 4,229,460 | 5,002,563 | 5,312,856 | 4,963,074 | 5,069,413 | 651,591 | 8 |
| **AVANGRID** | **AGR** | **259,282** | **281,995** | **704,225** | **680,918** | **1,294,447** | **1,033,383** | **1,081,558** | **1,449,305** | **1,456,768** | **1,414,611** | **1,495,424** | **1,212,519** | **456,846** | **3** |
| **UNITIL CORP** | **UTL** | **287,775** | **301,445** | **345,603** | **349,810** | **375,440** | **344,282** | **310,391** | **309,953** | **312,830** | **324,799** | **310,878** | **286,867** | **47,448** | **6** |
| VECTREN CORP | VVC | 622,498 | 848,140 | 918,759 | 761,319 | 990,386 | 1,015,934 | 1,556,133 | 749,640 | 487,650 | 651,767 | 550,236 | 669,736 | 347,822 | 2 |
| WISCONSIN ENERGY | WEC | 11,636,627 | 12,364,167 | 8,988,854 | 8,397,395 | 9,933,722 | 10,016,757 | 9,302,511 | 11,670,700 | 11,100,120 | 11,366,645 | 12,247,151 | 14,405,386 | 1,615,759 | 9 |
| XCEL ENERGY | XEL | 12,511,334 | 14,022,256 | 12,217,008 | 8,822,218 | 10,591,604 | 11,686,092 | 9,677,397 | 8,539,371 | 8,917,426 | 9,675,279 | 10,614,439 | 10,775,818 | 2,393,528 | 5 |
| **MEDIAN** | | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Regulated Electrics Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Feb-16** | **Mar-16** | **Apr-16** | **May-16** | **Jun-16** | **Jul-16** | **Aug-16** | **Sep-16** | **Oct-16** | **Nov-16** | **Dec-16** | **Avg Vol.** | **SIR** |
| ALLETE | ALE | 1,701,053 | 1,813,660 | 1,193,521 | 1,495,118 | 987,983 | 1,065,321 | 874,115 | 883,480 | 1,006,586 | 1,024,969 | 1,028,812 | 268,545 | 4 |
| CENTERPOINT ENERGY | CNP | 13,873,273 | 15,697,478 | 16,348,040 | 15,248,637 | 12,817,128 | 14,210,801 | 9,765,396 | 10,130,262 | 8,496,639 | 9,691,026 | 8,077,116 | 3,592,221 | 2 |
| CLECO | CNL | 1,599,299 | 1,557,993 | - | - | - | - | - | - | - | - | - | - | NA |
| DUKE ENERGY | DUK | 9,888,803 | 20,823,438 | 19,146,199 | 20,978,874 | 20,131,343 | 17,469,816 | 16,353,449 | 18,778,847 | 9,217,266 | 8,840,617 | 9,376,942 | 3,422,960 | 3 |
| EL PASO ELECTRIC | EE | 674,398 | 1,070,484 | 1,157,016 | 899,173 | 711,129 | 679,062 | 475,139 | 611,643 | 653,586 | 542,918 | 458,416 | 231,573 | 2 |
| EMPIRE DISTRICT ELECTRIC | EDE | 1,447,324 | 1,610,400 | 1,907,390 | 1,998,021 | 1,736,901 | 1,708,505 | 1,520,301 | 1,398,570 | 1,270,653 | 1,131,967 | 1,169,769 | 228,273 | 5 |
| GREAT PLAINS | GXP | 2,266,142 | 3,070,241 | 2,539,635 | 4,996,970 | 4,892,396 | 7,762,255 | 6,324,595 | 7,654,519 | 11,981,631 | 11,626,860 | 11,127,972 | 3,140,530 | 4 |
| HAWAIIAN ELECTRIC | HE | 1,844,978 | 1,957,131 | 1,586,607 | 1,864,332 | 1,562,232 | 1,186,795 | 1,257,791 | 1,739,497 | 1,756,656 | 2,001,615 | 2,826,336 | 603,313 | 5 |
| IDACORP | IDA | 1,416,085 | 1,318,636 | 1,398,674 | 1,331,086 | 1,019,865 | 1,345,366 | 1,081,446 | 1,195,831 | 1,098,951 | 1,192,897 | 1,135,228 | 207,409 | 5 |
| PINNACLE WEST | PNW | 2,937,424 | 2,851,110 | 3,251,052 | 3,151,725 | 3,503,284 | 3,021,328 | 3,065,025 | 3,288,647 | 3,357,976 | 3,161,255 | 2,626,324 | 622,067 | 4 |
| PNM RESOURCES | PNM | 2,678,947 | 3,468,009 | 2,754,469 | 3,201,458 | 2,846,171 | 2,719,313 | 3,085,106 | 2,781,811 | 3,795,577 | 4,868,775 | 4,346,558 | 610,769 | 7 |
| PORTLAND GENERAL | POR | 2,312,984 | 2,502,948 | 2,443,387 | 2,536,658 | 2,397,189 | 2,535,762 | 2,145,026 | 1,684,130 | 1,947,257 | 1,608,839 | 1,222,454 | 542,893 | 2 |
| SOUTHERN COMPANY | SO | 23,727,418 | 21,363,239 | 20,776,337 | 20,674,655 | 20,604,349 | 22,258,313 | 14,967,429 | 19,557,221 | 15,944,261 | 23,556,041 | 18,878,461 | 4,724,016 | 4 |
| WESTAR ENERGY | WR | 3,220,074 | 2,365,832 | 2,872,889 | 3,231,249 | 1,827,163 | 1,522,680 | 1,656,668 | 1,743,016 | 2,259,333 | 2,063,278 | 2,092,762 | 1,002,128 | 2 |
| **MEDIAN** | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Combination Electrics With Merchant)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg. Vol | SIR |
| AMEREN | AEE | 4,628,725 | 6,542,333 | 5,337,415 | 4,816,504 | 6,633,944 | 5,296,729 | 4,973,195 | 5,408,469 | 6,190,220 | 6,660,281 | 6,831,424 | 7,796,379 | 1,320,485 | 6 |
| AMERICAN ELECTRIC POWER | AEP | 6,729,944 | 6,872,663 | 6,271,230 | 5,292,517 | 5,915,098 | 5,599,256 | 5,599,121 | 4,334,786 | 5,281,399 | 5,809,801 | 5,810,675 | 6,934,055 | 2,495,879 | 3 |
| DOMINION | D | 16,414,662 | 19,653,673 | 18,551,702 | 13,805,872 | 16,163,191 | 19,186,422 | 14,715,448 | 21,677,374 | 18,871,366 | 19,037,497 | 20,372,271 | 19,390,468 | 2,655,750 | 7 |
| EDISON INTERNATIONAL | EIX | 4,163,012 | 4,558,257 | 4,352,894 | 3,843,164 | 4,285,549 | 4,796,143 | 4,297,120 | 4,395,183 | 6,446,038 | 6,015,726 | 5,033,398 | 5,462,232 | 1,772,750 | 3 |
| ENTERGY | ETR | 3,663,240 | 3,114,189 | 3,335,387 | 3,245,486 | 3,221,177 | 3,077,096 | 2,620,255 | 3,776,276 | 4,921,992 | 5,886,402 | 5,064,381 | 6,729,050 | 1,446,802 | 5 |
| EXELON | EXC | 23,510,738 | 22,337,320 | 21,668,699 | 15,870,432 | 16,827,544 | 16,556,924 | 18,564,774 | 18,774,825 | 18,653,052 | 19,233,855 | 20,045,486 | 19,202,129 | 6,686,267 | 3 |
| FIRST ENERGY | FE | 5,480,275 | 7,014,342 | 7,145,293 | 6,127,157 | 6,932,003 | 10,026,391 | 8,812,710 | 8,631,178 | 9,566,026 | 12,231,776 | 9,828,389 | 12,163,197 | 4,392,288 | 3 |
| NEXTERA ENERGY | NEE | 8,691,262 | 8,761,622 | 8,491,913 | 8,606,645 | 10,259,906 | 9,920,463 | 8,121,245 | 8,961,779 | 5,859,168 | 6,686,183 | 10,308,436 | 7,988,393 | 2,335,702 | 3 |
| PPL CORP | PPL | 13,788,323 | 14,254,889 | 9,201,798 | 7,509,565 | 10,590,733 | 7,640,733 | 6,212,640 | 7,738,588 | 10,536,584 | 11,921,915 | 11,594,531 | 13,085,114 | 3,935,611 | 3 |
| PUBLIC SERVICE ENT GROUP | PEG | 14,037,263 | 13,115,526 | 12,020,793 | 11,203,151 | 10,282,819 | 10,519,236 | 10,630,161 | 9,020,354 | 9,874,156 | 9,598,035 | 9,656,414 | 10,031,039 | 2,524,060 | 4 |
| **MEDIAN** | | | | | | | | | | | | | | | **4** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Electric Utilities (Merchant Generators)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| CALPINE | CPN | 16,477,446 | 12,324,916 | 16,818,183 | 13,663,882 | 13,724,551 | 11,665,570 | 12,121,802 | 16,390,105 | 22,002,588 | 17,156,172 | 18,506,113 | 22,696,694 | 4,532,755 | 5 |
| DYNEGY | DYN | 10,868,200 | 9,599,125 | 8,321,766 | 9,456,404 | 7,472,656 | 14,347,508 | 12,597,274 | 14,107,081 | 17,218,281 | 16,561,030 | 18,820,698 | 17,569,618 | 3,372,602 | 5 |
| COVANTA | CVA | 10,952,331 | 11,527,286 | 11,722,453 | 11,561,366 | 11,329,165 | 10,581,188 | 10,692,352 | 11,634,853 | 13,714,973 | 14,278,273 | 10,825,852 | 9,461,139 | 1,690,267 | 6 |
| NRG ENERGY | NRG | 22,244,843 | 19,442,647 | 17,636,845 | 18,223,339 | 17,808,283 | 18,313,441 | 16,806,902 | 15,531,581 | 15,882,642 | 20,116,834 | 20,906,426 | 23,191,729 | 6,263,184 | 4 |
| ORMAT TECHNOLOGIES | ORA | 2,287,460 | 1,924,050 | 1,786,611 | 1,696,044 | 1,454,296 | 1,325,137 | 1,266,884 | 1,185,854 | 1,089,037 | 1,129,957 | 977,682 | 915,472 | 155,532 | 6 |
| **MEDIAN** | | | | | | | | | | | | | | | **5** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Downstream (Gas Distribution Only)

## Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Ticker** | **Jan-16** | **Feb-16** | **Mar-16** | **Apr-16** | **May-16** | **Jun-16** | **Jul-16** | **Aug-16** | **Sep-16** | **Oct-16** | **Nov-16** | **Dec-16** | **Avg Vol.** | **SIR** |
| ATMOS ENERGY | ATO | 1,481,289 | 2,220,529 | 2,102,460 | 1,897,843 | 1,902,074 | 1,956,840 | 2,243,713 | 1,812,052 | 1,785,169 | 1,904,494 | 1,340,869 | 1,121,278 | 505,629 | 4 |
| LACLEDE GROUP | LG | 2,529,602 | 2,464,464 | 2,269,591 | 2,334,247 | 2,267,350 | 1,944,770 | 1,818,568 | 1,772,015 | 1,747,441 | 1,535,192 | 1,084,769 | 775,927 | 296,781 | 8 |
| **NEW JERSEY RESOURCES** | **NJR** | **2,553,177** | **2,866,659** | **3,352,882** | **3,015,040** | **3,500,465** | **3,601,391** | **3,657,971** | **2,755,772** | **3,009,815** | **3,974,272** | **3,238,004** | **3,440,433** | **495,448** | **6** |
| NORTHWEST NATURAL GAS | NWN | 1,402,496 | 1,211,679 | 862,861 | 671,857 | 811,238 | 992,847 | 957,486 | 907,258 | 917,006 | 947,131 | 807,957 | 870,381 | 146,711 | 8 |
| PIEDMONT NATURAL GAS | PNY | 1,844,782 | 2,030,036 | 2,122,686 | 2,546,203 | 2,456,957 | 1,770,055 | 2,110,062 | 2,312,090 | 1,260,180 | N/A | N/A | N/A | N/A | #VALUE! |
| **SOUTH JERSEY INDUSTRIES** | **SJI** | **2,255,433** | **3,016,976** | **3,067,991** | **3,335,511** | **3,817,233** | **4,307,945** | **4,103,530** | **3,850,398** | **4,387,981** | **4,769,171** | **4,575,787** | **4,346,013** | **477,000** | **6** |
| SOUTHWEST GAS | SWX | 1,003,833 | 1,052,977 | 1,101,342 | 1,073,301 | 1,319,466 | 1,280,717 | 1,338,369 | 958,517 | 676,855 | 859,088 | 1,193,635 | 795,340 | 304,389 | 3 |
| **WGL HOLDINGS, INC.** | **WGL** | **2,048,737** | **2,025,427** | **2,075,441** | **2,352,340** | **2,293,713** | **2,188,110** | **1,804,345** | **1,309,479** | **1,187,225** | **1,248,569** | **1,182,736** | **1,372,928** | **482,692** | **4** |
| **MEDIAN** | | | | | | | | | | | | | | | **#VALUE!** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Upstream (Exploration & Production)

Short Interest

**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| BLACK HILLS CORP | BKH | 5,522,097 | 6,458,216 | 5,870,161 | 5,765,213 | 5,380,253 | 5,100,422 | 5,330,414 | 5,027,997 | 4,350,293 | 4,657,515 | 4,739,919 | 4,521,147 | 368,053 | 18 |
| ENERGEN | EGN | 5,639,247 | 9,122,760 | 5,788,943 | 5,138,214 | 4,713,717 | 5,011,649 | 3,924,765 | 3,907,314 | 3,545,232 | 3,883,054 | 3,395,677 | 2,810,677 | 892,238 | 10 |
| EQUITABLE RESOURCES | EQT | 6,004,440 | 3,840,007 | 4,912,008 | 3,914,960 | 4,609,683 | 6,736,648 | 5,111,450 | 6,020,275 | 8,265,763 | 7,946,699 | 8,640,695 | 9,128,868 | 1,883,580 | 2 |
| MDU RESOURCES, INC. | MDU | 3,486,176 | 4,240,104 | 3,770,120 | 3,810,422 | 3,807,071 | 5,018,313 | 4,998,634 | 4,164,679 | 4,783,709 | 5,382,451 | 4,121,473 | 4,272,686 | 1,157,482 | 4 |
| NATIONAL FUEL GAS | NFG | 3,020,225 | 2,927,363 | 3,040,611 | 3,129,587 | 2,246,128 | 2,133,582 | 1,934,168 | 1,857,915 | 2,737,072 | 3,402,968 | 3,079,535 | 3,275,248 | 376,454 | 8 |
| WILLIAMS COMPANIES | WMB | 19,306,202 | 25,000,666 | 25,554,406 | 21,956,343 | 24,144,379 | 25,715,215 | 20,270,842 | 18,515,542 | 19,910,033 | 19,342,767 | 20,404,624 | 18,425,638 | 7,536,196 | 3 |
| **MEDIAN** | | | | | | | | | | | | | | | 7 |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*

# Gas Utilities - Midstream (Non Exploration & Production)

Short Interest

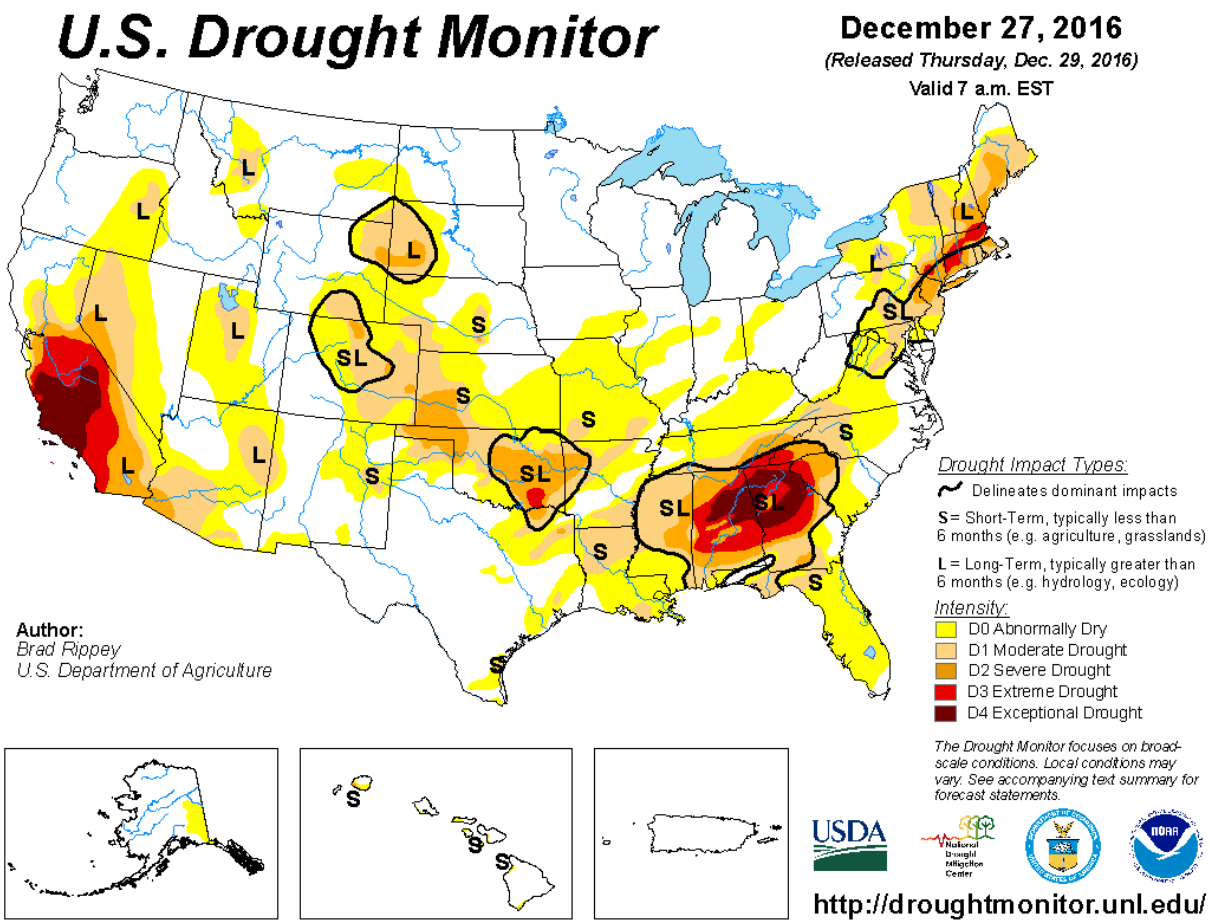
**Michael Gaugler**, 215-665-1359 mgaugler@janney.com
**Katherine Burke**, 646-840-3207 kburke@janney.com

| | Short Interest | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ticker | Jan-16 | Feb-16 | Mar-16 | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Avg Vol. | SIR |
| OGE ENERGY CORP | OGE | 3,188,522 | 4,171,214 | 5,443,108 | 5,539,490 | 6,268,472 | 5,032,460 | 5,332,135 | 6,120,150 | 5,722,449 | 5,025,700 | 4,864,755 | 5,306,383 | 877,308 | 5 |
| ONEOK, INC. | OKE | 13,262,035 | 15,056,642 | 16,738,671 | 16,992,482 | 15,980,994 | 13,576,274 | 13,661,423 | 12,335,108 | 16,961,607 | 12,155,916 | 13,281,431 | 14,632,498 | 1,851,783 | 8 |
| NISOURCE | NI | 9,014,767 | 8,404,630 | 8,117,479 | 8,098,786 | 10,985,836 | 8,897,487 | 8,146,006 | 8,737,098 | 11,435,698 | 12,281,197 | 10,478,999 | 8,562,425 | 2,803,547 | 3 |
| SEMPRA ENERGY | SRE | 3,779,661 | 4,632,573 | 3,575,809 | 3,003,912 | 4,325,832 | 3,958,996 | 3,541,161 | 4,089,744 | 6,977,808 | 5,829,784 | 5,827,020 | 4,850,385 | 1,090,589 | 4 |
| **UGI CORP** | **UGI** | **2,576,706** | **3,070,083** | **3,126,312** | **3,444,621** | **3,515,167** | **3,489,454** | **2,832,876** | **2,502,974** | **2,618,575** | **2,849,782** | **2,238,088** | **1,886,523** | **689,266** | **4** |
| SPECTRA ENERGY | SE | 29,504,140 | 29,478,452 | 24,083,347 | 21,559,984 | 23,697,682 | 25,022,174 | 24,255,497 | 23,434,724 | 15,837,897 | 16,994,311 | 14,566,381 | 13,120,178 | 3,425,506 | 9 |
| **MEDIAN** | | | | | | | | | | | | | | | **6** |

*Sources: FactSet, Janney Montgomery Scott, LLC estimates*



RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 44 - 45 OF THIS REPORT




## Recent Research

- *Janney/Utilities and Infrastructure Weekly – December 27 2016*
- *Janney/AWK – Upgrading from Neutral to BUY, Maintaining $80 Fair Value – December 20 2016*
- *Janney/Utilities and Infrastructure Weekly – December 19 2016*
- *Janney/Utilities and Infrastructure Weekly – December 12 2016*
- *Janney/Utilities and Infrastructure Weekly – December 05 2016*
- *Janney/WGL - Downgrading from Buy to NEUTRAL on Valuation – November 21 2016*
- *Janney/Utilities and Infrastructure Weekly – November 21 2016*
- *Janney/NJR: Adjusting Estimates, Fair Value to $36, Maintain NEUTRAL Rating – November 18 2016*
- *Janney/WGL: Upgrading to BUY, Raising Fair Value to $71 – November 18 2016*
- *Janney/SBSP3: SBSP3 – Updating Estimates, Raising Fair Value to R$35, Maintain NEUTRAL Rating – November 15 2016*
- *Janney/UGI: UGI: Upgrading to BUY, Raising Fair Value from $46 to $47 – November 14 2016*
- *Janney/CWCO: Reports 3Q16 Results, Maintaining BUY Rating, Fair Value of $15 – November 14 2016*
- *Janney/APU: Reports FY16 Results; Maintaining BUY Rating, $58 Fair Value – November 14 2016*
- *Janney/SJI: Reports Strong 3Q16 Results; Maintaining NEUTRAL Rating, $33 Fair Value – November 7 2016*

- *Janney/CPK: Reports 3Q16; Maintaining BUY Rating of CPK, Fair Value Lowered from $76 to $73 – November 7 2016*
- *Janney/Utilities and Infrastructure Weekly – November 7 2016*
- *Janney/CCC: Weak 3Q16 Results, But Better Performance Ahead; Maintain BUY Rating, F.V. to $19 – November 4 2016*
- *Janney/AWR: 3Q16 Results Inline with Expectations; Maintain NEUTRAL Rating – November 3 2016*
- *Janney/AWK: Reports Strong 3Q16 Results, Maintaining NEUTRAL Rating – November 3 2016*
- *Janney/WTS: Solid 3Q16 Results; Maintaining NEUTRAL Rating, Fair Value to $64 – November 3 2016*
- *Janney/MWA: Reports Mixed FY4Q16 Results; Maintaining BUY Rating, $14 Fair Value – November 3 2016*
- *Janney/FSLR: Outlook Diminished; Downgrading to NEUTRAL, Fair Value from $68 to $48 – November 3 2016*
- *Janney/WTR: Solid 3Q16 Results, Reaffirmed 2016 Guidance; Maintain BUY Rating, $39 F.V. – November 2 2016*
- *Janney/ES: Strong 3Q16 Results/Guidance Maintained; Reiterate BUY Rating – November 2 2016*
- *Janney/XYL: Upgrading from Neutral to BUY, Raising Fair Value from $50 to $52 – November 2 2016*
- *Janney/AME: 3Q16 Results Slightly Better than Expected; Maintain BUY Rating, $56 Fair Value - November 1 2016*
- *Janney/Utilities and Infrastructure Weekly – October 31 2016*
- *Janney/CWT: Solid 3Q16 Results; Maintaining NEUTRAL Rating, Fair Value from $33 to $32 – October 28 2016*
- *Janney/SJW: 3Q16 Results a Pleasant Surprise, Raising Fair Value from $44 to $49 – October 28 2016*
- *Janney/AGR: 3Q16 Results Below Expectations, Lowering Estimates, Fair Value to $43 – October 26 2016*
- *Janney/UTL: Reports Strong 3Q16 Results; Maintaining NEUTRAL Rating – October 24 2016*
- *Janney/AME: Initiating Coverage with BUY Rating, Fair Value Estimate of $56 – October 24 2016*
- *Janney/IEX: First Look; 3Q16 Results inline with Expectations, Maintain BUY Rating, $96 Fair Value – October 18 2016*
- *Janney/Utilities and Infrastructure Weekly – October 17 2016*
- *Janney/Utilities and Infrastructure Weekly – October 10 2016*
- *Janney/Investor Meeting Takeaways Provide Greater Granularity; Reiterate BUY Rating, $20 Fair Value – September 27 2016*
- *Janney/Utilities and Infrastructure Weekly – September 26 2016*
- *Janney/CAFD: CAFD Continues to Execute above Expectations; Maintaining BUY Rating, $22.50 Fair Value – September 21 2016*
- *Janney/Utilities and Infrastructure Weekly – September 19 2016*
- *Janney/WTS: Initiating Coverage with NEUTRAL Rating, Fair Value of $63 – September 16 2016*
- *Janney/CCC: Challenged Shipping Industry Warrants our Conservative Stance on CCC Ballast Water – September 14 2016*
- *Janney/Utilities and Infrastructure Weekly – September 12 2016*
- *Janney/CCC: Ballast Water Regulations Finally Arrive; Reiterating BUY rating, $20 Fair Value – September 9 2016*
- *Janney/CPK: A Deep Dive into a Substantial Opportunity Set; Reiterating BUY rating, $71 Fair Value – September 9 2016*
- *Janney/Utilities and Infrastructure Weekly – September 6 2016*
- *Janney/Utilities and Infrastructure Weekly – August 22 2016*

## IMPORTANT DISCLOSURES

### Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

AmeriGas Partners, LP currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Chesapeake Utilities Corporation currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

South Jersey Industries, Inc. currently is, or during the past 12 months was, a Janney Montgomery Scott LLC client. Janney Montgomery Scott LLC, provided investment banking related services.

Janney Montgomery Scott LLC currently acts as a market-maker in the securities of AMETEK, Inc., American Water Works, American States Water, Calgon Carbon Corp., Consolidated Water Co., California Water Service, IDEX Corporation, Mueller Water Products, New Jersey Resources Corp., Companhia de Saneamento Basico do Estado de Sao Paulo (ADR), South Jersey Industries, Inc., SJW Corp, Unitil, Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc..

Janney Montgomery Scott LLC managed or co-managed a public offering of securities for Chesapeake Utilities Corporation and South Jersey Industries, Inc. in the past 12 months.

Janney Montgomery Scott LLC received compensation for investment banking services from Chesapeake Utilities Corporation and South Jersey Industries, Inc. in the past 12 months.

Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Avangrid, Inc., AMETEK, Inc., AmeriGas Partners, LP, American Water Works, American States Water, 8point3 Energy Partners LP, Calgon Carbon Corp., Chesapeake Utilities Corporation, Consolidated Water Co., California Water Service, Eversource Energy, IDEX Corporation, Mueller Water Products, New Jersey Resources Corp., South Jersey Industries, Inc., SJW Corp, UGI Corporation, Unitil, WGL Holdings Inc., Aqua America, Inc., Watts Water Technologies, Inc. and Xylem, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

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Individual disclosures for the companies mentioned in this report can be obtained by accessing our Firm’s Disclosure Site

Disclosure Site

### Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

### Janney Montgomery Scott Ratings Distribution as of 09/30/16

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 124 | 52.54 | 28 | 22.58 |
| **NEUTRAL [N]** | 109 | 46.19 | 11 | 10.09 |
| **SELL [S]** | 3 | 1.27 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

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Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

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Katherine Burke 646-840-3207 kburke@janney.com

Water Utilities

May 4, 2017

# Aqua America, Inc. (WTR) - BUY

## Clean Quarter, Forward Outlook Maintained; Reiterate BUY Rating, $38 Fair Value

| | |
|---|---|
| Price: | $32.72 |
| Fair Value Estimate: | $38.00 |
| 52-Week Range: | $28.03 - $35.83 |
| Market Cap (MM): | $5,811 |
| Shr.O/S-Diluted (mm): | 177.6 |
| Average Daily Volume: | 619,665 |
| Book Value: | $10.43 |
| Dividend: | $0.77 |
| Yield: | 2.4% |

| FYE: Dec | 2016A | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.33A | $1.36E | $1.46E |
| Prior EPS: | | $1.37 | NC |
| P/E Ratio: | 24.6x | 24.1x | 22.4x |

Quarterly EPS:

| | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.28A | $0.29E |
| Q2 | $0.33A | $0.33E | $0.36E |
| Q3 | $0.41A | $0.44E | $0.48E |
| Q4 | $0.28A | $0.31E | $0.33E |

Quarterly Revenue (M):

| | | | |
|---|---|---|---|
| Q1 | $192A | $188A | $207E |
| Q2 | $204A | $214E | $235E |
| Q3 | $227A | $245E | $257E |
| Q4 | $197A | $207E | $217E |
| Year: | $820A | $853E | $916E |

1 Year Price History for WTR

### PORTFOLIO MANAGER BRIEF

Aqua America reported first quarter results of $0.28, which was essentially in line with our expectations. Results were lower YoY, but non-recurring items that had a positive impact on earnings last year created an unfavorable comparison. Looking forward, a robust capital expenditure budget, acquisition growth, and a continued commitment to cost efficiency continues to create shareholder value. We've made minor adjustments to our forward estimates, and we reiterate our BUY rating and $38 Fair Value.

### ANALYST NOTES

- Solid first quarter results suffered unfavorable YoY comparisons. Net income of $49MM for 1Q17 was slightly below the net income of $51MM for 1Q16. Last year the company included the positive impacts of the sale of a utility system and a tax settlement. EPS of $0.28 was $0.01 below our expectations ($0.02 below consensus), but we consider the shortfall meaningless given 1Q results are the seasonally weakest and rarely impact valuation.
- Regulatory update. Completed rate cases and infrastructure surcharges in Indiana, Illinois, New Jersey, North Carolina, and Ohio were completed, adding $10.7MM in revenue increases. There are still two pending base rate cases in Illinois and Virginia, with requested increases of $12.2MM. In terms of expected rate case activity, Aqua's Pennsylvania subsidiary is expected to file for an infrastructure investment charge in 2017 with a rate case filing likely in 2018, with a resolution and new rates anticipated in 2019.
- Guidance reaffirmed. Aqua America expects 2017 earnings per share between $1.34 and $1.39, with reasonable O&M growth of 1% to 2%. The company also forecasts customer growth of 1.5% to 2%, which looks readily obtainable just by closing the acquisitions already in process.
- Summary/valuation -we consider 1Q17 results in line with expectations, and we note the set-up so far from a weather perspective is extremely favorable for the company to achieve the upper end of its guidance range. Water supplies are ample, and summer-like temperatures have already appeared in many of the areas Aqua operates in. In terms of valuation, WTR shares remain attractive at 22x our 2018 EPS estimate of $1.46. We maintain our BUY rating and $38 Fair Value, based on a P/E of 26x our aforementioned EPS forecast.


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 2 - 3 OF THIS REPORT

## Company Description

Aqua America, Inc., serves residential, commercial, fire protection, industrial, other water, wastewater, and other utility customers in Pennsylvania, Texas, North Carolina, Ohio, Illinois, New Jersey, Indiana and Virginia. It also provides water and wastewater services through operating and maintenance contracts with municipal authorities and other parties, as well as offers sludge hauling, septage and grease services, backflow prevention services, and other non-regulated water and wastewater services.

## IMPORTANT DISCLOSURES

## Research Analyst Certification

I, Michael Gaugler, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

## Janney Montgomery Scott LLC ("Janney") Equity Research Disclosure Legend

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Janney Montgomery Scott LLC intends to seek or expects to receive compensation for investment banking services from Aqua America, Inc. in the next three months.

The research analyst is compensated based on, in part, Janney Montgomery Scott's profitability, which includes its investment banking revenues.

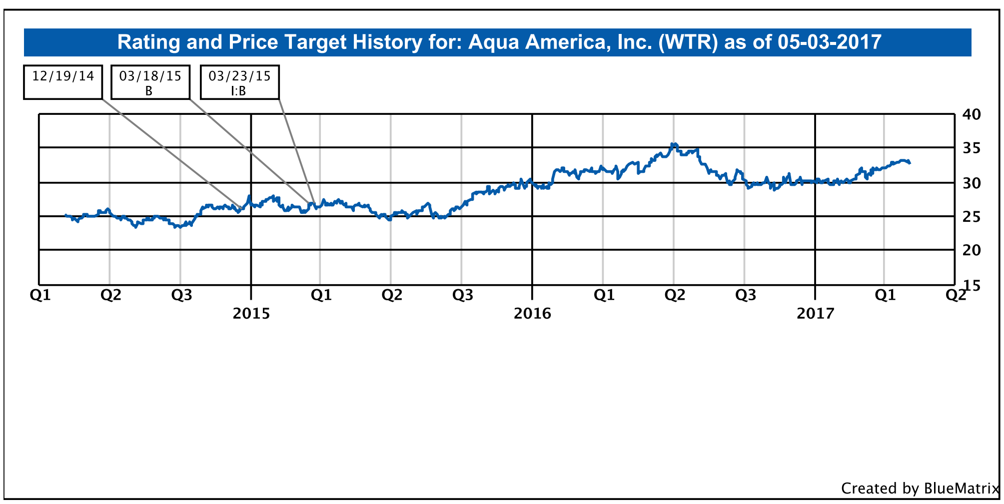
## Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

## Price Charts




## Janney Montgomery Scott Ratings Distribution as of 3/31/17

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 114 | 48.93 | 28 | 24.56 |
| **NEUTRAL [N]** | 114 | 48.93 | 18 | 15.79 |
| **SELL [S]** | 5 | 2.15 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

Janney Montgomery Scott LLC, is a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the New York Stock Exchange, the Financial Industry Regulatory Authority and the Securities Investor Protection Corp.

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Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

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Katherine Burke 646-840-3207 kburke@janney.com

Water Utilities

August 3, 2016

# Aqua America, Inc. (WTR) - BUY

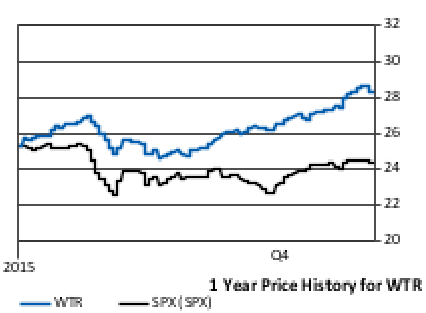
## 2Q16 Results Inline with Expectations; Maintain BUY Rating, Fair Value to $39

| | |
|---|---|
| Price: | $34.40 |
| Fair Value Estimate: | $39.00 |
| 52-Week Range: | $24.45 - $35.83 |
| Market Cap (MM): | $6,099 |
| Shr.O/S-Diluted (mm): | 177.3 |
| Average Daily Volume: | 727,700 |
| Book Value: | $9.93 |
| Dividend: | $0.71 |
| Yield: | 2.1% |

| FYE: Dec | 2016E | 2017E | 2018E |
|---|---|---|---|
| EPS: | $1.34E | $1.43E | $1.50E |
| Prior EPS: | $1.35 | $1.47 | NC |
| P/E Ratio: | 25.7x | 24.1x | 22.9x |

| Quarterly EPS: | | | |
|---|---|---|---|
| Q1 | $0.29A | $0.28E | $0.29E |
| Q2 | $0.33A | $0.32E | $0.33E |
| Q3 | $0.40E | $0.46E | $0.49E |
| Q4 | $0.31E | $0.37E | $0.38E |

| Quarterly Revenue (M): | | | |
|---|---|---|---|
| Q1 | $192A | $202E | $212E |
| Q2 | $204A | $214E | $225E |
| Q3 | $225E | $266E | $279E |
| Q4 | $207E | $244E | $256E |
| Year: | $829E | $927E | $973E |



1 Year Price History for WTR

### PORTFOLIO MANAGER BRIEF

Aqua America's 2Q16 results slightly exceeded our expectations, with revenues of $204MM and EPS of $0.33. Recent strategic actions reduced OPEX materially, offsetting lower consumption. Looking forward, we've introduced (and moved to) 2018 estimates for valuation purposes, which increases our Fair Value assumption on WTR shares to $39 from $35. We continue to recommend accumulation at current price levels.

### ANALYST NOTES

- 2Q16 results a touch above forecasts. On the top line, revenues of $204MM were actually below our $208MM forecast, before adjusting for divestitures in market-based activities. Making that adjustment, WTR came within $1MM of our estimate. More interesting though was the OPEX improvement, which decreased by 7.2% YoY. The aforementioned sales of market-based activities appears to have had a noticeable impact. Otherwise, most other income statement line items were within normal statistical bounds of what we were expecting. EPS of $0.33 was $0.01 ahead of our $0.32 estimate, which was also consensus.
- Dividend increase announced. The company boosted its dividend 7.5%, to $0.1913 per share, payable to shareholders of record on 8/18. This marks the 26th dividend increase in 25 years.
- Guidance reaffirmed. Aqua America reaffirmed its 2016 EPS guidance of $1.30 to $1.35. The company also expects in excess of $350MM of CAPEX to be deployed during the year, and customer growth of 1.5% to 2.0%. Thus far, WTR has invested $168.8MM and increased its customer count by 1.1%.
- Adjusting pre-existing estimates; introducing 2018 forecasts. We've made minor adjustments to our 2016 and 2017 estimates, and introduced 2018 forecasts. The move to 2018 forecasts for share valuation purposes had a material impact on our Fair Value assumption.
- Summary/Valuation. The move to 2018 forecasts for valuation purposes allows us to increase our Fair Value target for WTR shares from $35 to $39, based on a 26 P/E multiple. What we saw in the 2Q16 results was a widening focus on improving operational margins, in addition to solid execution against the guidance parameters laid out for 2016. We've also noted from recent activity that WTR is not content to just "work around the edges" to improve its performance; if it sees large scale opportunities to grow the business, it steps


RESEARCH ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES ARE ON PAGES 3 - 4 OF THIS REPORT

right up to the plate and takes its swings. We differ with those that believe multiple contraction would occur should WTR move outside water/wastewater utilities; we believe most analysts would simply incorporate a "sum-of-the-parts" methodology to the various earnings streams generated, much like we do in our electric & gas utility universe. That said, we continue to recommend accumulation at current share price levels.



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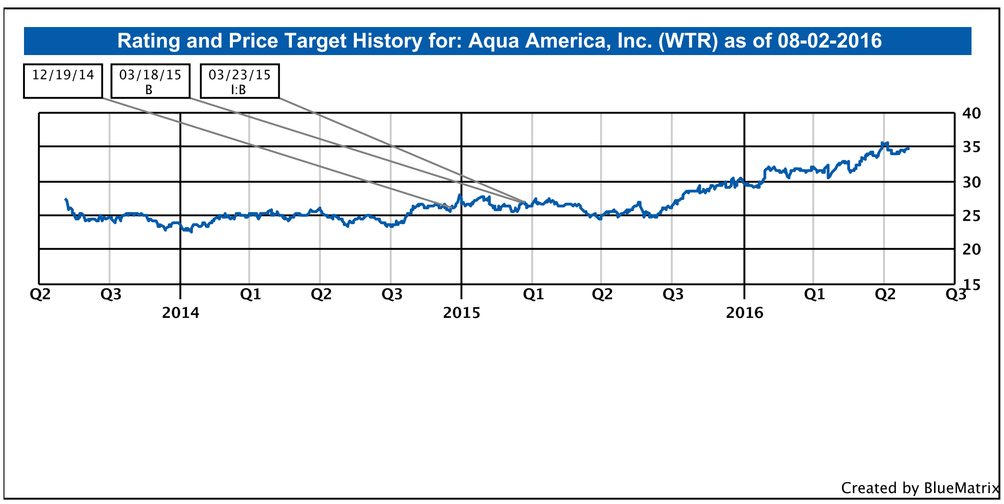


## Janney Montgomery Scott Ratings Distribution as of 06/30/16

| | | | IB Serv./Past 12 Mos.* | |
|---|---|---|---|---|
| **Rating** | **Count** | **Percent** | **Count** | **Percent** |
| **BUY [B]** | 109 | 52.15 | 26 | 23.85 |
| **NEUTRAL [N]** | 98 | 46.89 | 11 | 11.22 |
| **SELL [S]** | 2 | 0.95 | 0 | 0.00 |

*Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.

Other Disclosures

Janney Montgomery Scott LLC, is a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of the New York Stock Exchange, the Financial Industry Regulatory Authority and the Securities Investor Protection Corp.

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Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however, our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views. Supporting information related to the recommendation, if any, made in the research report is available upon request.

MACQUARIE

UNITED STATES

**Please see estimate and TP changes starting on page 4.**

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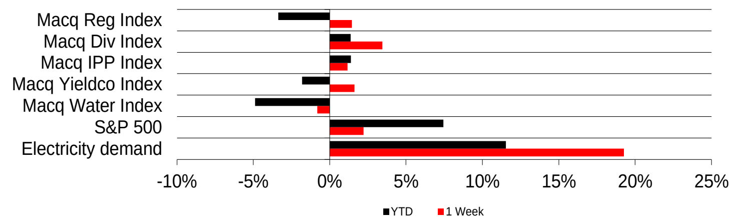
January 29 2018
Macquarie Capital (USA) Inc.

# US Utilities

## Weekly Snapshot

- This past week, **AEP**, **NEE** and **NEP** reported earnings. Please see brief write ups on the earnings releases inside.
- **AEP** kicked off the 4Q17 earnings season for US utilities with an earnings call heavily focused on the implications from the tax reform. **AEP**'s FFO/debt should bottom around 14% in 2020 down from the current 18.7% when the company should become a meaningful cash taxpayer. We admit that the US$700-800m reduction in operating cash flows exceeded our expectations by ~US$150m. The company did not add more equity to its plan, and instead reduced its previous 2020 capex plan by ~8% or US$500m.
- Last Monday, **FE** announced a US$1.62bn private placement of mandatory convertible preferred equity to a consortium of Elliott, Bluescape and GIC, and US$850m in common equity from Zimmer Partners. Additionally, **FE** and its new investors created a Restructuring Working Group to facilitate a constructive exit from the merchant power business (FES) and refocus **FE** on fully regulated electric T&D growth. While the issuances are more dilutive than we would have hoped for, they remove one out of two major overhangs from the **FE** story.
- **NEE**'s FPL convinced its regulators to use tax-related savings from 2018 through 2020 to recover US$1.3bn in Hurricane Irma-related expenses. Tax savings for 2021-2022 could delay FPL's next base rate case. The drop in the tax rate should add US$0.45 to the EPS of NextEra Energy Resources; together with record-high new contracted wind and solar additions, **NEE** managed to increase its 2018 EPS guidance by US$0.65. Management extended its 6-8% EPS CAGR from 2020 to 2021 off of the new midpoint of its 2018 EPS guidance of US$7.70.
- **NEP**'s management expects "one of the best renewables development environments in our history over the next several years," and suggested that the long-lasting tax shield in the US could create an incremental opportunity to sell its Canadian portfolio and invest the proceeds in the US. We think the timing for such a recycling of the Canadian portfolio is particularly ripe given the recent substantial weakening of the US dollar vs the Canadian dollar.
- Last Monday, Axios published a draft version of the White House's infrastructure plan. We don't expect the proposed federal support for water infrastructure upgrades to discourage municipal M&A if only because they should struggle with coming up with 80% of funding needed for upgrades and the federal support likely being allocated to larger-ticket items. We remain optimistic about the future water sector consolidation, especially for **AWK** and **WTR**.

**Performance for the week ended January 26, 2018**




Source: FactSet, EEI, Macquarie Capital (USA), January 2018

**Please refer to page 11 for important disclosures and analyst certification, or on our website [www.macquarie.com/research/disclosures](www.macquarie.com/research/disclosures).**

## Fig 1 Stocks under coverage – Comp sheet (1 of 2)

| Regulated utilities | Ticker | Rating | Price (US$) | | TSR | Mkt cap | DPS | Dividend | EPS - 2017E | | EPS - 2018E | | EPS - 2019E | | PE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 26-Jan-18 | Target | 12m | US$m | 2017E | Yield | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2017E | 2018E | 2019E |
| **American Electric Power** | **AEP** | **Outperform** | **68.75** | **76.00** | **14.0%** | **33,817** | **2.35** | **3.4%** | **3.67** | **3.68** | **3.90** | **3.89** | **4.10** | **4.12** | **18.7** | **17.6** | **16.8** |
| CMS Energy | CMS | Neutral | 44.79 | 47.00 | 7.9% | 12,631 | 1.32 | 2.9% | 2.17 | 2.17 | 2.34 | 2.33 | 2.50 | 2.50 | 20.6 | 19.1 | 17.9 |
| CenterPoint Energy | CNP | Neutral | 28.46 | 28.00 | 2.2% | 12,267 | 1.08 | 3.8% | 1.34 | 1.34 | 1.43 | 1.48 | 1.52 | 1.55 | 21.2 | 20.0 | 18.7 |
| **Dominion Resources** | **D** | **Outperform** | **75.50** | **83.00** | **13.9%** | **45,225** | **3.02** | **4.0%** | **3.56** | **3.58** | **4.01** | **4.04** | **4.22** | **4.30** | **21.2** | **18.8** | **17.9** |
| **DTE Energy** | **DTE** | **Outperform** | **105.50** | **117.00** | **14.0%** | **18,926** | **3.30** | **3.1%** | **5.55** | **5.53** | **5.75** | **5.71** | **6.08** | **6.06** | **19.0** | **18.3** | **17.3** |
| Duke Energy | DUK | Neutral | 78.83 | 85.50 | 12.9% | 55,172 | 3.51 | 4.5% | 4.55 | 4.56 | 4.85 | 4.80 | 5.13 | 5.03 | 17.3 | 16.3 | 15.4 |
| **Edison International** | **EIX** | **Outperform** | **62.46** | **73.00** | **20.3%** | **20,424** | **2.17** | **3.5%** | **4.35** | **4.31** | **4.20** | **4.26** | **4.55** | **4.60** | **14.4** | **14.9** | **13.7** |
| Eversource Energy | ES | Neutral | 64.07 | 57.00 | -8.1% | 20,303 | 1.91 | 3.0% | 3.16 | 3.14 | 3.31 | 3.34 | 3.57 | 3.58 | 20.3 | 19.4 | 18.0 |
| Alliant Energy | LNT | Neutral | 40.30 | 43.00 | 9.8% | 9,318 | 1.26 | 3.1% | 1.95 | 1.94 | 2.12 | 2.11 | 2.25 | 2.24 | 20.7 | 19.0 | 17.9 |
| **Pacific Gas & Electric** | **PCG** | **Outperform** | **43.54** | **61.00** | **44.6%** | **22,328** | **1.96** | **4.5%** | **3.68** | **3.68** | **3.83** | **3.82** | **4.00** | **4.00** | **11.8** | **11.4** | **10.9** |
| PPL Corp | PPL | Underperform | 32.01 | 30.00 | -13% | 21,868 | 1.58 | 4.9% | 2.18 | 2.18 | 2.31 | 2.33 | 2.42 | 2.41 | 14.7 | 13.8 | 13.2 |
| SCANA Corp. | SCG | Neutral | 43.43 | 43.00 | 4.7% | 6,207 | 2.45 | 5.6% | 4.05 | 4.06 | 2.27 | 3.19 | 2.37 | 3.26 | 10.7 | 19.1 | 18.3 |
| **Southern Company** | **SO** | **Outperform** | **44.31** | **52.00** | **22.5%** | **44,471** | **2.30** | **5.2%** | **2.96** | **2.96** | **2.93** | **2.98** | **3.10** | **3.10** | **15.0** | **15.1** | **14.3** |
| Xcel Energy | XEL | Neutral | 45.70 | 50.00 | 12.6% | 23,205 | 1.44 | 3.2% | 2.31 | 2.31 | 2.43 | 2.44 | 2.60 | 2.59 | 19.7 | 18.8 | 17.6 |
| *Average* | | | | | | | | *3.9%* | | | | | | | *17.5* | *17.3* | *16.3* |
| **American Water Works** | **AWK** | **Outperform** | **84.94** | **93.50** | **12.0%** | **15,151** | **1.62** | **1.9%** | **3.02** | **3.01** | **3.26** | **3.28** | **3.52** | **3.52** | **28.2** | **26.0** | **24.1** |
| American States Water | AWR | Neutral | 56.22 | 52.00 | -5.7% | 2,062 | 0.99 | 1.8% | 1.71 | 1.75 | 1.82 | 1.79 | 1.94 | 1.90 | 32.8 | 31.0 | 29.0 |
| California Water | CWT | Neutral | 41.70 | 42.00 | 2.4% | 2,001 | 0.71 | 1.7% | 1.31 | 1.33 | 1.41 | 1.42 | 1.51 | 1.50 | 31.9 | 29.5 | 27.7 |
| Aqua America | WTR | Neutral | 36.69 | 38.50 | 7.1% | 6,519 | 0.79 | 2.2% | 1.37 | 1.35 | 1.42 | 1.43 | 1.51 | 1.51 | 26.9 | 25.9 | 24.3 |
| *Average* | | | | | | | | *1.9%* | | | | | | | *29.9* | *28.1* | *26.3* |

| Diversified utilities | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AVANGRID** | **AGR** | **Outperform** | **48.68** | **53.00** | **12.4%** | **15,045** | **1.73** | **3.5%** | **2.25** | **2.23** | **2.44** | **2.43** | **2.65** | **2.58** | **21.6** | **20.0** | **18.4** |
| **AES Corp** | **AES** | **Outperform** | **11.72** | **13.00** | **15.1%** | **7,740** | **0.48** | **4.1%** | **1.02** | **1.02** | **1.20** | **1.17** | **1.28** | **1.28** | **11.4** | **9.7** | **9.1** |
| Entergy | ETR | Neutral | 78.29 | 84.00 | 11.8% | 14,112 | 3.51 | 4.5% | 6.98 | 6.91 | 5.01 | 5.10 | 5.39 | 5.50 | 11.2 | 15.6 | 14.5 |
| **Exelon** | **EXC** | **Outperform** | **38.86** | **44.00** | **16.6%** | **37,309** | **1.30** | **3.3%** | **2.67** | **2.66** | **3.10** | **2.95** | **3.03** | **2.89** | **14.6** | **12.5** | **12.8** |
| **FirstEnergy** | **FE** | **Outperform** | **32.09** | **37.50** | **21.3%** | **14,275** | **1.44** | **4.5%** | **3.05** | **3.04** | **2.68** | **2.49** | **2.50** | **2.40** | **10.5** | **12.0** | **12.9** |
| NextEra Energy | NEE | Neutral | 157.69 | 152.00 | -1.1% | 74,177 | 3.93 | 2.5% | 6.70 | 6.70 | 7.69 | 7.51 | 8.13 | 8.11 | 23.5 | 20.5 | 19.4 |
| **Public Service Enterprise** | **PEG** | **Outperform** | **51.20** | **55.00** | **10.8%** | **25,909** | **1.72** | **3.4%** | **2.91** | **2.91** | **3.09** | **3.08** | **3.09** | **3.09** | **17.6** | **16.6** | **16.6** |
| *Average (ex-AES)* | | | | | | | | *3.6%* | | | | | | | *15.5* | *15.4* | *15.2* |

| Independent power producers | Ticker | Rating | Price (US$) | | TSR | Mkt cap | Net debt | EV | EBITDA - 2017E | | EBITDA - 2018E | | EBITDA - 2019E | | EV/EBITDA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 26-Jan-18 | Target | 12m | US$m | '18 US$m | US$m | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2017E | 2018E | 2019E |
| Calpine | CPN | Neutral | 15.12 | 15.25 | 0.9% | 7,348 | 8,761 | 16,109 | 1,807 | 1,836 | 1,968 | 2,009 | 1,917 | 1,958 | 8.9 | 8.2 | 8.4 |
| **Dynegy** | **DYN** | **Outperform** | **12.80** | **13.00** | **1.6%** | **1,847** | **6,059** | **7,906** | **1,205** | **1,187** | **1,463** | **1,492** | **1,320** | **1,323** | **6.6** | **5.4** | **6.0** |
| **NRG Energy** | **NRG** | **Outperform** | **27.40** | **28.00** | **2.2%** | **8,676** | **13,607** | **22,283** | **2,390** | **2,458** | **2,593** | **2,867** | **2,771** | **2,823** | **9.3** | **8.6** | **8.0** |
| *Average* | | | | | | | | | | | | | | | *8.3* | *7.4* | *7.5* |

Source: FactSet, Macquarie Capital (USA), January 2018; prices as of close on January 26, 2018

## Fig 2 Stocks under coverage – Comp sheet (2 of 2)

| YieldCos | Ticker | Rating | Price (US$) | | TSR | Mkt cap | Net debt | EV | DPS - 2017E | | DPS - 2018E | | DPS - 2019E | | Dividend Yield | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 26-Jan-18 | Target | 12m | US$m | '17 US$m | US$m | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2017E | 2018E | 2019E |
| Atlantica Yield | AY | Neutral | 20.86 | 23.00 | 15.5% | 2,091 | 5,102 | 7,192 | 109 | 116 | 160 | 150 | 160 | 172 | 5.2% | 7.7% | 7.7% |
| NextEra Energy Partners | NEP | Neutral | 43.04 | 43.00 | 3.4% | 2,334 | 3,348 | 5,683 | 149 | 152 | 174 | 175 | 198 | 2.00 | 3.5% | 4.0% | 4.6% |
| **NRG Yield** | **NYLD** | **Outperform** | **19.15** | **21.00** | **15.4%** | **662** | **5,545** | **6,207** | **1.10** | **1.11** | **1.26** | **1.26** | **1.38** | **1.39** | **5.7%** | **6.6%** | **7.2%** |
| Pattern Energy Group | PEGI | Neutral | 2142 | 22.00 | 10.5% | 2,097 | 2,269 | 4,366 | 167 | 167 | 171 | 172 | 177 | 179 | 7.8% | 8.0% | 8.2% |
| TerraForm Power | TERP | Neutral | 1123 | 13.00 | 15.8% | 1,665 | 3,077 | 4,742 | 0.00 | 0.97 | 0.72 | 0.76 | | 0.77 | 0.0% | 6.4% | |
| *Average* | | | | | | | | | | | | | | | *4.4%* | *6.5%* | *6.9%* |

| Alternative energy and smart grid | Ticker | Rating | Price (US$) | | TSR | Mkt cap | Net debt | EV | EBITDA - 2017E | | EBITDA - 2018E | | EBITDA - 2019E | | EV/EBITDA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 26-Jan-18 | Target | 12m | US$m | '16 US$m | US$m | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2017E | 2018E | 2019E |
| Broadwind Energy | BWEN | Neutral | 2.62 | 3.70 | 412% | 40 | -15 | 25 | 5 | 4 | 11 | 14 | 18 | 18 | 5.2 | 2.3 | 14 |

Source: FactSet, Macquarie Capital (USA), January 2018; prices as of close on January 26, 2018

*Companies mentioned:*

# The week in review: January 22 – January 26, 2018

*AEP*

## American Electric Power (Outperform) – FFO weakness higher than expected, but growth prospects largely unchanged

AEP kicked off the 4Q17 earnings season for US utilities with an earnings call heavily focused on the implications from the tax reform. We had expected AEP's FFO/debt to weaken on the back of the tax reform due to lower customer collections. AEP's FFO/debt should bottom around 14% in 2020 down from the current 18.7% when the company should become a meaningful cash taxpayer. We admit that the US$700-800m reduction in operating cash flows exceeded our expectations by ~US$150m. The company did not add more equity to its plan, and instead reduced its previous 2020 capex plan by ~8% or US$500m, and still expects its credit rating to remain at Baa1, its EPS CAGR to remain at 5-7% through 2020, with the rate base growing at a 9% CAGR over this period.

Separately, management was very disappointed with a recent ALJ recommendation in PSO's pending rate case in OK, which could further put into question the proposed 2,000MW Wind Catcher project in the state. Management hopes the OK Corporation Commission does not side with the ALJ recommendation, and that a settlement with industrial customer together with lower energy prices fully offsetting the cost of the Wind Catcher project to OK ratepayers should bode well for the future of the project. Our estimates do not account for the wind project. Our 2018-2020 estimates remain unchanged, and our TP remains at US$76.

AEP reported 2017 operating EPS of US$3.68 ahead of our/consensus estimates are US$3.60/3.61 with the beat coming from cost efficiencies and stronger than expected load growth on the industrial side partly offset by mild weather.

*Weekly snapshot only (29 January).*

*FE*

## FirstEnergy (Outperform) - One down, one more to go

With the US$2.47bn equity offering FE has addressed its equity needs through at least 2020, and while the issuances are more dilutive than we would have hoped for, they remove one out of two major overhangs from the FE story. The impending bankruptcy of FES and financial implications on FE still need to be addressed, and that could take time, but FE's current market valuation more than reflects any FES-related implications, we believe. Hence we reiterated our Outperform rating, but trimmed our TP to US$37.50 from US$38.50 in recognition of the higher dilution and the tax reform.

Yesterday, FE announced a US$1.62bn private placement of mandatory convertible preferred equity to a consortium of Elliott, Bluescape and GIC, and US$850m in common equity from Zimmer Partners. Additionally, FE together with its new investors created a Restructuring Working Group to facilitate a constructive exit from the merchant power business (FES) and refocus FE on fully regulated electric T&D growth.

*Please see our report, FirstEnergy - One down, one more to go (23 January).*

*NEE*

## NextEra Energy (Neutral) – No tax detriment to FPL, tax benefit and accelerating renewable new build benefit at NEER

FPL convinced its regulators not to reduce its customer rates on the back of the tax reform, but instead to use tax-related savings from 2018 through 2020 to recover US$1.3bn in Hurricane Irma-related expenses. Tax savings for 2021-2022 could delay FPL's next base rate case.

The drop in the tax rate should add US$0.45 to the EPS of NextEra Energy Resources, together with record-high new contracted wind and solar additions, NEE managed to increase its 2018 EPS guidance by US$0.65. Management extended its 6-8% EPS CAGR from 2020 to 2021 off of the new midpoint of its 2018 EPS guidance of US$7.70.

NEE reported adjusted 2017 EPS of US$6.70 vs. our/consensus expectations of US$6.69/6.75. Management raised its 2018-2020 EPS projections to account for the US$0.45 EPS benefit associated with the tax reform and growth in signed wind/solar contracts. Our new '18/'19/'20 EPS estimates are US$7.70/8.15/8.55 up from US$7.32/7.71/-, respectively. We are raising our TP to US$152 from US$140 along with higher estimates and as have rolled forward our valuation to 2020.

*Weekly snapshot only (29 January).*

***NEP***

## NextEra Energy Partners (Neutral) – Partial relief on a few fronts

NEP's management expects "one of the best renewables development environments in our history over the next several years." The US Congress did not change the PTC retroactively, and NextEra Energy Resources was able to close its four remaining 2017 tax equity financings at "substantially similar" economics vs what they expected before the tax reform, which is a partial relief to us as it relates to NEP's opportunities for dropdown acquisitions, though we think it's too soon to tell what the ultimate impacts will be on the growth outlook from the lower corporate tax rate. As expected, NEE's tax shield should be maintained beyond 15 years despite the lower tax rate because of ongoing tax loss generation; management suggested that the long-lasting tax shield in the US could create an incremental opportunity to sell its Canadian portfolio and invest the proceeds in the US. We think the timing for such a recycling of the Canadian portfolio is particularly ripe given the recent substantial weakening of the US dollar vs the Canadian dollar.

NEP reported 2017 adjusted EBITDA of US$743m vs our/consensus US$826/784m on lower-than-expected wind resource. The company announced a quarterly distribution increase to US$0.4050/unit and reduced EBITDA guidance due to a lower pre-tax value of NEP's tax credits resulting from the tax reform; 12/31/17 run rate adjusted EBITDA guidance has fallen to US$830-930m from US$875-975m, and the 12/31/18 run rate guidance fell to US$1,000-1,150m from US$1,050-1,200m. CAFD guidance is unchanged. Our new '18/'19/'20 EBITDA estimates are US$889/1,018/1,197m vs US$968/1,112/- previously. However, we increase our TP to US$43 from US$41 to reflect opportunities for recycling Canadian assets into the US on the back of tax reform. We reiterate Neutral as we view NEP's debt-financed growth as fully valued.

*Weekly snapshot only (29 January).*

***US Utilities***

## US Utilities: MacqCharts – Tax reform and cash taxes

AEP kicked off the 4Q17 earnings season for US utilities. The earnings call focused on large ~15% reductions in management's projections for cash flows from operations in 2018 and 2019 on the back of the tax reform, which in turn could lead to AEP's FFO/debt dropping by more than 400bps. The impact is particularly high for AEP given its lack of NOLs which should make the company a cash tax payer. Below please find federal NOLs positions as of the end of 2016 for regulated utilities under our coverage. While those will be re-measured under the lower tax rate, and SCG should gain a sizeable NOL position on the back of its abandoned nuclear plant, the chart should be a good starting point for future assessment of the FFO degradation for US utilities.

*Please see our report, US Utilities: MacqCharts – Tax reform and cash taxes (25 January).*

***Water Utilities***

## Water utilities: Infrastructure plan should not discourage muni water system privatization

We don't expect the proposed federal support for infrastructure upgrades, including those in the water segment, to discourage mid-size munis from privatizing their underinvested water systems if only because they should struggle with coming up with 80% of funding needed for upgrades and the federal support likely being allocated to large ticket items such as water treatment plants. Importantly, the proposed infrastructure plan would lift caps on tax-exempt private activity bonds (PABs) and allow investor-owned water utilities to qualify for funds from state revolving water funds, in turn minimizing the cost of needed upgrades and their impact on customer bills. We remain optimistic about the future water sector consolidation, especially for AWK and WTR, as both companies focus on mid-sized municipal water systems. Last Monday, Axios published a draft version of the White House's infrastructure plan.

*Please see our report, Water utilities: Infrastructure plan should not discourage muni water system privatization (24 January).*

### Fig 3 AEP

| Income Statement (US$m) | 2016 | 2017 | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| Total revenue | 16,367 | 15,436 | 16,297 | 16,889 | 17,517 |
| Operating expenses | 12,905 | 12,005 | 11,920 | 12,175 | 12,484 |
| Gross margin | 10,637 | 10,124 | 11,280 | 11,731 | 12,215 |
| EBIT | 3,462 | 3,431 | 4,377 | 4,714 | 5,033 |
| EBITDA | 5,424 | 5,428 | 6,424 | 6,796 | 7,151 |
| Interest expense | -877 | -895 | -1,027 | -1,202 | -1,291 |
| Other income | 146 | 141 | -495 | -495 | -495 |
| EBT | 2,731 | 2,676 | 2,855 | 3,017 | 3,247 |
| Taxes | -892 | -934 | -999 | -1,056 | -1,136 |
| Net Income incl equity earnings | 1,941 | 1,824 | 1,939 | 2,044 | 2,193 |
| S/O | 491 | 492 | 493 | 494 | 501 |
| EPS | $3.94 | $3.68 | $3.90 | $4.10 | $4.35 |

Source: Company data, Macquarie Capital (USA), January 2018

### Fig 4 NEE

| Income statement (US$m) | 2016 | 2017 | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| EBITDA | 7,657 | 7,100 | 10,097 | 11,004 | 11,763 |
| Depreciation | 3,077 | 2,357 | 3,642 | 3,945 | 4,228 |
| EBIT | 4,580 | 4,743 | 6,456 | 7,059 | 7,534 |
| Net interest expense | -220 | -2,349 | -1,525 | -1,830 | -1,988 |
| Profit Before Tax | 4,360 | 2,394 | 4,930 | 5,229 | 5,546 |
| Income tax | 1,383 | -713 | 1,219 | 1,252 | 1,322 |
| Net profit | 2,884 | 3,165 | 3,681 | 3,942 | 4,183 |
| S/O (m) | 466 | 473 | 478 | 484 | 489 |
| Diluted EPS | 6.19 | 6.70 | 7.70 | 8.15 | 8.55 |
| DPS | 3.48 | 3.93 | 4.42 | 4.97 | 5.60 |

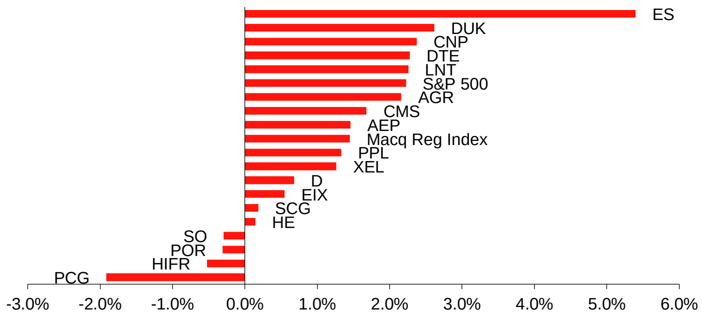
Source: Company data, Macquarie Capital (USA), January 2018

### Fig 5 NEP

| Abbreviated financials (US$m) | 2016 | 2017 | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| EBITDA (US$m) | 639 | 743 | 889 | 1,018 | 1,197 |
| Growth | | 16% | 20% | 14% | 18% |
| CAFD (US$m) | 222 | 246 | 333 | 400 | 501 |
| Growth | | 11% | 35% | 20% | 25% |
| Dividends (US$m) | 209 | 307 | 283 | 340 | 426 |
| Avg. share count | 122 | 129 | 130 | 138 | 144 |
| CAFD/share (US$) | 1.82 | 1.90 | 2.57 | 2.90 | 3.47 |
| IDRs | 0.24 | 0.32 | 0.42 | 0.49 | 0.61 |
| DPS after IDRs (US$) | 1.30 | 1.49 | 1.74 | 1.98 | 2.34 |

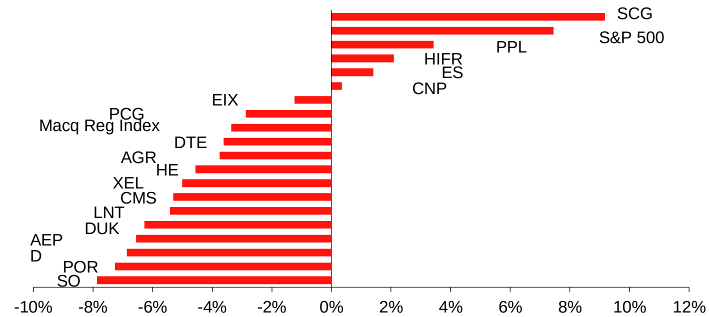
Source: Company data, Macquarie Capital (USA), January 2018

## Fig 6 Weekly performance – regulated electric utilities



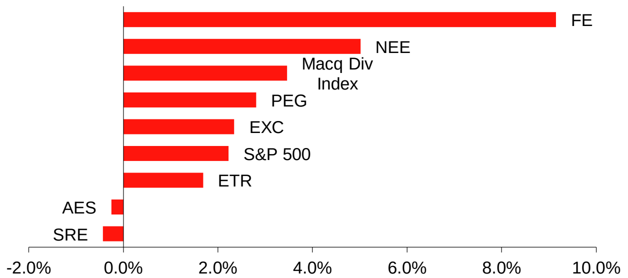

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 7 YTD performance – regulated electric utilities



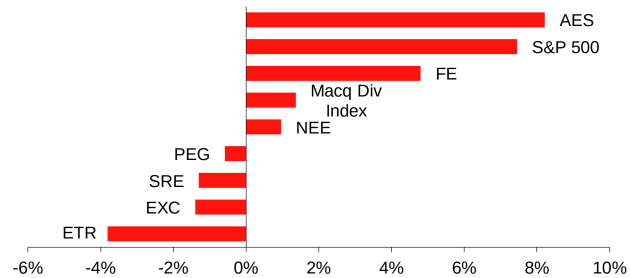

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 8 Weekly performance – diversified utilities



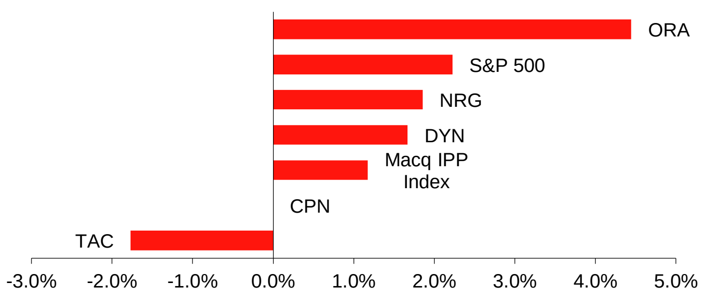

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 9 YTD performance – diversified utilities



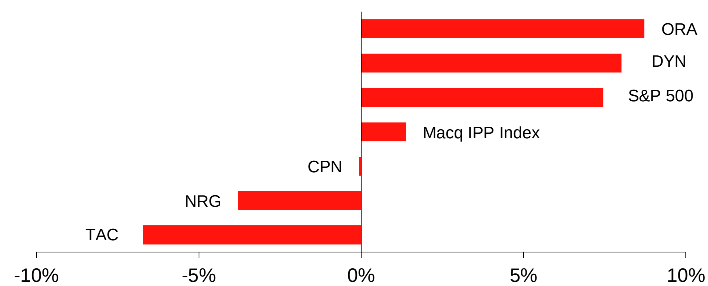

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 10 Weekly performance – IPPs



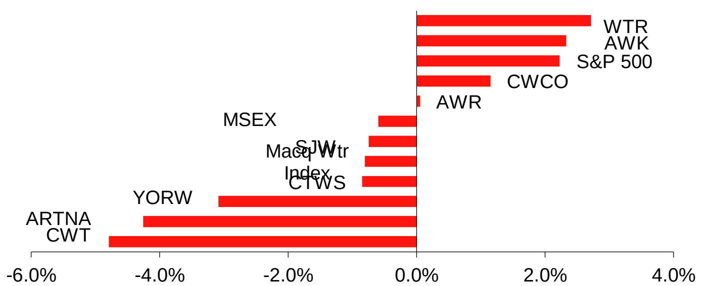

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 11 YTD performance – IPPs



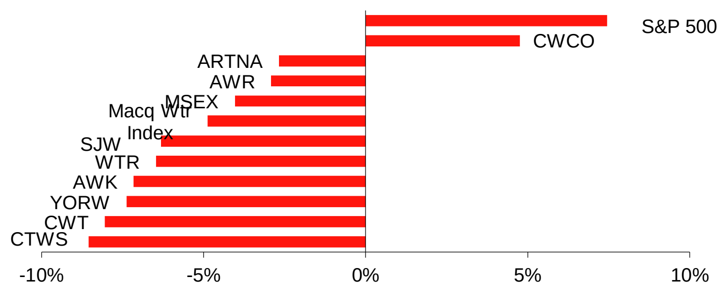

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 12 Weekly performance – water utilities



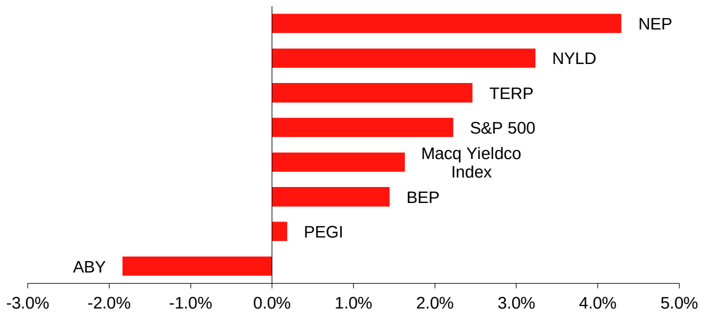

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 13 YTD performance – water utilities



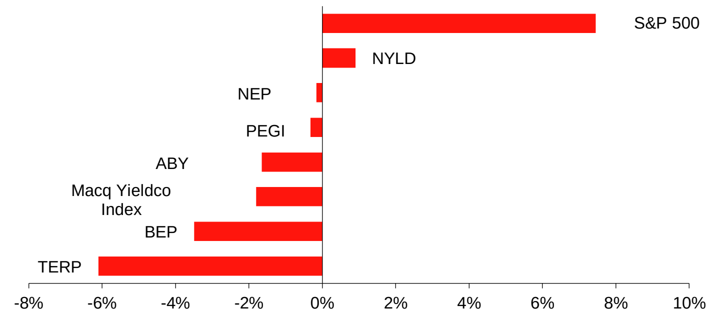

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 14 Weekly performance – YieldCos



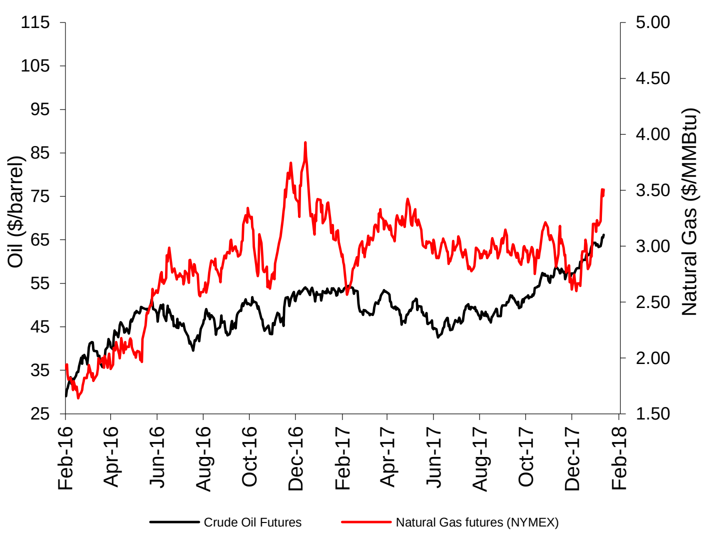

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 15 YTD performance – YieldCos



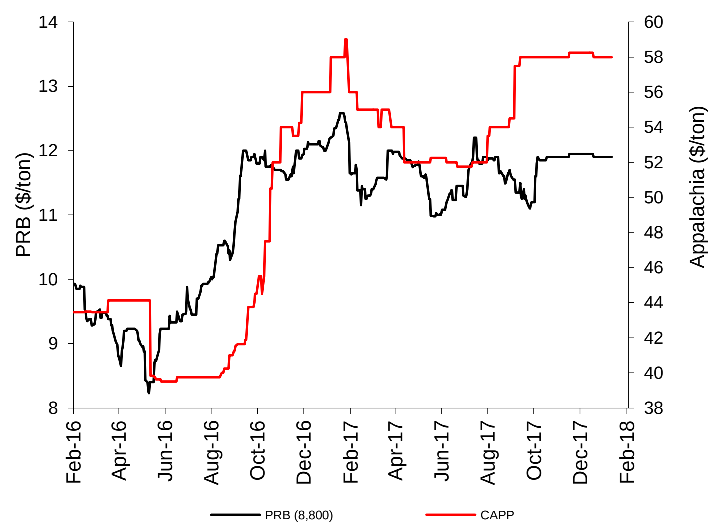

Source: Macquarie Capital (USA), January 2018

## Fig 16 Oil and gas futures (Prompt) (US$)



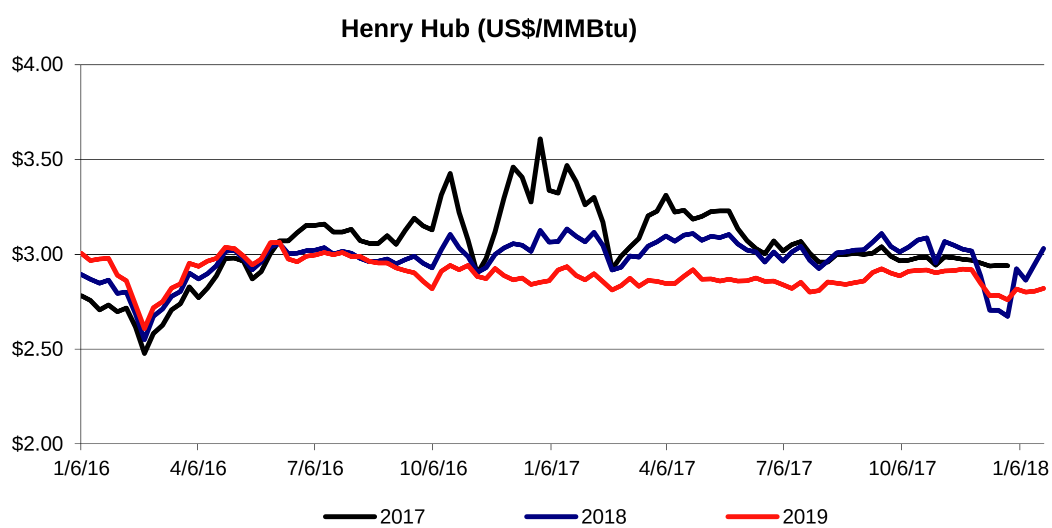

Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 17 Coal forward prices (Prompt) (US$)



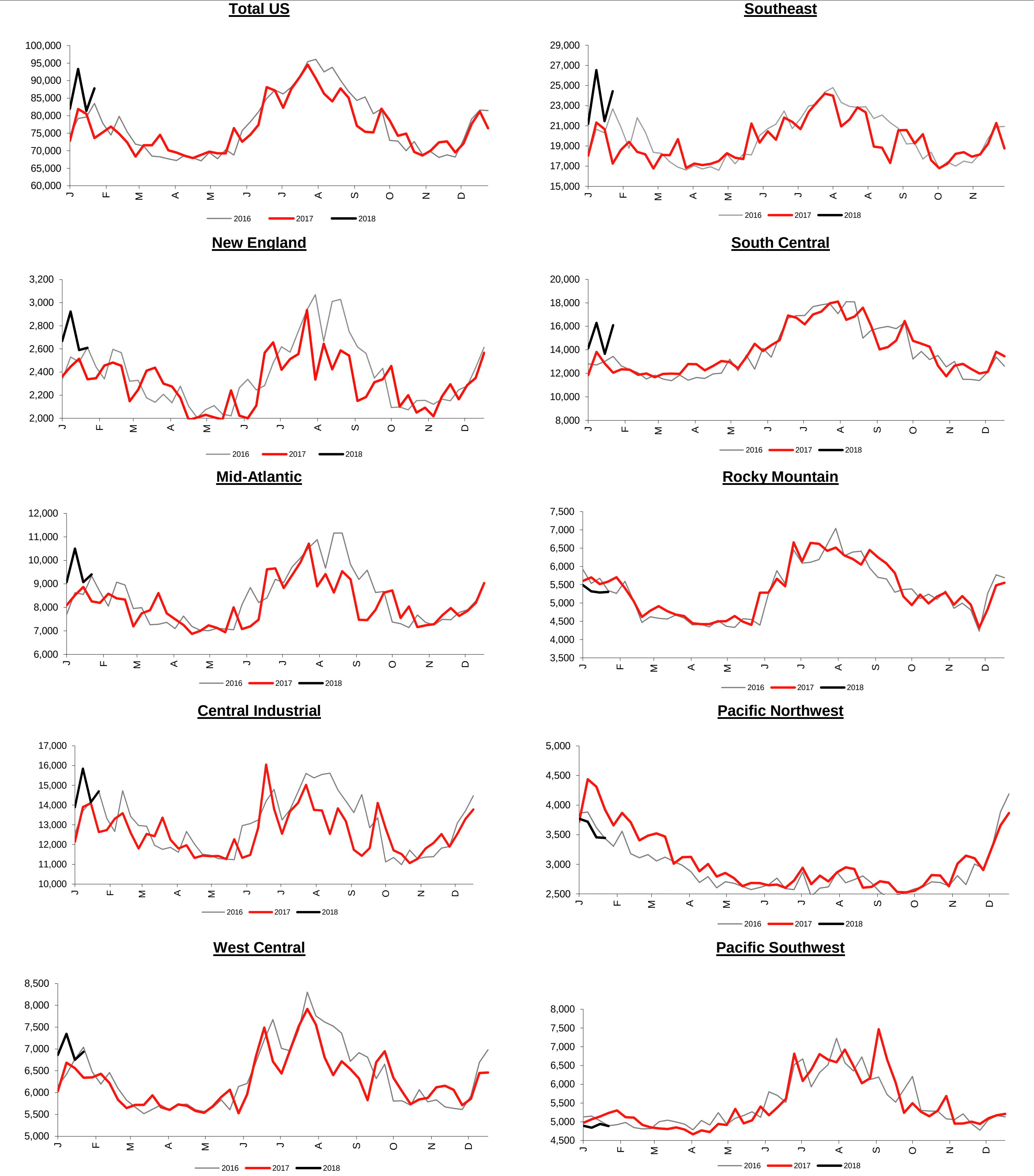

Source: Macquarie Capital (USA), January 2018

## Fig 18 Macquarie Henry Hub natural gas forward curve




Source: FactSet, Macquarie Capital (USA), January 2018

## Fig 19 EEI weekly electric output* – total US and regions (GWh)




Source: EEI, Macquarie Capital (USA), data as of January 2018

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

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All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 December 2017

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 51.82% | 55.57% | 44.05% | 45.06% | 60.00% | 42.51% | (for global coverage by Macquarie, 4.36% of stocks followed are investment banking clients) |
| Neutral | 35.40% | 28.60% | 36.90% | 47.59% | 28.67% | 40.42% | (for global coverage by Macquarie, 2.58% of stocks followed are investment banking clients) |
| Underperform | 12.77% | 15.83% | 19.05% | 7.34% | 11.33% | 17.07% | (for global coverage by Macquarie, 0.69% of stocks followed are investment banking clients) |

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**GLOBAL**

# Global Water

## Rising capex quenches thirst

### Comparing European, US, and Chinese water names

We have benchmarked 11 investor-owned water utilities in the US, the UK, France, and China and compared invested capital, capex, opex, returns and consumer water bills. US and UK water stocks are comparable asset companies whilst French and Chinese water companies operate concession models.

**American Water, Severn Trent, Suez, and Beijing Enterprises Water** are our preferred global water investments.

### We see global water capex rising

US utilities show strong (and accelerating) growth in Earnings base (5-9% per annum) when compared to their UK peers (2-5%). Earnings base per household is similar between the UK and US. We see US Earnings base rising faster than UK from similar levels, but both are below modern equivalent asset values. We anticipate that UK water capex will plateau at current high levels into the next review, whilst in the US, excessive levels of lead being detected in numerous US municipal water systems and wastewater overflow upgrades intensify the push for sharply higher spending on water capex with little help provided by the federal government. China will see increasing environmental renovation projects.

### Consumers pay for these improvements

The range in water bills between regions is large (Fig. 10), with UK and US water and wastewater bills already well above those of other countries where greater cross subsidy exists with Government. Overall, Water bills are the highest in Northern Europe, but the US is likely to soon catch up on the back of rising water and wastewater investments. US investor-owned water utilities have water bills typically twice as high as those of municipality owned companies. Excluding newly acquired muni systems, an average water bill for a US listed water stock should be rising at a ~3% CAGR nominal through 2020, we estimate. We expect UK bills to rise by 0.5% per annum real out to 2030.

### Efficiency, improved economies of scale and falling cost of capital will mitigate rising bills

UK utilities lead in operational efficiencies; with small-cap US water names showing the highest opex metrics (Fig. 15). French and large-cap US names are similar. In the US we see regulatory and political support for muni wastewater acquisitions, and that, together with economies of scale, could moderate water bill increases, though bill rises are inevitable. Current low bond yields will flow into a lower cost of debt. Ofwat is also likely to reduce baseline RORE expectations (guideline to be published in December).

### AWK, SVT, SEV, 371HK are our preferred water stocks

We used: i) a regulatory ROE vs regulatory asset growth and RAB premium, ii) economic PE, and iii) sustainable growth DDM models (Fig. 2). Whilst US water companies have the highest asset growth rates, we believe these are more than adequately reflected in high EV/RAB and PEs. DDM implies modest upside, with **American Water** our preferred US water name. **Severn Trent** appears to have good value on all metrics with high asset growth, an adjusted PE of just 14.0x and the highest global DDM upside of c.50%. We see **Suez** as a key beneficiary of the big expected uplift in future US water investment (purchase of GE Water and ownership of United Water). **Beijing Enterprises Water** is the largest water and wastewater treatment play by capacity in China. Trading on a 2017E PER of ~14.9x with 30% growth, we see BEW's valuation as attractive.

### Inside




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11 April 2017

# Rising capex quenches thirst

## Not all water tastes the same

We have compared 11 global water stocks in the US, the UK, France and China. We have examined a number of common drivers for these stocks:

- Allowed returns, regulatory framework and political environment.
- Operating cost comparisons and relative efficiencies.
- Investment requirements in water, and wastewater, infrastructure.
- Current bills, and expected growth in bills.

Key distinctions include the following:

1) UK and US water companies are more closely comparable with each other with an Earnings Base driving an achieved return (Asset companies).
2) French and Chinese water companies are also more comparable with each other. Both sets of companies follow a concession business model (outside of Suez ownership of US Water) with individual contracts with municipalities without asset ownership (Concession companies).

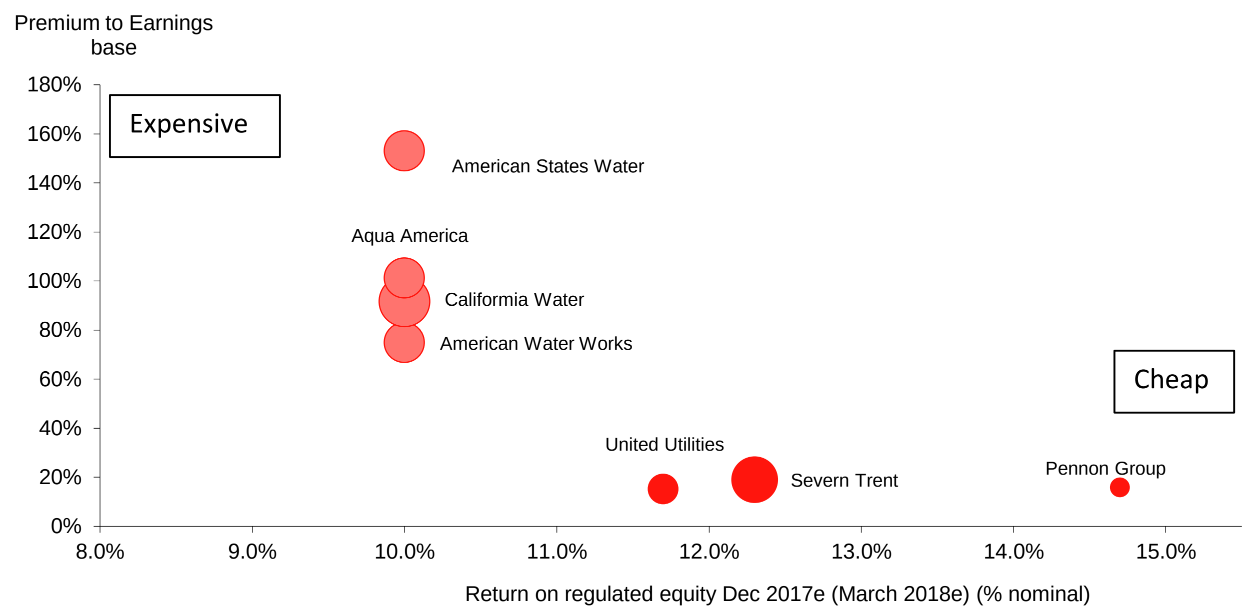
## American Water, Severn Trent, Suez, and Beijing Enterprises Water are our preferred global water investments

Overall we see the most attractive water companies as those with the highest returns, the highest investment profiles and in a regulatory environment where political intervention should be at a minimum.

We have compared earnings using three measures:

- i) a regulatory ROE versus regulatory asset growth and valuation premium,
- ii) economic PE earnings and
- iii) sustainable growth DDM model.

**Fig 1 Asset based water company valuation summary: US water stocks have generally higher growth and higher valuations (the size of the bubble indicates earnings base growth 2015-2020). UK water looks cheaper.**



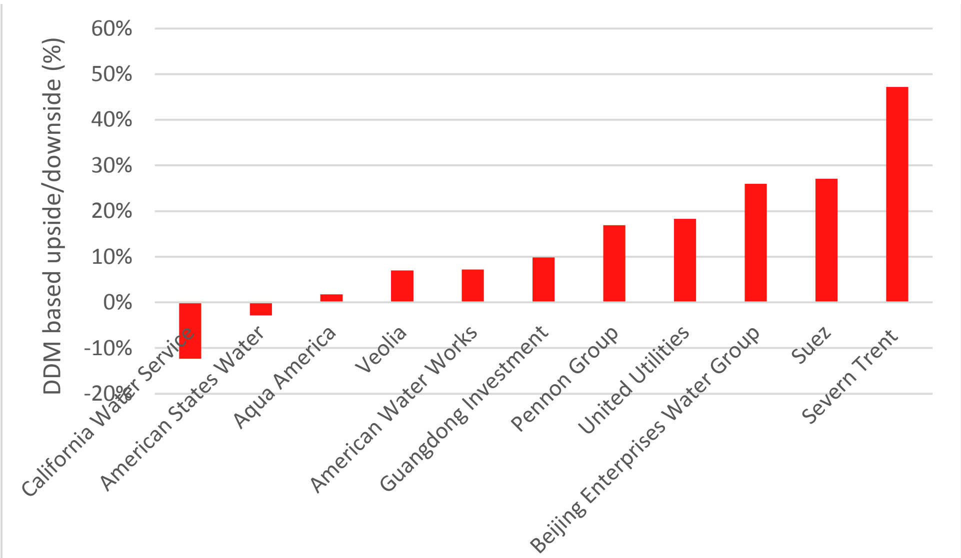

Source: Macquarie Research, April 2017

## Fig 2 Valuation summary for Global Water stocks

| Company (December 2017/March 2018) (mn) | Pennon Group | Severn Trent | United Utilities | American Water Works | Aqua America | California Water Service | American States Water | Suez | Veolia | Beijing Enterprises Water Group | Guangdong Investment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Currency | GBP | GBP | GBP | USD | USD | USD | USD | Euro | Euro | HKD | HKD |
| Price/share | 887 | 2,403 | 1,003 | 77.94 | 32.36 | 36 | 43.92 | 15.04 | 17.39 | 6.26 | 11.60 |
| EPS 2017 (2017/18e) | 43.8 | 106.8 | 42.4 | 3.04 | 1.37 | 1.29 | 1.72 | 0.87 | 1.08 | 0.419 | 0.786 |
| IFRS/GAAP Net income (Group) | 183 | 251 | 289 | 541 | 244 | 61 | 63 | 499 | 595 | 3,722 | 4,933 |
| Accounting ROE | 14.9% | 11.5% | 10.1% | 9.6% | 12.0% | 10.7% | 12.4% | 9.0% | 7.6% | 15.40% | 14.00% |
| Economic net income (Group) | 267 | 405 | 495 | 541 | 244 | 61 | 63 | 499 | 595 | 3,722 | 4,933 |
| Economic EPS (Group) | 63.6 | 172.2 | 72.5 | 3.04 | 1.37 | 1.29 | 1.72 | 0.87 | 1.08 | 0.419 | 0.786 |
| Economic ROE on regulated subsidiary | 14.7% | 12.3% | 11.7% | 8.3% | 12.0% | 10.7% | 12.4% | | | | |
| Economic ROE sustainable | 9.5% | 9.0% | 8.0% | 10.0% | 10.5% | 10.0% | 10.0% | | | | |
| **PE (IFRS or US GAAP) (x)** | 20.3 | 22.5 | 23.7 | 25.6 | 23.6 | 27.9 | 25.5 | 17.4 | 16.0 | 14.9 | 14.8 |
| **PE (Economic) (x)** | **14.0** | **14.0** | **13.8** | **25.6** | **23.1** | **27.5** | **25.6** | **17.4** | **16.0** | **14.9** | **14.8** |
| **Premium to RAB on EV** | **15.7%** | **19.0%** | **15.2%** | **74.8%** | **91.7%** | **101.2%** | **153.0%** | **na** | **na** | **na** | **na** |
| **RAB growth 2015-20** | **6.7%** | **23.6%** | **14.2%** | **34.3%** | **30.3%** | **39.3%** | **23.5%** | **na** | **na** | **na** | **na** |
| Required ROE (for val'n) | 8.0% | 7.0% | 7.0% | 7.0% | 7.0% | 7.0% | 7.0% | 8.0% | 8.0% | 8.00% | 7.00% |
| P/B / ROE/WACC: Accounting | 1.20 | 1.73 | 1.63 | 1.95 | 1.65 | 1.98 | 1.82 | | | | |
| P/B / ROE/WACC: Economic | 1.14 | 1.07 | 1.33 | 1.88 | 1.86 | 2.49 | 2.25 | | | | |
| DPS | 37.7 | 83.3 | 38.4 | 1.65 | 0.79 | 0.71 | 0.96 | 0.65 | 0.8 | 0.155 | 0.446 |
| **Divi yield** | **4.3%** | **3.5%** | **3.8%** | **2.1%** | **2.4%** | **2.0%** | **2.2%** | **4.3%** | **4.6%** | **2.5%** | **3.8%** |
| Economic payout | 59.3% | 48.4% | 52.9% | 54.3% | 57.7% | 55.0% | 55.8% | 75.0% | 73.8% | 37.0% | 56.7% |
| Dividend growth rate through 2020 | 7.0% | 3.0% | 3.0% | | | | | | | | |
| Theoretical long-term growth rate (adjusted for normalized realized ROE) | 4.4% | 4.6% | 3.8% | 5.0% | 4.6% | 4.8% | 4.8% | 4.6% | 3.7% | 6.1% | 3.5% |
| **DDM valuation** | **1,037** | **3,538** | **1,187** | **84** | **33** | **32** | **43** | **19.1** | **18.6** | **7.9** | **12.7** |
| **% upside** | **16.9%** | **47.2%** | **18.3%** | **7.2%** | **1.7%** | **-12.3%** | **-2.9%** | **27.1%** | **7.0%** | **27.0%** | **9.9%** |

Source: Macquarie Research, April 2017; prices as of 7 April

## Fig 3 Severn Trent, Suez, Beijing Water provide best DDM upside




Source: Macquarie Research, April 2017

## Key stock recommendation and earnings changes

### Fig 4 Key stock target price and recommendation changes (our top water stocks in bold)

| Stock | Ticker symbol (Bloomberg) | Currency | Country | Share price | Target price (new) | Target price (old) | Upside/ down-side | Recommendation (new) | Recommendation (old) |
|---|---|---|---|---|---|---|---|---|---|
| **American Water Works** | **AWK US** | **US$** | **USA** | **US$77.90** | **US$84** | **US$80** | **7%** | **Outperform** | **Outperform** |
| Aqua America | WTR US | US$ | USA | US$32.36 | US$33 | US$32 | 2% | Neutral | Neutral |
| America States Water | AWR US | US$ | USA | US$43.98 | US$43 | US$43 | -3% | Neutral | Neutral |
| **Beijing Enterprises Water Group** | **371 HK** | **HK$** | **China (Hong Kong)** | **HK$6.26** | **HK$7.50** | **HK$7.50** | **20%** | **Outperform** | **Outperform** |
| California Water Service | CWT US | US$ | USA | US$35.90 | US$32 | US$32 | -12% | Neutral | Neutral |
| Guangdong Water | 270 HK | HK$ | China (Hong Kong) | HK$11.64 | HK$13.10 | HK$13.10 | 13% | Outperform | Outperform |
| Pennon Group | PNN LN | GBp | UK | 887 | 940 | 950 | 6% | Outperform | Outperform |
| **Severn Trent** | **SVT LN** | **GBp** | **UK** | **2,403** | **2,570** | **2,620** | **7%** | **Outperform** | **Outperform** |
| **Suez** | **SEV FP** | **Euro** | **France** | **15** | **19** | **19** | **26%** | **Outperform** | **Outperform** |
| United Utilities | UU/ LN | GBp | UK | 1,003 | 1,040 | 1,000 | 4% | Neutral | Outperform |
| Veolia | VIE FP | Euro | France | 17 | 16 | 16 | -8% | Neutral | Neutral |

Source: Macquarie Research, April 2017

## Key stock calls

**American Water Works (Outperform, PT US$84.0)**

- American Water Works (AWK) is our favoured US water play and also a key water pick on a global basis. We have raised our PT to US$84 (from US$80) in recognition of the earnings upside from higher same-system or M&A-driven capex.
- There should be plenty of municipal M&A targets for all investor-owned water utilities in the US given how highly fragmented and underinvested the municipal water sector is. Yet, it's tough to deny AWK's competitive edge in municipal M&A given its unmatched access to cheap financing (~US$14bn market cap), the scale of regulated operations and large presence in PA/NJ, where the M&A activity is concentrated, and best in class operational and management practices. AWK remains upbeat about the recent pickup in acquisitions of municipal (and private) water and wastewater systems. The company has just closed acquisitions of two privately held water systems, Shorelands Water Company in NJ (11,000 accounts) and Meadowbrook Water Company in CA (1,600 accounts), and should close on a pending acquisition of a wastewater system in McKeesport, PA (22,000 accounts) in 2H17.
- Though AWK has a list of targeted municipal systems covering ~145,000 accounts, it's difficult for us to assess how many of the targets will be acquired by AWK, how soon such deals would close and how accretive such transactions should be. AWK has not yet raised its annual 1-2% EPS growth target associated with municipal M&A; to put that in perspective, AWK currently serves ~3.3m customer accounts. AWK's operating costs look largely in line with those of its UK peers, though AWK's headcount (even when we exclude ~550 employees of market-based businesses) looks relatively high vs its customer base. The incremental cost efficiencies could translate into more capex and thus higher earnings growth.

**Severn Trent (Outperform, TP 2570p)**

- Severn Trent ticks the wish list of our preferred water stock for four reasons: i) strong RAB growth (25% rise 2015 to 2020e) ii) strong RORE performance (11-12%), iii) we see it maintaining outperformance in the next review and iv) the lowest water bills in the country (£329 in 2016/17 rising to £339 in 2017/18e).
- We see RAB continuing to grow through to 2025 at a faster rate than the other water companies at 5% p.a. Severn Trent has one of the lowest RAB/MEA multiples and its central UK location has potential water trading asset build out
- Severn Trent should provide a total annual TSR of c.8.2% each year out to 2020e (using a RPI of 3%).
- PE at 22.5x (2017/18e) looks optically high. However adjusting for IFRS/Regulatory accounting drops this PE to a low 14.0x.
- We estimate that SVT is trading at a 19% premium to March 2018e RAB, and this falls to a 13% premium to RAB in March 2020e. A 40% premium to RAB valuation, in line with recent M&A multiples would value SVT at 3180p/share

**Suez (Outperform, PT €19)**

- We see Suez as a key beneficiary of the big expected uplift in future US water investment, highlighted by our global water sector report, first through the purchase of GE Water (~15% of GE Water's 2016 revenue is with US municipal clients) and second through its ownership of the #3 regulated US water utility United Water (we expect ~5% RAB growth per annum between 2016A-20E). We are therefore reiterating our Outperform rating with an unchanged €19.0 price target.
- There has been continued market scepticism over the merits of Suez's $3.4bn acquisition of GE Water (70%/30% transaction with CDPQ), which is expected to close in 3Q17. Based on our analysis there is a significant need for investment in US water infrastructure over the next decades. In our view Suez through GE Water is uniquely set up to profit from this development based on its unparalleled industrial water solutions & services platform and leading presence across the entire industrial water value chain, particularly in the US.

- Suez shares have underperformed the European utility sector by ~5% since the first press speculation emerged mid-February of a possible bidding interest in the GE Water assets. Based on the EPS accretive transaction reaching 10% in 2019 and the ~€1.0/share value creation, we see this underperformance as unjustified. Although there might be concerns that Suez overpaid, we believe the ultimate market assessment of the deal will be positive based on the historic importance of the EPS evolution for Suez.
- We see an attractive investment case in Suez (GE Water deal, cost cutting, regulated exposure, possible Engie buyout and waste recovery). Shares are trading at a 2018E PE of ~14x with a 2016E- 20E EPS CAGR of ~14% (of which ~50% is self-help), with a dividend yield of ~4.5% in 2017E reaching ~6% in 2020.

**Beijing Enterprises Water (Outperform, PT HK$7.50)**

- Beijing Enterprises Water is the largest water and wastewater treatment play by capacity in China. In addition, BEW is one of the few water plays that have a track record in undertaking environmental renovation projects in China. We think BEW will benefit from China's water clean-up development with projects likely in the form of PPP due to its track record. In addition, its SOE background should help it to manage receivables collection risk in undertaking PPP projects. Together with a market leadership position, this should help BEW to develop PPP projects using an asset-light strategy.
- At its recent analyst briefing, management guided towards bottom-line growth of 30% in 2017. A good amount of growth will be driven by environmental renovation construction and technical services, confirming our view that BEW will benefit form a pick-up in environmental renovation project activities in 2017. We expect a major catalyst will be the finalization of the Chifeng PPP, which is expected to complete soon. This PPP has a size of RMB4bn and management expects the fund to go off-balance-sheet. This is a milestone for BEW's asset-light strategy.
- Trading on a 2017E PER of ~14.9x vs. our core earnings growth est. of ~30% in 2017, we see BEW's valuation as attractive, considering its industry position and competitive advantages in the wastewater and water PPP space.

**United Utilities (Neutral, TP 1040p)**

- We downgrade United Utilities to Neutral from Outperform following strong performance. We estimate United Utilities is trading at a 15% premium to RAB, has a 3% annual RAB growth rate, and is now trading close to our Target Price (new TP 1040p/share versus 1000p/share previous). We estimate an annual TSR of 6.9% out to 2020.

# Investment thesis

We have compared 11 global water stocks in the US, the UK, France and China. We have examined a number of common drivers for these stocks:

- Allowed returns, regulatory framework and political environment.
- Operating cost comparisons and relative efficiencies.
- Investment requirements in water, and wastewater, infrastructure.
- Current bills, and expected growth in bills.

Key distinctions include the following:

1) UK and US water companies are more closely comparable with each other, with an Earnings Base driving an achieved return (Asset companies).
2) French and Chinese water companies are also more comparable with each other. Both sets of companies follow a concession business model (outside of Suez ownership of US Water), with individual contracts with municipalities without asset ownership (Concession companies).

### Regulatory comparisons

The key difference between the water companies we cover is the regulatory regime they operate under. Whereas the listed UK and US water companies follow a regulated regime, the listed French and Chinese water companies mainly operate under a concessions model. This means that the UK and US water companies operate under an incentivised regulatory framework, where there is a regulated asset base (RAB) generating an allowed return. Suez, Veolia, Beijing Enterprises Water Group and Guangdong Investment on the other hand have numerous concession agreements for their water activities. This means there are individual negotiated contracts between the companies and public entities that give them the right to operate the water businesses subject to certain conditions (mainly without actual asset ownership).

**Fig 5 Listed UK and US water companies follow regulated regime / listed French and Chinese water companies mainly operate under concessions model**

| | UK Water | US Water | France Water | China Water (WWT) |
|---|---|---|---|---|
| Regulator | Ofwat | State | | |
| Ex-post/Ex-ante | Ex-ante | Ex-post | Ex-post | Ex-post |
| Regulatory period | 5 years | Indeterminate | Indeterminate, average 15-20 year contracts | BOT contract (25 to 30 yrs) |
| Next review start | Apr-20 | NA | NA | NA |
| Earnings base/RAB | Yes | Yes | No | No |
| Inflation linked? | Real | Nominal | NA | BOT contact has tariff adj. clause on cost hikes |
| Cost of debt | Industry wide index with outperformance | Cost pass through | NA | NA |
| Cost of equity | Industry wide index | State by state | NA | NA |
| Opex outperformance retained by shareholders | c.50% | 100% | 100% | 100% |
| Capex outperformance retained by shareholders | c.50% | 100% | 100% | 100% |

Source: Company data, Macquarie Research, April 2017

## We see global water capex rising

As stated earlier, a key differentiating factor for the UK and US water groups is the existence of a regulated asset base (RAB). It is important to highlight that when comparing the respective companies it is apparent that even though RAB is growing in both regions US RAB growth is greater than in the UK.

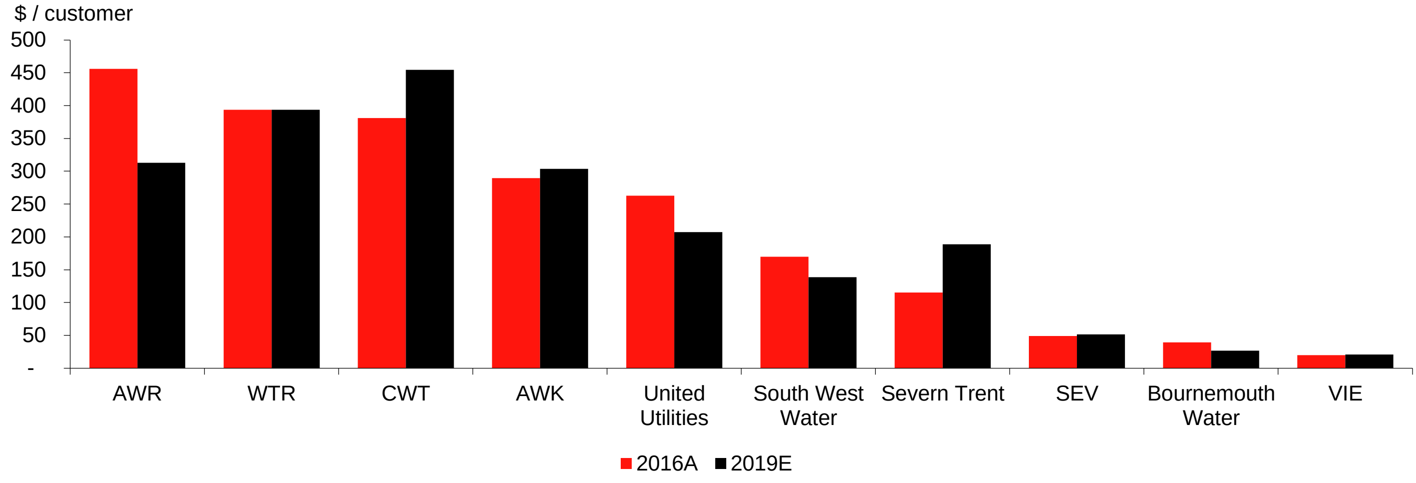
A comparison of capex levels across the water companies we cover highlights the very low capex per customer for the French groups Suez and Veolia. This is not surprising as the French water industry works under a concession model, where Suez and Veolia do not own the water network assets. Interestingly, capex levels for US water companies are significantly higher than for UK water companies.

US utilities show strong (and likely accelerating) growth in Earnings base (5-9% per annum) when compared to their UK peers (2-5%).

Our analysis shows that UK water capex will plateau at current high levels into the next review. Whilst in the US, excessive levels of lead being detected in numerous US municipal water systems and overflows of wastewater systems following large storms intensify the state and local push for sharply higher spending on water capex with little help provided by the federal government.

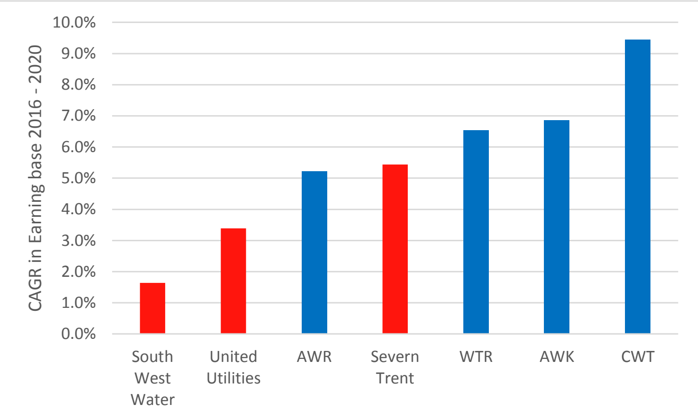
Earnings base per household is similar between the UK and US. We see US Earnings base rising faster, but both earnings base are significantly below the Modern Equivalent Asset Value (MEAV), with a discount of nearly 80%.

**Fig 6 US water capex levels are towards the top end for our coverage universe**



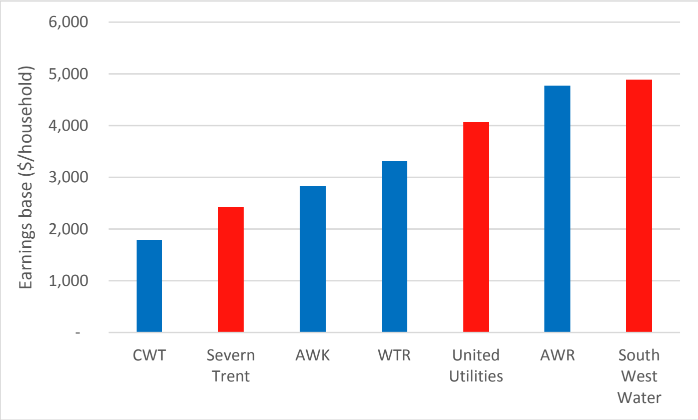

Source: Company data, Macquarie Research, April 2017

**Fig 7 RAB is growing in all regions…**



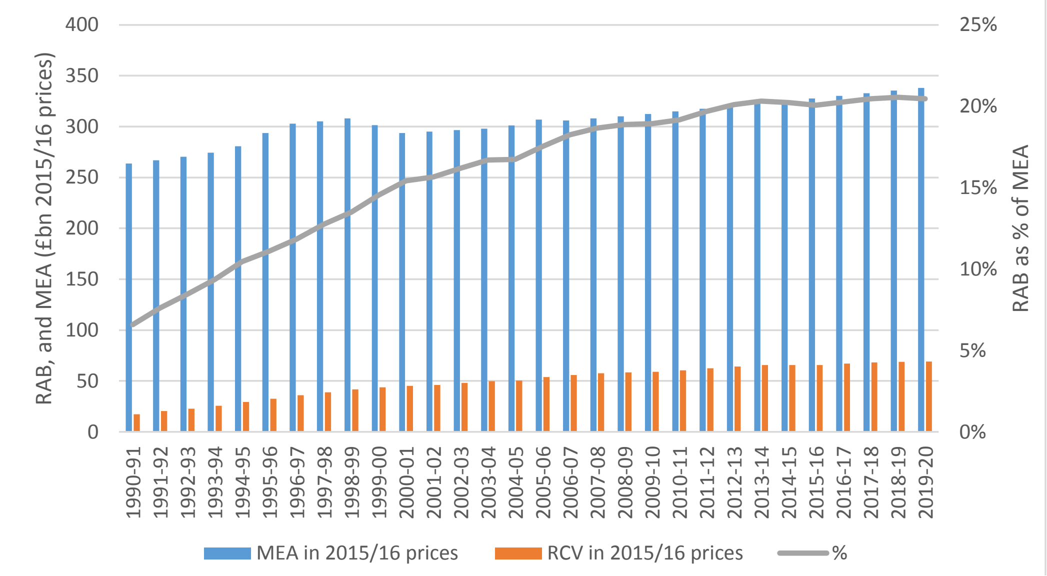

Source: Company data, Ofwat, Macquarie Research, April 2017

**Fig 8 … with strongest growth where earnings base is lowest**




Source: Company data, Ofwat, Macquarie Research, April 2017

**Fig 9 And Earnings base is at a huge discount (c.80%) to underlying modern asset cost**




**Source:** Ofwat, Macquarie Research, April 2017

## Consumers pays for these improvements

It is important to highlight that UK water bills are towards the top end of the global comparison and are significantly higher than in most major US cities and France. This is most likely a result of the significant historic capex over recent decades to modernise the respective UK water network assets. What is also apparent from this analysis is the low average household bill in Beijing, which can be used as a read-through to the rest of China.

The range in water bills between regions is large (Fig. 10), with UK and US water and wastewater bills already well above those of other countries where greater cross subsidy exists with Government, as well as how the water is sourced.

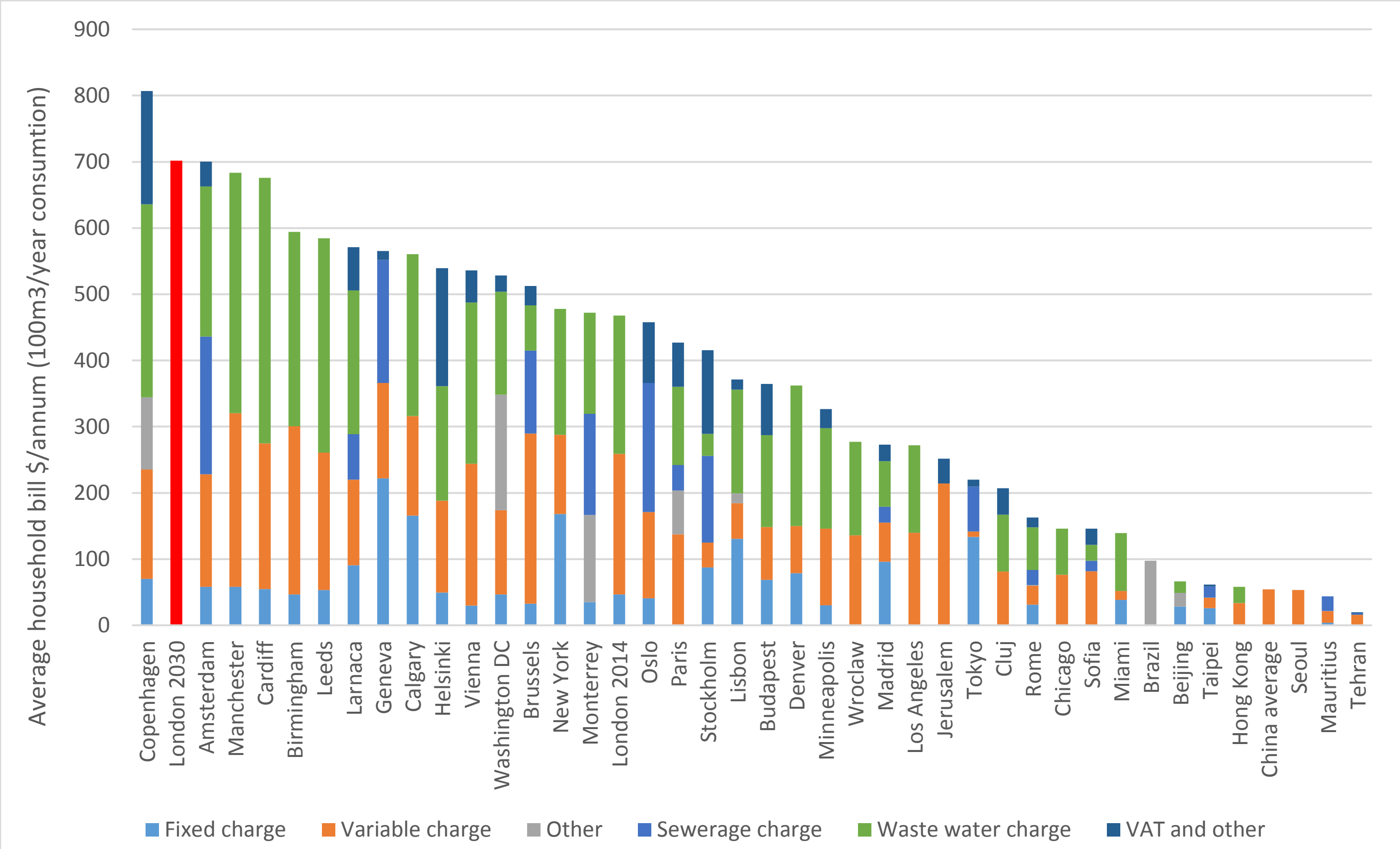
Overall, Water bills are the highest in Northern Europe (Figs 10, 12). The US is likely to soon catch up to the level in the UK on the back of rising water and wastewater investments. US investor-owned water utilities have water bills typically twice as high as those of munis.

Excluding newly acquired muni systems, an average water bill for a US listed water stock should be rising at a ~3% nominal CAGR through 2020 based on guidance from American Water, the largest investor-owned water utility in the US. We expect UK bills to rise by 0.5% per annum real out to 2030.

Our normalised bills also assume constant use of 100m3 per household. There is a wide range in per capita consumption. Looking at the average per capita household consumption of water across the world, there is a clear relationship between lower water bills and higher consumption of water. This is shown by all European countries, which in general have high water bill levels, having a much lower water consumption than in all US cities that form part of this analysis.

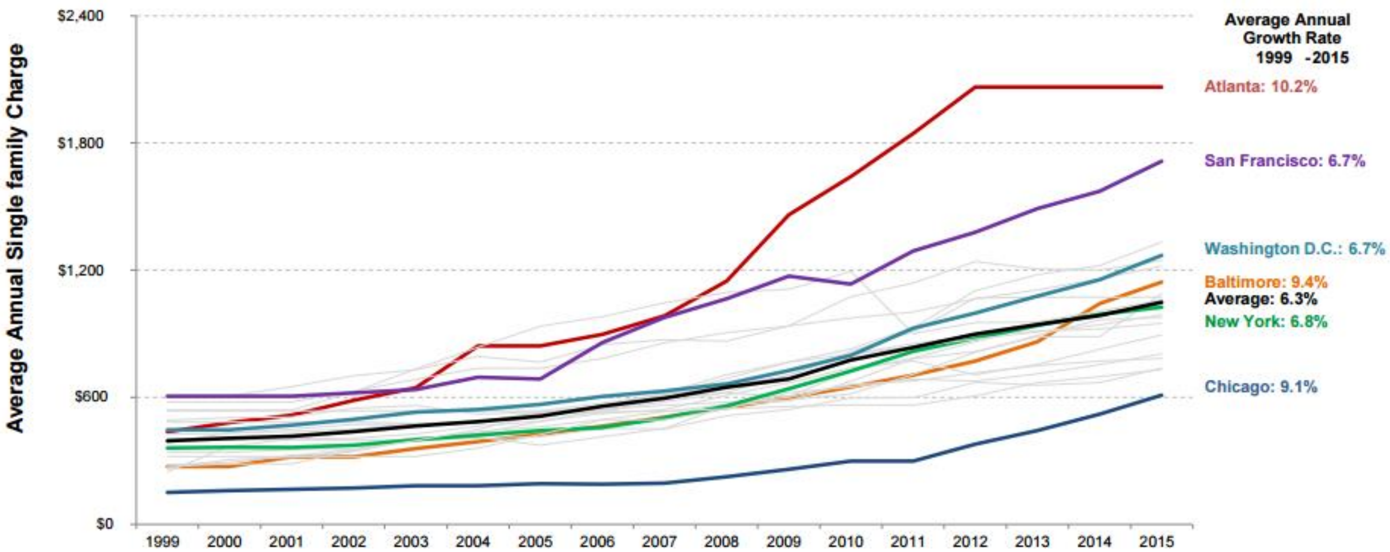
We also believe costs may differ between regions where water is abstracted using different sources. Ground water will be more expensive to abstract in our view than surface water.

**Fig 10 Global water bills vary enormously across regions - with UK and US towards more expensive bills**



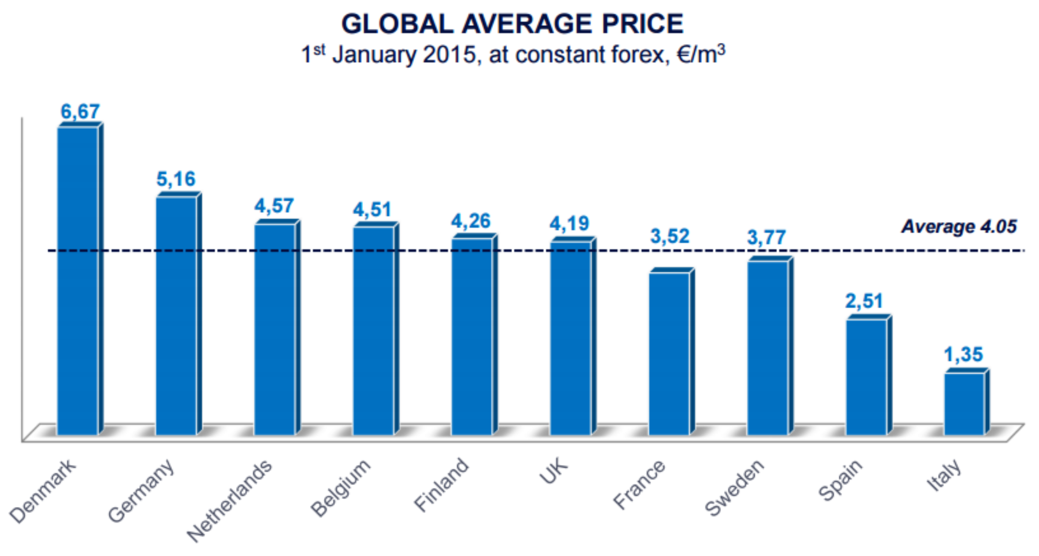

Source: IWA, April 2017

**Fig 11 Rate increases for residential water/wastewater charges in major US cities: Muni water bills are lower than those of investor-owned utilities, but they are rising rapidly**



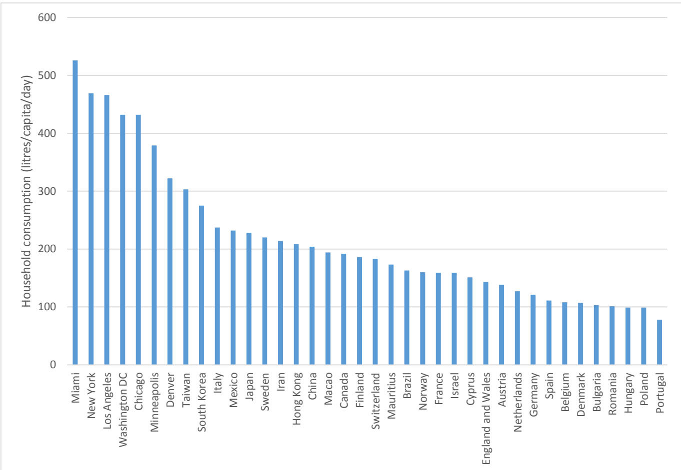

Source: NYC Water Board, May 2015

### Fig 12 Within Europe, Northern Europe has higher water bills than Southern Europe



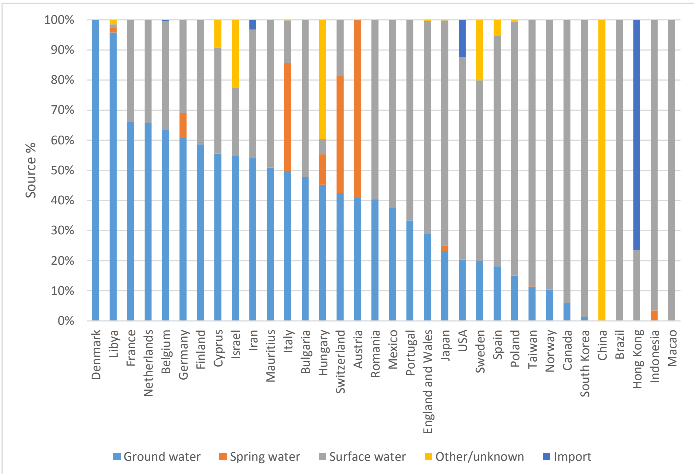

Source: Suez, March 2017

### Fig 13 US water consumption per household is nearly 2x that of Europe




Source: IWA, April 2017

### Fig 14 Water abstraction costs rise with lower reliance on surface water




Source: IWA, April 2017

## Efficiency, improved economies of scale and falling cost of capital will mitigate rising bills

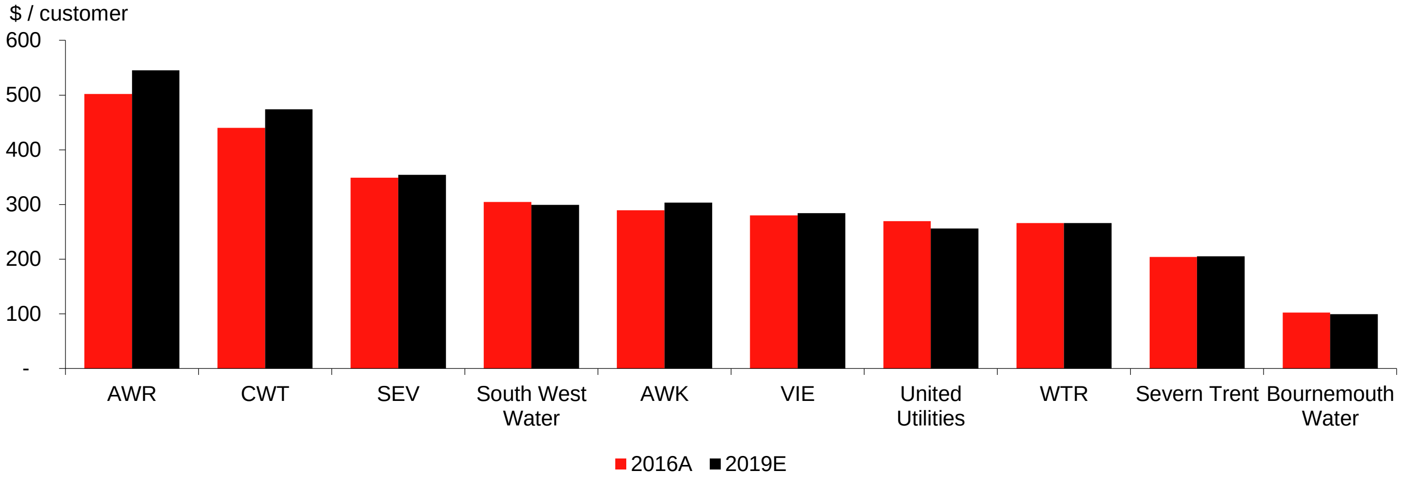
### UK water companies have lowest operating costs per consumer

A key conclusion from our cross-company analysis is that small cap US water companies have significantly higher operating costs than their UK and French counterparts. As shown in the following chart, the smaller US water groups American States Water and California Water Service have an operating cost per customer which is 50-60% higher than the level of South West Water. Large cap US water utilities, American Water Works and Aqua America, are as efficient as an average UK or French water utility which is a reflection of ongoing cost cutting initiatives as well as economies of scale.

UK utilities lead in operational efficiencies, with small-cap US water names showing the highest opex metrics (Fig. 15, 16). French and large-cap US are similar.

In the US we see regulatory and political support for muni wastewater acquisitions, and that together with economies of scale, could moderate water bill increases, though bill rises are inevitable.

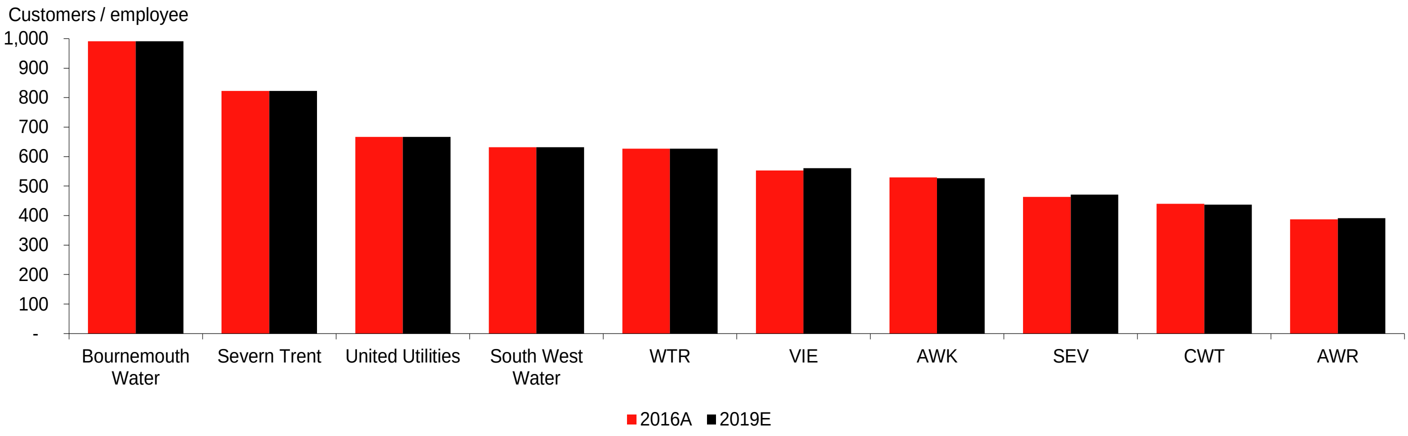
**Fig 15 Small cap US water companies have significantly higher operating costs than their peers (opex per customer for domestic water business)**




Source: Company data, Macquarie Research, April 2017

As argued in our report in the UK there has been a multi-decade efficiency push to lower operating costs since the privatisation of the industry. As a result UK water companies have among the highest efficiency levels in the world. This is underlined by the big positive difference in customers per employee for UK water companies when compared to other countries.

**Fig 16 UK water companies have among the highest efficiency levels in the world (customers per employee for domestic water business)**

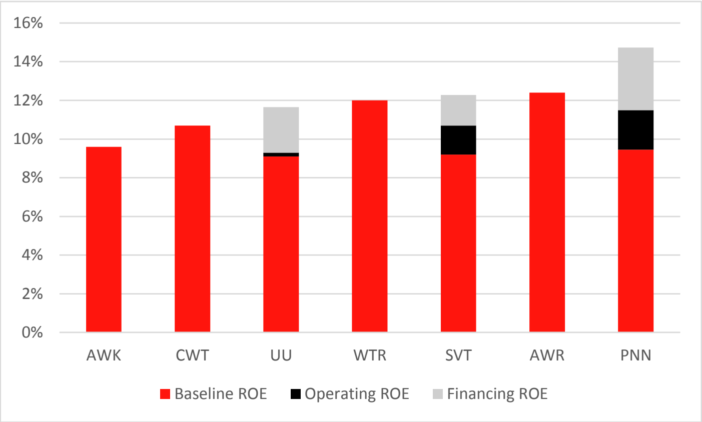



Source: Company data, Macquarie Research, March 2017

### Allowed returns comparisons: cost of debt to fall, but US baseline ROE should remain higher than the UK

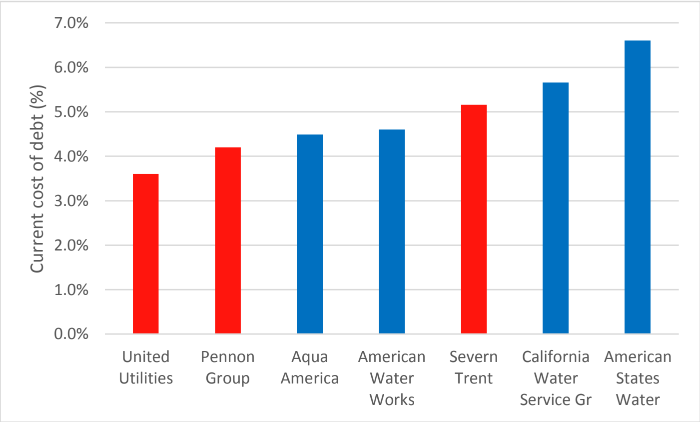
Current low bond yields are flowing into a lower cost of debt, which in all jurisdictions are eventually passed through to consumers. In the UK, we estimate that Ofwat is also likely to reduce baseline RORE expectations (guideline to be published in December) to 4.5% RPI real (7.5% nominal, assuming 3% RPI inflation) from 2020. However including incentives we estimate UK water will achieve RORE pick-ups of 50-200bps. UK achieved ROREs, should reach between 8.0-9.5%, Fig 19. These are close to our estimate of US allowed ROEs which will remain at c.9.8-10%.

**Fig 17 UK baseline ROEs are lower than the US, but similar once ROE incentives are included**




Source: Company data, April 2017

**Fig 18 Current cost of debt in water companies is higher than marginal cost of debt and should continue to fall**




Source: Company data, April 2017

**Fig 19 We estimate Ofwat will allow a 7.5% baseline nominal (4.5% real) allowed return on equity in the next review (2020-2025)but achieved ROE will be 50-200bps higher**

| | Equity return base (nominal) | Totex outperformance | ODI outperformance | Financing outperformance @3% RPI | Total ROE |
|---|---|---|---|---|---|
| Pennon Group | 7.5% | 0.5% | 0.5% | 1.0% | 9.5% |
| Severn Trent | 7.5% | 1.0% | 0.5% | 0.0% | 9.0% |
| United Utilities | 7.5% | 0.0% | 0.0% | 0.5% | 8.0% |

Source: Macquarie Research, April 2017

## Valuation comparison: achieving consistent earnings

In this section we compare valuation metrics across the major global water companies based on a consistent economic basis and approach. This allows a proper assessment of the valuation levels these companies trade at and is an important process behind our relative preferences. We focus on three metrics:

1) Economic PEs
2) Regulatory ROE versus regulatory asset growth and RAB premium
3) Sustainable growth DDM models

### PE comparison show US water as having highest PE (and high growth), UK and China water the lowest PEs

One of the key factors that needs to be adjusted for in a global comparison of the water sector is the different accounting approach and leverage situation of the respective companies. As part of this report we have pursued a standardised accounting and valuation approach in our analysis of the Chinese, French, UK and US water groups. This is particularly relevant for the UK water companies where overly high reported PEs are not a true reflection of the true economic PEs.

The material differences between US GAAP and IFRS accounting standards are exhibited in the following table. It shows the material differences in PE multiples between UK and US water companies as US regulation provides less capital growth, but more cash upfront.

**Fig 20 US regulation provides more cash up front, but less capital growth (all things equal) which means material difference in PE multiples between regions**

| | UK Profit and Loss account | | US profit and loss | |
|---|---|---|---|---|
| RCV | 100 | | 100 | |
| Debt | 60 | | 60 | |
| Equity | 40 | | 40 | |
| Interest rate nominal | 4.0% | | 4.0% | |
| Required return on equity nominal | 9.0% | | 9.0% | |
| | | | | |
| Allowed regulatory returns | | | | |
| Inflation | 2.5% | | 2.5% | |
| Allowed cost of debt | 1.5% | | 4.0% | |
| Equity remuneration rate | 6.5% | | 9.0% | |
| | | | | |
| Cash to pay equity | 2.6 | | 3.6 | |
| Cash to pay interest | 0.9 | | 2.4 | |
| Tax rate | 20% | | 33% | |
| cash to pay tax equity | 0.7 | | 1.8 | |
| tax shield due to interest payment | 0.38 | | - | |
| Total pre-tax allowed return | 3.78 | | 7.77 | |
| | | | | |
| Allowed post-tax return | 3.3% | | 5.5% | |
| **Allowed plain-vanilla return** | **3.5%** | | **6.0%** | |
| | | | | |
| **EBIT** | **3.78** | | **7.77** | |
| | | | | |
| Interest | 2.4 | | 2.4 | |
| | | | | |
| PBT | 1.4 | | 5.4 | |
| Tax rate | 20% | | 33% | |
| **Net income** | **1.1** | | **3.6** | |
| **Earnings return (%)** | **2.8%** | | **9.0%** | |
| Capital return | 2.5 | | - | |
| **Capital return (%)** | **6.3%** | | **0.0%** | |
| **Total equity return (%)** | **9.0%** | | **9.0%** | |
| **PE calculation** | **Value** | **PE** | **Value** | **PE** |
| **0% premium to RCV** | **40.0** | **36.4** | **40.0** | **11.1** |
| **10% premium to RCV** | **50.0** | **45.5** | **50.0** | **13.9** |
| **20% premium to RCV** | **60.0** | **54.5** | **60.0** | **16.7** |

Source: Company data, Macquarie Research, April 2017

Our analysis shows that UK and Chinese water companies trade at a lower 2017E economic PE than the French and particularly the US water groups. Although the attractive economic ROE and the predominantly regulated nature of the US water companies explains some of the valuation premium, economic PEs of over 20x still seem high compared to the valuation levels of other water companies.

**Fig 21 Comparison of ROEs and PEs across our water coverage universe**

| Company (December 2017/March 2018e) (mn) | Pennon Group GBP | Severn Trent GBP | United Utilities GBP | American Water Works USD | Aqua America USD | California Water Service USD | American States Water USD | Suez Euro | Veolia Euro | Beijing Enterprises Water Group HKD | Guangdong Investment HKD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Price/share | 887 | 2,403 | 1,003 | 77.94 | 32.36 | 36 | 43.92 | 15.04 | 17.39 | 6.26 | 11.60 |
| EPS 2017 (2017/18e) | 43.8 | 106.8 | 42.4 | 3.04 | 1.37 | 1.29 | 1.72 | 0.87 | 1.08 | 0.419 | 0.786 |
| IFRS/GAAP Net income (Group) | 183 | 251 | 289 | 541 | 244 | 61 | 63 | 499 | 595 | 3,722 | 4,933 |
| Accounting ROE on regulated subsidiary | 14.9% | 11.5% | 10.1% | 9.6% | 12.0% | 10.7% | 12.4% | 9.0% | 7.6% | 15.40% | 14.00% |
| | | | | | | | | | | | |
| Economic net income (Group) | 267 | 405 | 495 | 541 | 244 | 61 | 63 | 499 | 595 | 3,722 | 4,933 |
| Economic EPS (Group) | 63.6 | 172.2 | 72.5 | 3.04 | 1.37 | 1.29 | 1.72 | 0.87 | 1.08 | 0.419 | 0.786 |
| **Economic ROE on regulated subsidiary** | **14.7%** | **12.3%** | **11.7%** | **8.3%** | **12.0%** | **10.7%** | **12.4%** | | | | |
| Economic ROE sustainable | 9.5% | 9.0% | 8.0% | 10.0% | 10.5% | 10.0% | 10.0% | | | | |
| PE (IFRS or US GAAP) (x) | 20.3 | 22.5 | 23.7 | 25.6 | 23.6 | 27.9 | 25.5 | 17.4 | 16.0 | 14.9 | 14.8 |
| **PE (Economic) (x)** | **14.0** | **14.0** | **13.8** | **25.6** | **23.1** | **27.5** | **25.6** | **17.4** | **16.0** | **14.9** | **14.8** |

Source: Macquarie Research, April 2017; prices as of 9th April 2017

### RAB based valuation metrics mainly used in Europe: UK looks cheapest

The following table provides an overview of the key RAB-based valuation metrics for the major water companies. It is important to highlight that the French and Chinese groups mainly operate a concession-based business model for their water activities. Based on our analysis, UK water companies trade at significantly lower RAB premiums than the US groups. Despite the higher RAB growth of the US water companies, the valuation levels of Pennon, Severn Trent and United Utilities seem too low.

The superior RORE level for UK water names, which we highlighted earlier, is supported by a comparison with other European regulated utilities. In the European context, UK water companies have the highest return on equity coupled with a low premium to the earnings base and decent RAB growth.

Of note, the UK water sector trades in a relatively tight RAB valuation range, as Figure 24 summarises. This figure also shows the M&A multiples for UK regulated utilities. The average market value is a 15% premium to RAB, with 30% premium average for acquisition multiples. Recent acquisition multiples have been >50% premium to RAB. Total shareholder return in the listed UK water sector has averaged 15% per annum compounded in 30 years, even though premium to RAB valuation has remained constant.

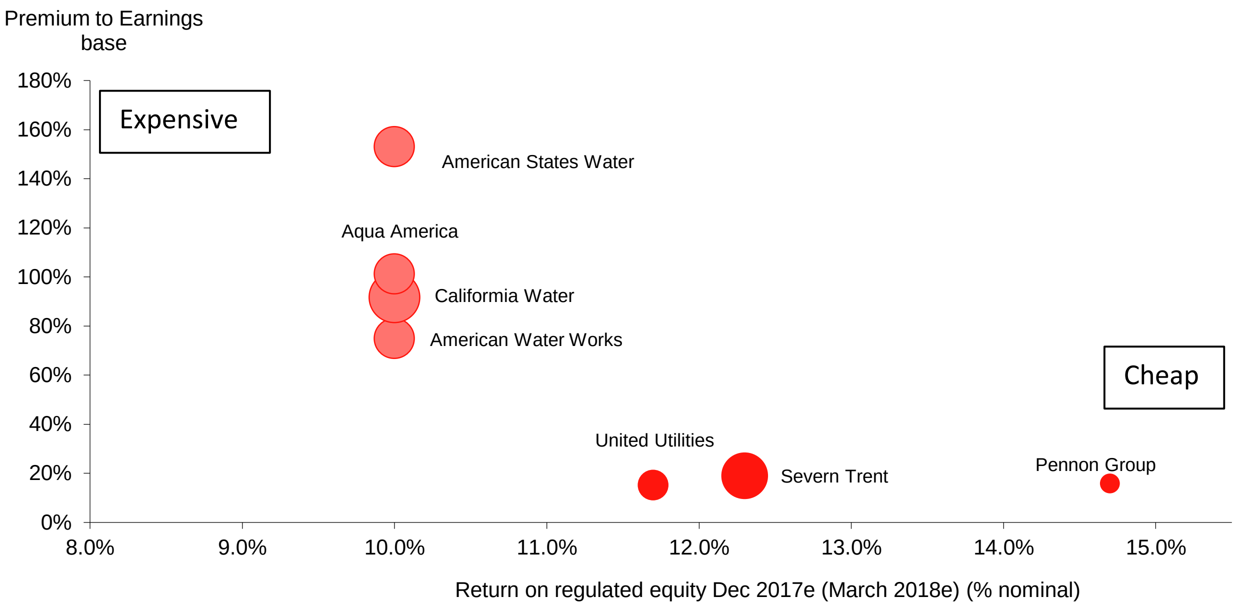
**Fig 22 Analysis of RAB valuation metrics across our water coverage universe**

| **Local currency (GBP/USD) March 2018 Valuations** | **Pennon** | **Severn Trent** | **United Utilities** | **American Water** | **Aqua America** | **California Water** | **American States Water** |
|---|---|---|---|---|---|---|---|
| Share price (p) | 887 | 2,403 | 1,003 | 77.9 | 32.36 | 35.9 | 43.98 |
| Valuation (p) | 940 | 2,570 | 1,040 | 84 | 33 | 32 | 43 |
| Recommendation | Outperform | Outperform | Neutral | Outperform | Outperform | Neutral | Neutral |
| upside | 6% | 7% | 4% | 7% | 2% | -12% | -3% |
| No. of shares (m) | 421 | 235 | 682 | 178 | 178 | 48 | 37 |
| Market capitalisation (£m) | 3,732 | 5,652 | 6,839 | 13,866.20 | 5,755.23 | 1,723.56 | 1,607.47 |
| Net debt (£m) March 2018 | 3,013 | 5,311 | 6,811 | 6,697 | 2,031 | 570 | 396 |
| Provisions + minorities (£m) | 332 | 370 | - 215 | | | | |
| Enterprise value (£m) | 7,077 | 11,333 | 13,435 | 20,563 | 7,786 | 2,294 | 2,003 |
| minus | | | | | | | |
| Non-household retail (£mn) March 2018 | 46 | 115 | 115 | | | | |
| Household retail (£mn) March 2018 | 118 | 460 | 292 | | | | |
| Non-core valuation (£m) March 2018 | 2,983 | 354 | 200 | | | | |
| Adjusted enterprise value | 3,930 | 10,404 | 12,828 | 20,563 | 7,786 | 2,294 | 2,003 |

| **Capital value (CV)** | **Pennon** | **Severn Trent** | **United Utilities** | **American Water** | **Aqua America** | **California Water** | **American States Water** |
|---|---|---|---|---|---|---|---|
| Headline capital value (£m) March 2018 | 3,395 | 8,744 | 11,136 | | | | |
| add/minus RAB log-down (£mn) | | | | | | | |
| Adjusted capital value (£mn) | 3,395 | 8,744 | 11,136 | 11,762 | 4,062 | 1,140 | 792 |
| **Premium/discount to adjusted RCV December 2017/March 2018** | **15.7%** | **19.0%** | **15.2%** | **74.8%** | **91.7%** | **101.2%** | **153.0%** |

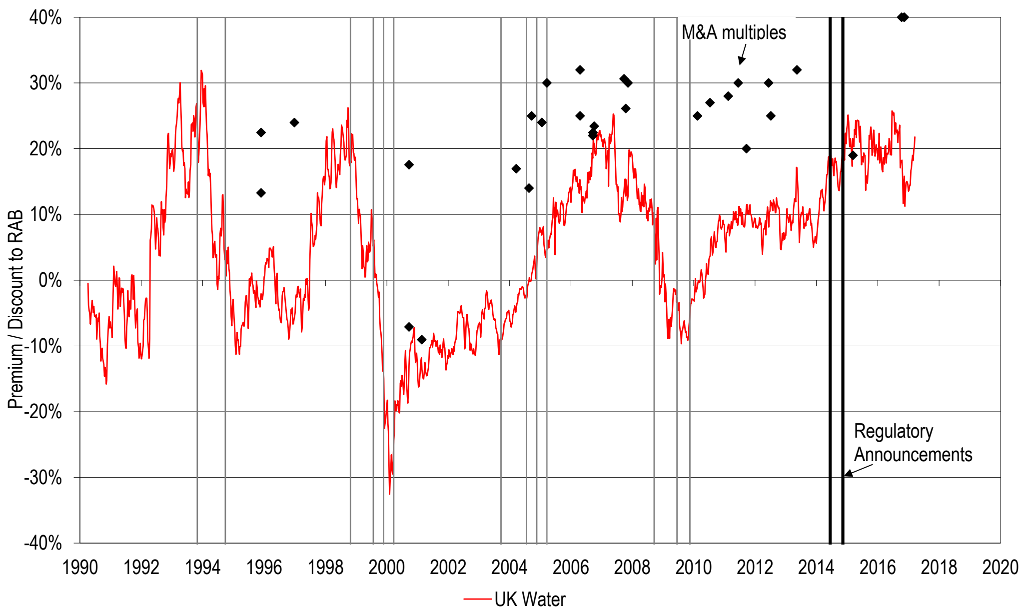
Source: Macquarie Research, April 2017; prices as of 7 April

**Fig 23 Asset based water company valuation summary: US water stocks have generally higher growth and higher valuations (the size of the bubble indicates earnings base growth 2015-2020). UK water looks cheaper.**




Source: Macquarie Research, April 2017

**Fig 24 UK water stocks have traded in a tight premium to RAB valuation, averaging 15% since privatisation. Recent acquisition multiples have been at c.50% premium to RAB**




Source: Ofwat, Macquarie Research, April 2017

### DDM analysis is in our view the most consistent comparable valuation tool

Our detailed analysis highlighted in the previous tables allows us to build a DDM model, which can be used for a consistent valuation approach across our water coverage. This is important as different accounting, depreciation and tax regimes make a consistent valuation methodology very important. The main advantage of using a dividend discount model is that there is very little subjectivity in this valuation methodology as it only considers dividends as legitimate cash flows for shareholders. Our DDM valuation approach shows significant upside for the UK water companies, Beijing Enterprises Water Group and Suez. We see this as an important supporting factor for our relative rankings of the respective companies.

**Fig 25 DDM valuation approach shows significant upside for UK water companies, Beijing Water and Suez**

| Company (December 2017/March 2018) | Pennon Group | Severn Trent | United Utilities | American Water Works | Aqua America | California Water Service | American States Water | Suez | Veolia | Beijing Enterprises Water Group | Guangdong Investment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P/B / ROE/WACC: Accounting | 1.20 | 1.73 | 1.63 | 1.95 | 1.65 | 1.98 | 1.82 | | | | |
| P/B / ROE/WACC: Economic | 1.14 | 1.07 | 1.33 | 1.88 | 1.86 | 2.49 | 2.25 | | | | |
| Required ROE (for valuation) | 8.0% | 7.0% | 7.0% | 7.0% | 7.0% | 7.0% | 7.0% | 8.0% | 8.0% | 8.00% | 7.00% |
| DPS | 37.7 | 83.3 | 38.4 | 1.65 | 0.79 | 0.71 | 0.96 | 0.65 | 0.8 | 0.155 | 0.446 |
| Divi yield | 4.3% | 3.5% | 3.8% | 2.1% | 2.4% | 2.0% | 2.2% | 4.3% | 4.6% | 2.5% | 3.8% |
| Economic payout | 59.3% | 48.4% | 52.9% | 54.3% | 57.7% | 55.0% | 55.8% | 75.0% | 73.8% | 37.0% | 56.7% |
| Dividend growth rate through 2020 | 7.0% | 3.0% | 3.0% | | | | | | | | |
| Theoretical long-term growth rate (adjusted for normalized realized ROE) | 4.4% | 4.6% | 3.8% | 5.0% | 4.6% | 4.8% | 4.8% | 4.6% | 3.7% | 6.1% | 3.5% |
| DDM valuation | 1,037 | 3,538 | 1,187 | 84 | 33 | 32 | 43 | 19.1 | 18.6 | 7.9 | 12.7 |
| **% upside** | **16.9%** | **47.2%** | **18.3%** | **7.2%** | **1.7%** | **-12.3%** | **-2.9%** | **27.1%** | **7.0%** | **27.0%** | **9.9%** |

Source: Macquarie Research, April 2017

# In case you want to know more: country by country analysis

# US: Managing water system investment needs and customer bills

## It should be different this time around

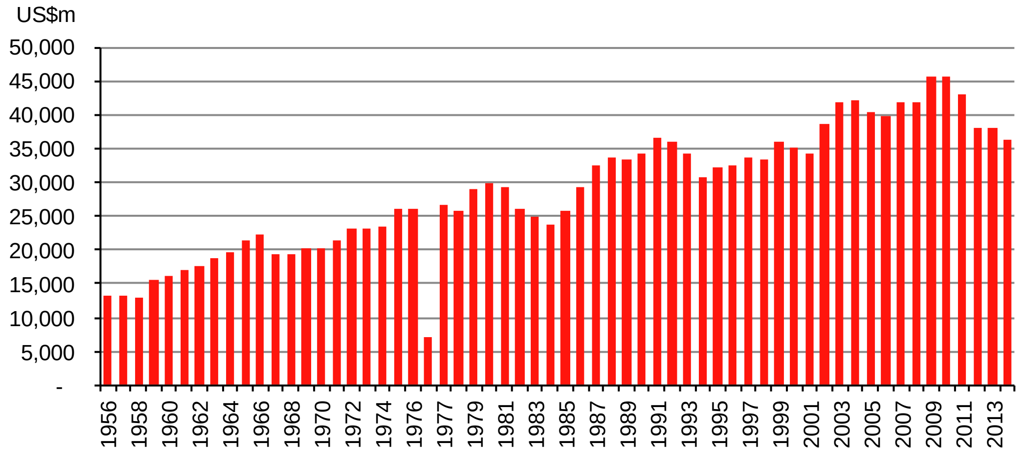
According to the 2017 Infrastructure Report Card, the American Society Civil Engineers grades the US drinking water infrastructure at D and wastewater systems at D+. A potentially eased burden on systems from water conservation efforts and efficiency upgrades will not change the growth in wastewater volumes. The useful life of US water pipes is 75-100 years and yet utilities are replacing them at a 200 year cycle/pace. The US EPA estimates that every year there are 23,000-75,000 wastewater system overflows in the US. The underinvestment of US water and wastewater systems is nothing new, however. While the EPA's water quality rule enforcement may become less stringent during Trump's term, the negative media coverage and political implications of water quality issues (especially with elevated lead levels) should lead to higher capex deployment and privatization of municipal water and wastewater systems. The transformation of the US water industry has already begun, but the question remains if the municipal consolidation becomes a widespread phenomenon and who will pay for necessary system upgrades.

## Only one-third of annual water infrastructure needs is being met

According to the EPA and the USGS, in the US, there are ~52,000 water distribution systems and ~16,000 water treatment plants serving ~86% of the US population and providing ~50% of the freshwater used by commercial and industrial customers, ~42 billion gallons/day. Additionally, there are ~15,000 wastewater systems (and treatment plants) that serve ~75% of the US population, treating ~32 billion gallons/day. Based on the population served, public systems, mostly municipally-owned, account for ~84% of all water distribution systems and ~98% of wastewater treatment in the US, with investor-owned utilities accounting for the rest.

The American Society of Civil Engineers estimates that the US needs to invest a minimum of US$123bn annually (in 2016 dollars) in its water infrastructure over the next decade to maintain a reliable clean water service, with the highest capex needs in the South (34%), the Midwest (23%), and the West (23%). The required spending would need to be three times higher than that incurred by federal, state and municipal water utilities in 2016 (~US$40bn), according to the US Congressional Budget Office (CBO).

**Fig 26 Federal, state and municipal capex of water utilities (2014 dollars)**

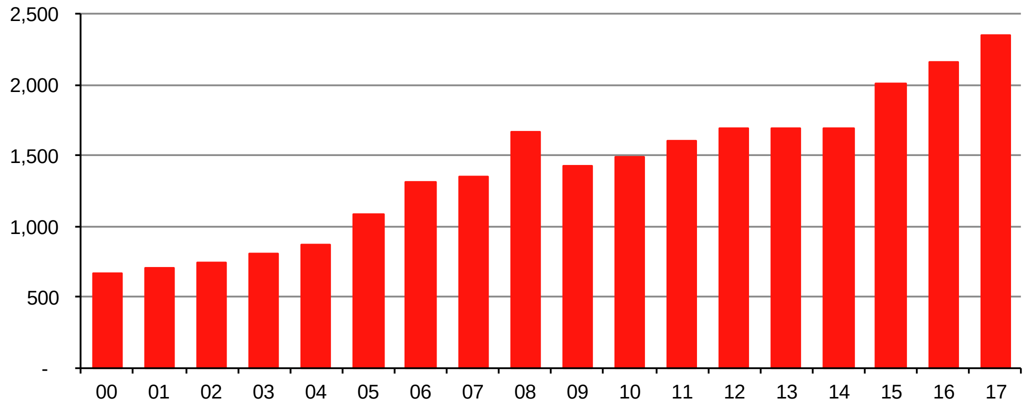



Source: CBO, Macquarie Capital (USA), April 2017

The need for a surge in the water-related replacement capex is driven by the 75-100 year lifespan and of the water mains and other equipment installed in US water systems over the last century. Back in 2011, the American Water Works Association estimated that by 2040 every third water main in the US would need to be replaced, and as they age, their breaks per year continue to rise. Strong storms and growing population density has been putting a particular strain on wastewater and stormwater systems, many of which were built in the early 1950s. Some estimates indicate that every year ~900 billion gallons of untreated wastewater and stormwater overflow are being released into nearby water reservoirs. The city of Washington D.C. is progressing with construction of a system of tunnels to deal with overflowing wastewater. The US$2.6bn project, funded with municipal debt, and thus by municipal water customers, should reduce the cases of wastewater overflow into the Potomac River, a major source of drinking water, from 80 to two per year.

Capital investments from nine investor-owned US water utilities continue to rise at a 5-6% CAGR. The investments of these utilities do not seem outsized; capex from investor-owned utilities should account for only ~5-6% of total water capex in the US in 2017, while they deliver water to 15% of the US population. Also, total water capex seems heavily skewed toward wastewater systems where investor-owned utilities have only a 2% market share.

**Fig 27 Water capex – investor-owned water utilities since 2000 (US$bn in nominal dollars)**




Source: Company data, Macquarie Capital (USA), April 2017

The Value of Water Campaign has recently released a report on "The Economic Benefits of Investing in Water Infrastructure" in the US. The report was put together to demonstrate that investments in water infrastructure can generate numerous, high-quality jobs and support strong economic growth in the US. Trump's proposed budget includes US$2.3bn for the State Revolving Funds, a mere US$4m increase from Obama's last budget, with an unchanged US$20m for the Water Infrastructure Finance and Innovation Act program. However, the budget eliminates the US$498m Water and Wastewater loan and grant program of the Department of Agriculture; the program currently provides funding for clean drinking water to communities with fewer than 10,000 people. Privatizations, or at least public-private partnerships, could become a more popular vehicle to modernize municipal water and wastewater systems as municipalities don't have much debt capacity left and federal funding is drying up.

Trump's budget plan also calls for a sharp reduction in the EPA's enforcement office and that in turn could reduce the EPA's ability to enforce drinking water violations, despite the fact that the EPA has been enforcing only ~11% of violations under the federal Lead and Copper rule per estimates from The National Resources Defence Council. Cognizant of that low enforcement rate, the state of New Jersey has been advancing a new state law, called the Water Quality Accountability Act, which would align investment and reliability standards between investor-owned and municipal water utilities, and would require the latter to report and address any EPA-related violations in a timely fashion. Management teams of investor-owned utilities often cite EPA-related violations at municipal systems as a key catalyst for growth in the M&A pipeline.

## Water bills remain low, but wastewater costs are already pretty high

The Circle of Blue and the Food & Water Watch estimate that an average monthly water-only bill for a residential customer in the US is just ~US$35 (below US$30/mo for public/ municipally-run water systems and closer to US$40/mo for investor-owned water systems), with the level of investments likely explaining the pricing difference, we believe (Fig 28).

**Fig 28 Average monthly water bills per region for residential customers (excluding wastewater or stormwater)**

| US$/month | Public water systems | Private water systems |
|---|---|---|
| Midwest | 25.46 | 42.59 |
| Northeast | 26.46 | 45.72 |
| South | 24.39 | 31.89 |
| West | 28.47 | 27.56 |
| **US** | **25.62** | **38.04** |

Source: Food & Water Watch, Macquarie Capital (USA), April 2017

However, when we add wastewater and stormwater costs, an average all-in water bill jumps to ~US$140/month (Fig 29), making it a very meaningful expense. Wastewater treatment costs are starting to comprise larger and larger portions of total water bills, with the rising frequency of strong storms and higher costs of water treatment. The all-in monthly water bills are in excess of US$300 in GA, WA, and parts of Florida. Investor-owned utilities are not to blame for those high and rising all-in water bills, as wastewater costs comprise the majority of all-in bills and wastewater systems are almost exclusively operated by municipalities. Yet, those rising water bills could limit the pace of capex deployment due to affordability issues and partly explain the strong emphasis from larger investor-owned water utilities on cost efficiencies, we believe.

The EPA estimates that for water service to remain affordable, all-in water bills should not exceed 4.5% of annual household income. At the current rate of ~US$140/month, that would imply a minimum income north of US$37,000. The median household income in 2014 was ~US$54,000, according to the US Census Bureau.

**Fig 29 Monthly residential bills for water only and water + wastewater in major US cities (US$/month per account)**

| City | State | Water Only | Water+Wastewater |
|---|---|---|---|
| Fresno | CA | 22 | 49 |
| Memphis | TN | 15 | 56 |
| Salt Lake City | UT | 18 | 59 |
| Las Vegas | NV | 47 | 64 |
| Milwaukee | WI | 18 | 73 |
| Phoenix | AZ | 30 | 76 |
| Chicago | IL | 40 | 91 |
| Denver | CO | 22 | 94 |
| San Antonio | TX | 35 | 97 |
| San Jose | CA | 75 | 104 |
| Dallas/Fort Worth | TX | 32 | 111 |
| Columbus | OH | 31 | 124 |
| Tuscon | AZ | 30 | 126 |
| Jacksonville | FL | 20 | 133 |
| Philadelphia | PA | 30 | 135 |
| Los Angeles | CA | 58 | 136 |
| Detroit | MI | 20 | 139 |
| Indianapolis | IN | 31 | 139 |
| Charlotte | NC | 19 | 148 |
| Houston | TX | 33 | 152 |
| New York | NY | 34 | 153 |
| Baltimore | MD | 32 | 158 |
| San Diego | CA | 77 | 171 |
| Boston | MA | 37 | 186 |
| Austin | TX | 34 | 225 |
| San Francisco | CA | 41 | 260 |
| Seattle | WA | 40 | 310 |
| Atlanta | GA | 43 | 326 |
| **Average** | | **34** | **142** |
| **Median** | | **31** | **135** |

Source: Circle of Blue, Macquarie Capital (USA), April 2017

## Underinvestment in municipal water systems could accelerate their privatization

While all-in water bills in the US for now remain manageable, given needed water infrastructure upgrades, customers of municipally-managed water systems could see annual bill increases well in excess of 10% and in some cases as high as 50% over the next couple of years, especially for smaller muni systems. The alternative could be privatization of those systems in order to benefit from efficiencies and economies of scale of larger investor-owned water systems. The water bill increases are inevitable either way, though the increases could be more spread out if muni water systems were privatized, especially in states like Pennsylvania, where the cost of needed upgrades of a newly acquired water (or wastewater) system can be recovered over the total customer base of an investor-owned utility in the given state instead of just the acquired municipality.

We have been waiting for a wave of privatizations of municipal water systems for at least the last two decades, and while the recent pickup in municipal water system consolidation may signal a new trend, it’s too early to tell. For now, municipalities remain more open to sell their wastewater rather than water systems, with public referendums needed to sign off on the sale of more meaningful municipal water systems.

High lead levels in drinking water have been detected not only in Flint, MI, but in a number of large municipalities, with Pittsburgh, PA being the latest example. The need for lead pipe replacement could accelerate the decision on privatization of water systems, though it often turns out that the source of lead is water pipes on the customer-side of water mains. Water pipes on the customer-side are not a part of the assets of municipal or investor-owned water utilities.

Investor-owned water utilities tend to grow their same-system asset base at a 5-6% CAGR, with AmWater, the largest publicly traded water utility in the US, operating under a self-imposed 2.5-3.0% annual cap for water bill increases in its service territories (outside of CA). While other utilities have not explicitly stated their maximum water bill hike targets, water bill affordability is being widely discussed. AmWater recognizes that its regulators would want the utility to step up the pace of its water system upgrades, but prefer to up the bill increase cap only once it sees signs of a sustainable economic pickup in its service territories.

Large municipal M&A could create the need for higher capex and thus faster rate base growth for the largest investor-owned water utilities in the US, with AWK being the best positioned to lead here. However, the prospect of much higher water rates (on the back of incremental capex) and sharp cost reduction initiatives often discourage municipalities from pursuing privatization of their water systems.

## Pennsylvania most supportive of municipal water/wastewater M&A

The state of Pennsylvania has been the most active at supporting privatizations of municipal water systems – the PA Legislature has adopted bills that allow for consolidation of water and wastewater revenue requirements (Act 11) as well as fair market value assessments for municipal systems being acquired (Act 12). The latter, also in effect in New Jersey, Illinois, California, Indiana and Missouri, allows investor-owned utilities to largely eliminate the issue of goodwill on municipal deals. Instead, the purchase price of a system becomes an approximate rate base of the assets acquired and the new owner is allowed to earn a return on the entire amount.

The state of New Jersey, frustrated with the quality of water and service provided by municipal water utilities, has been advancing a new bill which would require municipal utilities in the state to comply with the same capex and service quality standards as those currently faced by investor-owned water utilities. While the EPA enforcement of violations of water quality laws remains weak and Scott Pruitt could run an even less-imposing EPA, the bill (The NJ Water Quality Accountability Act) would impose deadlines on municipalities to address any violations. The new rules, once adopted, could lead to more privatizations of municipal water systems or at the very least to public-private partnerships between municipalities and private water utilities, we believe. We expect the bill to become law by the end of 2017.

## Municipal M&A and earnings accretion – Show me the money

Given their large presence in Pennsylvania and New Jersey as well as sizeable balance sheets, American Water and Aqua America seem best positioned to benefit from the consolidation of the municipal water and wastewater market. However, it is difficult for us to assess the timing and size of likely municipal deals. For now, we can say that AmWater targets systems that can reach 50,000 accounts within five years from the acquisition, while Aqua focuses on systems with 5,000-40,000 accounts. Given the lack of official rate base numbers for municipal water systems, the M&A pricing is quoted in US$/account with an average residential system selling for US$3,000-5,000 per account depending on future capex needs (and thus growth prospects for investor-owned utilities) as well as an independent assessment of the value of such systems.

Consolidation in the US water system is not a new phenomenon, and both AmWater and Aqua seem to have learned from prior (bad) experiences on the financing of municipal acquisitions and capex needed to bring the systems back to EPA standards. Still, between a lengthy regulatory approval process for such muni deals, rate case stayouts or at least caps on annual rate increases, not to mention limits on near-term cost cutting, it could take even three years to see any meaningful earnings accretion from these municipal deals. For now, it seems like announcements of municipal water deals are enough to keep investors happy, but at some point we need to see that these transactions are creating meaningful earnings.

## US water stocks and rising water capex

There should be plenty of municipal M&A targets for all investor-owned water utilities in the US given how highly fragmented and underinvested the municipal water sector is. Yet, it's tough to deny the competitive edge in municipal M&A of **American Water Works (AmWater/AWK**), the largest private water utility.

The company has a strong presence in New Jersey and Pennsylvania, where most of the water M&A seems to be concentrated, it has an unmatched access to cheap financing (given its US$14bn market cap), and best in class operational and management practices, we believe. **AmWater** has just closed acquisitions of two privately held water systems, Shorelands Water Company in NJ (11,000 accounts) and Meadowbrook Water Company in CA (1,600 accounts), and should close on a pending acquisition of a wastewater system in McKeesport, PA (22,000 accounts) in 2H17. **AmWater** has a list of targeted municipal systems covering ~145,000 accounts, but to put that in perspective, the company currently serves more than 3.3m customer accounts.

As the second-largest publicly traded water utility, **Aqua America** (**Aqua/WTR**) seems well positioned to benefit from privatization of the US water sector, especially as ~70% of its current rate base is in Pennsylvania. **Aqua** needs meaningful deals to boost its anaemic ~4-4.5% EPS growth – its current water pipe replacement cycle (less than 100 years) is the shortest among investor-owned water utilities in the US, and as such does not offer much (if any) upside to the current capex level. In '17, **WTR** expects to close four pending municipal system deals for US$114m in total vs just US$22m in similar transactions completed in '16. Management is talking up the level of activity in the municipal space, and yet it has not given up on gas utility M&A.

**California Water Service Group (CalWater**) has a 200 year water pipe replacement cycle, more than twice longer than that of Aqua, even if it has recently improved from a 300 year cycle through to a large capex increase. As a result, it does not need to go after municipal M&A in order to boost its earnings growth.

**American Water Works (AWR)** would need municipal M&A for higher growth, but the company remains at a competitive disadvantage in the municipal M&A to its two larger and more geographically diverse peers, **AmWater** and **Aqua**, which have operations in M&A-ripe NJ and PA, and much larger balance sheets.

# UK: We see capex continuing at a rate of at least £5bn per annum

The UK Water Industry is facing some major long-term challenges. Population growth, climate change, tough economic conditions and tightening environmental legislation all provide a tough underlying backdrop to the business and regulators.

We have tried to estimate UK capex going forward based on a number of parameters:

1) UK historical spend and trend.
2) A comparison of the Modern Equivalent Asset value versus current spend and depreciation rates.
3) A bottom-up analysis of the needs and requirements for the future network.

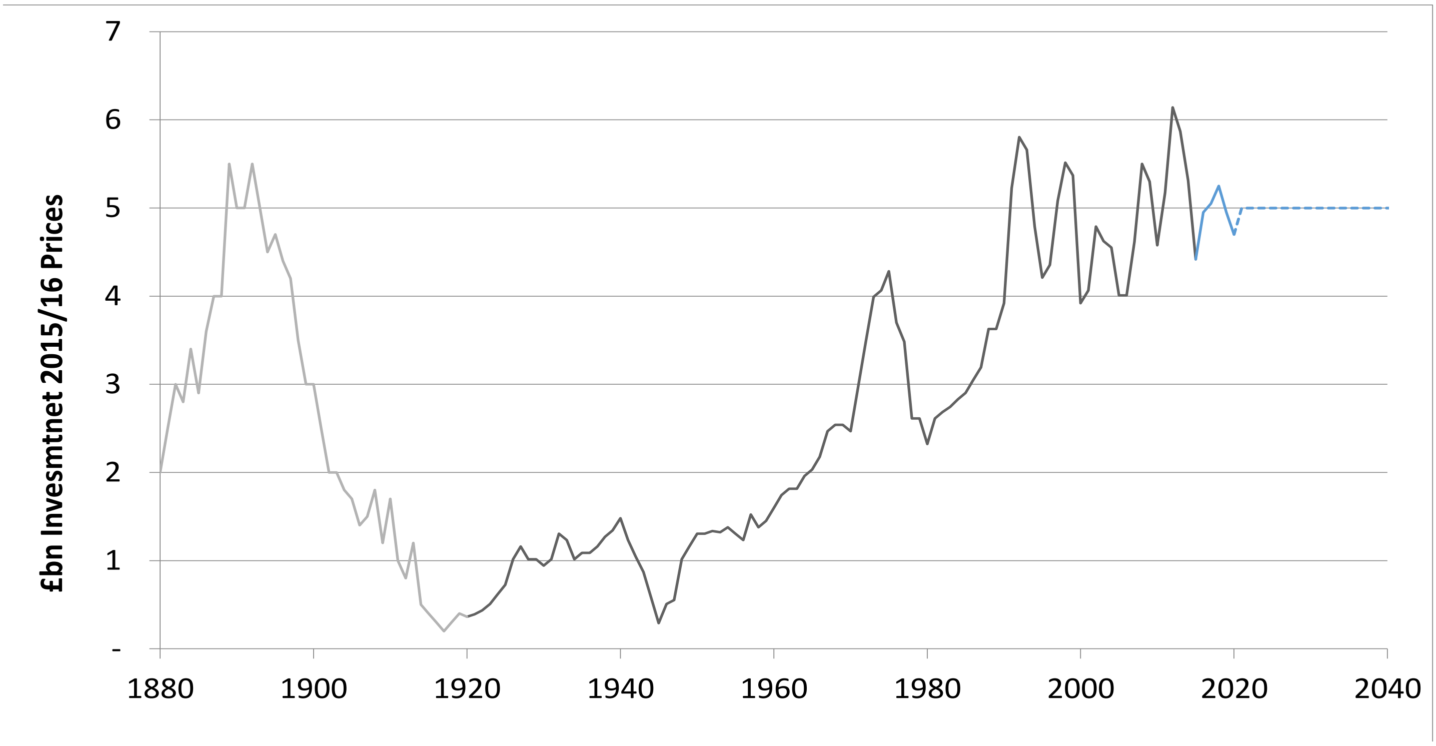
## 1) UK current spend at structural high point in cycle

We estimate that total UK water spend shows a cyclical nature, albeit one in which the cycle runs to over a hundred years or more. The following chart shows the investment in the English and Welsh water sector since 1880. We estimate that the roll out of the large scale clean water and sewerage systems happened in parallel with the large modern house building programmes of Victorian times.

Looking at the capex chart below, we estimate that the water sector saw significant capex at the end of the 19th Century. Investment then fell with annualised investments of around £1bn from 1920 to 1960. Whilst investment rose in the 70s and 80s, it was the huge increase in investment that was needed that was in part the reason why the sector was privatised. Privatisation, in 1989, saw investment double and it has been broadly flat in real terms since 1990, at c.£5bn in 2015/16 prices.

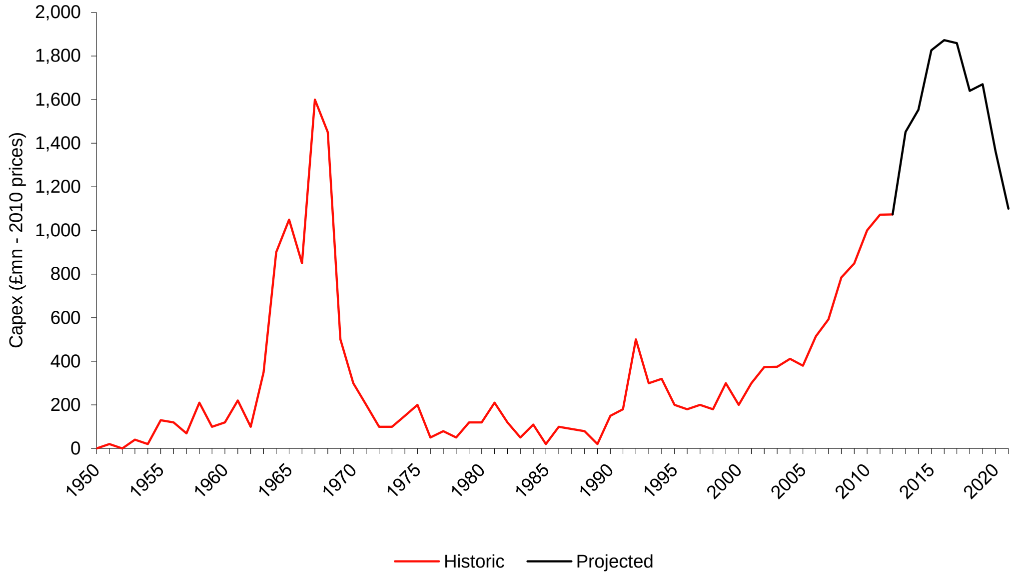
With now nearly 30 years at £5bn of investment we see no real reason why investment should fall off. Whilst a large part of the water and wastewater network may not need updating for another century, or more, replacements are now more expensive than greenfield water expansions.

**Fig 30 The capex cycle… Water has an extremely long asset life with rising capex lasting potentially decades**




Source: Ofwat, Macquarie Research, April 2017

**Fig 31 National Grid UK electricity transmission capex cycles are c.50 years**




Source: Ofgem, National Grid, April 2017

## 2) MEA is still 5x RAB and this gap is (slowly) closing

Ofwat publishes modern equivalent asset (MEA) values for the water network. This estimates the actual economic book value of the water companies, based on the current condition. The following chart shows that Ofwat estimated that the MEA at privatisation was over £200bn (2015/16 prices). The RAB at March 1990 was £14bn (2015/16 prices), which meant that the earnings base at privatisation was at a 93% discount to MEA.

We estimate that the water industry MEA has kept fairly constant in real terms since privatisation, rising to between £300bn and £340bn over the past two decades (in 2015/16 prices).

We estimate that asset lives of these water and wastewater assets is probably in the order of 75-100 years. This means that if the network were to be maintained in the current state, then we would estimate an annual maintenance annual capex of £4.0bn per annum.

The RAB of the UK water sector is currently £70bn, or just 21% of the MEA. We estimate that the depreciation life of the sector is currently c.25 year life. This means that the depreciation allowance passed through to consumer bills is in the order of £3.0bn per annum.

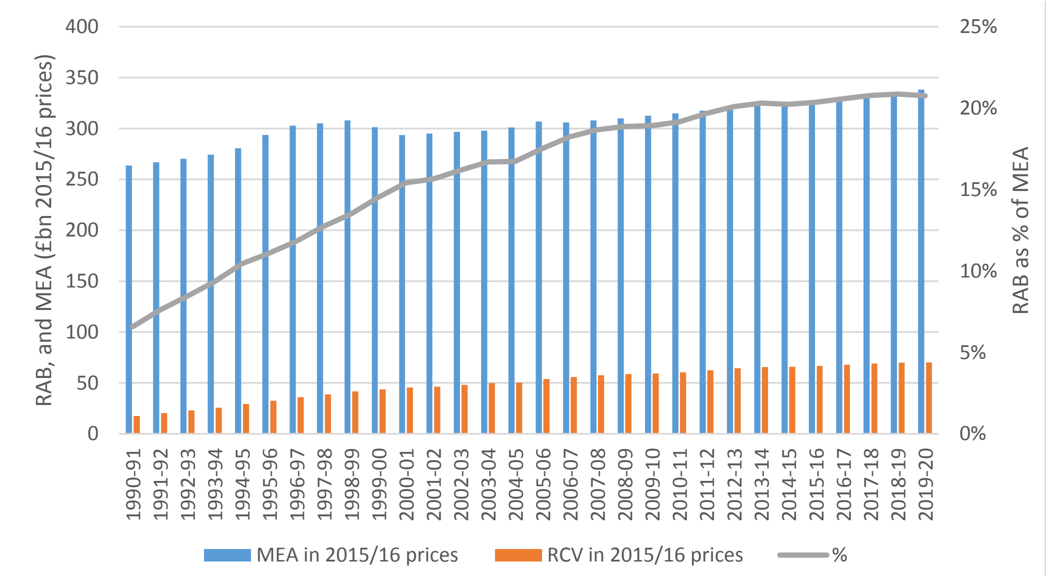
We estimate that on top of these long-run projects, the MEA should naturally rise as improvements are added to the network. These include tightening environmental standards as well as increased interconnectivity.

**Overall we estimate that in 2015/16 prices we see maintenance investment in the order of £4bn rising to a total investment need of £5bn per annum including improvements**.

Note on p19 of the December 2015 publication of the PR19 review, Ofwat state that RCV is c.12% of MEA, but we are unsure how they came to these numbers. In any case, a 12% RCV/MEA ratio would indicate scope for even greater future capex.

Within the three UK listed companies, we see the RAB/MEA for Severn Trent and United Utilities as the lowest (at 16-20%) with Pennon at 30%.

**Fig 32 Water companies were privatised with an extremely low earnings base (RAB) versus the Modern Equivalent Asset (MEA) (2015/16 prices)**



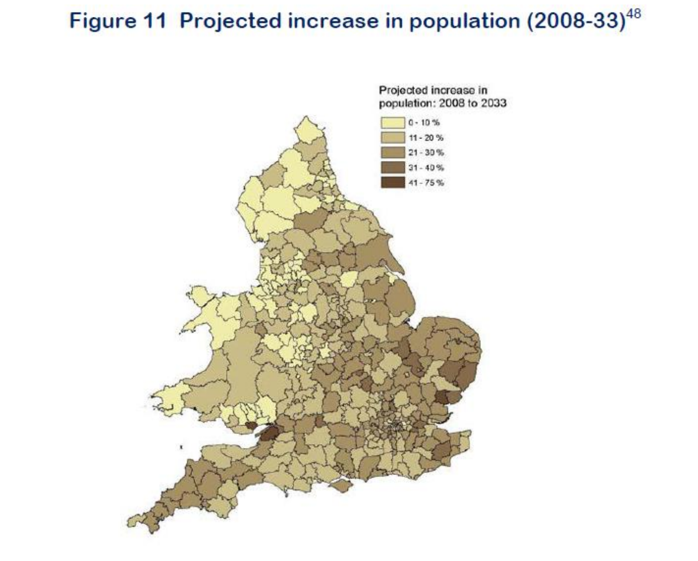

Source: Ofwat, April 2017

## 3) The UK faces structural water challenges: resilience will add >£1bn per annum in investment

We have also examined some of the structural challenges for the UK water sector in the coming decades. It might appear very long dated, but these assets need careful planning as once they are in place they are around for three generations or more.

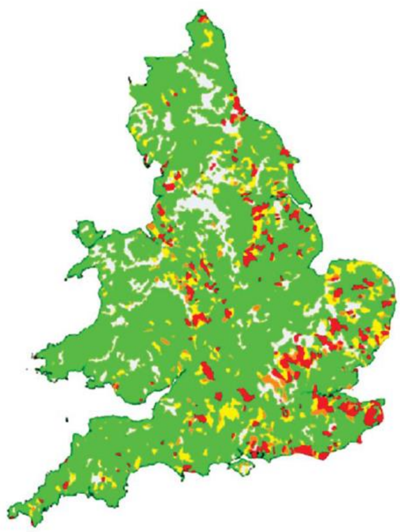
Overall a recent long-term 'UK Water' report on long-term resource planning focuses on water resilience, and with changes in population growth and rainfall patterns we are looking at up to c.£1bn a year in extra investment to build resilience into the system, including increasing efficiency, leakage and recycling rates.

**Fig 33 Population growth is still expected to focus on South and East**



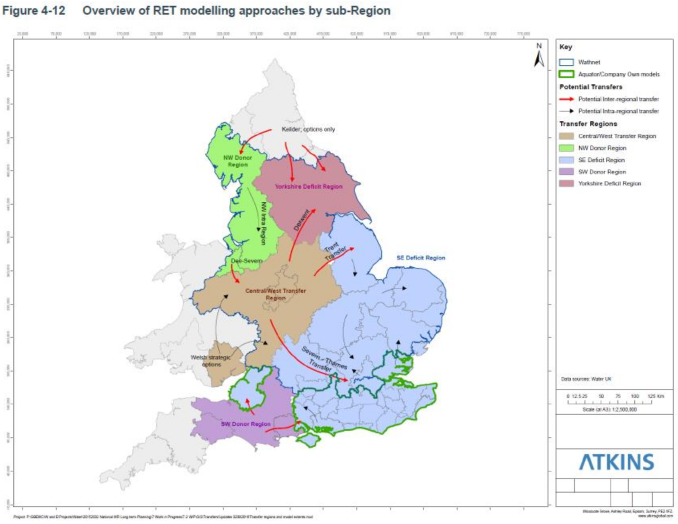

Source: Office of National Statistics, November 2011

**Fig 34 And rainfall pattern changes can put already scarce resources at further risk – red areas show water scarcity areas**



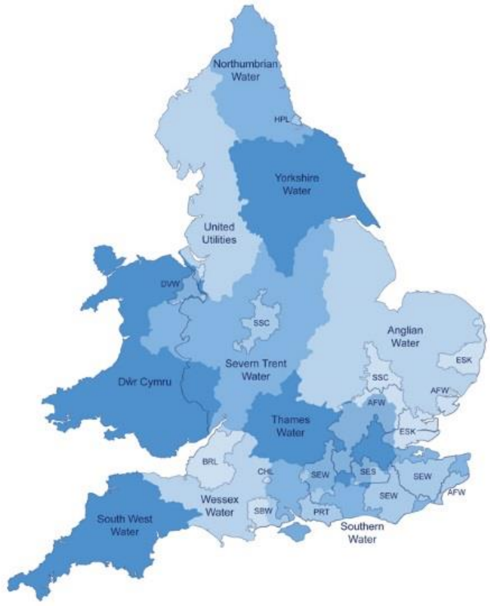
Source: DEFRA, Water for Life, December 2011

### Fig 35 Water Resource long-term planning shows a flow of water from the North and the West



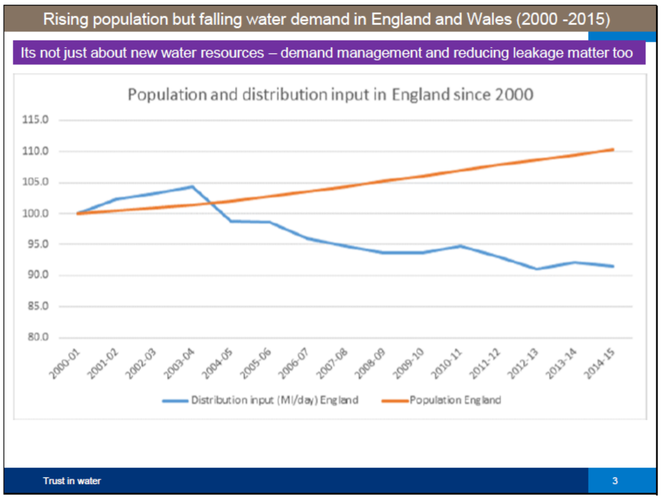

Source: UK Water, Water resources long term planning framework 2015-2065, July 2016

### Fig 36 Severn Trent Water is best positioned for large scale water transfer



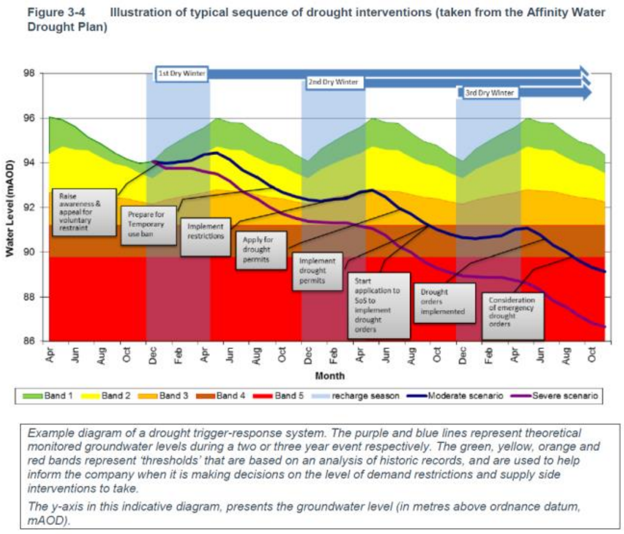

Source: Ofwat, April 2017

### Fig 37 Overall population growth has so far been offset by increased efficiency and lower leakage rates




Source: UK Water, Water resources long term planning framework 2015-2065, July 2016

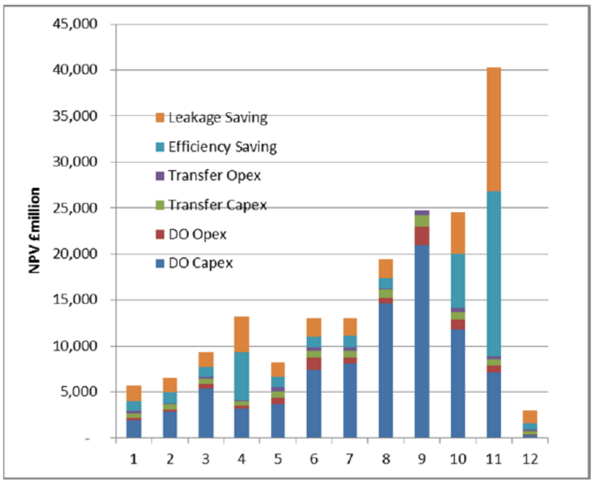
### Fig 38 But three dry winters will cause drought. We are now in year 2 of it being dry.




Source: UK Water, Water resources long term planning framework 2015-2065, July 2016

**Fig 39 There were 12 resilience strategies examined, with an NPV average of £10bn**

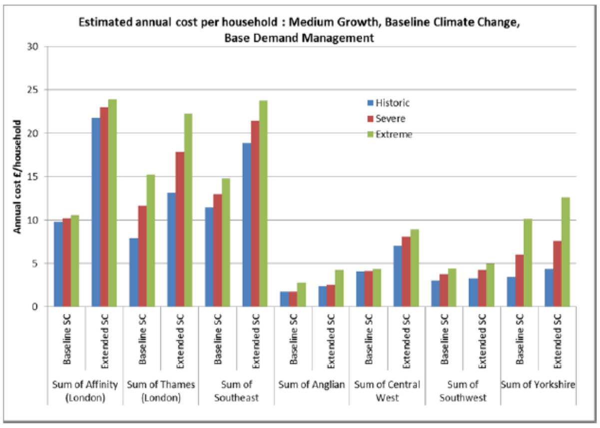
Figure 8-16 NPV costs of portfolios, showing breakdown of costs across capex and opex, supply options, transfers and demand management




Source: UK Water, Water resources long-term planning framework 2015-2065, July 2016

**Fig 40 Households in London and the South East will have the highest costs**

Figure 8-31 Total annualised costs for the BAU Base demand management strategy, normalised to number of households forecast by region in 2040, under Medium Growth, Baseline climate change

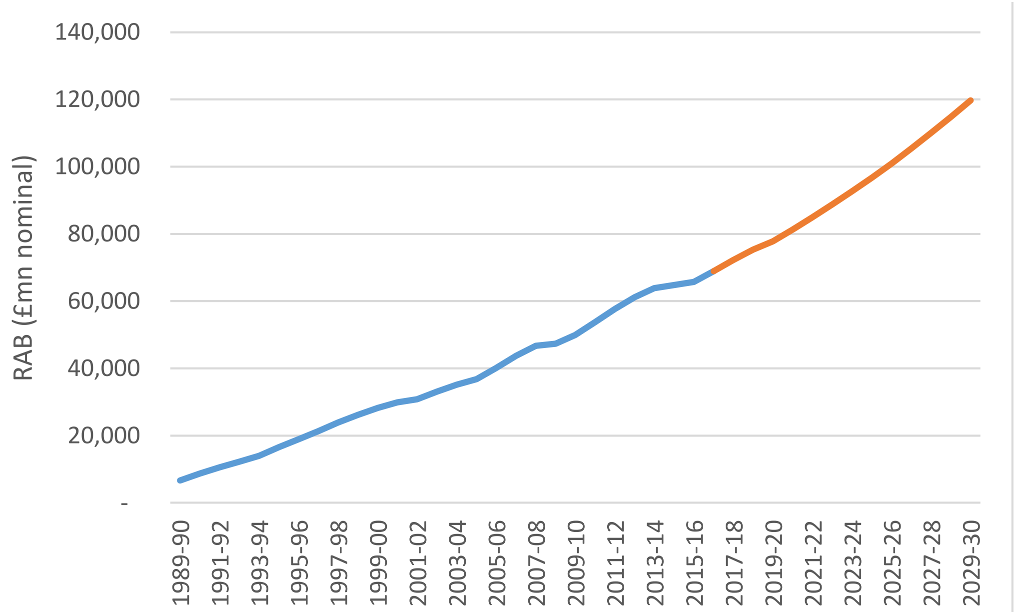



Source: UK Water, Water resources long term planning framework 2015-2065, July 2016

## RABs are going to rise: we see RAB rising by 75% in nominal terms in ten years

We estimate that RAB in the industry is going to rise (all things being equal re Pay As You Go (PAYG) ratios) by c.£2bn a year going forward in real terms. On top of this, if an inflation rate of c.2.5-3.0% is seen going forward, then we see the RAB of the UK water sector rising from c.£69bn in March 2017 to £120bn in 2030, a 75% rise.

**Fig 41 The UK Water sector RAB has grown by 10x in 28 years (nominal) and we see a further doubling out to 2030**



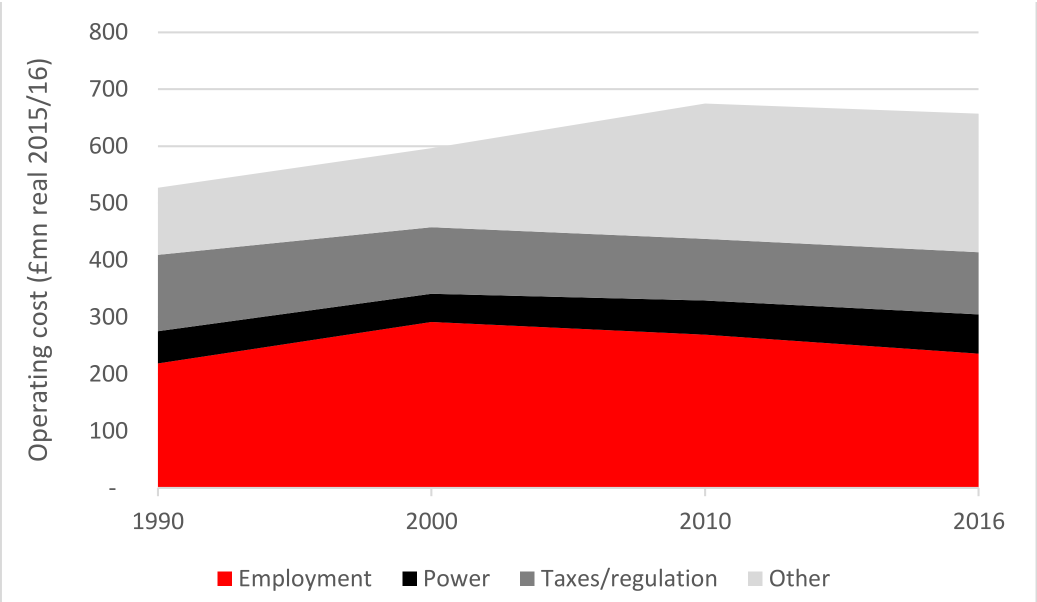

Source: Ofwat, Macquarie Research estimates, April 2017

## Operating performance efficiencies can limit water bill rises

Whilst RAB rose rapidly since privatisation, the UK water sector went through improving efficiencies which meant that bill rises were limited. We have used Severn Trent Water as an example, and it can be seen that whilst total operating costs have risen in real terms since 1990, these have been driven broadly by 'other' costs, in particular hired services and contractors. These will likely increase as investment size increases and the asset base increases.

However overall employment costs have fallen in real terms continuously since 2000, as productivity has increased.

**Fig 42 Employment increased initially as water investment increased, and has fallen in real terms since 2000 (Severn Trent Water taken as an example)**

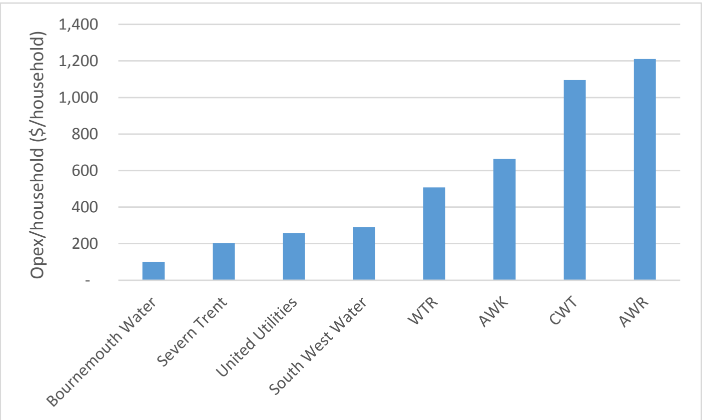



Source: Severn Trent Water, Companies House, April 2017

## UK water companies are amongst the most efficient in our global company index

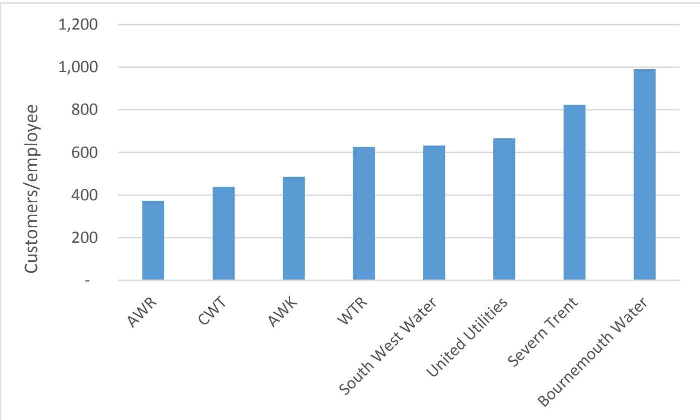
The following two charts summarise the operating costs for our global water companies. We estimate that UK water companies have an opex/customer on average at a 75% discount to their US peers and nearly 2x the number of employees/customer.

**Fig 43 UK companies 75% more efficient than US companies on opex…**




Source: Macquarie Research estimates, April 2017

**Fig 44 ...with nearly double the customers/employees**




Source: Macquarie Research estimates, April 2017

## Allowed returns keep falling: we estimate 4.5% real cost of equity (RPI based at 3%)

Looking at the return on regulated equity (RORE), it is important to highlight the attractive returns offered across the UK water names. Based on our projections, we see achieved ROREs for the UK water groups at between 10-13% over the next years. We view this RORE level as superior within the sector context.

**Fig 45 We see *achieved* ROREs in the UK water names between 10-13%**

| ROE progression | | 2015/16a | 2016/17e | 2017/18e | 2018/19e | 2019/20e |
|---|---|---|---|---|---|---|
| Base ROE infrastructure | Severn Trent | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% |
| | South West | 5.6% | 5.6% | 5.6% | 5.6% | 5.6% |
| | United Utilities | 5.3% | 5.3% | 5.3% | 5.3% | 5.3% |
| Base ROE including retail | Severn Trent | 5.7% | 5.7% | 5.7% | 5.7% | 5.7% |
| | South West | 6.0% | 6.0% | 6.0% | 6.0% | 6.0% |
| | United Utilities | 5.6% | 5.6% | 5.6% | 5.6% | 5.6% |
| Totex outperformance | Severn Trent | 0.7% | 1.3% | 1.3% | 1.2% | 0.9% |
| | South West | 2.5% | 2.0% | 1.6% | 1.4% | 1.7% |
| | United Utilities | -2.2% | 0.1% | 0.0% | 0.3% | 1.8% |
| ODI outperformance | Severn Trent | 0.7% | 0.7% | 0.2% | 0.2% | 0.2% |
| | South West | 0.2% | 0.4% | 0.4% | 0.4% | 0.4% |
| | United Utilities | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |
| Financing outperformance | Severn Trent | -0.2% | 0.5% | 1.6% | 1.0% | 0.8% |
| | South West | 1.4% | 2.0% | 3.2% | 2.6% | 2.4% |
| | United Utilities | 1.3% | 1.7% | 2.4% | 1.9% | 1.8% |
| RPI | | 1.6% | 2.2% | 3.5% | 3.0% | 3.0% |
| **Total achieved ROE** | **Severn Trent** | **8.5%** | **10.3%** | **12.3%** | **11.1%** | **10.7%** |
| | **South West** | **11.6%** | **12.5%** | **14.7%** | **13.3%** | **13.5%** |
| | **United Utilities** | **6.4%** | **9.8%** | **11.7%** | **11.0%** | **12.4%** |

Source: Macquarie Research, April 2017

Ofwat looks at three parameters within determining a cost of capital: i) leverage; ii) a cost of debt; and iii) a cost of equity. We estimate in the next review that the allowed cost of equity will be 7.5% nominal, or 4.5% real, using an RPI level of 3%. We also predict a cost of debt allowance of 1.5% real in the next review.

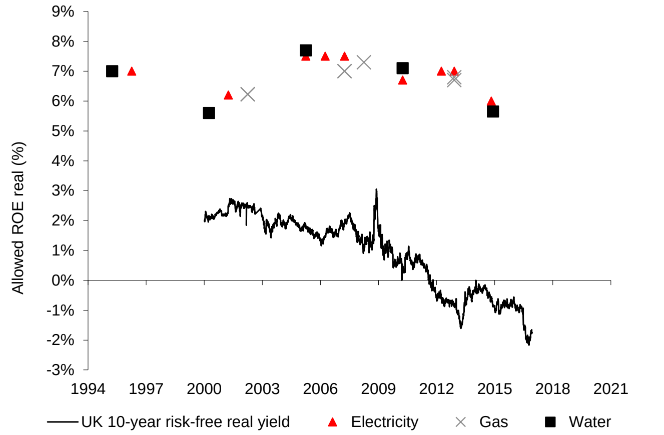
The regulator will be moving from RPI to 50% CPI for existing assets, and 100% CPI for new assets from 2020. CPI has traditionally been c.100bps lower than RPI, which would raise allowed ROE from 4.5% real (RPI) to 5.5% real (CPI).

**Fig 46 We estimate allowed returns will fall from 3.8% to 2.8% in the next review**

| | Ofwat Fast Track proposal | Ofwat Final Determination | Macquarie estimates next review 2020 |
|---|---|---|---|
| Period | April 2015 - March 2020 | April 2015 - March 2020 | **April 2020 - March 2025** |
| Regulator allowed gearing level | 62.50% | 62.50% | **62.50%** |
| Cost of debt (pre-tax real) allowed by regulator | 2.75% | 2.60% | **1.50%** |
| Cost of equity (post-tax real) allowed by regulator | 5.30% | 5.30% | **4.50%** |
| Tax rate | 20% | 20% | **20%** |
| Wholesale post tax real return | 3.34% | 3.26% | **2.44%** |
| Wholesale plain vanilla return | 3.70% | 3.60% | **2.63%** |
| Regulated HH retail margin | | 1% | **1%** |
| Regulated retail pick-up | 0.15% | 0.15% | **0.15%** |
| Plain vanilla return including regulated retail | 3.85% | 3.75% | **2.78%** |
| Competitive retail | 0.06% | 0.06% | |
| All-in allowed return | 3.91% | 3.81% | **2.78%** |

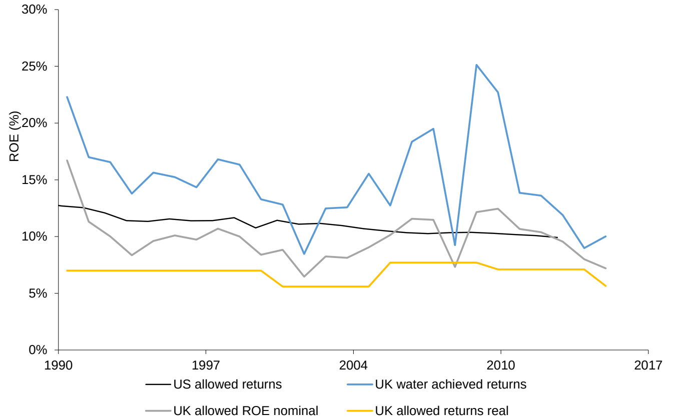
Source: Ofwat, Macquarie Research, April 2017

**Fig 47 UK base allowed ROREs have been falling, and are below US returns, even after adjusted for inflation…**



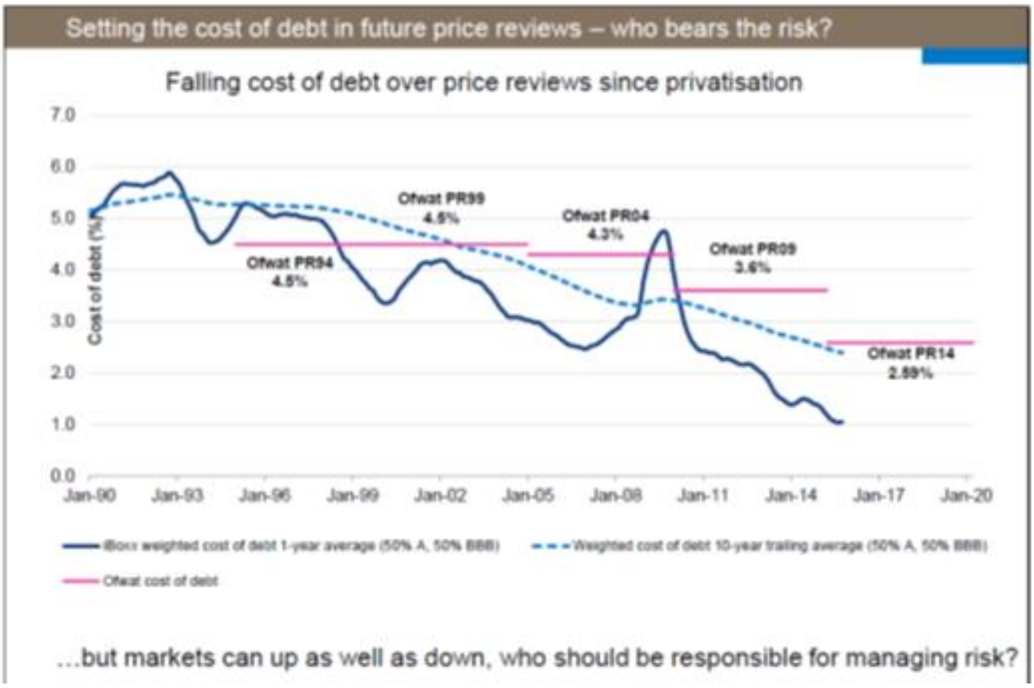

Source: Ofwat, Ofgem, Offer, Ofgas, Bloomberg, Macquarie Research, April 2017

**Fig 48 … but achieved ROREs have been 400bps greater than allowed returns which puts them above US returns**




Source: Ofwat, Macquarie Research, April 2017

**Fig 49 Cost of debt allowances have seen consistent declines in the reviews**




Source: Ofwat, April 2017

**Fig 50 We see Ofwat providing a 4.5% real allowed return on equity (based on full RPI proportion at 3%), equating to 7.5% nominal return. We see these three companies outperforming the regulatory contract by 50-200bps**

| | Equity return base (nominal) | Totex outperformance | ODI outperformance | Financing outperformance @3% RPI | Total ROE |
|---|---|---|---|---|---|
| Pennon Group | 7.5% | 0.5% | 0.5% | 1.0% | 9.5% |
| Severn Trent | 7.5% | 1.0% | 0.5% | 0.0% | 9.0% |
| United Utilities | 7.5% | 0.0% | 0.0% | 0.5% | 8.0% |

Source: Macquarie Research, April 2017

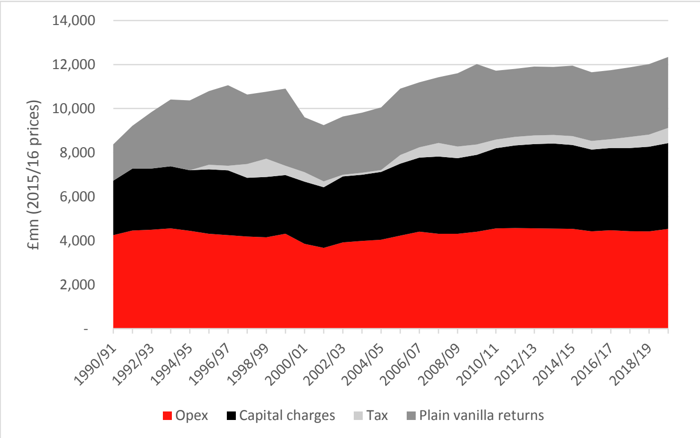
## We see UK water bills up 50% within a decade – and if the cost of capital were to rise from here we could see higher rises

One consequence of moving from an 'opex heavy' to 'asset heavy' model is that the make-up of a water bill moves from one where opex made up 50% of the bill at privatisation to one where it is now c.38%. We estimate it will fall to c.30% by 2030.

We have factored in a material cut to WACC, and improving real operating cost efficiencies. However, we still predict bills will rise by c.3.5% p.a. out to 2030, which is above the cost of inflation. If cost of capital were to increase from these historic lows, then we do see the risk that bills could be materially higher in the future.

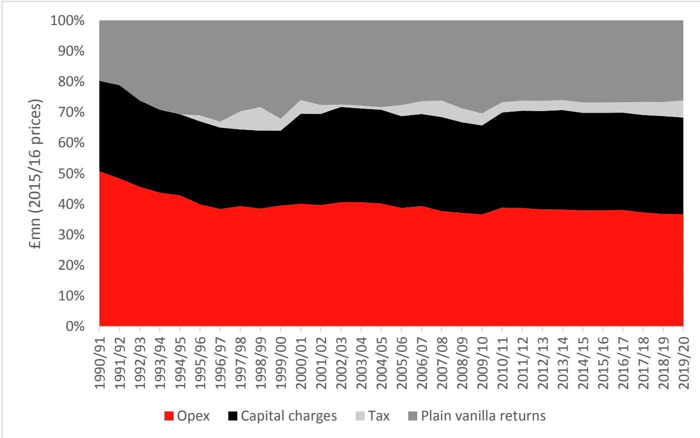
Overall we estimate UK water bills rising 50% in the coming decade to reach c.£600/household.

**Fig 51 Overall total revenues have risen slightly in real terms**



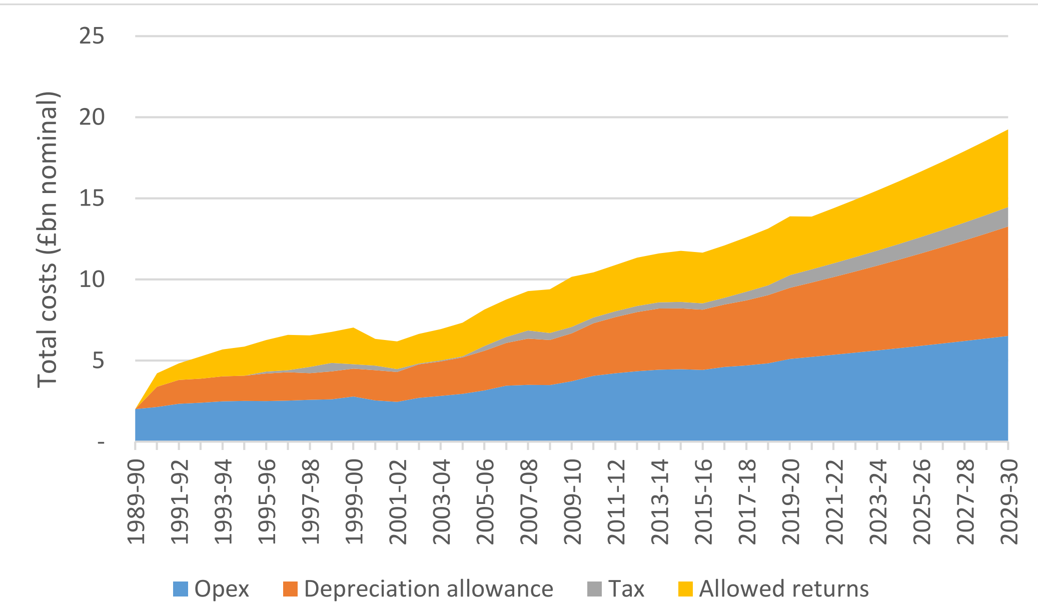

Source: Macquarie Research, April 2017

**Fig 52 And opex costs make up increasingly less of the bill versus capital costs**



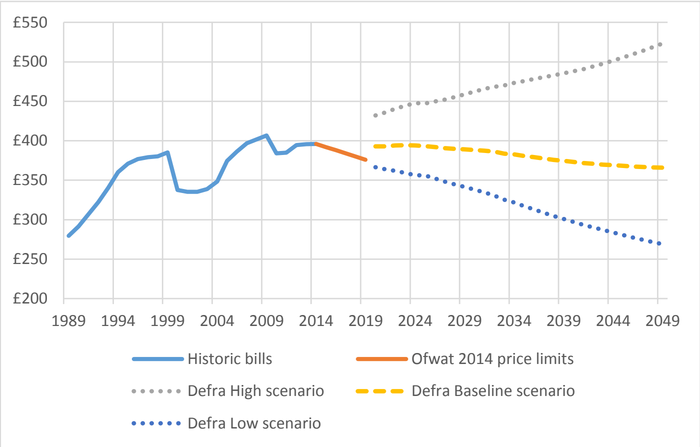

Source: Macquarie Research, April 2017

**Fig 53 We estimate that total costs will rise at 3.5% per annum, or 0.5% real**



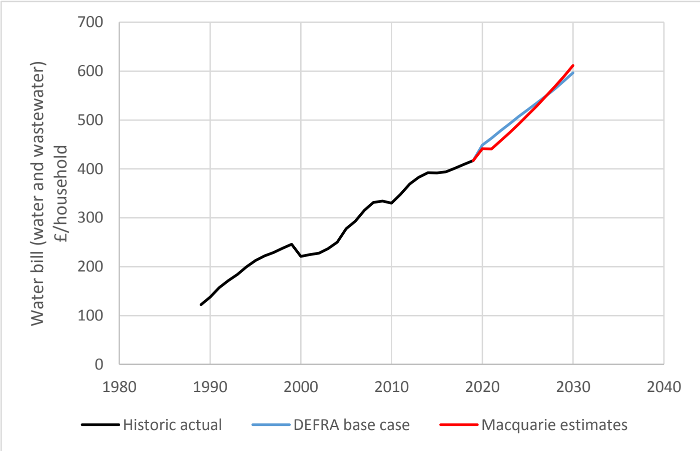

Source: Ofwat, Macquarie Research estimates, April 2017

**Fig 54 In real terms, UK water bills rose 50% after privatisation, but have remained broadly flat thereafter (2014/15 prices)**




Source: Ofwat, National Audit Office, Macquarie Research, April 2017

**Fig 55 We expect to see bills rise in real and nominal terms to reach over £600/household by end of next decade**




Source: Ofwat, Macquarie Research, April 2017

## We see Ofwat increasingly adopting innovation to minimise these potential bill rises

There have been broadly five major policy publications in the past seven years that are driving the industry towards meeting this brave new water world. A slightly more detailed explanation of the content within these reports is in the Appendices.

This research focuses on the impact of household retail competition in the sector, but the context in the content of the other associated documents is important to understand why Ofwat and the water sector are moving towards innovation and competition as a solution to meet industry challenges.

- Walker Report, 2009 (DEFRA)
- Cave Report, 2009 (DEFRA)
- The Water White Paper ‘Water for Life’, 2011 (DEFRA)
- The Water Act, 2014 (DEFRA)
- Water 2020, 2015-16 (Ofwat)
- Household Water Competition review, 2016 (Ofwat)

*Through all these documents we see a philosophy that the water industry should embrace innovation, using market forces, rather than rely on bilateral regulatory negotiations between Ofwat and companies.*

We explore these themes in considerable detail in the following notes:

1) Water 2020: Trust in Water February 2016
2) The Big Splash: Maximum hydration for your portfolio September 2016
3) UK utilities: The re-inflation trade, what public equity doesn’t get, private equity does January 2017

The current UK water industry has split the water sector into four components. All the existing RCV is in the wholesale business, which is remunerated with a return on regulated WACC methodology, whilst retail is remunerated based on a revenue margin and average cost-to-serve methodology.

**Wholesale**

⇒ Water wholesale

⇒ Wastewater wholesale

**Retail**

⇒ Household retail

⇒ Non-household retail

In the current review period (April 2015-March 2020) all four components started fully regulated, with competition being introduced in non-household retail in April 2017. The remaining three components will still be fully regulated by the end of the current review period.

The following table summarises the main components of the wholesale and retail regulation in the water sector, for both the enhanced submission as well as the standard Final Determination. The only material difference between the enhanced review and Final Determination was the allowed cost of debt, which fell from 2.75% real in the Draft determination to 2.6% in the Final Determination.

**Fig 56 Summary of the UK water Enhanced and Final Determination allowed returns and margins**

| | Ofwat enhanced Determination (PNN) | Ofwat Final Determination (SVT, UU) |
|---|---|---|
| **Period** | **April 2015 - March 2020** | **April 2015 - March 2020** |
| **Wholesale** | | |
| Regulator allowed gearing level | 62.5% | 62.5% |
| Cost of debt (pre-tax real) allowed by regulator | 2.75% | 2.6% |
| Cost of equity (post-tax real) allowed by regulator | 5.3% | 5.3% |
| Wholesale plain vanilla return | 3.7% | 3.6% |
| **Retail** | | |
| Household retail margin | 1.0% | 1.0% |
| Non-household margin (until 2017) | 2.5% | 2.5% |

Source: Ofwat, Macquarie Research, December 2014

On top of the ‘baseline’ ROREs, there are a number of incentives that can change the achieved ROREs significantly. These are broadly:

- Totex outperformance (efficiency savings ahead of regulatory targets in opex and capex)
- ODIs (Output delivery Incentives) which can provide a reward or penalty versus a number of qualitative and quantitative measures.
- Financing outperformance, coming from an achieved cost of debt differing from that set by Ofwat.
- SIM (Service Incentive Mechanisms), a retail only incentive and a subset of ODIs.

# China: Rising capex to tackle water pollution issues

## Strong capex underpinned by the State's 13-FYP surrounding pollution curing

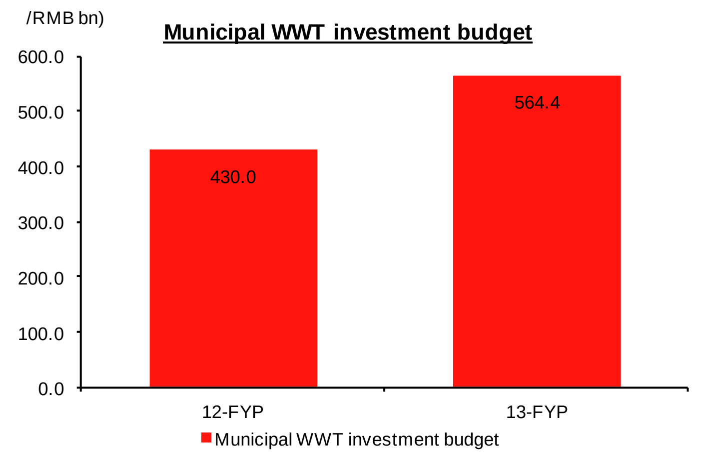
### Fig 57 Investment budget on municipal WWT (13-FYP vs. 12-FYP)

| (RMB mn) | 12-FYP | 13-FYP | Chg % |
|---|---|---|---|
| Sewage pipeline and upgrade - (a) | 244.3 | 262.8 | 7.6% |
| Rain water pipeline and upgrade - (b) | | 50.1 | |
| New WWT facilities - (c) | 104.0 | 150.6 | 44.8% |
| WWT facilities upgrade - (d) | 13.7 | 43.2 | 215.3% |
| Sludge treatment facilities - (e) | 34.7 | 29.4 | -15.3% |
| Recycled-water facilities - (f) | 30.4 | 15.8 | -48.0% |
| Rain water treatment facilities - (g) | | 8.1 | |
| Monitoring / others | 2.9 | 4.4 | 51.7% |
| **Total** | **430.0** | **564.4** | **31.3%** |
| | | | |
| Addressable market size (13-FYP includes 100% of pipeline investment budget) | 182.8 | 560.0 | 206.3% |
| Addressable market size (13-FYP includes 50% of pipeline investment budget) | 182.8 | 403.6 | *120.8%* |

Source: State Council, Macquarie Research, April 2017 Note: Scenario: 12-FYP includes (c) to (f); 13-FYP includes (a) to (g) with 50% to 100% applied to (a) to (b)

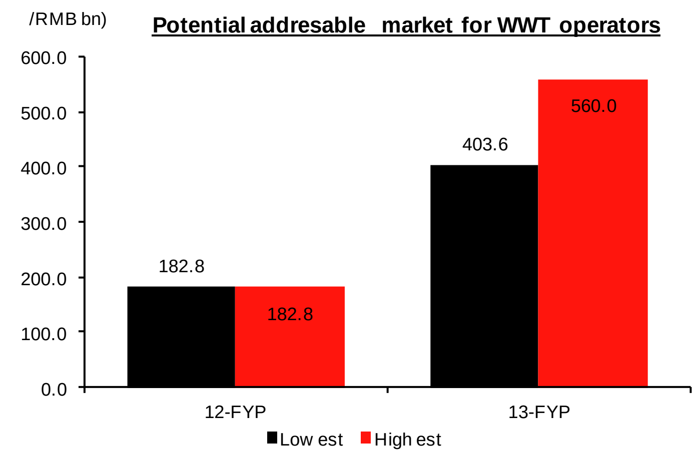
The total investment budgeted for municipal wastewater treatment during 13-FYP (Five-Year-Plan, 16-20) is to rise by 31% to RMB564bn than that of 12-FYP. The Chinese government has recently introduced the concept of plants + pipeline bundling. In the past, privatization opportunities for wastewater treatment (WWT) were largely surrounding the plants' assets. In the latest 13-FYP municipal wastewater treatment development plan, State Council has introduced the concept of pipeline + plants' bundling. Conceptually, BOT investment for a WWT project will become larger now, given operators will also need to invest in pipeline as well. If we were to assume a similar return as before, the addressable market size for China's wastewater treatment operators increased. If we were to run a scenario analysis that addressable market size during 13-FYP includes 50 to 100% of the sewage pipeline and rain water pipeline, the addressable market for WWT operators would increase by 121 to 206%.

### Fig 58 Municipal WWT investment budget




Source: State Council, Macquarie Research, April 2017

### Fig 59 Addressable market size est. for operators




Source: State Council, Macquarie Research, April 2017 Note: Est. for both 12-FYP and 13-FYP has ignored the privatization of existing projects or M&A in the consolidating market

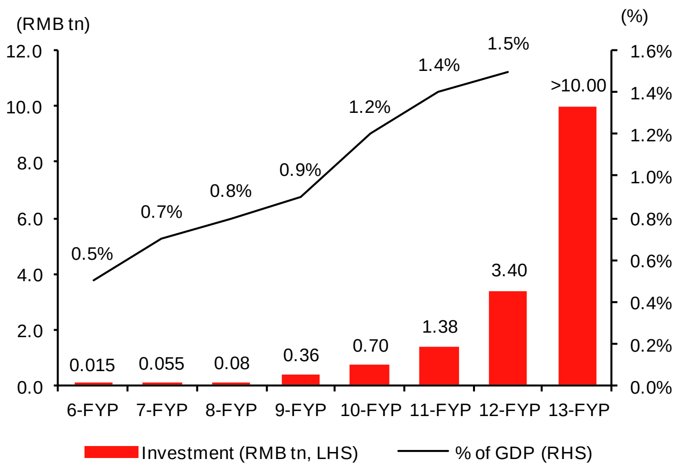
## River clean-up projects (aka environmental renovation) in the form of PPP are additional opportunities

In addition to further pushing urban municipal WWT by developing more WWT projects, the Chinese government has introduced the new focus on 'black and odorous water body' cleansing, environmental renovation and sponge city development during the 13-FYP. This type of water cleansing project will involve landscaping, pipeline building, construction works and misc. infrastructures building, which will most likely adopt a public-private-partnership (PPP) model.

In a nutshell, (i) with the expanding scope from municipal wastewater treatment to environmental cleansing, which requires more capex than before, (ii) the State Council's promotion on PPP and (iii) the industry's early adoption of PPP format (i.e. BOT wastewater treatment plan), we see the current PPP development as a natural extension to the water & environmental sector.

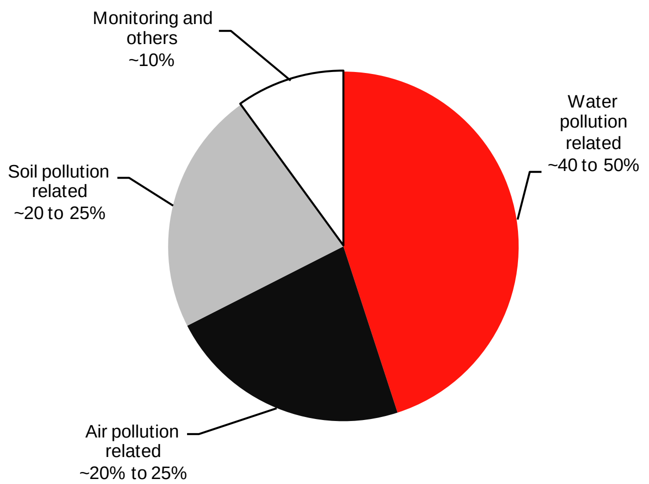
We think that water pollution-related investment (incl. renovation, landscaping and other misc. water related infrastructure) can go up to RMB4 to 5tn during the 13-FYP.

**Fig 60 China's environmental-related investment est.**




Source: CAEP, Macquarie Research, September 2016

**Fig 61 Estimated 13-FYP env. investment breakdown**

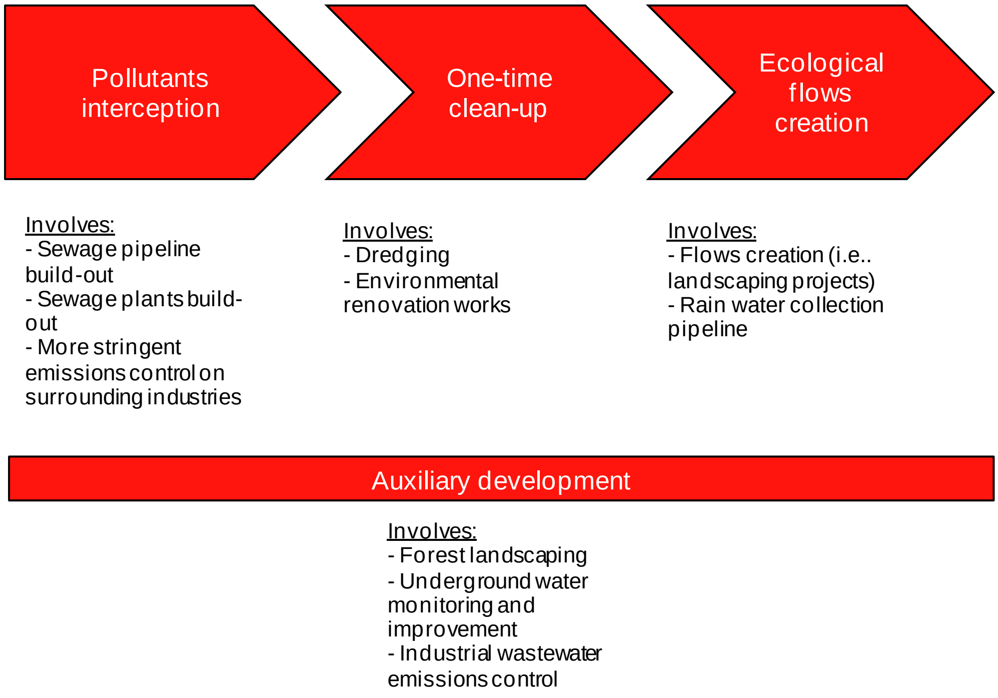



Source: CAEP, Macquarie Research, September 2016

### What is 'black and odorous water'?

Black and odorous water is a term coined by recent policy announcements such as the Water Action Plan. It refers to a water of body (incl. rivers, lakes or stale water body) that is at a distressed pollution level which has the characteristic of being black in color and has an offensive odor. We think that the situation of 'black and odorous water' can be proxied by the water quality of China's surface water. As of week 1 of 2016, ~22% of China's surface water is regarded Grade 4 of worse, which is not suitable for human consumption. Indeed, we see environmental cleansing, sponge city development and 'black and odorous water cleansing' are at times bundled together, as illustrated on the actual work that needs to be performed in the diagram below.

**Fig 62 Black and odorous water body cleansing**




Source: Macquarie Research, September 2016

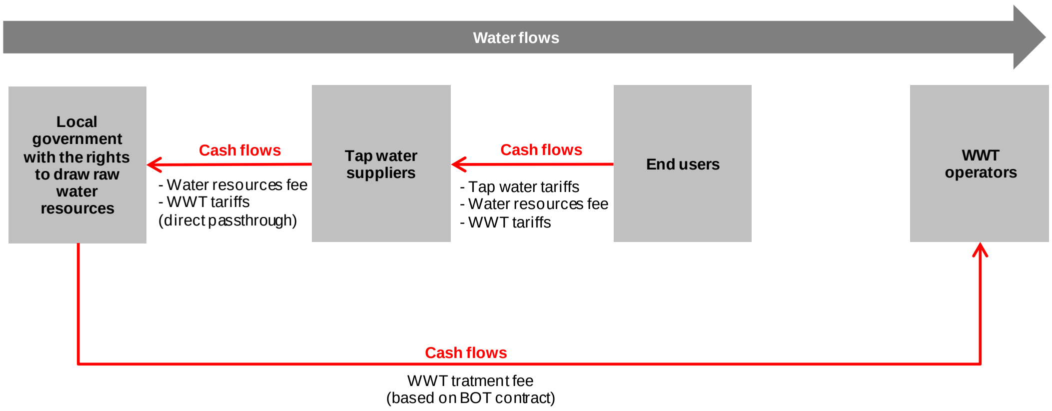
### Unique challenges and risks, we pick quality plays

We reckon water & environment projects account for 15% of the MOF's PPP projects database, making significant PPP opportunities in the segment. However, these opportunities are not without risk - in particular, execution, receivables collection, project selection and financing.

We think selecting a company that can mitigate project selection, execution and collection risks is important. Due to heavy capex and long payback periods, access to competitive finance cost is important if the co. invests using its own capital. In addition, the ability to attract LPs (limited partner) to go asset-light can enhance ROE. In this space, BEW (371 HK) is our top pick.

## China water: cash flows vs. water flows

**Fig 63 China water: cash flows vs. water flows**




Source: Macquarie Research, April 2017

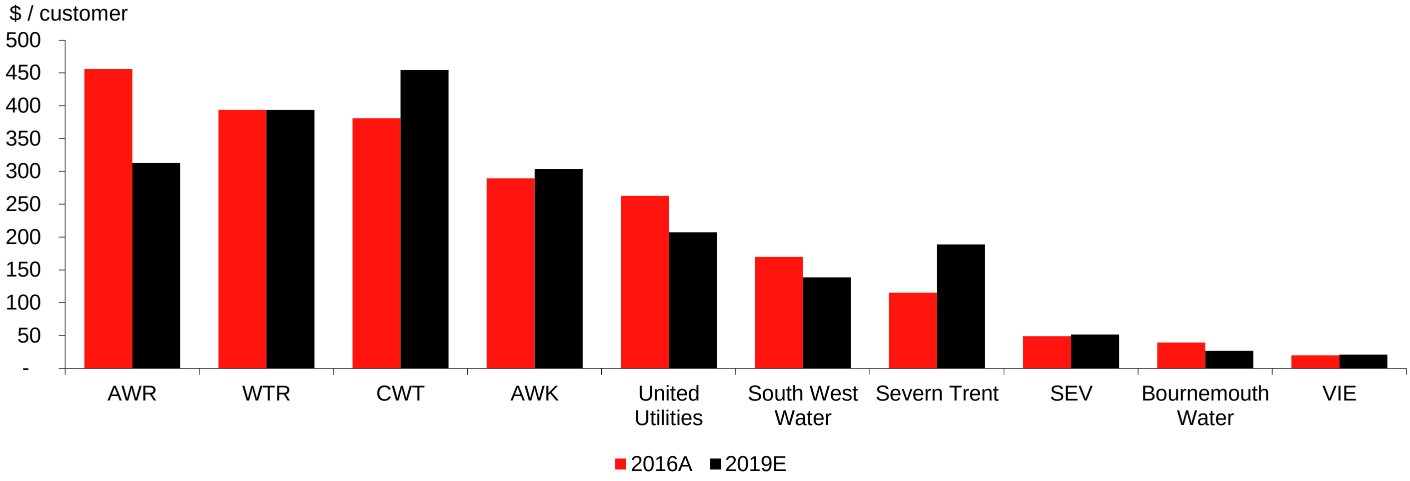
Most of HK-listed Chinese water companies are involved in municipal WWT (wastewater treatment) projects based on a BOT (build-operate-transfer) business model. The market opportunity is correlated with investment demand (capex). While a local government is the sole customer for a WWT operator, we do not see that WWT operators are relying on government subsidies because costs associated with WWT are largely passed through to end users. In China, end users will pay water fees for the amount of water consumed to tap water suppliers. The end-user water fees consist of tap water tariffs, water resource fees and WWT tariffs. Tap water suppliers will pass through the water resources fee portions and WWT tariffs to the local government and the local government will then leverage the WWT tariffs collected to make payment to WWT operators.

In the case of GDI (270 HK), the major business is water sales in HK. This is a unique project where GDI has the monopoly in selling raw water to the HK government at a fixed price. The contract is negotiated every three years. While there was no clear regulatory framework for downside protection, GDI has been able to raise its tariff since 2009, primarily due to its monopolistic position. The HK government subsidizes water for HK residents as it has no other alternatives to acquire fresh water resources.

# France: Suez is uniquely positioned to profit from US water investment

As stated before, a comparison of capex levels across the water companies we cover highlights the very low capex per customer for the French groups Suez and Veolia. This is not surprising to us as the French water industry works under a concession model with Suez and Veolia not owning the water network assets.

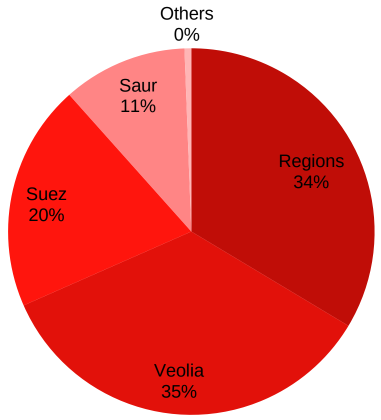
**Fig 64 Capex for Suez and Veolia relating to French water is very low due to concession operating model**




Source: Company data, Macquarie Research, April 2017

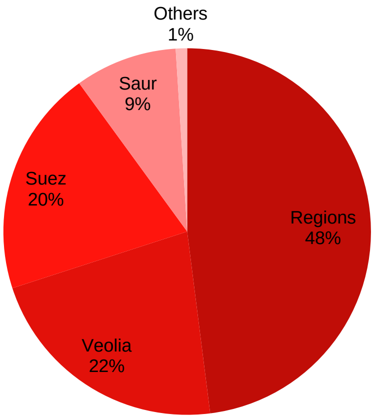
It is important to highlight that both Veolia and Suez are the dominant providers of drinking water and wastewater treatment in France. Both companies have an over 55% market share in drinking water and around 42% market share in wastewater treatment. The remainder of the French water market is mainly comprised by small municipal companies that provide the local drinking water and wastewater treatment services.

**Fig 65 Drinking water France market share**




Source: Veolia, December 2015

**Fig 66 Wastewater treatment France market share**




Source: Veolia, December 2015

Nevertheless, we see a significant positive read-through for Suez relating to the detailed water capex analysis of this report, mainly relating to the US. Our global water report highlights that according to the American Society of Civil Engineers the U.S. needs to invest a minimum of US$123bn annually (in 2016 dollars) in its water infrastructure over the next decade to maintain reliable clean water service. This is more than triple the ~US$40bn, which was invested by federal, state and municipal water utilities in 2016. This significant water-related replacement capex is driven by the 75-100 year lifespan and of the water mains and other equipment installed in US water systems over the last century.

We see Suez as a key beneficiary of the big expected uplift in future US water investment first through the purchase of GE Water and second through its ownership of the #3 regulated US water utility United Water. We are therefore reiterating our Outperform rating with an unchanged €19.0 price target.

## GE Water acquisition puts Suez into a unique position to profit from a big uplift in future US water capex

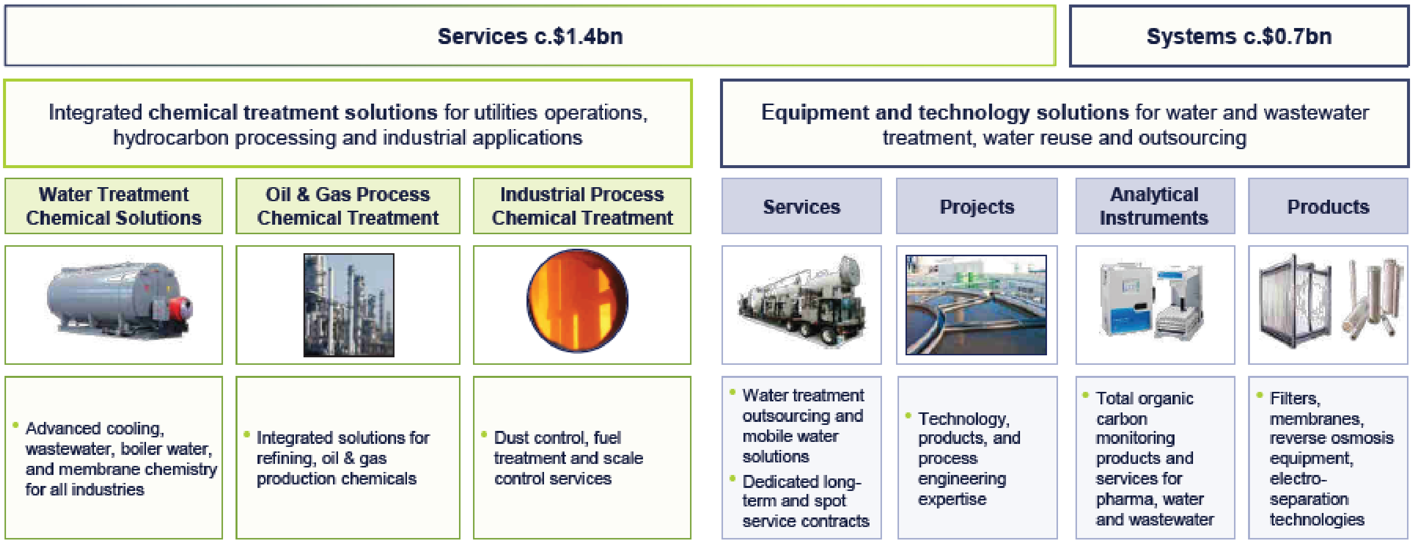
Suez announced on 8th March 2017 that it will purchase GE Water for ~€3.2bn (~$3.4bn) in a 70%/30% transaction with Caisse de dépôt et placement du Québec ("CDPQ"). This transaction will initially be financed by a bridge loan, which will be refinanced through a €0.75bn capital increase of Suez (existing shareholders will take up >€0.3bn), €0.7bn of equity provided by CDPQ, ~€0.6bn of hybrid debt and ~€1.1bn of senior debt of Suez (€1.2bn was raised on 28th March). The transaction should close in 3Q17.

This is a transformative transaction for Suez allowing it to become a key player in industrial water (GE Water 2016 services revenue ~$1.4bn and systems ~$0.7bn) building a dominant presence globally (half of revenues in the US and half of revenues outside US). We view this transaction positively driven by the expected ~5% revenue growth p.a. for the global industrial water market until 2020. Our positive view is reinforced by our analysis in this global water report showing the big required uplift in future US water capex. It is also important to highlight that we view the €65m p.a. target for EBITDA cost synergies as achievable for Suez. We have reflected the GE Water transaction in our financial forecasts and arrive at the targeted double-digit EPS accretion for Suez by 2019. Despite the deal looking pricey in the near term (2016 EV/EBITDA transaction multiple at 10.0x incl. cost synergies), we see a positive valuation uplift of ~€600m for Suez (~€1.0/share).

There has been continued market scepticism over the merits of Suez's $3.4bn acquisition of GE Water. This is evidenced by Suez shares underperforming the European utility sector by ~5% since the first press speculation emerged mid-February of a possible bidding interest in the GE Water assets. Based on our analysis, there is a significant need for investment in US water infrastructure over the next decades.

In our view Suez through GE Water is uniquely set up to profit from this development based on its unparalleled industrial water solutions & services platform and leading presence across the entire industrial water value chain, particularly in the US. This particularly relates to the systems' offering of Suez, which concentrates on equipment and technology solutions for water and wastewater treatment, outsourcing and water reuse. Around 15% of GE Water's 2016 revenue is with municipal clients. This masks the significant exposure of Suez to US local authorities' clients; after closing of the GE Water transaction Suez will have US revenues of ~€2.1bn (half with industrials, half with local authorities including regulated assets). We therefore believe that the revenue growth of the US operations GE Water under Suez ownership could be higher than in the past and potentially beat the mid-single digit growth target.

**Fig 67 GE Water offers broad industrial water solutions and services platform**




Source: Suez, March 2017

## RAB of United Water should continue to grow strongly

In our view the market underappreciates the significant regulated exposure of Suez as around 22% of its 2017E group EBITDA will come from its United Water business (#3 player in the US regulated water market; wholly owned) and controlled Aguas Andinas (largest regulated water company in Chile, direct Suez economic stake ~28.4%). United Water is the holding company for 16 regulated water utilities in the US, with a strong presence in New Jersey, New York, Pennsylvania, Delaware, Rhode Island and Idaho. We particularly view Suez's exposure to the regulated US water industry positively based on Macquarie's house view.

**Fig 68 Significant regulated EBITDA exposure of Suez**

| | 2015E | 2016E | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|
| United Water | 215 | 221 | 228 | 235 | 242 | 249 |
| Aguas Andinas | 361 | 382 | 394 | 405 | 418 | 430 |
| Total | 576 | 604 | 622 | 640 | 660 | 679 |
| Suez group EBITDA | 2,751 | 2,651 | 2,795 | 3,135 | 3,297 | 3,439 |
| % of group EBITDA | 20.9% | 22.8% | 22.2% | 20.4% | 20.0% | 19.8% |

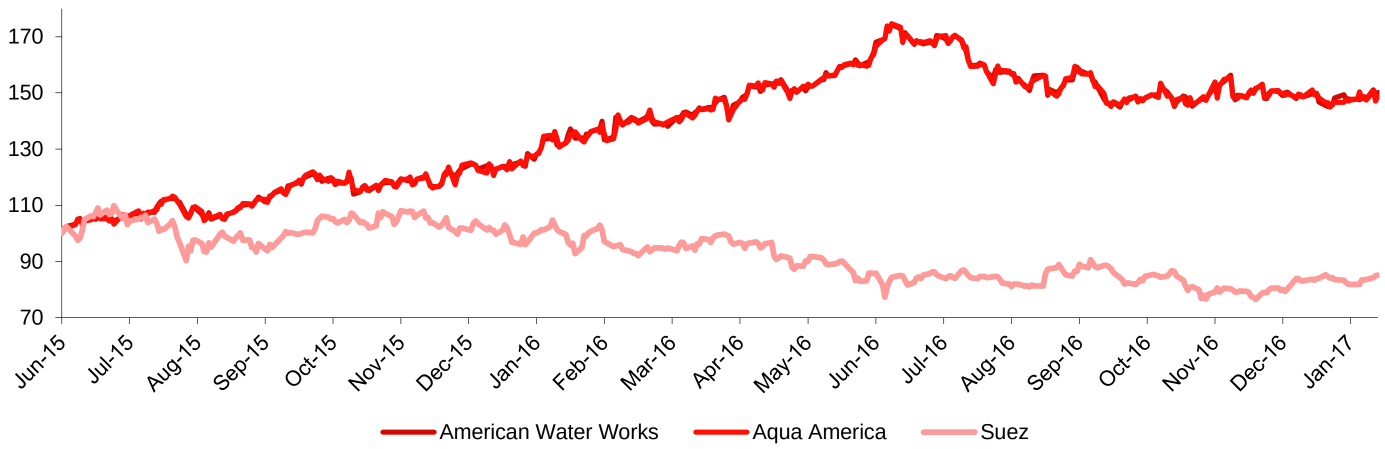
Source: Company data, Macquarie Research, April 2017

As argued in our sector report there is plenty of upside to US water utility investments (and thus water earnings) despite ongoing water usage efficiencies. The US water utility sector is the most capital-intensive of the US utility industries. The average water pipe replacement cycle in the US is ~240 years (with wooden water pipes still being used) and even investor-owned water utilities replace their pipes every ~150 years vs. their 100-year depreciation schedules. Our global water report highlights the potential future tripling of annual capex levels for US water utilities from the 2016 level. This supports the ~5.0% annual RAB growth we see for United Water over 2016A-20E, which has been an important part of our Bull case.

***Share price rally of regulated US peers should have had a positive impact on Suez shares***

There has been a significant recent rally in the share prices of the largest and second-largest listed regulated US water utilities. We believe this increase is mainly a result of the market appreciating their higher quality, defensiveness and future RAB growth. Although United Water only accounts for almost 11% of Suez's EV, we believe that the current share price ignores the recent significant re-rating we have seen for US regulated water utilities. Even though Suez owns the third-largest company in the regulated US water industry, its share price has declined by ~15% since the end of 1H15 vs. the around 50% average increase for the two largest peers. We see this underperformance as unjustified.

**Fig 69 Evolution of Suez share price vs American Water Works and Aqua America (30 Jun 2015 = 100)**

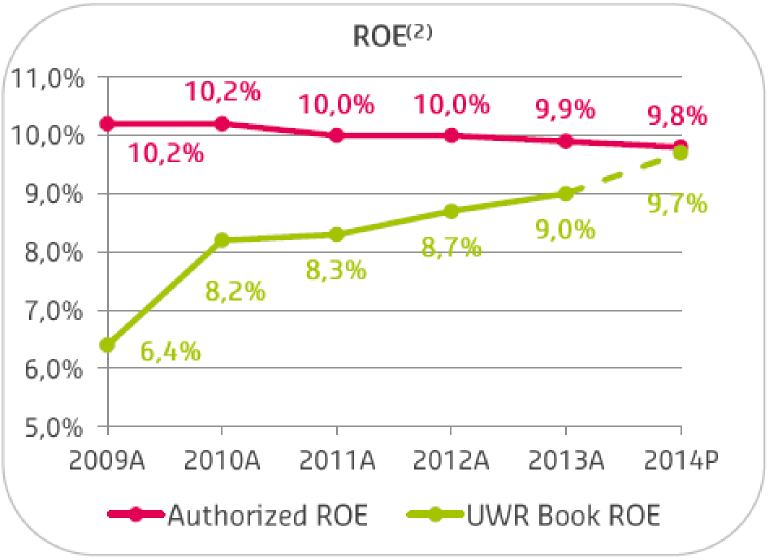



Source: Bloomberg, Macquarie Research, April 2017

***United Water ROE is almost 10%, which is very good***

Therefore, there is a significant positive read-through for the third-largest regulated US water company, United Water owned by Suez. In our view the present Suez share price does not reflect the recent re-rating of American Water Works and Aqua America . Based on Suez commentary at the education day on its regulated businesses on 15th Dec 2014 the 2014E ROE for United Water is ~9.7%. This is a very good ROE and based on United Water having a similar strong presence in Northeastern US, like American Water Works and Aqua America, we see a similarly large premium to the Rate Base as justified.

**Fig 70 ROE evolution for United Water over 2009-14**




Source: Suez, December 2014. (2) ROE normalized for leverage (55/45 debt-equity ratio).

A major factor behind our €19.0 price target for Suez is our ~€3.3bn EV valuation of United Water, which accounts for almost 30% of our equity value. Our valuation of United Water is based on using an 80% premium to the projected 2017E rate base, which is still almost 14 percentage points below the ~94% average of the peer group. As stated before, we do not see the around ~15% share price decline of Suez since the end of 1H15 as justified compared to the around 50% rally for the two largest regulated US water companies.

# In case you want to know more: company by company analysis

## UNITED STATES

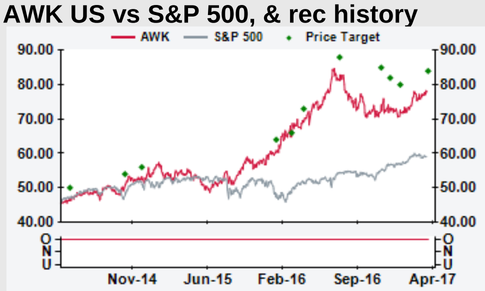
| | |
|---|---|
| AWK US | Outperform |
| **Price** (at 14:30, 07 Apr 2017 GMT) | US$77.90 |

| | | |
|---|---|---|
| **Valuation** - PER | **US$** | **83.75** |
| **12-month target** | **US$** | **84.00** |
| **12-month TSR** | **%** | **+10.0** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **13,843** |
| **30-day avg turnover** | **US$m** | **63.2** |
| **Number shares on issue** | **m** | **177.7** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| EPS adj | US$ | 2.84 | 3.04 | 3.29 | 3.55 |
| EPS adj growth | % | 7.5 | 7.1 | 8.3 | 7.8 |
| PER adj | x | 27.4 | 25.6 | 23.7 | 21.9 |
| Total DPS | US$ | 1.50 | 1.65 | 1.78 | 1.92 |
| Total div yield | % | 1.9 | 2.1 | 2.3 | 2.5 |

**AWK US vs S&P 500, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Capital (USA), April 2017
(all figures in USD unless noted)

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11 April 2017
Macquarie Capital (USA) Inc.

# American Water Works

## Size matters for municipal M&A

### Event

- There should be plenty of municipal M&A targets for all investor-owned water utilities given how highly fragmented and underinvested the municipal water sector is. Yet, it's tough to deny AWK's competitive edge in municipal M&A given its unmatched access to cheap financing (~US$14bn market cap), the scale of regulated operations and large presence in PA/NJ, where the M&A activity is concentrated, and best in class operational and management practices.

### Impact

- **Municipal M&A is gaining momentum:** AWK remains upbeat about the recent pickup in acquisitions of municipal (and private) water and wastewater systems. The company has just closed acquisitions of two privately held water systems, Shorelands Water Company in NJ (11,000 accounts) and Meadowbrook Water Company in CA (1,600 accounts), and should close on a pending acquisition of a wastewater system in McKeesport, PA (22,000 accounts) in 2H17. Though AWK has a list of targeted municipal systems covering ~145,000 accounts, it's difficult for us to assess how many of the targets will be acquired by AWK, how soon such deals would close and how accretive such transactions should be. There is no rule of thumb on the incremental earnings power per each new account; it all depends on the terms of the acquisitions and the level of capex these systems require. AWK has not raised its annual 1-2% EPS growth target associated with municipal M&A; to put that in perspective, AWK currently serves ~3.3m customer accounts.
- **Cost efficiencies:** We have attempted to benchmark US, UK, French and Chinese water utilities based on their regulated O&M expenses/customer, regulated capex/customer, and customers/employee. AWK's operating costs look largely in line with those of its UK peers, though AWK's headcount (even when we exclude ~550 employees of market-based businesses) looks relatively high vs its customer base. The incremental cost efficiencies could translate into more capex and thus higher earnings growth; AWK remains focused on limiting its annual water bill increases for its existing customer base to ~2.5% (outside of CA). The faster pace of growth in water bills could be justified by improving macroeconomic conditions and the preference of AWK's state utility regulators for a faster pace of upgrades for AWK's water systems.

### Earnings and target price revision

- We've marginally lowered our '19 EPS to US$3.55 from US$3.57 due to tweaks to market-based earnings projections. We see some upside to our regulated earnings for AWK in 2019 (and beyond) stemming from already announced municipal acquisitions, but we struggle with quantifying the earnings uplift. We are raising our TP to US$84 (from US$80) in recognition of this earnings upside from higher same-system or M&A-driven capex.

### Price catalyst

- 12-month price target: US$84.00 based on a PER methodology.
- Catalyst: Updates on municipal acquisitions.

### Action and recommendation

- We reiterate our OP rating.

## Fig 1 AWK: EPS breakdown (US$)

| | 2015 | 2016 | 2017E | 2018E | 2019E | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| Regulated EPS | 2.63 | 2.86 | 3.00 | 3.18 | 3.40 | 6.0% |
| Market-based EPS | 0.23 | 0.22 | 0.31 | 0.38 | 0.42 | 24.1% |
| Parent EPS | -0.22 | -0.24 | -0.27 | -0.27 | -0.27 | 4.0% |
| **Total EPS** | **2.64** | **2.84** | **3.04** | **3.29** | **3.55** | **7.7%** |
| **DPS** | **1.33** | **1.50** | **1.65** | **1.78** | **1.92** | **8.6%** |
| Dividend payout | 50.4% | 52.9% | 54.3% | 54.1% | 54.1% | |

Source: Company disclosures, Macquarie Capital (USA), April 2017

## Fig 2 AWK: Financial projections (US$m except per share data)

| | 2015 | 2016 | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Sales | 3,159 | 3,302 | 3,424 | 3,589 | 3,774 |
| Operating expenses | 1,644 | 1,687 | 1,711 | 1,756 | 1,823 |
| EBITDA | 1,515 | 1,615 | 1,713 | 1,833 | 1,951 |
| Depreciation | 440 | 470 | 515 | 549 | 582 |
| EBIT | 1,075 | 1,145 | 1,198 | 1,284 | 1,369 |
| Net interest expense | 293 | 310 | 313 | 325 | 334 |
| Ordinary Profit Before Tax | 792 | 850 | 899 | 974 | 1,050 |
| Income tax | 316 | 342 | 355 | 385 | 415 |
| Net profit | 476 | 508 | 544 | 589 | 635 |
| **S/O (m)** | **180** | **179** | **179** | **179** | **179** |
| **Diluted EPS** | **2.64** | **2.84** | **3.04** | **3.29** | **3.55** |
| **DPS** | **1.33** | **1.50** | **1.65** | **1.78** | **1.92** |
| | | | | | |
| Cash | 45 | 95 | 45 | 45 | 45 |
| Receivables | 255 | 269 | 272 | 285 | 299 |
| Inventory | 38 | 39 | 39 | 40 | 42 |
| Other short-term assets | 319 | 381 | 396 | 411 | 426 |
| Goodwill | 1,302 | 1,345 | 1,345 | 1,345 | 1,345 |
| Other-long term assets | 1,349 | 1,361 | 1,361 | 1,361 | 1,361 |
| Property, plant, and equipment | 13,933 | 14,992 | 15,827 | 16,628 | 17,396 |
| **Total assets** | **17,241** | **18,482** | **19,284** | **20,115** | **20,915** |
| Financial liabilities | 682 | 1,423 | 999 | 999 | 999 |
| Operating liabilities | 126 | 154 | 142 | 146 | 152 |
| Other liabilities | 725 | 815 | 815 | 815 | 815 |
| Deferred credits | 4,785 | 5,113 | 5,388 | 5,687 | 6,008 |
| Long-term debt | 5,862 | 5,759 | 5,999 | 6,186 | 6,295 |
| Shareholders' equity | 5,061 | 5,218 | 5,941 | 6,283 | 6,645 |
| **Total liabilities and equity** | **17,241** | **18,482** | **19,284** | **20,115** | **20,915** |
| | | | | | |
| Net income | 476 | 508 | 544 | 589 | 635 |
| D&A, goodwill amortisation | 440 | 470 | 515 | 549 | 582 |
| Other non cash elements | 324 | 180 | 279 | 302 | 326 |
| Funds from operations | 1,240 | 1,158 | 1,339 | 1,440 | 1,543 |
| Decrease (increase) in w. capital | -61 | 118 | -15 | -10 | -10 |
| Operating cash flow | 1,179 | 1,276 | 1,324 | 1,430 | 1,532 |
| Net investments in fixed assets | -1,352 | -1,506 | -1,350 | -1,350 | -1,350 |
| Net investments in financial assets | -113 | -81 | 0 | 0 | 0 |
| Free cash flow before dividends | -286 | -311 | -26 | 80 | 182 |
| Dividends paid (group + minorities) | -239 | -261 | -294 | -317 | -342 |
| Free cash flow after dividends | -525 | -572 | -320 | -237 | -160 |
| Increase or (repayment) of capital | 615 | 656 | 290 | 237 | 160 |
| Increase or (repayment) of debt | -87 | -39 | 0 | 0 | 0 |
| Adjustment for miscellaneous | 19 | -15 | 0 | 0 | 0 |
| Increase in cash | 22 | 30 | -30 | 0 | 0 |

Source: FactSet, Macquarie Capital (USA), April 2017

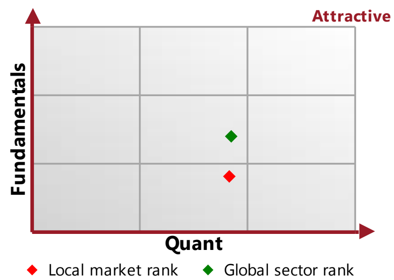
# Macquarie Quant View

The quant model currently holds a marginally positive view on American Water Works. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Profitability, indicating this stock is not efficiently converting investments to earnings; proxied by ratios like ROE or ROA.

**166/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 53% (9/17) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 1 |

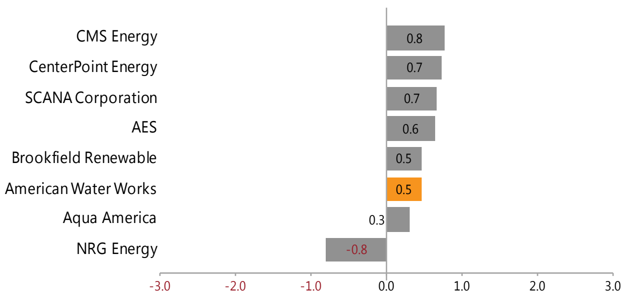



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

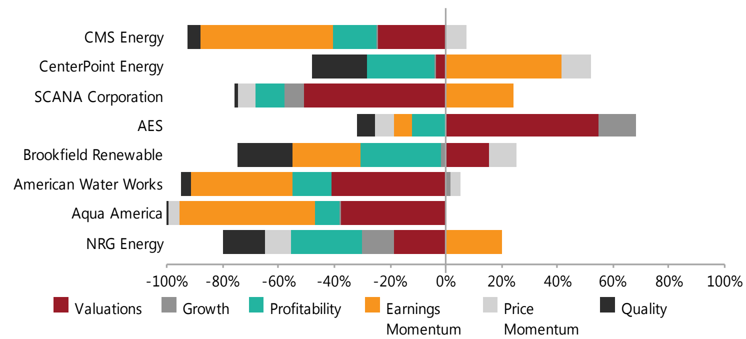
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



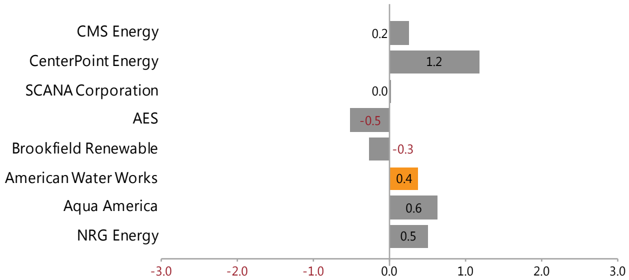

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



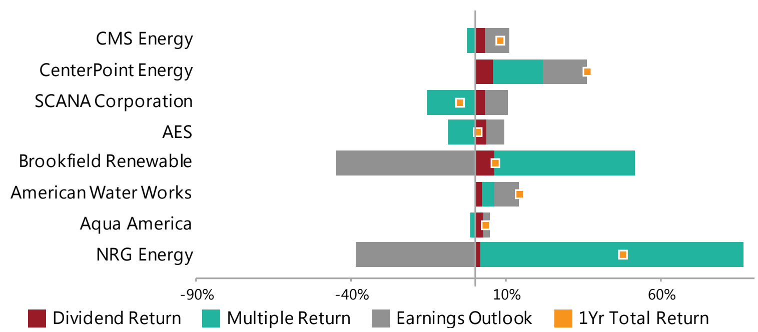

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



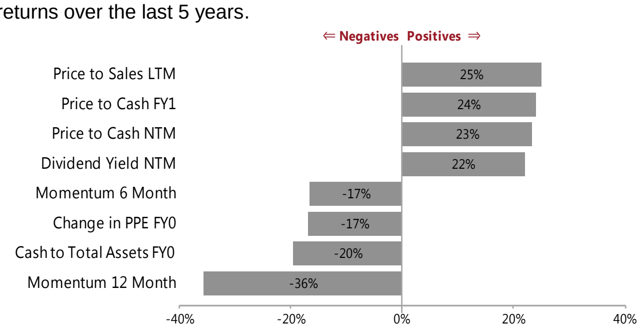

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.




## What drove this Company in the last 5 years

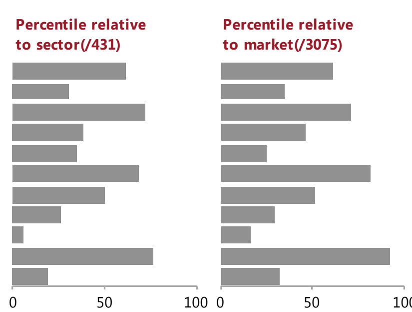
Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.

| | Normalized Score |
|---|---|
| Alpha Model Score | 0.46 |
| Valuation | -0.18 |
| Growth | 0.06 |
| Profitability | -0.33 |
| Earnings Momentum | -0.22 |
| Price Momentum | 0.08 |
| Quality | -0.16 |
| Capital & Funding | -0.24 |
| Liquidity | -1.82 |
| Risk | 0.26 |
| Technicals & Trading | -0.77 |




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

**UNITED STATES**

| WTR US | | Neutral |
|---|---|---|
| **Price** (at 20:50, 07 Apr 2017 GMT) | | US$32.36 |
| **Valuation** - PER | **US$** | **33.21** |
| **12-month target** | **US$** | **33.00** |
| **12-month TSR** | **%** | **+4.5** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **5,746** |
| **30-day avg turnover** | **US$m** | **19.7** |
| **Number shares on issue** | **m** | **177.6** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| EPS adj | US$ | 1.32 | 1.37 | 1.43 | 1.49 |
| EPS adj growth | % | 4.4 | 3.9 | 4.3 | 4.5 |
| PER adj | x | 24.6 | 23.7 | 22.7 | 21.7 |
| Total DPS | US$ | 0.74 | 0.79 | 0.86 | 0.92 |
| Total div yield | % | 2.3 | 2.5 | 2.7 | 2.9 |

**WTR US vs S&P 500, & rec history**


Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Capital (USA), April 2017
(all figures in USD unless noted)

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11 April 2017
Macquarie Capital (USA) Inc.

# Aqua America

## Lessons learned

### Event

- It's not easy for us to get constructive on WTR. Its earnings growth has been lacklustre, the company is heading into a major rate review in PA, and management keeps talking up the possibility of corporate M&A in the gas utility sector, which undermines the public confidence in growth prospects for the water sector. The significant underperformance of the stock against its US water peers over the last 12 months should have sent a strong message to WTR's management on gas M&A aspirations, and the company will be filing a rate case in PA voluntarily, which makes us hope for a settlement. Still, we expect WTR's EPS growth to trail its rate base growth at least until '20. Therefore we reiterate N.

### Impact

- **WTR's M&A strategy has been puzzling:** As the second-largest publicly traded water utility, WTR seems well positioned to benefit from privatization of the highly fragmented municipal water sector. In '17, WTR expects to close four pending municipal system deals for US$114m in total vs just US$22m in similar transactions completed in '16. We recognize, however, that we may need to wait a couple of years to see any earnings accretion on the back of these muni deals. Management is talking up the level of activity in the municipal space, and yet it has not given up on gas M&A. To us, gas and water don't mix.
- **PA regulatory filings and future earnings growth**: WTR's PA subsidiary, representing ~70% of WTR's consolidated rate base, plans to file for a higher capex rider (DSIC) in 2017 and a full-blown rate case in '18 with new (hopefully higher) rates becoming effective sometime in '19. Ahead of the PA filings, WTR has increased its capex spending to ~US$450m in '17 from ~US$370m, its previous capex run-rate, to bring its realized ROE in PA close to allowed levels. The goal of the PA rate case is to eventually align WTR's EPS growth with its 6-7% rate base growth, but it is likely to take some time. Also, WTR's water pipe replacement cycle seems the fastest among public water peers (less than 100 years vs 140 years for AWK) and as such we would not count on meaningfully higher capex for WTR's existing water systems.

### Earnings and target price revision

- We have marginally raised our '18 EPS to US$1.43 from US$1.42 to reflect some cost efficiencies. We have raised our TP to US$33 from US$32 as gas M&A prospects seem to have subsided and earnings could benefit from regulatory filings in PA as well as improving growth prospects from privatizations of municipal water systems.

### Price catalyst

- 12-month price target: US$33.00 based on a PER methodology.
- Catalyst: Announcements of additional municipal M&A, filing of rate applications in PA (DSIC and rate case).

### Action and recommendation

- We reiterate Neutral, but raise our TP to US$33 from US$32 as gas M&A prospects seem to have subsided.

### Fig 1 WTR: EPS breakdown (US$)

| | 2015 | 2016 | 2017E | 2018E | 2019E | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| Regulated EPS | 1.25 | 1.31 | 1.36 | 1.42 | 1.48 | 4.6% |
| Market-based EPS | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.0% |
| **Total EPS** | **1.26** | **1.32** | **1.37** | **1.43** | **1.49** | **4.6%** |
| **DPS** | **0.69** | **0.74** | **0.79** | **0.86** | **0.92** | **7.7%** |
| Dividend payout | 55% | 57% | 58% | 61% | 62% | |

Source: Company disclosures, Macquarie Capital (USA), April 2017

### Fig 2 WTR: Financial projections (US$m except per share data)

| | 2015 | 2016 | 2017E | 2018E | 2018E |
|---|---|---|---|---|---|
| Sales | 814 | 820 | 835 | 866 | 902 |
| Operating expenses | 364 | 361 | 363 | 365 | 373 |
| Operational EBITDA | 450 | 459 | 472 | 501 | 529 |
| Depreciation | 129 | 133 | 138 | 151 | 161 |
| Operational EBIT | 321 | 326 | 334 | 350 | 368 |
| Net interest expense | 64 | 82 | 75 | 80 | 84 |
| Ordinary Profit Before Tax | 239 | 255 | 265 | 276 | 290 |
| Income tax | 15 | 21 | 22 | 23 | 25 |
| Net profit | 224 | 234 | 243 | 254 | 265 |
| S/O (m) | 178 | 178 | 178 | 178 | 178 |
| **Diluted EPS** | **1.26** | **1.32** | **1.37** | **1.43** | **1.49** |
| **DPS** | **0.69** | **0.74** | **0.79** | **0.86** | **0.92** |
| | | | | | |
| Cash | 3 | 4 | 10 | 10 | 10 |
| Receivables | 99 | 97 | 101 | 104 | 109 |
| Inventory | 12 | 13 | 12 | 12 | 13 |
| Other short-term assets | 14 | 15 | 15 | 15 | 15 |
| Other-long term assets | 924 | 1,029 | 1,029 | 1,029 | 1,029 |
| Property, plant, and equipment | 4,689 | 5,002 | 5,323 | 5,563 | 5,782 |
| **Total assets** | **5,741** | **6,159** | **6,490** | **6,733** | **6,956** |
| Financial liabilities | 52 | 157 | 107 | 107 | 107 |
| Operating liabilities | 56 | 60 | 59 | 59 | 60 |
| Other liabilities | 84 | 84 | 84 | 84 | 84 |
| Deferred credits | 2,078 | 2,270 | 2,287 | 2,304 | 2,322 |
| Long-term debt | 1,744 | 1,738 | 1,856 | 1,955 | 2,074 |
| Shareholders' equity | 1,726 | 1,850 | 2,096 | 2,223 | 2,309 |
| **Total liabilities and equity** | **5,741** | **6,159** | **6,490** | **6,733** | **6,956** |
| | | | | | |
| Net income | 202 | 234 | 243 | 254 | 265 |
| D&A, goodwill amortisation | 129 | 133 | 138 | 151 | 161 |
| Other non cash elements | 28 | 28 | 17 | 17 | 17 |
| Funds from operations | 358 | 395 | 399 | 422 | 443 |
| Non-cash working capital | 13 | 1 | -10 | -8 | -5 |
| Operating cash flow | 371 | 396 | 389 | 414 | 438 |
| Net investments in fixed assets | -393 | -385 | -460 | -390 | -380 |
| Net investments in financial assets | -1 | 1 | 0 | 0 | 0 |
| Free cash flow before dividends | -23 | 13 | -71 | 24 | 58 |
| Dividends paid | -121 | -131 | -141 | -152 | -164 |
| Free cash flow after dividends | -145 | -118 | -212 | -128 | -106 |
| Changes in capital | -17 | 3 | 0 | 0 | 0 |
| Changes in debt | 158 | 120 | 218 | 128 | 106 |
| Adjustment for miscellaneous | 2 | -4 | 0 | 0 | 0 |
| Increase in cash | -1 | 1 | 6 | 0 | 0 |

Source: FactSet, Macquarie Capital (USA), April 2017

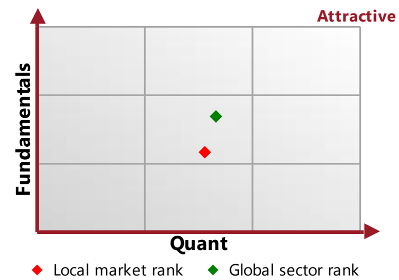
# Macquarie Quant View

The quant model currently holds a marginally positive view on Aqua America. The strongest style exposure is Quality, indicating this stock is likely to have a superior and more stable underlying earnings stream. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**193/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 50% (6/12) |
| **Number of Price Target downgrades** | 1 |
| **Number of Price Target upgrades** | 1 |

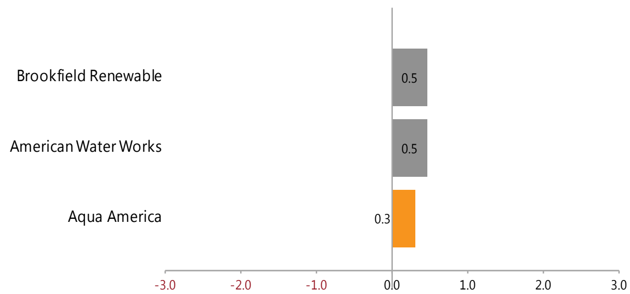



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).

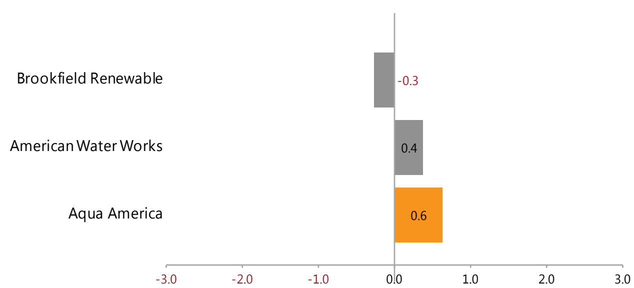



## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.

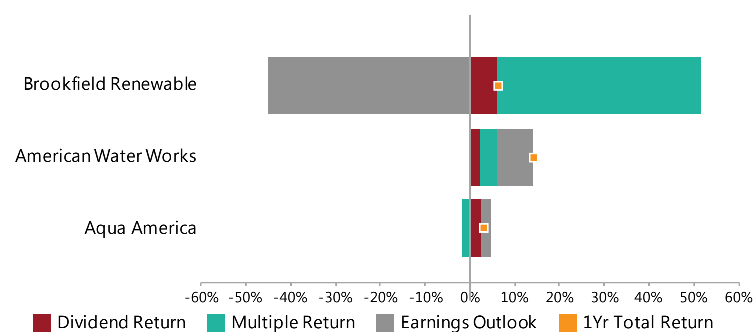

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



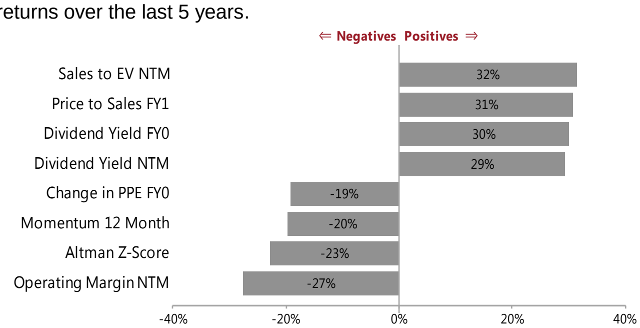

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



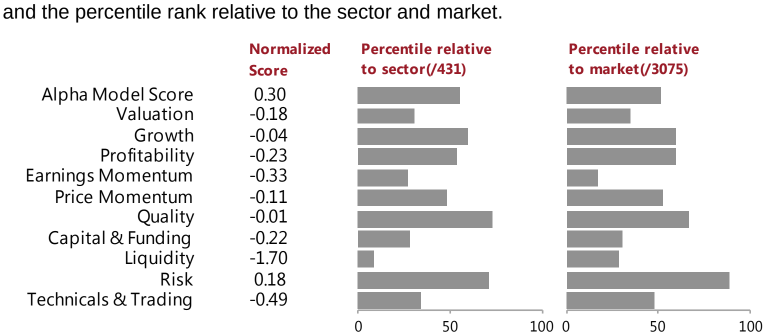

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## UNITED STATES

| AWR US | | Neutral |
|---|---|---|
| **Price** (at CLOSE#, 07 Apr 2017) | | US$43.98 |
| **Valuation** - PER | **US$** | **43.00** |
| **12-month target** | **US$** | **43.00** |
| **12-month TSR** | **%** | **+0.0** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **1,609** |
| **30-day avg turnover** | **US$m** | **6.8** |
| **Number shares on issue** | **m** | **36.59** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| EPS adj | US$ | 1.63 | 1.72 | 1.82 | 1.94 |
| EPS adj growth | % | 1.1 | 5.4 | 6.0 | 6.7 |
| PER adj | x | 27.0 | 25.6 | 24.2 | 22.6 |
| Total DPS | US$ | 0.91 | 0.96 | 1.01 | 1.06 |
| Total div yield | % | 2.1 | 2.2 | 2.3 | 2.4 |

**AWR US vs S&P 500, & rec history**


Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Capital (USA), April 2017
(all figures in USD unless noted)

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11 April 2017
Macquarie Capital (USA) Inc.

# American States Water

## Regulatory hurdles but potential M&A

### Event

- More so than its relatively underinvested CA-peer, CWT, we see regulated municipal water and wastewater acquisitions as a likelier source of additional growth going forward. Admittedly, AWR remains at a competitive disadvantage in this regard to its two larger and more geographically diverse peers, AWK and WTR, which have operations in M&A-ripe NJ and PA. We expect to see more military bases awarded to AWR, but given the sporadic timing of those announcements, we are hopeful to hear of municipal acquisitions in the works. AWR's regulated water utility, GSWC, recently filed testimony for its 3-year '18-'20 cost of capital proceeding, and will soon file its four-year '18-'21 general rate case for BVES, its electric sub. We await the ORA testimony in GSWC's cost of capital proceeding, and expect it by late 2Q17. We reiterate our Neutral rating.

### Impact

- **Municipal acquisitions:** Unlike its larger peers in CA, AWR does not have any regulated operations outside of its home state. While this may make non-CA acquisitions less likely, management has expressed an interest in looking at regulated opportunities outside of the state. We acknowledge that AWR's operations on 10 military bases across the country do offer at least some local regulatory insights as well as positive regional PR.
- **Cost of capital proceeding:** GSWC, AWR's largest subsidiary, filed on April 3rd to commence its '18-'20 cost of capital proceedings. The utility asked for an 11.0% ROE and 57% equity ratio, vs its currently approved ROE of 9.43% with a 55% equity ratio. We expect strong pushback from the Office of Ratepayer Advocates (ORA), which opposed a joint attempt in Dec '16 by the four largest CA water IOUs to maintain the status quo for an additional year. GSWC's water operations make up ~94% of its non-administrative regulatory rate base. The next water GRC for '19-'21 is due to be filed by mid-'17.
- **Electric rate case:** We expect GSWC to soon file its anticipated four-year '18-'21 GRC for its Bear Valley Electric Service (BVES) subsidiary. BVES makes up ~6% of GSWC's non-administrative rate base. The electric utility currently has an allowed ROE of 9.95% in place until YE17.

### Earnings and target price revision

- No change to our EPS forecasts or '19 PE-based TP of US$43.

### Price catalyst

- 12-month price target: US$43.00 based on a PER methodology.
- Catalyst: Updates on Golden State Water's cost of capital proceeding; update on Bear Valley Electric's rate case; potential municipal acquisitions.

### Action and recommendation

- We reiterate our Neutral rating.

## Fig 1 AWR: Financial metrics (US$)

| | 2015 | 2016 | 2017E | 2018E | 2019E | '16-'19 CAGR |
|---|---|---|---|---|---|---|
| EPS | 1.56 | 1.60 | 1.72 | 1.82 | 1.94 | 6.7% |
| EPS growth | -1.0% | 2.1% | 7.4% | 6.0% | 6.7% | |
| DPS | 0.87 | 0.91 | 0.96 | 1.01 | 1.06 | 5.0% |
| DPS growth | 5.2% | 4.6% | 5.0% | 5.0% | 5.0% | |
| Payout ratio | 56% | 57% | 56% | 55% | 54% | |
| Diluted shares outstanding | 39 | 37 | 37 | 37 | 37 | |
| Capex (US$m) | 87 | 130 | 90 | 90 | 90 | |
| Regulatory rate base (US$m) | | 745 | 792 | 840 | 888 | 6.1% |
| Equity ratio | 55% | 55% | 55% | 55% | 55% | |
| EV/Rate Base | | 2.01x | 1.91x | 1.84x | 1.75x | |
| Authorized ROE (GSWC) | 9.43% | 9.43% | 9.43% | 9.43% | 9.43% | |

Source: Company data, Macquarie Capital (USA), April 2017

## Fig 2 AWR: Financial projections (US$m except per share data)

| | 2015 | 2016 | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Operating revenues | | | | | |
| Water | $ 329 | $ 303 | $ 324 | $ 333 | $ 353 |
| Electric | 36 | 36 | 36 | 37 | 37 |
| Contracted services | 94 | 97 | 109 | 111 | 114 |
| Total Operating Revenues | 459 | 436 | 469 | 481 | 504 |
| Operating expenses | | | | | |
| Water and Electric Supply Costs | 104 | 86 | 97 | 99 | 101 |
| Other Operation | 28 | 28 | 28 | 28 | 28 |
| Administrative and General | 80 | 81 | 80 | 82 | 86 |
| Depreciation and Amortization | 42 | 39 | 45 | 48 | 50 |
| Maintenance | 17 | 16 | 19 | 18 | 21 |
| Property and Other Taxes | 17 | 17 | 19 | 20 | 21 |
| ASUS Construction | 53 | 54 | 57 | 55 | 55 |
| Total Operating Expenses | 340 | 321 | 346 | 349 | 363 |
| Operating income | 118 | 115 | 123 | 133 | 141 |
| Interest expense | (21) | (22) | (22) | (25) | (26) |
| Other, net | 1 | 2 | 1 | - | - |
| EBT | 98 | 94 | 102 | 108 | 115 |
| Income tax expense | 38 | 35 | 39 | 41 | 44 |
| Net income | $ 60 | $ 60 | $ 63 | $ 66 | $ 71 |
| Weighted avg diluted shares outstanding | 39 | 37 | 37 | 37 | 37 |
| Diluted EPS | $1.56 | $1.60 | $1.72 | $1.82 | $1.94 |
| Net income | 60 | 60 | 63 | 66 | 71 |
| Adjustments to reconcile non-cash charges | 58 | 70 | 75 | 77 | 80 |
| Changes in assets and liabilities | (23) | (32) | (32) | (32) | (32) |
| CFO | 95 | 97 | 106 | 112 | 119 |
| Capital expenditures | (87) | (130) | (90) | (90) | (90) |
| Other | (3) | (1) | - | - | - |
| CFI | (90) | (131) | (90) | (90) | (90) |
| Issuance/repurchase of common stock | (72) | 0 | 0 | 0 | 0 |
| Long-term debt issued/repaid | (0) | (0) | 40 | 40 | 1 |
| Short-term debt issued/repaid | 28 | 62 | 17 | 13 | 47 |
| Dividends paid | (33) | (33) | (35) | (37) | (39) |
| Other | (0) | 2 | 2 | 2 | 2 |
| CFF | (77) | 30 | 24 | 18 | 11 |
| Net change in cash and cash equivalents | (72) | 2 | 2 | 40 | 40 |
| Cash and cash equivalents, end of period | 4 | 0 | 40 | 80 | 120 |
| Current assets | $ 133 | $ 167 | $ 205 | $ 243 | $ 282 |
| PP&E | 1,081 | 1,173 | 1,238 | 1,314 | 1,398 |
| Regulatory and other assets | 135 | 131 | 131 | 131 | 131 |
| Total assets | 1,349 | 1,470 | 1,574 | 1,688 | 1,811 |
| Current liabilities | 124 | 178 | 195 | 200 | 203 |
| Long-term debt | 326 | 321 | 361 | 401 | 402 |
| Other liabilities (including construction) | 434 | 477 | 477 | 477 | 477 |
| Total liabilities | 883 | 976 | 1,034 | 1,078 | 1,082 |
| Total Shareholders' Equity | 466 | 494 | 540 | 610 | 728 |
| Liabilities and Shareholders' Equity | $ 1,349 | $ 1,470 | $ 1,574 | $ 1,688 | $ 1,811 |

Source: Company data, Macquarie Capital (USA), April 2017

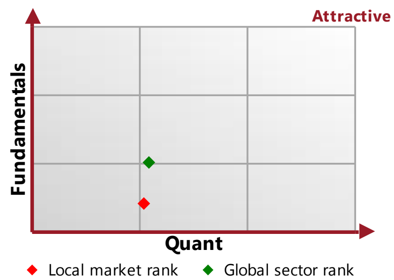
## Macquarie Quant View

The quant model currently holds a neutral view on American States Water. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**276/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 0% (0/6) |
| **Number of Price Target downgrades** | 1 |
| **Number of Price Target upgrades** | 0 |

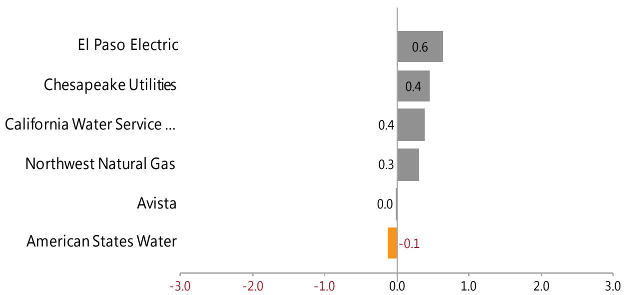



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

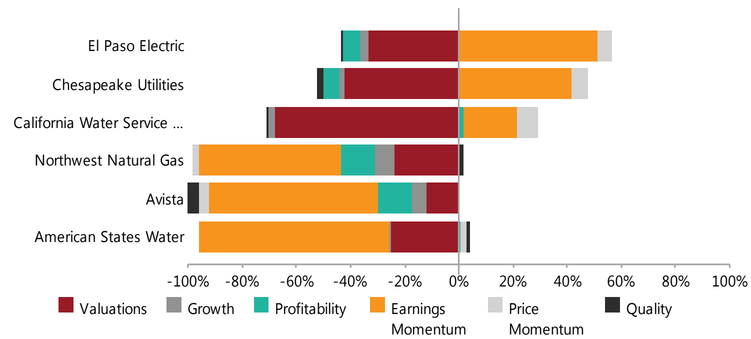
### Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



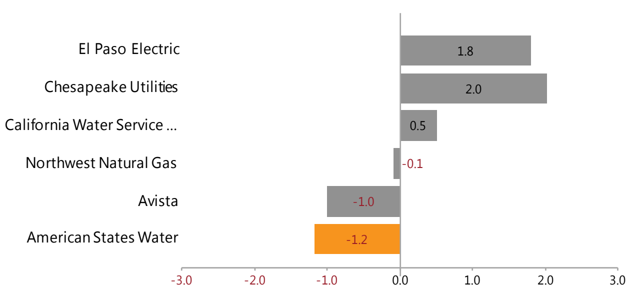

### Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



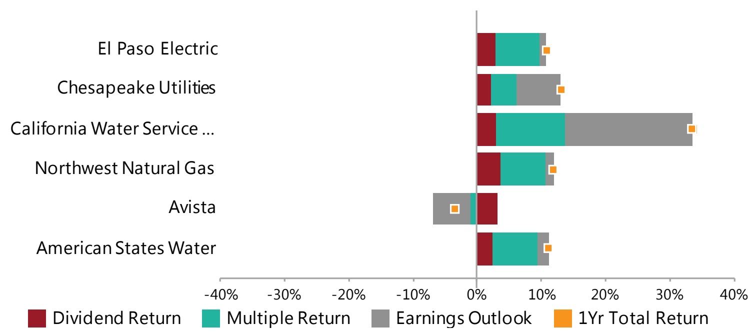

### Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



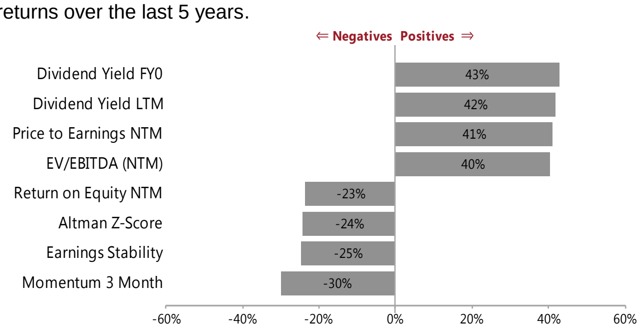

### Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



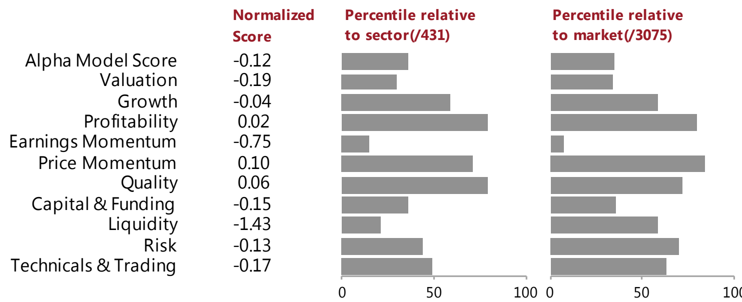

### What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




### How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## HONG KONG

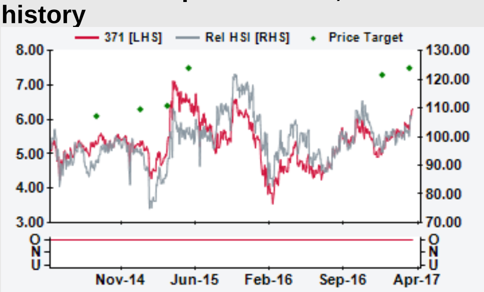
| | | |
|---|---|---|
| 371 HK | | Outperform |
| **Price** (at 13:53, 07 Apr 2017 GMT) | | HK$6.26 |

| | | |
|---|---|---|
| **Valuation** | **HK$** | **7.50** |
| - DCF (WACC 7.0%, beta 0.9, ERP 7.0%, RFR 3.0%, TGR 1.0%) | | |
| **12-month target** | **HK$** | **7.50** |
| **Upside/Downside** | **%** | **+19.8** |
| **12-month TSR** | **%** | **+22.3** |
| **Volatility Index** | | **High** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **HK$m** | **54,711** |
| **Market cap** | **US$m** | **7,098** |
| **Free float** | **%** | **49** |
| **30-day avg turnover** | **US$m** | **22.5** |
| **Number shares on issue** | **m** | **8,740** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue | m | 17,355 | 22,892 | 25,719 | 28,926 |
| EBIT | m | 5,537 | 6,444 | 7,155 | 7,850 |
| EBIT growth | % | 28.6 | 16.4 | 11.0 | 9.7 |
| Reported profit | m | 3,227 | 3,722 | 4,351 | 4,794 |
| Adjusted profit | m | 3,227 | 3,722 | 4,351 | 4,794 |
| EPS rep | ¢ | 36.5 | 41.9 | 47.8 | 52.1 |
| EPS rep growth | % | 30.5 | 14.7 | 13.9 | 9.1 |
| EPS adj | ¢ | 36.5 | 41.9 | 47.8 | 52.1 |
| EPS adj growth | % | 30.5 | 14.7 | 13.9 | 9.1 |
| PER rep | x | 17.1 | 14.9 | 13.1 | 12.0 |
| PER adj | x | 17.1 | 14.9 | 13.1 | 12.0 |
| Total DPS | ¢ | 11.8 | 15.5 | 22.7 | 24.5 |
| Total div yield | % | 1.9 | 2.5 | 3.6 | 3.9 |
| ROA | % | 7.6 | 7.4 | 7.5 | 7.7 |
| ROE | % | 16.6 | 15.4 | 16.1 | 16.0 |
| EV/EBITDA | x | 13.3 | 11.3 | 10.4 | 9.5 |
| Net debt/equity | % | 94.0 | 116.1 | 122.8 | 115.5 |
| P/BV | x | 2.4 | 2.2 | 2.0 | 1.8 |

**371 HK rel HSI performance, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, April 2017

(all figures in HKD unless noted)

**Analyst(s)**

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**Eric Zong**
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11 April 2017
Macquarie Capital Limited

# Beijing Enterprises Water

## Quality play in China water space

### Event

- We think BEW will benefit from China's water clean-up development with projects likely in the form of PPP due to its previous track record of undertaking environmental renovation projects. In addition, its SOE background should help it to manage receivables collection risk in undertaking PPP projects. Together with a market leadership position, this should help BEW to develop PPP projects using an asset light strategy.

### Impact

- **Chifeng PPP fund is close to finalization** with major contracts signed. It has a size of RMB4bn. Management expects the fund to go off-balance-sheet. This is a milestone for BEW's asset-light strategy. While the 2nd PPP fund for the Beijing Tongzhou project is already underway, management shared that for this particular high-quality project, they will develop with or without the support of the PPP fund. For other PPP projects, BEW will employ the asset light strategy in partnering with the PPP fund.
- **Positive guidance for FY17**. During the recent analyst briefing, management guided towards bottom-line growth of 30% in 2017. A good amount of growth will be driven by environmental renovation construction and technical services, confirming our view that BEW will benefit form a pick-up in environmental renovation project activities in 2017. Project gains targeted are 3.0mn tons/day for traditional BOT water projects and gaining RMB30bn of PPP projects in 2017. While FY17 guidance on traditional BOT project gains is lower than FY16's gain (3.57mn tons/day + another 2.0mn tons/day embedded in Tongzhou PPP), management has a track record of providing conservative guidance at the beginning of the year and over-delivering.
- **Reputable name in the Chinese water space.** BEW is the largest WWT play by capacity in China. In addition, BEW is one of the few water plays that has a track record of undertaking environmental renovation projects. Such a track record should help it to gain projects and attract LPs (limited partners) to develop PPP projects using an asset light strategy.

### Earnings and target price revision

- No change.

### Price catalyst

- 12-month price target: HK$7.50 based on a DCF methodology.
- Catalyst: project wins, earnings growth, +ve development from PPP fund

### Action and recommendation

- Trading on a 14.9x FY17E PER vs. our core earnings growth est. of ~30% in 2017, we see BEW's valuation as attractive, considering its industry position and competitive advantages in the wastewater and water PPP space. Maintain OP.

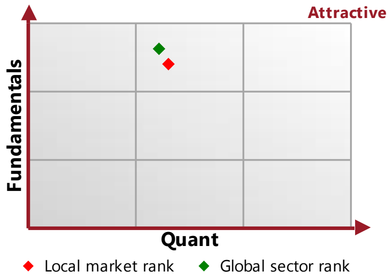
# Macquarie Quant View

The quant model currently holds a neutral view on Beijing Enterprises Water Group. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Quality, indicating this stock is likely to have a weaker and less stable underlying earnings stream.

**257/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 95% (18/19) |
| **Number of Price Target downgrades** | 1 |
| **Number of Price Target upgrades** | 4 |




Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Hong Kong) and Global sector (Utilities)

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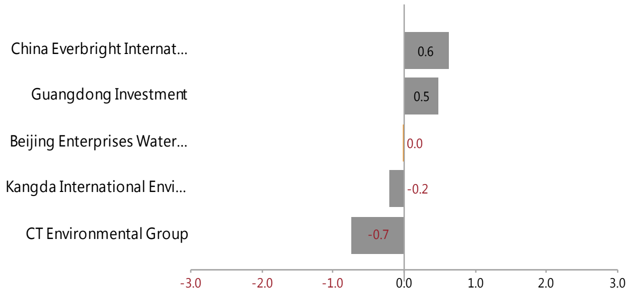
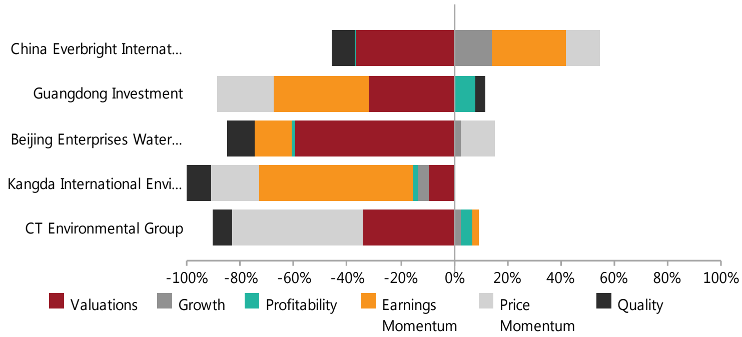



## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.

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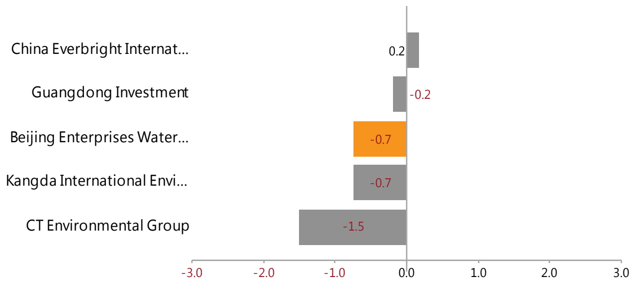
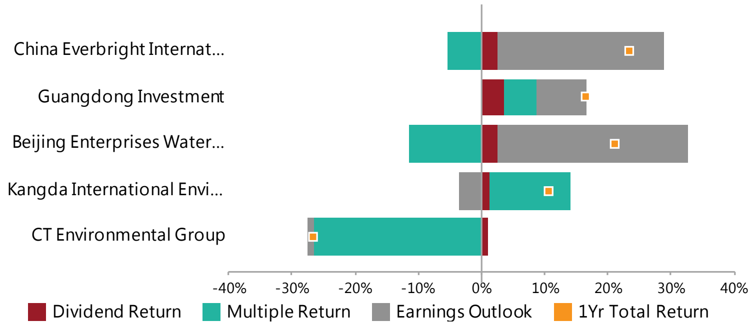



## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.

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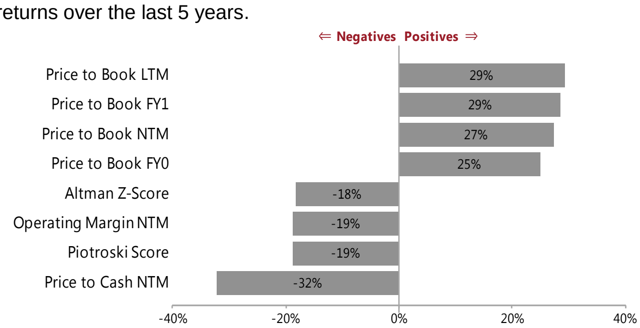
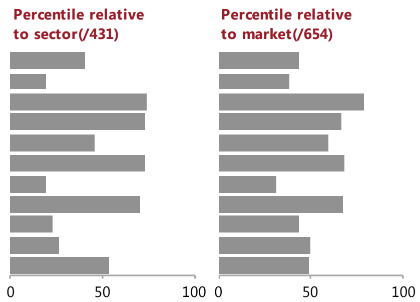
Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.

| | Normalized Score |
|---|---|
| Alpha Model Score | -0.02 |
| Valuation | -0.40 |
| Growth | 0.08 |
| Profitability | -0.08 |
| Earnings Momentum | -0.12 |
| Price Momentum | 0.12 |
| Quality | -0.51 |
| Capital & Funding | 0.18 |
| Liquidity | -1.43 |
| Risk | -0.43 |
| Technicals & Trading | -0.10 |

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## Beijing Enterprises Water Group (371 HK, Outperform, Target Price: HK$7.50)

| Interim Results | | 2H/16A | 1H/17E | 2H/17E | 1H/18E |
|---|---|---|---|---|---|
| **Revenue** | **m** | **9,788** | **9,981** | **12,911** | **11,214** |
| **Gross Profit** | **m** | **3,263** | **3,208** | **4,150** | **3,506** |
| Cost of Goods Sold | m | 6,525 | 6,773 | 8,761 | 7,708 |
| **EBITDA** | **m** | **3,194** | **2,954** | **3,821** | **3,272** |
| Depreciation | m | 36 | 72 | 93 | 76 |
| Amortisation of Goodwill | m | 0 | 0 | 0 | 0 |
| Other Amortisation | m | 36 | 72 | 93 | 76 |
| **EBIT** | **m** | **3,123** | **2,810** | **3,635** | **3,120** |
| Net Interest Income | m | -715 | -572 | -740 | -520 |
| Associates | m | 211 | 167 | 217 | 167 |
| Exceptionals | m | 0 | 0 | 0 | 0 |
| Forex Gains / Losses | m | 0 | 0 | 0 | 0 |
| Other Pre-Tax Income | m | 0 | 0 | 0 | 0 |
| **Pre-Tax Profit** | **m** | **2,619** | **2,405** | **3,111** | **2,767** |
| Tax Expense | m | -548 | -500 | -646 | -571 |
| **Net Profit** | **m** | **2,072** | **1,905** | **2,464** | **2,196** |
| Minority Interests | m | -220 | -181 | -234 | -198 |
| **Reported Earnings** | **m** | **1,820** | **1,623** | **2,099** | **1,897** |
| **Adjusted Earnings** | **m** | **1,820** | **1,623** | **2,099** | **1,897** |
| EPS (rep) | ¢ | 20.6 | 18.3 | 23.6 | 20.8 |
| EPS (adj) | ¢ | 20.6 | 18.3 | 23.6 | 20.8 |
| EPS Growth yoy (adj) | % | 30.5 | 14.7 | 14.7 | 13.9 |
| EBITDA Margin | % | 32.6 | 29.6 | 29.6 | 29.2 |
| EBIT Margin | % | 31.9 | 28.2 | 28.2 | 27.8 |
| Earnings Split | % | 56.4 | 43.6 | 56.4 | 43.6 |
| Revenue Growth | % | 28.5 | 31.9 | 31.9 | 12.3 |
| EBIT Growth | % | 28.6 | 16.4 | 16.4 | 11.0 |

| Profit and Loss Ratios | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue Growth | % | 28.5 | 31.9 | 12.3 | 12.5 |
| EBITDA Growth | % | 28.1 | 19.6 | 10.8 | 9.4 |
| EBIT Growth | % | 28.6 | 16.4 | 11.0 | 9.7 |
| Gross Profit Margin | % | 33.3 | 32.1 | 31.3 | 30.7 |
| EBITDA Margin | % | 32.6 | 29.6 | 29.2 | 28.4 |
| EBIT Margin | % | 31.9 | 28.2 | 27.8 | 27.1 |
| Net Profit Margin | % | 18.6 | 16.3 | 16.9 | 16.6 |
| Payout Ratio | % | 32.4 | 37.1 | 47.6 | 47.1 |
| EV/EBITDA | x | 13.3 | 11.3 | 10.4 | 9.5 |
| EV/EBIT | x | 13.6 | 11.8 | 10.9 | 10.0 |
| **Balance Sheet Ratios** | | | | | |
| ROE | % | 16.6 | 15.4 | 16.1 | 16.0 |
| ROA | % | 7.6 | 7.4 | 7.5 | 7.7 |
| ROIC | % | 9.8 | 9.8 | 8.8 | 8.4 |
| Net Debt/Equity | % | 94.0 | 116.1 | 122.8 | 115.5 |
| Interest Cover | x | 4.4 | 4.9 | 6.0 | 6.1 |
| Price/Book | x | 2.4 | 2.2 | 2.0 | 1.8 |
| Book Value per Share | | 2.6 | 2.9 | 3.1 | 3.5 |

| Profit & Loss | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| **Revenue** | **m** | **17,355** | **22,892** | **25,719** | **28,926** |
| **Gross Profit** | **m** | **5,785** | **7,359** | **8,041** | **8,886** |
| Cost of Goods Sold | m | 11,570 | 15,534 | 17,678 | 20,039 |
| **EBITDA** | **m** | **5,663** | **6,774** | **7,505** | **8,213** |
| Depreciation | m | 63 | 165 | 175 | 181 |
| Amortisation of Goodwill | m | 0 | 0 | 0 | 0 |
| Other Amortisation | m | 63 | 165 | 175 | 181 |
| **EBIT** | **m** | **5,537** | **6,444** | **7,155** | **7,850** |
| Net Interest Income | m | -1,267 | -1,313 | -1,192 | -1,284 |
| Associates | m | 375 | 384 | 384 | 384 |
| Exceptionals | m | 0 | 0 | 0 | 0 |
| Forex Gains / Losses | m | 0 | 0 | 0 | 0 |
| Other Pre-Tax Income | m | 0 | 0 | 0 | 0 |
| **Pre-Tax Profit** | **m** | **4,644** | **5,515** | **6,347** | **6,949** |
| Tax Expense | m | -971 | -1,146 | -1,310 | -1,426 |
| **Net Profit** | **m** | **3,673** | **4,370** | **5,037** | **5,523** |
| Minority Interests | m | -389 | -415 | -453 | -497 |
| **Reported Earnings** | **m** | **3,227** | **3,722** | **4,351** | **4,794** |
| **Adjusted Earnings** | **m** | **3,227** | **3,722** | **4,351** | **4,794** |
| EPS (rep) | ¢ | 36.5 | 41.9 | 47.8 | 52.1 |
| EPS (adj) | ¢ | 36.5 | 41.9 | 47.8 | 52.1 |
| EPS Growth (adj) | % | 30.5 | 14.7 | 13.9 | 9.1 |
| PE (rep) | x | 17.1 | 14.9 | 13.1 | 12.0 |
| PE (adj) | x | 17.1 | 14.9 | 13.1 | 12.0 |
| Total DPS | ¢ | 11.8 | 15.5 | 22.7 | 24.5 |
| Total Div Yield | % | 1.9 | 2.5 | 3.6 | 3.9 |
| Basic Shares Outstanding | m | 8,857 | 8,907 | 9,318 | 9,088 |
| Diluted Shares Outstanding | m | 8,832 | 8,882 | 9,113 | 9,203 |

| Cashflow Analysis | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| **EBITDA** | **m** | **5,663** | **6,774** | **7,505** | **8,213** |
| Tax Paid | m | -971 | -1,146 | -1,310 | -1,426 |
| Chgs in Working Cap | m | 4,908 | -6,419 | -4,257 | -382 |
| Net Interest Paid | m | -1,267 | -1,313 | -1,192 | -1,284 |
| Other | m | 2,401 | 2,715 | 2,824 | -5,120 |
| **Operating Cashflow** | **m** | **10,734** | **611** | **3,568** | **0** |
| Acquisitions | m | 0 | 0 | 0 | 0 |
| Capex | m | -9,110 | -7,547 | -6,952 | -6,943 |
| Asset Sales | m | 0 | 0 | 0 | 0 |
| Other | m | -321 | -40 | -43 | -124 |
| **Investing Cashflow** | **m** | **-9,430** | **-7,587** | **-6,995** | **-7,067** |
| Dividend (Ordinary) | m | -832 | -1,042 | -1,377 | -1,610 |
| Equity Raised | m | 0 | 0 | 0 | 0 |
| Debt Movements | m | 5,145 | 9,313 | -205 | 723 |
| Other | m | -1,289 | -1,504 | -1,381 | -1,393 |
| **Financing Cashflow** | **m** | **3,025** | **6,767** | **-2,963** | **-2,280** |
| **Net Chg in Cash/Debt** | **m** | **4,547** | **-209** | **-6,389** | **-9,346** |
| **Free Cashflow** | **m** | **1,625** | **-6,936** | **-3,384** | **-6,943** |

| Balance Sheet | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Cash | m | 10,921 | 10,712 | 4,322 | 3,211 |
| Receivables | m | 7,004 | 11,339 | 17,256 | 19,701 |
| Inventories | m | 91 | 54 | 64 | 74 |
| Investments | m | 0 | 0 | 0 | 0 |
| Fixed Assets | m | 47,228 | 53,542 | 59,028 | 64,304 |
| Intangibles | m | 3,312 | 3,312 | 3,312 | 3,312 |
| Other Assets | m | 12,491 | 14,276 | 14,537 | 14,820 |
| **Total Assets** | **m** | **81,047** | **93,235** | **98,519** | **105,422** |
| Payables | m | 9,843 | 8,014 | 9,218 | 10,608 |
| Short Term Debt | m | 4,812 | 6,355 | 6,313 | 6,462 |
| Long Term Debt | m | 31,266 | 39,037 | 38,874 | 39,448 |
| Provisions | m | 0 | 0 | 0 | 0 |
| Other Liabilities | m | 8,359 | 9,966 | 10,824 | 11,933 |
| **Total Liabilities** | **m** | **54,280** | **63,372** | **65,229** | **68,450** |
| Shareholders' Funds | m | 22,806 | 25,486 | 28,461 | 31,645 |
| Minority Interests | m | 3,961 | 4,376 | 4,830 | 5,327 |
| Other | m | 0 | 0 | 0 | 0 |
| **Total S/H Equity** | **m** | **26,767** | **29,863** | **33,290** | **36,972** |
| **Total Liab & S/H Funds** | **m** | **81,047** | **93,235** | **98,519** | **105,422** |

All figures in HKD unless noted.
Source: Company data, Macquarie Research, April 2017

## UNITED STATES

| CWT US | | Neutral |
|---|---|---|
| **Price** (at CLOSE#, 07 Apr 2017) | | US$35.90 |
| **Valuation** - PER | **US$** | **32.00** |
| **12-month target** | **US$** | **32.00** |
| **12-month TSR** | **%** | **-8.9** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **1,722** |
| **30-day avg turnover** | **US$m** | **7.4** |
| **Number shares on issue** | **m** | **47.97** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| EPS adj | US$ | 1.02 | 1.29 | 1.40 | 1.45 |
| EPS adj growth | % | 8.1 | 25.7 | 9.2 | 3.3 |
| PER adj | x | 35.1 | 27.9 | 25.6 | 24.8 |
| Total DPS | US$ | 0.69 | 0.71 | 0.73 | 0.75 |
| Total div yield | % | 1.9 | 2.0 | 2.0 | 2.1 |

**CWT US vs S&P 500, & rec history**


Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Capital (USA), April 2017

(all figures in USD unless noted)

**Analyst(s)**

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11 April 2017
Macquarie Capital (USA) Inc.

# California Water Service Group

## A Cali pure play at any rate

### Event

- CWT's successful bid for Travis Air Force Base should see it make US$12.7m of initial capital improvements and ~US$52m in total over the life of the 50-year contract, beginning in 2018. The contract is unique in that the CPUC will regulate water rates and tariffs for the base as part of Cal Water's three-year rate case cycle. Although Army/Air Force contracts are awarded only intermittently, we are hopeful that CWT will take on more bases, especially because we already struggle with the high level of growth expectations which seem to be priced into the stock. Cal Water generates nearly all of CWT's earnings, and finalized its '16-'19 GRC in Dec '16. As a result, the current '18-'20 cost of capital proceeding will be particularly in focus for CWT. We expect a regulatory overhang in the stock at least until the ORA submits its proposed rate of return, and depending on the spread vs the company's request, that drag could continue until the CPUC staff weigh in. We continue to view CWT's valuation as stretched, even within the water group, but acknowledge that its clear capex-driven path to rate base growth will continue for the foreseeable future. We reiterate our Neutral rating.

### Impact

- **Victory declared:** On Mar 14th, CWT officially secured a 50-year contract to acquire the water distribution assets of Travis Air Force base and to provide the base with water utility service. Originally awarded in Sep '16, the bids were re-evaluated after another bidder filed a complaint. CWT was selected again by the Defense Logistics Agency in Feb '17, and no further protests were filed. This contract differs from those of other military bases in that it will be CPUC-regulated.
- **Cost of capital proceeding:** Cal Water, CWT's largest subsidiary, filed to commence its '18-'20 cost of capital proceedings on Apr 3rd. The utility asked for a ROE of 10.75%, vs its currently approved ROE of 9.43%, with an unchanged equity ratio of 53.4%. We expect strong pushback from the Office of Ratepayer Advocates (ORA), which opposed a joint attempt in Dec '16 by the four largest CA water IOUs to maintain the status quo for an additional year. Given Cal Water's significance to CWT (nearly all of its rate base), we expect the proceeding to be an overhang on the stock at least until the ORA specifies how much of a reduction it is looking for. This should come by late 2Q17, we believe.

### Earnings and target price revision

- No change to our EPS forecasts or '19E PE-based TP of US$32.

### Price catalyst

- 12-month price target: US$32.00 based on a PER methodology.
- Catalyst: 2Q17 ORA testimony in cost of capital proceeding; further clarity from CPUC on treatment of Travis Air Force Base.

### Action and recommendation

- We reiterate our Neutral rating.

## Fig 1 CWT: Financial metrics (US$)

| | 2015 | 2016 | 2017E | 2018E | 2019E | ’16-‘19 CAGR |
|---|---|---|---|---|---|---|
| EPS | 0.94 | 1.01 | 1.29 | 1.40 | 1.45 | 12.6% |
| EPS growth | -20.8% | 7.9% | 26.6% | 9.2% | 3.3% | |
| DPS | 0.67 | 0.69 | 0.71 | 0.73 | 0.75 | 3.0% |
| DPS growth | 3.1% | 3.0% | 3.0% | 3.0% | 3.0% | |
| Payout ratio | 71% | 68% | 55% | 52% | 52% | |
| Diluted shares outstanding | 48 | 48 | 48 | 52 | 51 | |
| Capex (US$m) | 177 | 195 | 215 | 225 | 235 | |
| Regulatory rate base (US$m) | 1,004 | 1,067 | 1,140 | 1,249 | 1,399 | 9.5% |
| Equity ratio | 53.4% | 53.4% | 53.4% | 53.4% | 53.4% | |
| EV/Rate base | 2.19x | 2.09x | 2.03x | 2.03x | 1.80x | |
| Authorized ROE (Cal Water) | 9.43% | 9.43% | 9.43% | 9.43% | 9.43% | |

Source: Company data, Macquarie Capital (USA), April 2017

## Fig 2 CWT: Financial projections (US$m except per share data)

| | 2015 | 2016 | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Operating revenue | $ 588 | $ 609 | $ 654 | $ 671 | $ 687 |
| Water production costs | 208 | 220 | 228 | 216 | 218 |
| Administrative and general | 113 | 98 | 103 | 105 | 102 |
| Other operations | 67 | 80 | 78 | 81 | 85 |
| Maintenance | 21 | 23 | 25 | 27 | 29 |
| Depreciation and amortization | 61 | 64 | 73 | 77 | 83 |
| Income tax benefit/expense | 25 | 25 | 32 | 35 | 36 |
| Property and other taxes | 22 | 23 | 26 | 28 | 30 |
| Net operating income | 71 | 76 | 91 | 102 | 104 |
| EBITDA | 159 | 165 | 196 | 214 | 223 |
| Net other income / loss | 1 | 3 | 1 | 1 | 1 |
| Net interest expense | 27 | 31 | 31 | 36 | 37 |
| Net income | 45 | 49 | 61 | 67 | 69 |
| Earnings per share - diluted | $0.94 | $1.01 | $1.29 | $1.40 | $1.45 |
| Dividend per share | $0.67 | $0.69 | $0.71 | $0.73 | $0.75 |
| Payout ratio | 71% | 68% | 55% | 52% | 52% |
| | | | | | |
| CFO | $ 145 | $ 112 | $ 134 | $ 144 | $ 152 |
| Utility plant expenditures | (177) | (195) | (215) | (225) | (236) |
| Other | (1) | - | - | - | - |
| CFI | (178) | (195) | (215) | (225) | (236) |
| Issuance of common stock | - | - | - | 110 | - |
| Issuance of debt | 46 | 108 | 106 | 92 | 22 |
| Dividends | (32) | (33) | (34) | (38) | (39) |
| Other | 9 | 9 | 9 | 9 | 9 |
| CFF | 23 | 84 | 81 | 173 | (8) |
| Change in cash and cash equivalents | (11) | 1 | - | 92 | (92) |
| Cash and cash equivalents at beginning of period | 20 | 9 | 10 | 10 | 102 |
| Cash and cash equivalents at end of period | $ 9 | $ 10 | $ 10 | $ 102 | $ 10 |
| | | | | | |
| Net utility plant | 1,702 | 1,859 | 2,002 | 2,149 | 2,302 |
| Cash and cash equivalents | 9 | 25 | 10 | 102 | 10 |
| Other current assets | 119 | 117 | 117 | 117 | 117 |
| Total current assets | 128 | 142 | 127 | 219 | 127 |
| Regulatory assets | 362 | 356 | 356 | 356 | 356 |
| Goodwill | 3 | 3 | 3 | 3 | 3 |
| Other assets | 52 | 52 | 52 | 52 | 52 |
| Total assets | $ 2,246 | $ 2,412 | $ 2,539 | $ 2,778 | $ 2,839 |
| | | | | | |
| Total common stockholders’ equity | $ 642 | $ 659 | $ 687 | $ 825 | $ 856 |
| Long-term debt, less current maturities | 512 | 532 | 612 | 703 | 713 |
| Total capitalization | 1,154 | 1,191 | 1,298 | 1,528 | 1,568 |
| Total current liabilities | 148 | 250 | 261 | 261 | 273 |
| Deferred income taxes | 265 | 299 | 299 | 299 | 299 |
| Pension and postretirement benefits | 236 | 223 | 223 | 223 | 223 |
| Other long-term liabilities | 82 | 84 | 84 | 84 | 84 |
| Advances for construction | 180 | 182 | 182 | 182 | 182 |
| Contributions in aid of construction | 178 | 181 | 190 | 199 | 209 |
| Total capitalization and liabilities | $ 2,246 | $ 2,412 | $ 2,539 | $ 2,778 | $ 2,839 |

Source: Company data, Macquarie Capital (USA), April 2017

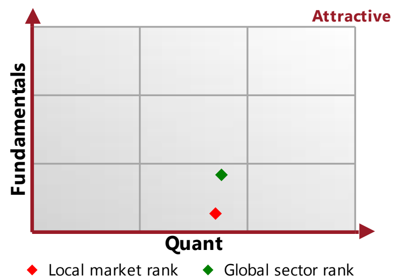
## Macquarie Quant View

The quant model currently holds a marginally positive view on California Water Service Group. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Valuations, indicating this stock is over-priced in the market relative to its peers.

**179/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 0% (0/8) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 0 |

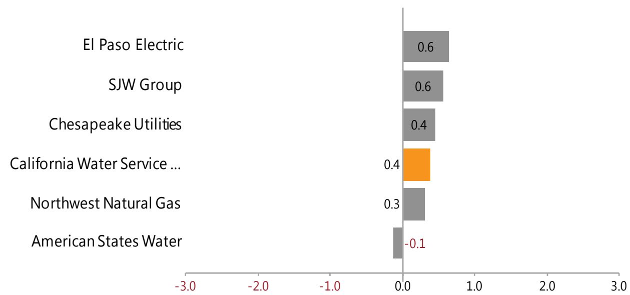



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

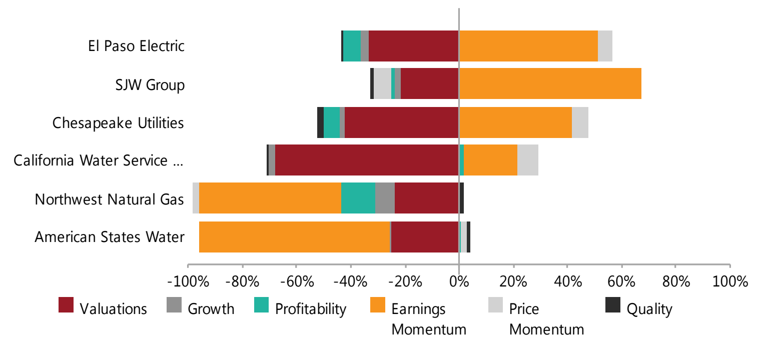
### Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



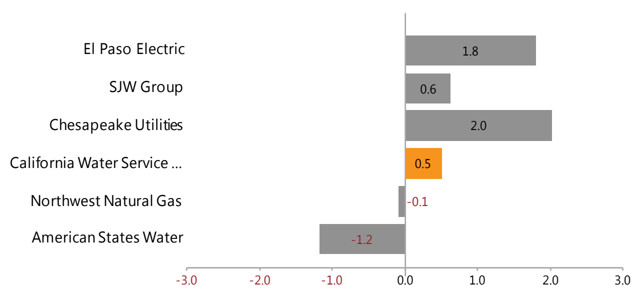

### Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



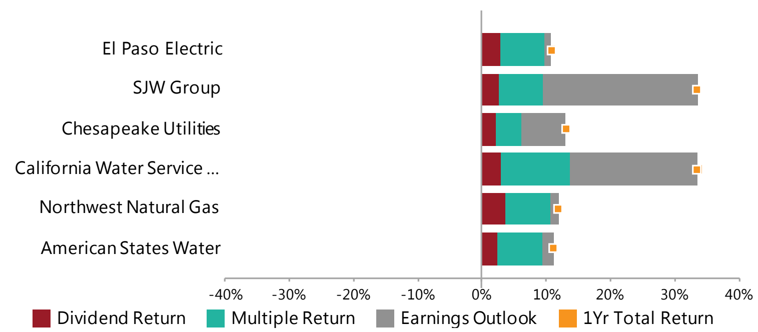

### Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



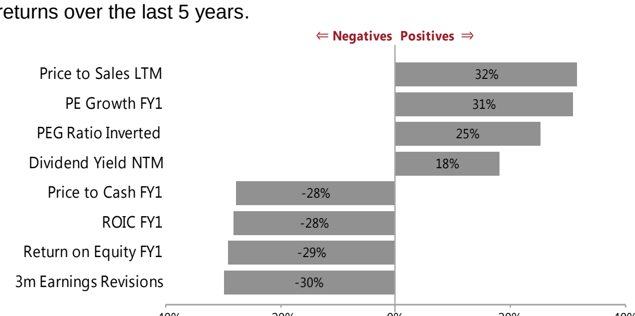

### Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



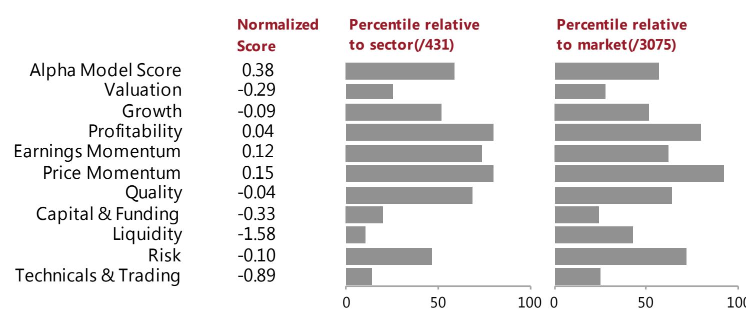

### What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




### How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## HONG KONG

**270 HK** **Outperform**

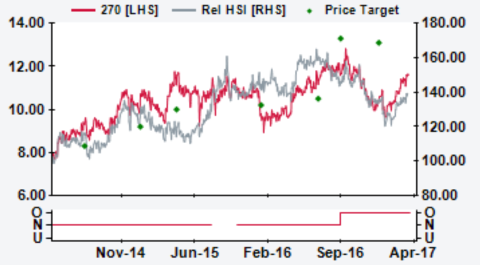
**Price** (at 13:53, 07 Apr 2017 GMT) **HK$11.64**

| | | |
|---|---|---|
| **Valuation** - Sum of Parts | **HK$** | **13.10** |
| **12-month target** | **HK$** | **13.10** |
| **Upside/Downside** | **%** | **+12.5** |
| **12-month TSR** | **%** | **+16.4** |
| **Volatility Index** | | **Low** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **HK$m** | **72,924** |
| **Market cap** | **US$m** | **9,353** |
| **Free float** | **%** | **45** |
| **30-day avg turnover** | **US$m** | **11.6** |
| **Number shares on issue** | **m** | **6,265** |

**Investment fundamentals**

| Year end 31 Dec | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| Revenue | m | 9,172 | 11,033 | 12,162 | 12,779 |
| EBIT | m | 5,088 | 5,642 | 6,110 | 6,500 |
| EBIT growth | % | 10.9 | 10.9 | 8.3 | 6.4 |
| Reported profit | m | 3,905 | 4,460 | 4,933 | 5,218 |
| Adjusted profit | m | 4,162 | 4,460 | 4,933 | 5,218 |
| EPS rep | ¢ | 62.2 | 71.1 | 78.6 | 83.1 |
| EPS rep growth | % | -11.2 | 14.2 | 10.6 | 5.8 |
| EPS adj | ¢ | 66.3 | 71.1 | 78.6 | 83.1 |
| EPS adj growth | % | 16.0 | 7.1 | 10.6 | 5.8 |
| PER rep | x | 18.7 | 16.4 | 14.8 | 14.0 |
| PER adj | x | 17.6 | 16.4 | 14.8 | 14.0 |
| Total DPS | ¢ | 34.0 | 40.3 | 44.6 | 47.1 |
| Total div yield | % | 2.9 | 3.5 | 3.8 | 4.0 |
| ROA | % | 10.0 | 10.1 | 10.4 | 10.7 |
| ROE | % | 13.5 | 13.6 | 14.0 | 14.0 |
| EV/EBITDA | x | 10.0 | 9.0 | 8.2 | 7.8 |
| Net debt/equity | % | -21.3 | -19.1 | -19.1 | -23.1 |
| P/BV | x | 2.3 | 2.1 | 2.0 | 1.9 |

**270 HK rel HSI performance, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, April 2017

(all figures in HKD unless noted)


**Analyst(s)**

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11 April 2017
Macquarie Capital Limited

# Guangdong Investment

## Slow and steady wins the race

### Event

- We maintain our OP rating on GDI (270 HK). With a strong balance sheet and cash flow generation from the HK water business, we think GDI can either get more value accretive projects or potentially lift its dividend payout ratio. In addition, we see upcoming HK water tariff negotiations at end-17 standing as potentially a positive catalyst.

### Impact

- **FY16 results:** Excl. one-off items such as FX and valuation gains, core earnings were HK$4,320mn, in-line with our/consensus of HK$4,460/4,500mn. Dongshen Water's PBT rose 4.4% YoY to HK$3,266mn and PBT for toll roads rose from FY15's HK$78mn to FY16's HK$366mn due to the first FY contribution. On the other hand, department store and hotel operations' PBT registered declines but the contribution of these 2 segments was small; this has a limited impact on GDI's overall earnings profile.
- **More projects or dividend raise?** As of end-16, GDI had a net cash position. Together with healthy cash flow generation from the HK water sales business and limited CAPEX commitment, we see room for GDI to further leverage its balance sheet to undertake new projects or to raise the dividend payout ratio. Indeed, GDI has lifted its payout ratio in the last few years.
- **HK tariff negotiations will happen at end-17.** Water sales to the HK government is a lump-sum payment contract and each contract term is good for 3 years. The negotiation for the 18-20 term should be finalized around end-17. Considering cost increases, negotiation power between Guangdong and HK, as well as alternatives for HK to secure safe drinking water resources, we expect a hike of 2.5% p.a. during the 18-20 term.

### Earnings and target price revision

- No change

### Price catalyst

- 12-month price target: HK$13.10 based on a Sum of Parts methodology.
- Catalyst: project wins and/or dividend payout ratio increase

### Action and recommendation

- Trading at a 14.8x FY17E PER against defensive growth. We see GDI's valuation as attractive. Maintain our OP.

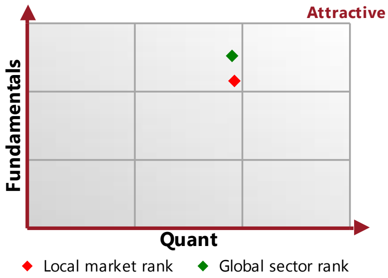
# Macquarie Quant View

The quant model currently holds a marginally positive view on Guangdong Investment. The strongest style exposure is Profitability, indicating this stock is efficiently converting investments to earnings; proxied by ratios like ROE or ROA. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**158/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 75% (12/16) |
| **Number of Price Target downgrades** | 1 |
| **Number of Price Target upgrades** | 0 |

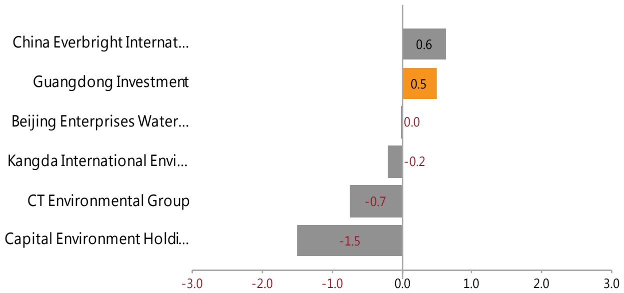



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Hong Kong) and Global sector (Utilities)

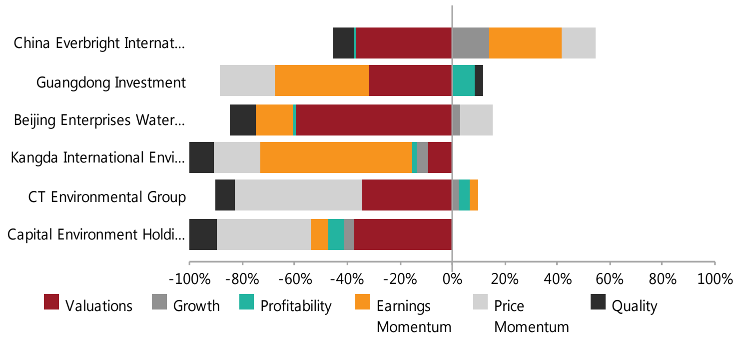
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



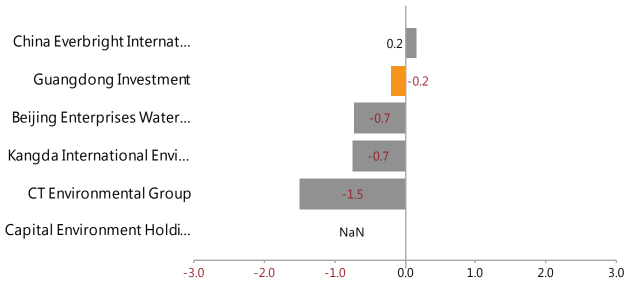

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



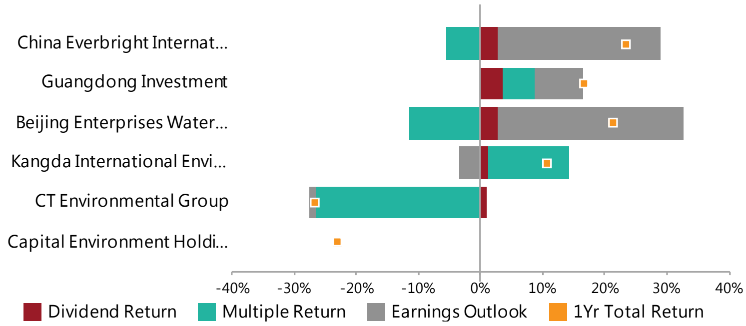

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



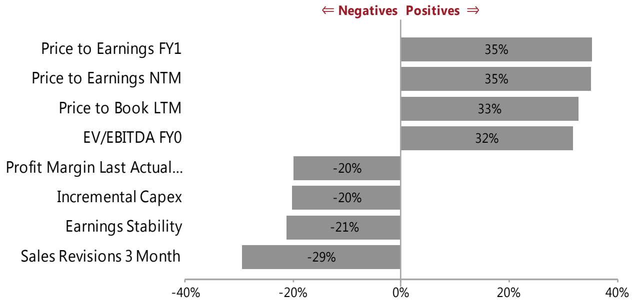

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.




## What drove this Company in the last 5 years

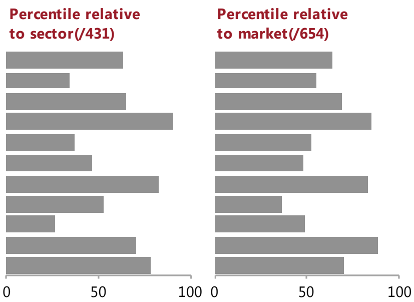
Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.

| | Normalized Score |
|---|---|
| Alpha Model Score | 0.48 |
| Valuation | -0.14 |
| Growth | 0.00 |
| Profitability | 0.27 |
| Earnings Momentum | -0.20 |
| Price Momentum | -0.13 |
| Quality | 0.11 |
| Capital & Funding | 0.02 |
| Liquidity | -1.38 |
| Risk | 0.17 |
| Technicals & Trading | 0.38 |




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## Guangdong Investment (270 HK, Outperform, Target Price: HK$13.10)

| Interim Results | | 1H/16A | 2H/16E | 1H/17E | 2H/17E |
|---|---|---|---|---|---|
| **Revenue** | **m** | **6,303** | **4,730** | **6,948** | **5,214** |
| **Gross Profit** | **m** | **4,015** | **3,013** | **4,365** | **3,276** |
| Cost of Goods Sold | m | 2,288 | 1,717 | 2,583 | 1,938 |
| **EBITDA** | **m** | **3,956** | **2,969** | **4,276** | **3,209** |
| Depreciation | m | 733 | 550 | 785 | 589 |
| Amortisation of Goodwill | m | 0 | 0 | 0 | 0 |
| Other Amortisation | m | 0 | 0 | 0 | 0 |
| **EBIT** | **m** | **3,224** | **2,419** | **3,491** | **2,619** |
| Net Interest Income | m | 1 | 0 | 20 | 15 |
| Associates | m | 178 | 133 | 242 | 182 |
| Exceptionals | m | 0 | 0 | 0 | 0 |
| Forex Gains / Losses | m | 0 | 0 | 0 | 0 |
| Other Pre-Tax Income | m | 0 | 0 | 0 | 0 |
| **Pre-Tax Profit** | **m** | **3,402** | **2,553** | **3,753** | **2,816** |
| Tax Expense | m | -645 | -484 | -699 | -525 |
| **Net Profit** | **m** | **2,757** | **2,069** | **3,054** | **2,291** |
| Minority Interests | m | -209 | -157 | -235 | -177 |
| | | | | | |
| **Reported Earnings** | **m** | **2,548** | **1,912** | **2,818** | **2,115** |
| **Adjusted Earnings** | **m** | **2,548** | **1,912** | **2,818** | **2,115** |
| | | | | | |
| EPS (rep) | ¢ | 40.6 | 30.5 | 44.9 | 33.7 |
| EPS (adj) | ¢ | 40.6 | 30.5 | 44.9 | 33.7 |
| EPS Growth yoy (adj) | % | 7.1 | 7.1 | 10.6 | 10.6 |
| | | | | | |
| EBITDA Margin | % | 62.8 | 62.8 | 61.5 | 61.5 |
| EBIT Margin | % | 51.1 | 51.1 | 50.2 | 50.2 |
| Earnings Split | % | 57.1 | 42.9 | 57.1 | 42.9 |
| Revenue Growth | % | 34.5 | 5.4 | 10.2 | 10.2 |
| EBIT Growth | % | -0.1 | 30.0 | 8.3 | 8.3 |

| Profit & Loss | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| **Revenue** | **m** | **9,172** | **11,033** | **12,162** | **12,779** |
| **Gross Profit** | **m** | **6,144** | **7,029** | **7,641** | **8,055** |
| Cost of Goods Sold | m | 3,028 | 4,005 | 4,521 | 4,724 |
| **EBITDA** | **m** | **6,190** | **6,925** | **7,484** | **7,875** |
| Depreciation | m | 1,102 | 1,282 | 1,375 | 1,375 |
| Amortisation of Goodwill | m | 0 | 0 | 0 | 0 |
| Other Amortisation | m | 0 | 0 | 0 | 0 |
| **EBIT** | **m** | **5,088** | **5,642** | **6,110** | **6,500** |
| Net Interest Income | m | 176 | 1 | 35 | 54 |
| Associates | m | 325 | 311 | 424 | 488 |
| Exceptionals | m | -343 | 0 | 0 | 0 |
| Forex Gains / Losses | m | 0 | 0 | 0 | 0 |
| Other Pre-Tax Income | m | 0 | 0 | 0 | 0 |
| **Pre-Tax Profit** | **m** | **5,246** | **5,955** | **6,569** | **7,041** |
| Tax Expense | m | -957 | -1,129 | -1,224 | -1,316 |
| **Net Profit** | **m** | **4,289** | **4,826** | **5,345** | **5,725** |
| Minority Interests | m | -384 | -366 | -412 | -508 |
| | | | | | |
| **Reported Earnings** | **m** | **3,905** | **4,460** | **4,933** | **5,218** |
| **Adjusted Earnings** | **m** | **4,162** | **4,460** | **4,933** | **5,218** |
| | | | | | |
| EPS (rep) | ¢ | 62.2 | 71.1 | 78.6 | 83.1 |
| EPS (adj) | ¢ | 66.3 | 71.1 | 78.6 | 83.1 |
| EPS Growth (adj) | % | 16.0 | 7.1 | 10.6 | 5.8 |
| PE (rep) | x | 18.7 | 16.4 | 14.8 | 14.0 |
| PE (adj) | x | 17.6 | 16.4 | 14.8 | 14.0 |
| | | | | | |
| Total DPS | ¢ | 34.0 | 40.3 | 44.6 | 47.1 |
| Total Div Yield | % | 2.9 | 3.5 | 3.8 | 4.0 |
| Basic Shares Outstanding | m | 6,261 | 6,276 | 6,276 | 6,276 |
| Diluted Shares Outstanding | m | 6,276 | 6,276 | 6,276 | 6,276 |

| Profit and Loss Ratios | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| Revenue Growth | % | 8.8 | 20.3 | 10.2 | 5.1 |
| EBITDA Growth | % | 9.4 | 11.9 | 8.1 | 5.2 |
| EBIT Growth | % | 10.9 | 10.9 | 8.3 | 6.4 |
| Gross Profit Margin | % | 67.0 | 63.7 | 62.8 | 63.0 |
| EBITDA Margin | % | 67.5 | 62.8 | 61.5 | 61.6 |
| EBIT Margin | % | 55.5 | 51.1 | 50.2 | 50.9 |
| Net Profit Margin | % | 45.4 | 40.4 | 40.6 | 40.8 |
| Payout Ratio | % | 51.3 | 56.7 | 56.7 | 56.7 |
| EV/EBITDA | x | 10.0 | 9.0 | 8.2 | 7.8 |
| EV/EBIT | x | 12.0 | 10.9 | 10.0 | 9.3 |
| | | | | | |
| **Balance Sheet Ratios** | | | | | |
| ROE | % | 13.5 | 13.6 | 14.0 | 14.0 |
| ROA | % | 10.0 | 10.1 | 10.4 | 10.7 |
| ROIC | % | 17.1 | 15.6 | 15.3 | 15.3 |
| Net Debt/Equity | % | -21.3 | -19.1 | -19.1 | -23.1 |
| Interest Cover | x | nmf | nmf | nmf | nmf |
| Price/Book | x | 2.3 | 2.1 | 2.0 | 1.9 |
| Book Value per Share | | 5.0 | 5.4 | 5.8 | 6.1 |

| Cashflow Analysis | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| **EBITDA** | **m** | **6,190** | **6,925** | **7,484** | **7,875** |
| Tax Paid | m | -877 | -1,129 | -1,224 | -1,316 |
| Chgs in Working Cap | m | -252 | -233 | -817 | 472 |
| Net Interest Paid | m | -136 | -130 | -109 | -93 |
| Other | m | 504 | 21 | 475 | 511 |
| **Operating Cashflow** | **m** | **5,429** | **5,454** | **5,809** | **7,450** |
| Acquisitions | m | 1,074 | 0 | 0 | 0 |
| Capex | m | -1,457 | -3,708 | -2,444 | -2,051 |
| Asset Sales | m | 1 | 0 | 0 | 0 |
| Other | m | -4,162 | 0 | 0 | 0 |
| **Investing Cashflow** | **m** | **-4,543** | **-3,708** | **-2,444** | **-2,051** |
| Dividend (Ordinary) | m | -1,877 | -2,520 | -2,787 | -2,948 |
| Equity Raised | m | 92 | 0 | 0 | 0 |
| Debt Movements | m | 2,809 | -175 | -1,133 | -918 |
| Other | m | -69 | -130 | -109 | -93 |
| **Financing Cashflow** | **m** | **955** | **-2,825** | **-4,030** | **-3,959** |
| | | | | | |
| **Net Chg in Cash/Debt** | **m** | **895,780** | **-613** | **-665** | **1,440** |
| | | | | | |
| **Free Cashflow** | **m** | **3,972** | **1,746** | **3,365** | **5,399** |

| Balance Sheet | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| Cash | m | 15,524 | 14,911 | 14,246 | 15,686 |
| Receivables | m | 737 | 915 | 1,041 | 1,128 |
| Inventories | m | 143 | 172 | 190 | 200 |
| Investments | m | 0 | 0 | 0 | 0 |
| Fixed Assets | m | 19,410 | 22,851 | 24,868 | 26,430 |
| Intangibles | m | 304 | 304 | 304 | 304 |
| Other Assets | m | 17,993 | 18,444 | 18,984 | 17,915 |
| **Total Assets** | **m** | **54,110** | **57,596** | **59,633** | **61,662** |
| Payables | m | 4,854 | 6,232 | 6,962 | 7,249 |
| Short Term Debt | m | 556 | 1,333 | 1,118 | 943 |
| Long Term Debt | m | 7,016 | 5,883 | 4,965 | 4,222 |
| Provisions | m | 0 | 0 | 0 | 0 |
| Other Liabilities | m | 4,416 | 3,928 | 3,810 | 3,692 |
| **Total Liabilities** | **m** | **16,843** | **17,376** | **16,855** | **16,106** |
| Shareholders' Funds | m | 31,472 | 34,059 | 36,204 | 38,474 |
| Minority Interests | m | 5,795 | 6,162 | 6,574 | 7,081 |
| Other | m | 0 | 0 | 0 | 0 |
| **Total S/H Equity** | **m** | **37,267** | **40,220** | **42,778** | **45,555** |
| **Total Liab & S/H Funds** | **m** | **54,110** | **57,596** | **59,633** | **61,662** |

All figures in HKD unless noted.
Source: Company data, Macquarie Research, April 2017

UNITED KINGDOM

PNN LN Outperform

Price (at 22:45, 07 Apr 2017 GMT) £8.87

| | | |
|---|---|---|
| **Valuation** - DCF (WACC 4.1%, beta 0.8, ERP 5.0%, RFR 2.0%) | £ | 9.39 |
| **12-month target** | £ | 9.40 |
| **12-month TSR** | % | +10.4 |
| **GICS sector** | | Utilities |
| **Market cap** | £m | 3,694 |
| **Market cap** | US$m | 4,616 |
| **30-day avg turnover** | £m | 10.1 |
| **Number shares on issue** | m | 416.4 |

**Investment fundamentals**

| Year end 31 Mar | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue | m | 1,352.3 | 1,346.2 | 1,365.7 | 1,421.9 |
| EBITDA | m | 448.4 | 480.0 | 508.8 | 545.3 |
| EBITDA growth | % | 9.1 | 7.0 | 6.0 | 7.2 |
| EBIT | m | 261.8 | 292.8 | 309.4 | 345.2 |
| Reported profit | m | 152.1 | 136.7 | 183.3 | 213.0 |
| Adjusted profit | m | 162.2 | 178.6 | 183.3 | 213.0 |
| Gross cashflow | m | 364.9 | 382.0 | 398.8 | 429.4 |
| CFPS | £ | 0.89 | 0.92 | 0.95 | 1.02 |
| CFPS growth | % | 3.7 | 3.7 | 3.3 | 7.1 |
| PGCFPS | x | 10.0 | 9.6 | 9.3 | 8.7 |
| EPS adj | £ | 0.40 | 0.43 | 0.44 | 0.51 |
| EPS adj growth | % | -0.4 | 9.1 | 1.5 | 15.6 |
| PER adj | x | 22.4 | 20.6 | 20.3 | 17.5 |
| Total DPS | £ | 0.34 | 0.36 | 0.39 | 0.41 |
| Total div yield | % | 3.8 | 4.1 | 4.4 | 4.7 |
| ROA | % | 4.8 | 5.1 | 5.2 | 5.8 |
| ROE | % | 11.4 | 12.2 | 12.5 | 13.9 |
| EV/EBITDA | x | 13.9 | 13.0 | 12.4 | 11.5 |
| Net debt/equity | % | 167.0 | 187.4 | 180.2 | 167.0 |
| P/BV | x | 2.5 | 2.6 | 2.5 | 2.4 |

Source: FactSet, Macquarie Research, April 2017
(all figures in GBP unless noted)

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11 April 2017
Macquarie Capital (Europe) Limited

# Pennon Group

## Highest dividend growth in sector

### Pennon Group own a best in class Water Company

South West Water provides the empirical evidence that being best in class provides superior returns. We estimate ROREs now peaking at c.15% in South West Water due to rising RPI expectations. Every 1% rise in RPI adds 2.2% to RORE.

We believe this underpins a 22% premium to underlying RAB. Pennon believe (with alarming accuracy) that they have a 94% probability of being in top quartile water at the end of this review. Some of this outperformance comes from the £27mn synergies with their acquisition of Bournemouth Water.

Pennon have also unwound their Peninsular off-balance sheet financial swap. Overall unwind cash cost is £35mn post-tax payable in June 2018. There has been a provision booked for £39.5mn which was recognised at the half-year results, but not put through the P&L. We have included an extra £35mn cash cost in our valuation.

### Viridor transformation nearly done

Viridor's exposure to landfill and recycling falls as the ERFs are ramped up. We see EBITDA from legacy business falling to £83.4mn by 2020 (from a £160mn peak in 2011/12). Viridor is still the UK's largest recycler processing 1.8mn tonnes per annum and it operates 97MW of landfill gas.

Conversely Viridor will have invested £1.7bn in ERFs (including JVs), operating 12 plants by 2020 (processing c.3mn tonnes of waste, or c.5% of all UK waste). These should provide an EBITDA (including IFRIC12 and proportional JV accounting) of c.£220mn by 2020. With 80% of gate fees contracted to municipalities for around 20 years with RPI indexed contracts, we see the risk profile of these assets as lower than market expectations.

A weak sterling makes waste export to European ERFs more expensive and Brexit/currency should increase demand for UK waste processing facilities.

### Valuation TP trimmed slightly to 940p/share

Pennon should be providing a 38.7p/share DPS in 2017/18e (4.4% yield) rising at RPI+4% until 2020. This is supported by rising EPS. We have trimmed our EPS forecasts for coming two years to c.43p/share, but are still 6% ahead of 2016/17e consensus and then we see a step up to c.51p and c.55p/share EPS in 2018/19e and 2019/20e. This increases dividend cover. There aren't too many utilities with c.10% EPS CAGR out to 2020.

Headline 2017/18e PE, of 20.3x, falls to just 14.0x on an economic basis once IFRS/regulatory accounting is taken into account.

We see net debt peak in March 2018, at £3.0bn, and thereafter cashflow to equity reaches c.£350mn per annum pre-dividends (10% cashflow yield), as capex in both SWW and Viridor falls and EBITDA rises. We see scrip no longer needed post 2018/19 and the £300mn hybrids due to be refinanced will be earnings accretive at current rates.

At consensus Viridor value, we see Pennon trading at a 30% premium to RAB (March 2018), falling to a 15.7% premium to RAB with our value of Viridor.

We would value Pennon at 1080p/share at a 40% premium to RAB valuation.

## Inside



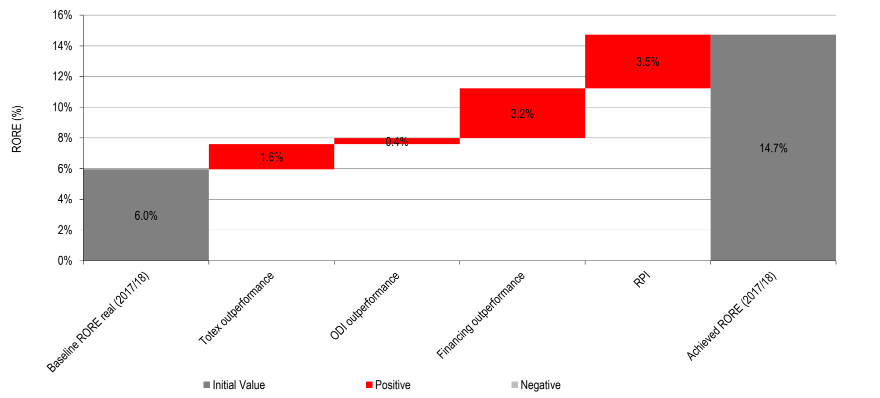
# Pennon Group: compelling value

## Company profile

Pennon Group is a £3.6bn market cap company that has two major subsidiaries: South West Water and Viridor Waste.

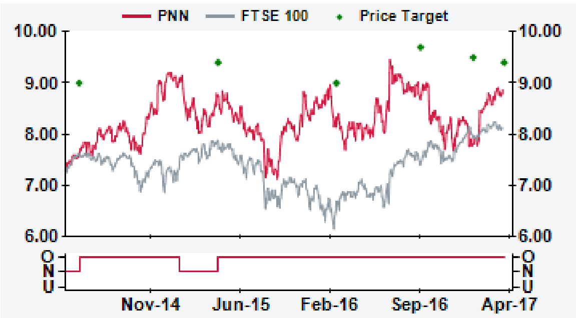
- ⇒ South West Water is a water and waste-water company covering Devon and Cornwall in the UK. It has a March 2018e RAB of £3.25bn and has regulatory clarity out to 2020. Bournemouth Water is a water only company and has a March 2017e RAB of c.£150mn.
- ⇒ Pennon Water Services (PWS) is a non-household water retail JV company between South West Water, Bournemouth, Cambridge and South Staffs. It will be the 4th largest water retailer with 180,000 accounts.
- ⇒ Viridor Waste is one of the UK's largest waste companies. Its 2015/16 EBITDA was £116.5mn, coming from recycling, contracts, landfill and landfill gas. Viridor Waste is investing up to £1.5bn into a total of ten new Energy Recovery Facilities (ERF) plants. Eight plants are now operating as of March 2016.

**Fig 1 South West Water RORE is best in class**




Source: Ofwat, Macquarie Research, March 2017

**Fig 2 PNN LN vs FTSE 100, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, April 2017 (all figures in GBP unless noted)

# Highest dividend growth in sector

## We value Pennon at 940p/share: maintain Outperform rating

We have decreased our 2016/17e EPS to 43.1p/share due to a combination of higher profitability at South West Water, better recyclate prices offset by a higher depreciation and interest charge . We see consensus EPS at 42.0p/share for 2016/17e, and we are c.3% ahead of consensus.

**Fig 3 We have decreased our EPS forecasts slightly as RPI has increased**

| Pennon Group | 2016A | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| **New EPS (adjusted)** | **39.5** | **43.1** | **43.8** | **50.6** | **55.4** |
| Old EPS (adjusted) | 39.5 | 44.1 | 44.1 | 49.6 | 55.3 |
| **% change** | **0.0%** | **-2.2%** | **-0.8%** | **2.0%** | **0.1%** |
| | | | | | |
| **EBITDA new (adjusted) *** | | | | | |
| **Water and sewerage** | **335.2** | **348.9** | **356.9** | **368.6** | **368.9** |
| **Waste management** | **176.5** | **198.0** | **222.0** | **247.3** | **263.8** |
| **Other** | **(3.3)** | **(3.3)** | **(3.3)** | **(3.3)** | **(3.3)** |
| **TOTAL** | **508.4** | **543.6** | **575.6** | **612.6** | **629.4** |
| | | | | | |
| EBITDA old (adjusted) * | | | | | |
| Water and sewerage | 335.2 | 347.0 | 355.0 | 362.5 | 371.7 |
| Waste management | 176.5 | 190.3 | 213.0 | 235.2 | 251.5 |
| Other | (3.3) | (3.3) | (3.3) | (3.3) | (3.3) |
| TOTAL | 508.4 | 534.0 | 564.7 | 594.4 | 619.9 |
| | | | | | |
| % change | | | | | |
| Water and sewerage | 0.0% | 0.5% | 0.5% | 1.7% | -0.8% |
| Waste management | 0.0% | 4.1% | 4.2% | 5.2% | 4.9% |
| Other | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| TOTAL | 0.0% | 1.8% | 1.9% | 3.1% | 1.5% |
| | | | | | |
| **Price target new** | **940** | | | | |
| Price target old | 950 | | | | |
| % change | -1% | | | | |

Source: Company reports, Macquarie Research, April 2017 * adjusted to include JV proportional EBITDA plus interest from IFRIC12 accounting

**Fig 4 We estimate a 8.8% annual TSR out to March 2020**

| Pennon | | Mar-17 | Mar-18 | Mar-19 | Mar-20 |
|---|---|---|---|---|---|
| price paid (p/share) | | 887.0 | | | |
| dividend (p/share) | | 26.0 | 38.7 | 41.5 | 44.4 |
| | | | | | |
| RCV (£mn) | | 3,288 | 3,455 | 3,517 | 3,362 |
| Adjustments (£mn) | | | | | (204) |
| exit multiple (x) | | | | | 1.2 |
| | | | | | 3,852 |
| Retail | | | | | 164 |
| Viridor (£mn) | | EBITDA | | | 196 |
| exit multiple (x) | | | | | 12.5 |
| JVs and associates | | PAT | | | 19.7 |
| exit multiple (x) | | | | | 18.0 |
| IFRIC 12 cashflow | | Interest and return | | | 28.1 |
| exit multiple (x) | | | | | 12.5 |
| Total | | | | | 3,162 |
| | | | | | |
| Net debt (£mn) | | | | | (2,454) |
| Hybrids (£mn) | | | | | (295) |
| Provisions (£mn) | | | | | (332) |
| Equity exit value (£mn) | | | | | 4,096 |
| Shares (#) | | | | | 421 |
| Exit price (p/share) | | | | | 973.7 |
| | | | | | |
| Total equity return (p/share) | | (861) | 39 | 41 | 1,018 |
| | | | | | |
| **Total return** | | **8.8%** | **IRR** | | |

Source: Macquarie Research, April 2017

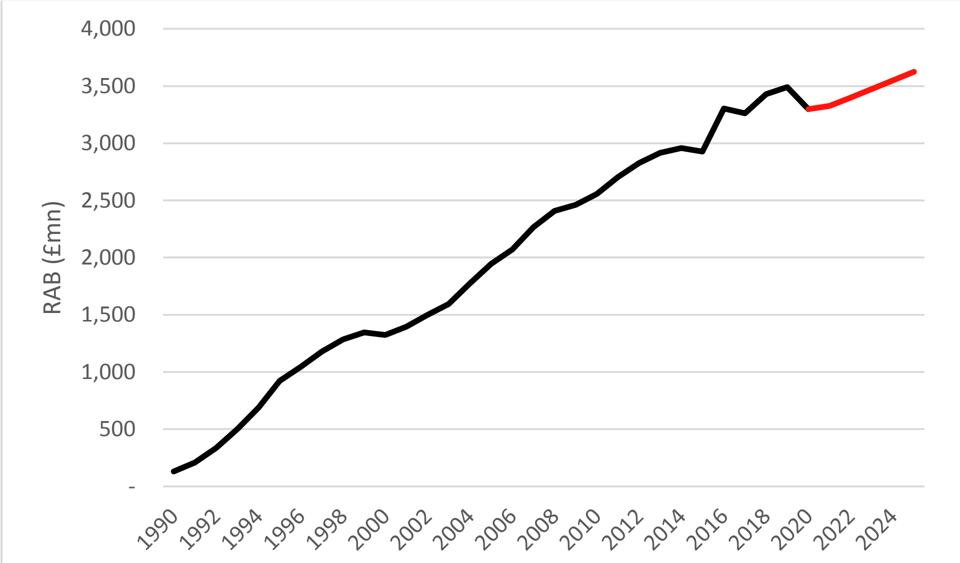
### Fig 5 We value Pennon at 940p/share at March 2018

| March 2018 | £m | premium to RAB | £ per share |
|---|---|---|---|
| **Water RCV** | **1,399** | **1,399** | **3.33** |
| Totex outperformance | (16) | | -0.04 |
| ODI outperformance | 9 | | 0.02 |
| CIS adjustment | (16) | | |
| Outperformance | 337.89 | | 0.80 |
| Total value | 1,714 | 22.5% | 4.07 |
| **Wastewater RCV** | **1,833** | **1,833** | **4.36** |
| Totex outperformance | (21) | | -0.05 |
| ODI outperformance | 12 | | 0.03 |
| CIS adjustment | (20) | | |
| Outperformance | 434 | | 1.03 |
| Total value | 2,237 | 22.1% | 5.32 |
| **Bournemouth Water RCV** | **163** | **163** | **0.39** |
| Totex outperformance | (4) | | -0.01 |
| ODI outperformance | 1 | | 0.00 |
| CIS adjustment | (2) | | |
| Outperformance | 45 | | 0.11 |
| Total value | 203 | 24.4% | 0.48 |
| Embedded debt | (2) | | 0.00 |
| **Total regulated value** | **4,152** | **22.3%** | **9.87** |
| Household retail | 118 | | 0.28 |
| Non-regulated retail | 46 | | |
| Viridor | | | |
| Existing fully consolidated | 356 | EV/EBITDA | 11.5 |
| JVs and associates, equity | 355 | PE | 13.3 |
| ERF under IAS16 | 1,828 | EV/EBITDA | 17.1 |
| ERF under IFRIC 12 | 444 | | 1.06 |
| Viridor total | 2,983 | | 7.09 |
| Total EV | 7,299 | | 17.35 |
| **Net Debt** | **(2,720)** | **-6.46** | **2018E net debt** |
| Hybrids | (295) | -0.70 | |
| - Environmental Liabilities | (239) | -0.57 | |
| - Pension | (93) | -0.22 | |
| Provisions | (332) | -0.79 | |
| **Equity Value** | **3,953** | **9.39** | |
| No. Shares | | 420.7 | |

Source: Macquarie Research, April 2017

## RAB growth is slowing

**Fig 6 We see Pennon RAB growing modestly out to 2025**




Source: Ofwat, Company data, Macquarie Research, April 2017

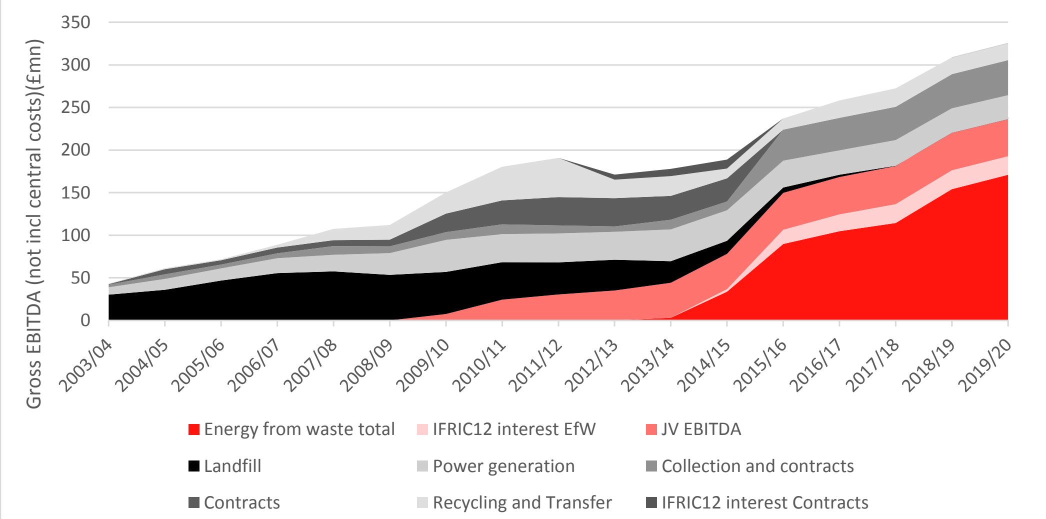
## Viridor is becoming a higher quality business

**Fig 7 Viridor will have invested nearly £1.7bn (proportional) and have access to 3.2mn tonnes of facilities**

| Site | Capital Cost (£mn) | Size (ktonnes) | MW Electricity | MW Heat | Commission date | Accounting method | Ownership | Partner |
|---|---|---|---|---|---|---|---|---|
| Lakeside | 150 | 410 | 38 | | May-10 | JV PAT | 50% | Grundon |
| Bolton | | 120 | 9 | | 2001 | IFRIC12 | | |
| Runcorn: Phase 1 | 236 | 375 | 28 | 51 | H2 2013/14 | JV PAT | 38% | Ineos Chlor |
| Runcorn: Phase 2 | 216 | 375 | 41 | | H2 2014/15 | IAS16 | | |
| Ardley | 204 | 300 | 24 | | H1 2014/15 | IAS16 | | |
| Exeter | 47 | 60 | 3 | | H1 2014/15 | IFRIC12 | | |
| Cardiff | 207 | 350 | 28 | | H2 2014/15 | IAS16 | | |
| Peterborough | 72 | 80 | 7 | | H2 2015/16 | IFRIC12 | | |
| **Operational** | **1,132** | **2,070** | **178** | **51** | | | | |
| Glasgow | 155 | 200 | 15 | | 2017 | IFRIC12 | | |
| Avonmouth | 252 | 320 | 33 | | 2020/21 | IAS16 | | |
| Beddington | 199 | 275 | 26 | | H1 2018/19 | IAS16 | | |
| Dunbar | 177 | 300 | 23 | 17 | H2 2017/18 | IAS16 | | |
| **Under Construction** | **783** | **1,095** | **97** | **17** | | | | |
| Total | 1,915 | 3,165 | 275 | 68 | | | | |

Source: Company data, Macquarie Research, April 2017

**Fig 8 Viridor EBITDA being dominated by their 12 ERF facilities**




Source: Viridor, Macquarie Research, April 2017

## Financial summary

**Fig 9 Pennon Group financial summary (note EBITDA is consolidated, not adjusted)**

| | 2015A | 2016A | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|
| PBT (£mn) | 197 | 206 | 195 | 240 | 276 | 300 |
| PBT growth (%) | 24% | 5% | -5% | 23% | 15% | 9% |
| PBT (norm) (£mn) | 211 | 211 | 234 | 240 | 276 | 300 |
| PBT growth (norm) (%) | 2% | 0% | 11% | 3% | 15% | 9% |
| Eps (post-exceptional, post-deferred tax) p/share | 32.3 | 37.0 | 33.0 | 43.8 | 50.6 | 55.4 |
| | | | most people over 40p/share | | | |
| **Eps (pre-deferred tax, pre-exceptional) p/share** | **39.8** | **39.5** | **43.1** | **43.8** | **50.6** | **55.4** |
| Eps growth (norm) (%) | -7% | -1% | 9% | 2% | 16% | 9% |
| P/E (x) | 22.3 | 22.5 | 20.6 | 20.3 | 17.5 | 16.0 |
| Interim (p/share) | 10.0 | 10.5 | 11.3 | 12.2 | 13.0 | 13.9 |
| Final (p/share) | 21.8 | 23.0 | 24.7 | 26.6 | 28.5 | 30.5 |
| Dps (p/share) | 31.8 | 33.6 | 36.0 | 38.7 | 41.5 | 44.4 |
| Dps growth | 5% | 6% | 7% | 8% | 7% | 7% |
| Dividend cover (pre-deferred tax) | 1.3 | 1.2 | 1.2 | 1.1 | 1.2 | 1.2 |
| Dividend yield | 3.6% | 3.8% | 4.1% | 4.4% | 4.7% | 5.0% |
| EBITDA (£mn) | 411 | 448 | 480 | 509 | 545 | 562 |
| EBITDA JVs (£mn) | 55 | 60 | 64 | 67 | 67 | 67 |
| Net debt JVs (£mn) | 204 | 215 | 205 | 194 | 181 | 166 |
| EV/EBITDA (x) | 14.1 | 13.7 | 13.2 | 12.6 | 11.7 | 11.1 |
| No. of shares (end-year) | 399 | 412.0 | 416 | 421 | 421 | 421 |
| No. of shares (year average) | 390.9 | 410.9 | 414 | 418.4 | 421 | 421 |
| Net interest cover | 6.0 | 4.8 | 4.6 | 4.1 | 4.5 | 5.1 |
| FFO interest cover | 8.1 | 6.7 | 5.9 | 5.2 | 5.6 | 6.3 |
| FFO/net debt | 15.1% | 14.5% | 14.2% | 14.4% | 16.3% | 18.0% |
| Net debt/EBITDA (incl 50% of hybrid) | 5.7 | 5.9 | 5.9 | 5.6 | 5.0 | 4.6 |
| RAB (nominal) | 2,928 | 3,150 | 3,288 | 3,455 | 3,517 | 3,362 |
| Water debt | 1,818 | 1,856 | 1,901 | 1,983 | 1,974 | 1,950 |
| Water debt / RAB | 62% | 59% | 58% | 57% | 56% | 58% |
| Group debt / RAB | 2,492 | 2,779 | 2,956 | 3,015 | 2,892 | 2,749 |
| Scrip takeup | 35% | 35% | 25% | 25% | 0% | 0% |
| Shares issued | 4.7 | 5.3 | 4.2 | 4.5 | - | - |
| | 41.3 | 46.9 | 37.1 | 40.3 | - | - |
| ODI ROE | | 0.2% | 0.4% | 0.4% | 0.4% | 0.4% |
| Totex ROE | | 2.5% | 2.0% | 1.6% | 1.4% | 1.7% |

Source: Company data, Macquarie Research, April 2017

## Fig 10 Pennon Group summary profit and loss statement

| **Income Statement** | | **2016a** | **2017e** | **2018e** | **2019e** | **2020e** |
|---|---|---|---|---|---|---|
| Water and sewerage | £mn | 547.0 | 557.1 | 565.7 | 585.1 | 601.0 |
| Waste management | £mn | 806.2 | 790.3 | 801.4 | 838.5 | 852.7 |
| Other | £mn | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Intra-group trading | £mn | (12.9) | (13.2) | (13.4) | (13.7) | (14.0) |
| Total turnover | £mn | 1,352.3 | 1,346.2 | 1,365.7 | 1,421.9 | 1,451.8 |
| | | | | | | |
| EBITDA (consolidated) | | | | | | |
| Water and sewerage | £mn | 335.2 | 348.9 | 356.9 | 368.6 | 368.9 |
| Waste management | £mn | 116.5 | 134.4 | 155.2 | 180.0 | 196.4 |
| Other | £mn | (3.3) | (3.3) | (3.3) | (3.3) | (3.3) |
| **TOTAL** | **£mn** | **448.4** | **480.0** | **508.8** | **545.3** | **562.0** |
| **Viridor underlying EBITDA** | **£mn** | **176.5** | **198.0** | **222.0** | **247.3** | **263.8** |
| | | | | | | |
| EBITA (pre-goodwill) | | | | | | |
| Water and sewerage | £mn | 224.5 | 233.1 | 238.8 | 248.2 | 246.2 |
| Waste management | £mn | 40.9 | 62.8 | 73.8 | 100.1 | 117.8 |
| Other | £mn | (3.6) | (3.1) | (3.1) | (3.1) | (3.1) |
| Discontinued | £mn | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Operating profit (pre-goodwill) | £mn | 261.8 | 292.8 | 309.4 | 345.2 | 361.0 |
| EBIT (pre-goodwill, post-exceptionals) | £mn | 251.6 | 292.8 | 309.4 | 345.2 | 361.0 |
| | | | | | | |
| Interest | £mn | (54.1) | (63.9) | (75.0) | (76.1) | (70.1) |
| JVs and Associates: equity accounted | £mn | 3.6 | 5.1 | 5.8 | 7.1 | 9.4 |
| Interest from JV loans | £mn | 10.70 | 10.49 | 10.30 | 10.30 | 10.30 |
| Profit before tax (pre-goodwill, pre-exceptional) | £mn | 211.3 | 234.0 | 240.3 | 276.2 | 300.3 |
| | | | | | | |
| Profit before tax (post-goodwill, post-exceptional) | £mn | 206.3 | 195.0 | 240.3 | 276.2 | 300.3 |
| | | | | | | |
| Tax (cash) | £mn | (32.9) | (39.2) | (40.9) | (47.0) | (51.0) |
| Net income | £mn | 152.1 | 136.7 | 183.3 | 213.0 | 233.0 |
| Net income (pre-exceptional, pre-goodwill) | £mn | 123.0 | 175.7 | 183.3 | 213.0 | 233.0 |
| Net income (pre-exceptional, pre-goodwill, pre-deferred tax) | £mn | 162.2 | 178.6 | 183.3 | 213.0 | 233.0 |
| | | | | | | |
| Ordinary dividends | £mn | (129.1) | (141.5) | (153.3) | (166.6) | (178.4) |
| Retained profit | £mn | 23.0 | (4.8) | 29.9 | 46.5 | 54.6 |

Source: Company data, Macquarie Research, April 2017

## Fig 11 Pennon Group summary Balance Sheet

| **Balance sheets** | | **2016a** | **2017e** | **2018e** | **2019e** | **2020e** |
|---|---|---|---|---|---|---|
| Intangible assets | £mn | 449 | 449 | 449 | 449 | 449 |
| Tangible assets | £mn | 3,897 | 4,127 | 4,214 | 4,136 | 4,048 |
| Investments | £mn | 268 | 290 | 297 | 298 | 298 |
| Tangible fixed assets | £mn | 4,614 | 4,865 | 4,959 | 4,883 | 4,794 |
| Stocks | £mn | 21 | 21 | 21 | 21 | 21 |
| Debtors | £mn | 324 | 324 | 324 | 324 | 324 |
| Creditors < 1 year | £mn | (302) | (302) | (302) | (302) | (302) |
| Net current assets excluding cash | £mn | 42 | 42 | 42 | 42 | 42 |
| Net cash/(debt) | £mn | (2,484) | (2,661) | (2,720) | (2,598) | (2,454) |
| Derivative positions | £mn | (37) | (37) | (37) | (37) | (37) |
| Creditors > 1 year | £mn | (113) | (113) | (113) | (113) | (113) |
| Provisions | £mn | (534) | (576) | (541) | (541) | (541) |
| Net assets | £mn | 1,488 | 1,520 | 1,590 | 1,637 | 1,691 |
| | | | | | | |
| Ordinary share capital | £mn | (168) | (205) | (245) | (245) | (245) |
| Non-equity share capital | £mn | 0 | 0 | 0 | 0 | 0 |
| Share premium | £mn | (213) | (213) | (213) | (213) | (213) |
| Other reserves | £mn | (295) | (295) | (295) | (295) | (295) |
| Capital redemption reserve | £mn | (144) | (144) | (144) | (144) | (144) |
| Profit and loss account | £mn | (668) | (663) | (693) | (739) | (794) |
| Minority | £mn | 0 | 0 | 0 | 0 | 0 |
| | £mn | (1,488) | (1,520) | (1,590) | (1,637) | (1,691) |

Source: Company data, Macquarie Research, April 2017

## Fig 12 Pennon Group summary cashflow statement

| Cash Flow Statements | | 2016a | 2017e | 2018e | 2019e | 2020e |
|---|---|---|---|---|---|---|
| Operating cash flow (EBIT (pre-goodwill, pre exceptional) + JVs) | £mn | 265 | 298 | 315 | 352 | 370 |
| Depreciation and amortisation | | | | | | |
| - South West Water | £mn | 111 | 116 | 118 | 120 | 123 |
| - Waste Management | £mn | 76 | 72 | 81 | 80 | 79 |
| - Other | £mn | 0 | (0) | (0) | (0) | (0) |
| Depreciation and amortisation total | £mn | 186.5 | 187.2 | 199.4 | 200.2 | 201.1 |
| Tax (cash tax) | £mn | (33) | (39) | (41) | (47) | (51) |
| Cashflow from operations | £mn | 419 | 446 | 474 | 505 | 520 |
| Capex cashflow total | | | | | | |
| - South West Water (gross of grants) | £mn | (115.4) | (191.3) | (163.8) | (82.6) | (71.5) |
| - Waste Management | £mn | (154.5) | (231.1) | (122.6) | (40.4) | (40.8) |
| Capex total | £mn | (375.2) | (422.4) | (286.4) | (123.0) | (112.3) |
| - Investments (JVs as equity) | £mn | (3.9) | 0.0 | 0.0 | 0.0 | 0.0 |
| - grants and disposals | £mn | 0 | 6 | 0 | 0 | 0 |
| Capex cashflow total | £mn | (412.10) | (438.43) | (292.55) | (129.27) | (118.76) |
| Operating cashflow | £mn | 7 | 7 | 181 | 376 | 402 |
| Acquisitions and disposals | | | | | | |
| Cashflow from changes in working capital | £mn | (20) | 0 | 0 | 0 | 0 |
| Interest charges and return from investments | £mn | (54) | (64) | (75) | (76) | (70) |
| Cash to equity (pre-exceptional) | £mn | (67) | (56) | 106 | 305 | 338 |
| Ordinary dividends paid | £mn | (129) | (141) | (153) | (167) | (178) |
| Cashflow from exceptionals (net of tax) | £mn | (9) | 0 | (35) | 0 | 0 |
| Share issue/repurchase | | | | | | |
| Cash after dividends | £mn | (60) | (161) | (42) | 139 | 159 |
| Other | | | | | | |
| Change in net debt | £mn | (76) | (177) | (58) | 122 | 143 |

Source: Company data, Macquarie Research, April 2017

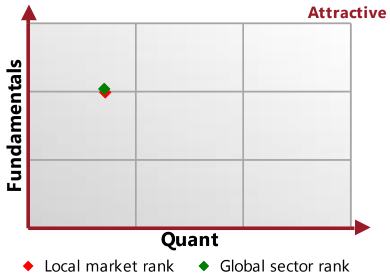
## Macquarie Quant View

The quant model currently holds a reasonably negative view on Pennon Group. The strongest style exposure is Growth, indicating this stock has good historic and/or forecast growth. Growth metrics focus on both top and bottom line items. The weakest style exposure is Price Momentum, indicating this stock has had weak medium to long term returns which often persist into the future.

**331/432**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 43% (6/14) |
| **Number of Price Target downgrades** | 2 |
| **Number of Price Target upgrades** | 1 |

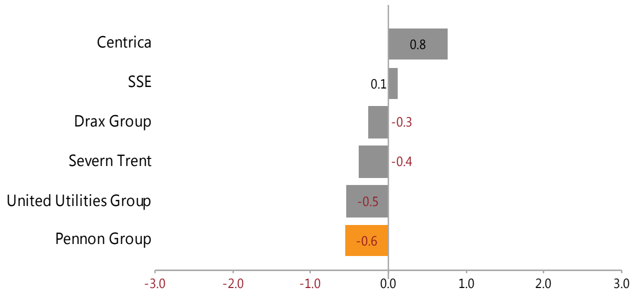



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Europe) and Global sector (Utilities)

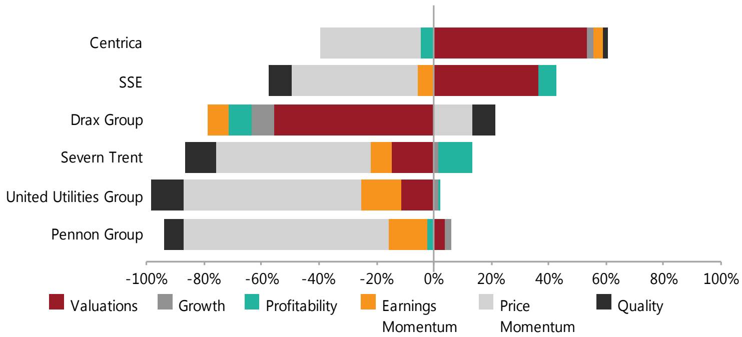
### Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



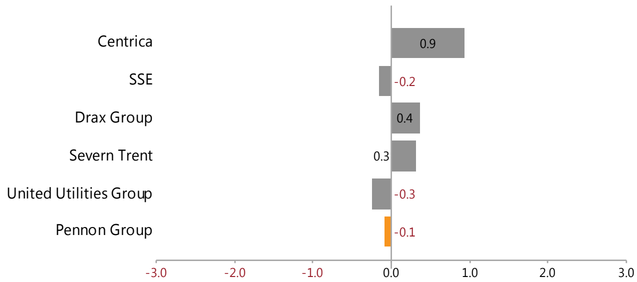

### Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



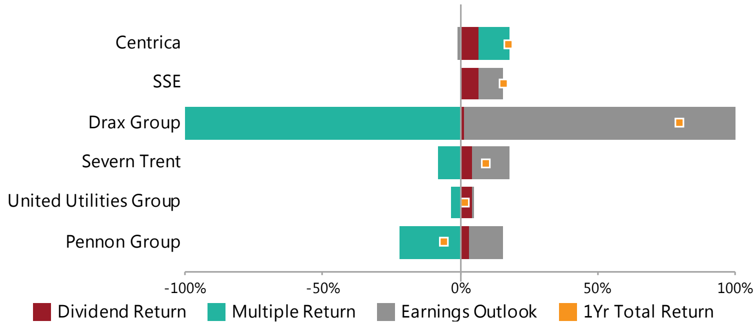

### Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



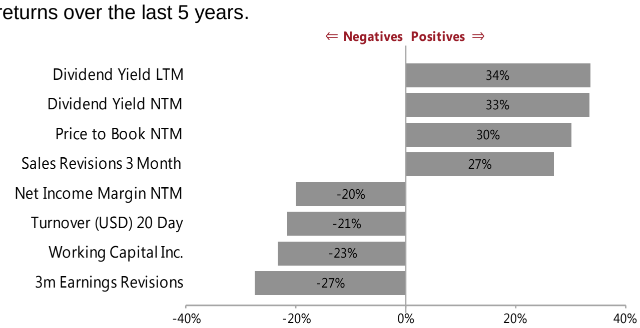

### Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.




### What drove this Company in the last 5 years

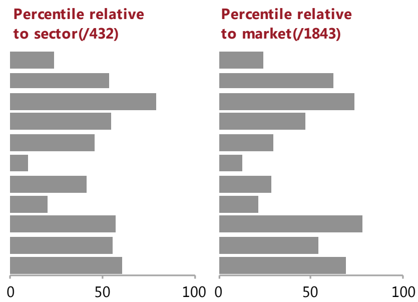
Which factor score has had the greatest correlation with the company's returns over the last 5 years.




### How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.

| | Normalized Score |
|---|---|
| Alpha Model Score | -0.56 |
| Valuation | 0.03 |
| Growth | 0.18 |
| Profitability | -0.19 |
| Earnings Momentum | -0.18 |
| Price Momentum | -0.80 |
| Quality | -0.23 |
| Capital & Funding | -0.32 |
| Liquidity | -0.69 |
| Risk | -0.03 |
| Technicals & Trading | 0.30 |




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

**UNITED KINGDOM**

**SVT LN** Outperform

**Price** (at 22:45, 07 Apr 2017 GMT) £24.03

| | | |
|---|---|---|
| **Valuation** - DCF (WACC 4.1%, beta 0.8, ERP 5.0%) | **£** | **25.70** |
| **12-month target** | **£** | **25.70** |
| **12-month TSR** | **%** | **+10.4** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **£m** | **5,664** |
| **Market cap** | **US$m** | **7,078** |
| **30-day avg turnover** | **£m** | **15.2** |
| **Number shares on issue** | **m** | **235.7** |

**Investment fundamentals**

| Year end 31 Mar | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue | m | 1,776.5 | 1,820.4 | 1,865.0 | 1,936.4 |
| EBITDA | m | 838.4 | 844.2 | 864.4 | 919.8 |
| EBIT | m | 522.8 | 515.0 | 523.8 | 567.8 |
| Reported profit | m | 330.7 | 250.1 | 251.3 | 277.1 |
| Adjusted profit | m | 256.7 | 250.1 | 251.3 | 277.1 |
| Gross cashflow | m | 595.3 | 602.3 | 614.9 | 652.2 |
| CFPS | £ | 2.52 | 2.56 | 2.61 | 2.77 |
| CFPS growth | % | 5.3 | 1.6 | 2.1 | 6.1 |
| PGCFPS | x | 9.5 | 9.4 | 9.2 | 8.7 |
| EPS adj | £ | 1.09 | 1.06 | 1.07 | 1.18 |
| EPS adj growth | % | 1.4 | -2.2 | 0.5 | 10.3 |
| PER adj | x | 22.1 | 22.6 | 22.5 | 20.4 |
| Total DPS | £ | 0.81 | 0.82 | 0.83 | 0.86 |
| Total div yield | % | 3.4 | 3.4 | 3.5 | 3.6 |
| ROA | % | 6.4 | 6.0 | 5.9 | 6.2 |
| ROE | % | 28.1 | 27.9 | 31.3 | 31.9 |
| EV/EBITDA | x | 12.7 | 12.6 | 12.3 | 11.6 |
| Net debt/equity | % | 456.6 | 669.3 | 652.5 | 627.8 |
| P/BV | x | 5.6 | 7.3 | 6.8 | 6.2 |

Source: FactSet, Macquarie Research, April 2017
(all figures in GBP unless noted)

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11 April 2017
Macquarie Capital (Europe) Limited

# Severn Trent

## Still our preferred water stock

### Severn Trent has highest RAB growth in sector

Severn Trent ticks the wish list of our preferred water stock for four reasons: i) strong RAB growth (25% rise 2015 to 2020e) ii) strong RORE performance (11-12%), iii) we see it maintaining outperformance in the next review and iv) the lowest water bills in the country (£329 in 2016/17 rising to £339 in 2017/18e).

We see RAB continuing to grow through to 2025 at a faster rate than the other water companies at 5% p.a. Severn Trent has one of the lowest RAB/MEA multiples and its central UK location has potential water trading asset build out.

### Sector leading RORE: peaking at 12.3% with high exposure to RPI

Severn Trent tops the list in ODIs, and we estimate it is a top quartile performer on meeting regulatory targets. Whilst Severn Trent is not top class in its cost of debt versus Pennon and United Utilities, it has high exposure to RPI. Every 1% change in RPI increases total return by 2% each year.

### We believe scope for increased dividend payment

The dividend yield is 3.4% for 2017/18e and is currently set to rise at least in line with RPI out to 2020e. We believe the dividend cut in 2015/16 was prudent based on EPS forecasts at the time: c.95p/share for 2016/17e. These EPS expectations have now risen to c.105p/share (Bloomberg consensus) and once the ODI in-period starts to come through (£18mn in 2017/18e) we could potentially see their ordinary dividend raised.

On top of this we see debt/RAB fall to c.59% in 2019/2020. Raising to the regulatory 62.5% leverage baseline would release a special of c.£400mn, or 170p/share. This is a c.8% special coming from off-balance sheet earnings, which if spread over the remaining three years increases dividend yield to c.6%.

### Valuation is low versus comps

Severn Trent should provide a total annual TSR of c.8.2% each year out to 2020e (using a RPI of 3%).

We have trimmed our 2016/17e and 2017/18e (see Fig 3) to take into account higher inflation, leading to higher financing costs as well as increased set-up costs for retail competition.

PE at 22.5x (2017/18e) looks optically high. However adjusting for IFRS/Regulatory accounting drops this PE to a low 14.0x.

A slightly higher pension liability leads to a marginally lower valuation of 2570p/share (from 2660p/share).

We expect to see a strategy develop for their retail JV (Water Plus) through 2017 – where we see a potential mini-Centrica in the making (is the 'Plus' in the name a clue...?)

We estimate that SVT is trading at a 19% premium to March 2018e RAB, and this falls to a 13% premium to RAB in March 2020e. A 40% premium to RAB valuation, in line with recent M&A multiples would value SVT at 3180p/share.

## Inside



# Severn Trent

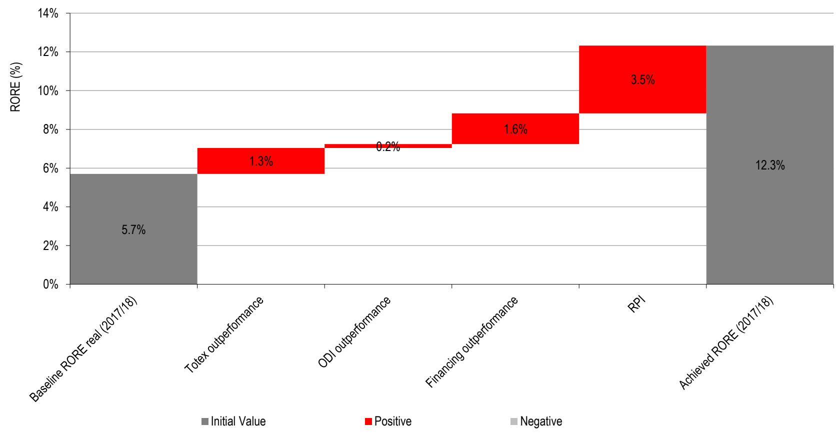
## Still our preferred water company

Severn Trent is a water and wastewater company operating in central England and Wales. It is the third largest water company in the UK with an RCV of c.£8.8bn and 4.3mn properties served.

Its network business is regulated by Ofwat, and the current review runs to March 2020. Its non-household retail business has been folded into a JV with United Utilities and its household retail business is regulated with a 1% margin.

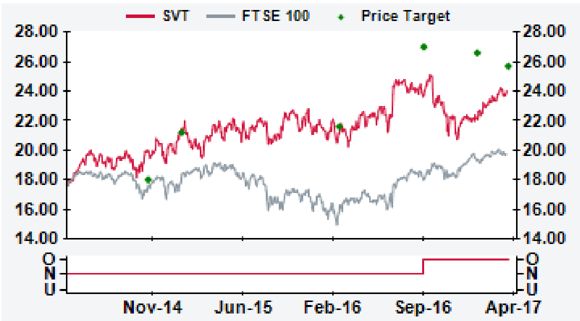
Severn Trent has a material renewable energy and services division.

**Fig 1 We see Severn Trent achieving a 12.3% RORE in 2017/18e**




Source: Ofwat, Macquarie Research estimates, April 2017

**Fig 2 SVT LN vs FTSE 100, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, April 2017 (all figures in GBP unless noted)

# Still our preferred water stock

## Severn Trent has highest RAB growth and good ROREs

### Fig 3 We have made some modest adjustments to SVT EPS and valuation

| Severn Trent | 2016A | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| New EPS (adjusted) p/share | 108.7 | 106.3 | 106.8 | 117.8 | 117.3 |
| Old EPS (adjusted) p/share | 108.7 | 107.5 | 115.0 | 116.0 | 117.2 |
| % change | 0% | -1% | -7% | 2% | 0% |
| | | | | | |
| PBT new £mn | 313.6 | 306.6 | 308.0 | 339.5 | 337.9 |
| PBT old £mn | 313.6 | 306.1 | 327.3 | 330.2 | 333.8 |
| % change | 0% | 0% | -6% | 3% | 1% |
| | | | | | |
| Price target new p/share | 2,570 | | Rec new | Outperform | |
| Price target old p/share | 2,660 | | Rec old | Outperform | |
| % change | -3% | | | | |

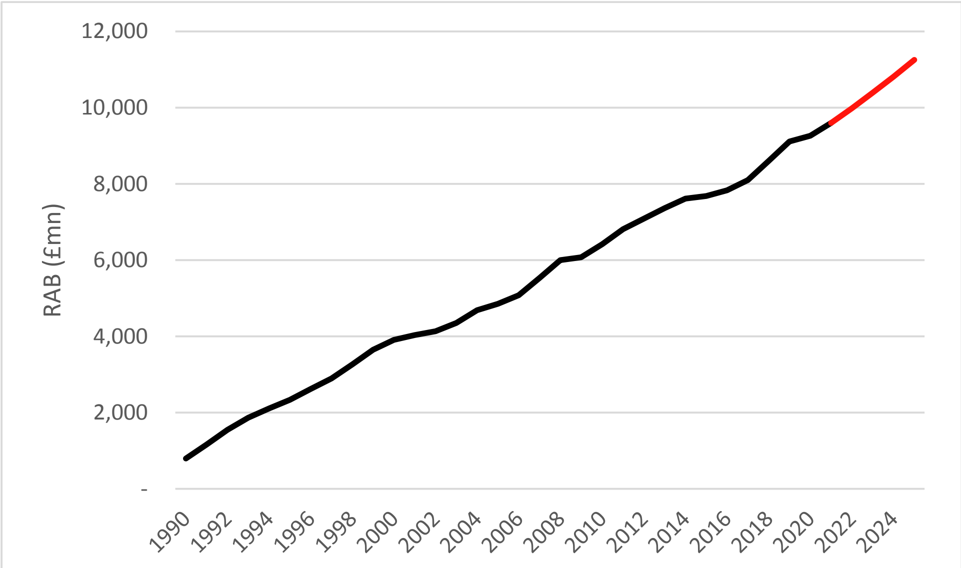
Source: Company data, Macquarie Research, April 2017

### Fig 4 We see Severn Trent achieving an 8.2% annual TSR out to 2020

| Severn Trent | Mar-17e | Mar-18e | Mar-19e | Mar-20e |
|---|---|---|---|---|
| price paid (p/share) | 2,403.0 | | | |
| dividend (p/share) | 61.5 | 83.3 | 86.2 | 88.8 |
| | | | | |
| RCV (£mn) | | | | 9,675 |
| Adjustments (£mn) | | | | (296) |
| exit multiple (x) | | | | 1.2 |
| Retail | | | | 575 |
| | | | | 12,017 |
| Other (£mn) | | | | 354 |
| net debt (£mn) | | | | (5,740) |
| provisions and other (£mn) | | | | (320) |
| | | | | |
| Equity exit value (£mn) | | | | 6,311 |
| Shares (#) | | | | 235 |
| Exit price (p/share) | | | | 2,683.22 |
| | | | | |
| Total equity return (p/share) | (2,341.5) | 83.3 | 86.2 | 2,772.0 |
| | | | | |
| **Total return** | **8.2%** | **IRR** | | |

Source: Macquarie Research, April 2017

**Fig 5 Severn Trent has solid RAB growth where we estimate it to be c.5% per annum**




Source: Ofwat, Company data, Macquarie Research estimates, April 2017

**Fig 6 Our valuation for Severn Trent is 2570p/share, with a higher pension shortfall being the main contributor to the lower valuation**

| Mar-18 | Value £mn | premium to RAB | £ per share |
|---|---|---|---|
| **Water & sewerage** | | | |
| Water RCV | 4,183 | | 17.78 |
| Dee Valley | 80 | | 0.34 |
| Totex outperformance | 7 | | 0.03 |
| ODI outperformance | 9 | | 0.04 |
| CIS adjustment | (61) | | |
| Outperformance | 1,072 | | 4.56 |
| Total value | 5,290 | 24.1% | 22.49 |
| | | | |
| **Wastewater RCV** | **4,561** | | **19.39** |
| Totex outperformance | (39) | | (0.16) |
| ODI outperformance | 31 | | 0.13 |
| CIS adjustment | (69) | | |
| Outperformance | 1,129 | | 4.80 |
| Total value | 5,613 | 23.1% | 23.86 |
| Embedded debt | (114) | | (0.49) |
| Total regulated value | 10,789 | 23.4% | 45.87 |
| | | | |
| Household retail | 460 | | 1.96 |
| Non-household retail (50% JV) | 115 | | 0.49 |
| Water techs and services | 383 | | 1.63 |
| Other | (29) | | (0.12) |
| Total | 11,718 | | 49.82 |
| Net debt | (5,311) | | (22.58) |
| | | | |
| Pension | (370) | | (1.57) |
| Other (incl deferred tax) | - | | - |
| Total provisions | (370) | | (1.57) |
| | | | |
| **Equity value** | **6,036** | | **25.66** |
| No. shares | 235.2 | | |

Source: Macquarie Research, April 2017

## Summary financials

### Fig 7 SVT summary financials

| Units (£mn) | 2015 | 2016 | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|
| PBT | 148 | 322 | 307 | 308 | 340 | 338 |
| PBT growth (%) | -54% | 117% | -5% | 0% | 10% | 0% |
| PBT (norm) | 300 | 314 | 307 | 308 | 340 | 338 |
| PBT growth (norm) (%) | 9% | 4% | -2% | 0% | 10% | 0% |
| EPS (post-deferred tax, post-exceptional, post-goodwill) | 47.9 | 140.1 | 106.3 | 106.8 | 117.8 | 117.3 |
| | | 0.505 | | | | |
| Eps (adjusted) | 107.2 | 108.7 | 106.3 | 106.8 | 117.8 | 117.3 |
| | | | cons 105.9 | | | |
| EPS growth (%) | 16% | 1% | -2% | 0% | 10% | 0% |
| PE (x) | 22.4 | 22.1 | 22.6 | 22.5 | 20.4 | 20.5 |
| Dps (p/share) | 84.9 | 80.7 | 81.5 | 83.3 | 86.2 | 88.8 |
| Dps growth (%) | 6% | -5% | 1% | 2% | 4% | 3% |
| Dividend cover (x) | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.3 |
| Dividend yield (%) | 3.5% | 3.4% | 3.4% | 3.5% | 3.6% | 3.7% |
| | 2.6% | 0.7% | | | | |
| EBITDA | 832.9 | 838.4 | 844.2 | 864.4 | 919.8 | 926.5 |
| EV/EBITDA (x) | 13.0 | 13.0 | 13.2 | 13.1 | 12.6 | 12.7 |
| No. of shares (end-year) | 239 | 235 | 235 | 235 | 235 | 235 |
| No. of shares (year average) | 239 | 236 | 235 | 235 | 235 | 235 |
| EBIT interest cover (x) | 2.4 | 2.7 | 2.7 | 2.6 | 2.6 | 2.6 |
| FFO Interest cover (x) | 2.4 | 2.9 | 3.0 | 2.9 | 2.8 | 2.9 |
| FFO/net debt (%) | 11.5% | 11.8% | 11.5% | 11.1% | 11.2% | 11.0% |
| FFO-capex/interest (x) | 0.27 | 0.84 | 0.51 | (0.18) | (0.29) | 0.15 |
| Water RAB (nominal) year end | | 3,696 | 3,914 | 4,183 | 4,431 | 4,629 |
| Wastewater RAB (nominal) year end | | 4,133 | 4,321 | 4,561 | 4,789 | 4,966 |
| | | | 80 | 80 | 80 | 80 |
| RAB total | 7,740 | 7,829 | 8,315 | 8,824 | 9,299 | 9,675 |
| Totex total wholesale business | | 1,017 | 1,146 | 1,241 | 1,275 | 1,221 |
| IRE total | | 126 | 150 | 156 | 150 | 152 |
| Capex total (IFRS) | | 410 | 485 | 627 | 687 | 598 |
| Water debt | 5,081 | 5,171 | 5,327 | 5,615 | 5,954 | 6,193 |
| Water debt / RAB (%) | 66% | 66% | 64% | 64% | 64% | 64% |
| Group debt / RAB (%) | 61.4% | 61.9% | 61.1% | 60.2% | 59.9% | 59.3% |
| Totex ROE | | 0.7% | 1.3% | 1.3% | 1.2% | 0.9% |
| ODI ROE | | 0.7% | 0.7% | 0.2% | 0.2% | 0.2% |
| Financing outperformance | | -0.2% | 0.5% | 1.6% | 1.0% | 0.8% |

Source: Company data, Macquarie Research, April 2017

## Fig 8 SVT Profit and Loss summary

| **Income Statement Summary** | | **2015** | **2016** | **2017E** | **2018E** | **2019E** | **2020E** |
|---|---|---|---|---|---|---|---|
| Water | £mn | 1,581 | 681 | 681 | 670 | 705 | 731 |
| Wastewater | £mn | - | 708 | 718 | 755 | 780 | 784 |
| Retail | £mn | - | 118 | 117 | 121 | 123 | 125 |
| Total regulated | | 1,581 | 1,506 | 1,516 | 1,545 | 1,609 | 1,640 |
| Severn Trent Services | £mn | 216 | 233 | 260 | 269 | 271 | 272 |
| Corporate costs and other | £mn | 4 | 3 | 3 | 3 | 3 | 4 |
| Inter-segment trading | £mn | -7 | -7 | -7 | -7 | -8 | -8 |
| Total turnover | £mn | 3,599 | 1,777 | 1,820 | 1,865 | 1,936 | 1,976 |
| | | | | | | | |
| EBITDA | | | | | | | |
| Regulated water and wastewater | £mn | 827.4 | 799.2 | 807.9 | 822.9 | 873.4 | 875.2 |
| Business services | £mn | 14.1 | 21.4 | 22.6 | 23.1 | 23.1 | 23.2 |
| Corporate costs and other | £mn | (8.6) | (10.1) | (8.1) | (8.3) | (8.5) | (8.7) |
| Total | £mn | 832.9 | 838.4 | 844.2 | 864.4 | 919.8 | 926.5 |
| | | | | | | | |
| EBITA | | | | | | | |
| Regulated water and wastewater | £mn | 539.0 | 492.1 | 490.8 | 495.8 | 536.3 | 528.1 |
| Services | £mn | 9.7 | 10.7 | 11.9 | 12.4 | 12.4 | 12.5 |
| Corporate costs and other | £mn | (8.4) | (7.5) | (8.1) | (8.3) | (8.5) | (8.7) |
| Operating profit (pre-goodwill, pre-exceptional) | £mn | 540.3 | 522.8 | 515.0 | 523.8 | 567.8 | 563.0 |
| | | | | | | | |
| Net interest | £mn | (226) | (195) | (192) | (205) | (220) | (219) |
| | | | | | | | |
| Profit before tax (pre-exceptional) | £mn | 300.4 | 313.6 | 306.6 | 308.0 | 339.5 | 337.9 |
| Profit before tax (post-exceptional, post fair value) | £mn | 148.2 | 322.3 | 306.6 | 308.0 | 339.5 | 337.9 |
| | | | | | | | |
| Tax current | £mn | (44.3) | (55.6) | (55.2) | (55.4) | (61.1) | (60.8) |
| Deferred tax | £mn | 5.1 | (13.7) | - | - | - | - |
| | | | | | | | |
| Net income (adjusted for EPS) | £mn | 256.0 | 256.6 | 250.1 | 251.3 | 277.1 | 275.8 |
| Net income | £mn | 114.4 | 330.7 | 250.1 | 251.3 | 277.1 | 275.8 |
| | | | | | | | |
| Ordinary dividends | £mn | (203) | (190) | (192) | (196) | (203) | (209) |
| Retained profit | £mn | (88) | 140 | 58 | 55 | 74 | 67 |

Source: Company data, Macquarie Research, April 2017

## Fig 9 SVT Balance sheet summary

| **Balance Sheet** | | **2015** | **2016** | **2017E** | **2018E** | **2019E** | **2020E** |
|---|---|---|---|---|---|---|---|
| Intangible assets | £mn | 81 | 87 | 65.3 | 43.6 | 21.9 | 0.2 |
| Tangible assets | £mn | 7,240 | 7,719 | 8,036 | 8,344 | 8,701 | 8,957 |
| Investments | £mn | 5 | 5 | 5 | 5 | 5 | 5 |
| Tangible fixed assets | £mn | 7,326 | 7,811 | 8,106 | 8,393 | 8,728 | 8,963 |
| Stocks | £mn | 17 | 21 | 21 | 21 | 21 | 21 |
| Debtors | £mn | 611 | 517 | 517 | 517 | 517 | 517 |
| Creditors < 1 year | £mn | (529) | (465) | (465) | (465) | (465) | (465) |
| Net current assets excluding cash | £mn | 99 | 72 | 72 | 72 | 72 | 72 |
| Net cash/(debt) | £mn | (4,750) | (4,852) | (5,089) | (5,320) | (5,581) | (5,748) |
| Adjusted net debt financial derivatives | £mn | (3) | 28 | 28 | 28 | 28 | 28 |
| Adjusted net debt quoted | £mn | (4,753) | (4,843) | (5,080) | (5,311) | (5,572) | (5,740) |
| Derivatives | £mn | (180) | (138) | (138) | (138) | (138) | (138) |
| Creditors > 1 year | £mn | (1,167) | (1,536) | (1,536) | (1,536) | (1,536) | (1,536) |
| Provisions | £mn | (503) | (340) | (640) | (640) | (640) | (640) |
| Net assets | £mn | 823 | 1,019 | 777 | 832 | 907 | 974 |
| Ordinary share capital | £mn | (234) | (234) | (234) | (234) | (234) | (234) |
| Non-equity share capital | £mn | 0 | 0 | 0 | 0 | 0 | 0 |
| Share premium | £mn | (100) | (107) | (107) | (107) | (107) | (107) |
| Other reserves | £mn | (98) | (117) | (117) | (117) | (117) | (117) |
| Capital redemption reserve | £mn | 0 | 0 | 0 | 0 | 0 | 0 |
| Profit and loss account | £mn | (378) | (560) | (318) | (374) | (448) | (515) |
| Minority | £mn | (13) | (1) | (1) | (1) | (1) | (1) |
| | £mn | (823) | (1,019) | (777) | (832) | (907) | (974) |

Source: Company data, Macquarie Research, April 2017

## Fig 10 SVT cashflow summary

| Cash Flow Statement | | 2015 | 2016 | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|---|
| EBITDA + JVs | | 833.0 | 838.5 | 842.2 | 867.9 | 926.4 | 935.2 |
| Operating cash flow (EBIT (pre-goodwill, pre exceptional) + JVs) | £mn | 540.4 | 522.9 | 513.0 | 527.3 | 574.3 | 571.7 |
| Depreciation and amortisation | | | | | | | |
| Water & sewerage | £mn | 288.4 | 129.0 | 134.0 | 139.0 | 144.0 | 149.0 |
| Business services | £mn | 4.4 | 10.7 | 12.1 | 13.5 | 15.0 | 16.4 |
| Corporate costs and other | £mn | (0.2) | (2.2) | 0.0 | 0.0 | 0.0 | 0.0 |
| Depreciation and amortisation total | £mn | 292.6 | 315.6 | 329.2 | 340.6 | 352.1 | 363.5 |
| | | | | | | | |
| Tax (cash tax) | £mn | (44.3) | (55.6) | (55.2) | (55.4) | (61.1) | (60.8) |
| Cashflow from operations | £mn | 788.7 | 782.9 | 787.0 | 812.5 | 865.2 | 874.3 |
| Total Capex incl intangibles | £mn | (522.2) | (410.0) | (484.6) | (627.2) | (687.3) | (598.0) |
| Net capex into cashflows | £mn | (487.0) | (410.0) | (484.6) | (627.2) | (687.3) | (598.0) |
| | | | | | | | |
| Operating cashflow | £mn | 301.7 | 372.9 | 302.3 | 185.3 | 178.0 | 276.3 |
| Cashflow from changes in working capital | £mn | (30.0) | 36.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Interest charges and return from investments | £mn | (240.0) | (209.3) | (206.4) | (219.3) | (234.8) | (233.7) |
| Minorities | £mn | (1.1) | (1.3) | (1.3) | (1.3) | (1.3) | (1.3) |
| Cash to equity (pre-exceptional) | £mn | 30.6 | 198.4 | (45.4) | (35.3) | (58.1) | 41.3 |
| Ordinary dividends paid | £mn | (202.7) | (190.4) | (191.7) | (195.9) | (202.7) | (208.8) |
| Cashflow from exceptionals (net of tax) | £mn | 40.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cash after dividends | £mn | (132.1) | (90.6) | (237.1) | (231.2) | (260.9) | (167.5) |

Source: Company data, Macquarie Research, April 2017

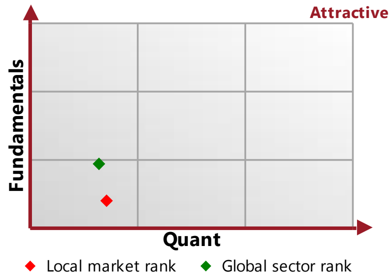
## Macquarie Quant View

The quant model currently holds a reasonably negative view on Severn Trent. The strongest style exposure is Profitability, indicating this stock is efficiently converting investments to earnings; proxied by ratios like ROE or ROA. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**340/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 20% (2/10) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 0 |

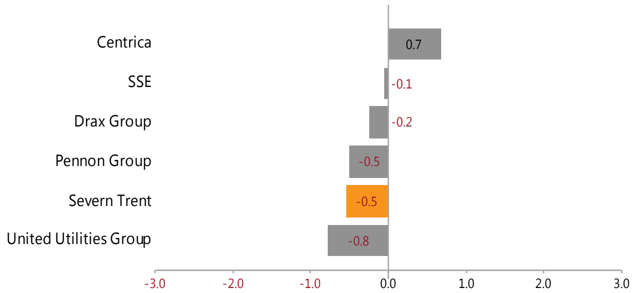



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Europe) and Global sector (Utilities)

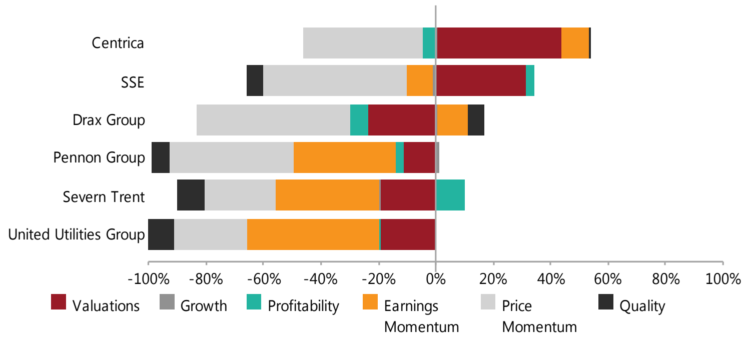
### Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



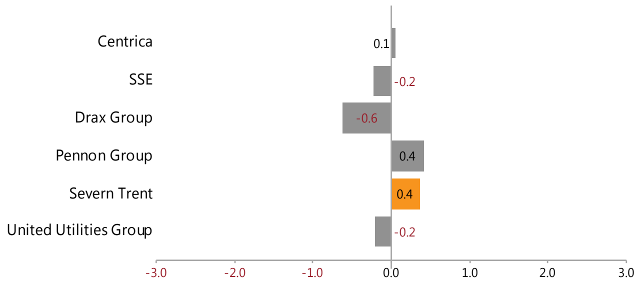

### Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



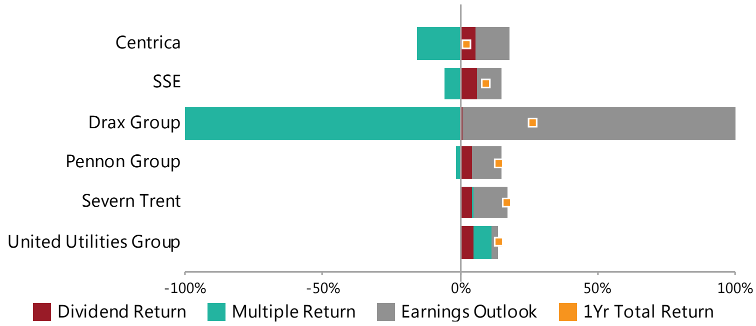

### Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



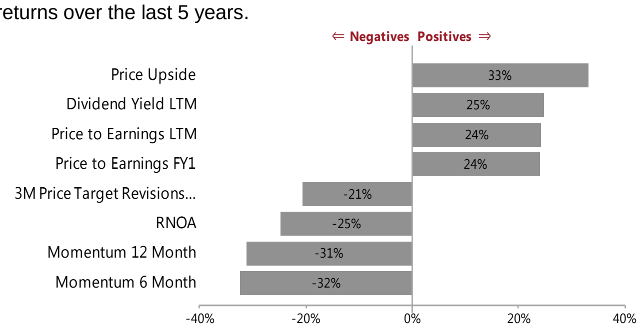

### Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



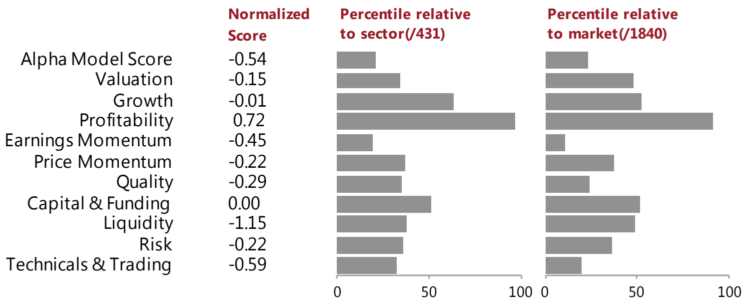

### What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




### How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## FRANCE

**SEV FP** Outperform

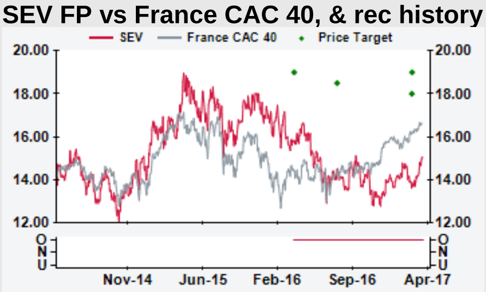
**Price** (at 15:47, 07 Apr 2017 GMT) €15.04

| | | |
|---|---|---|
| **Valuation** | **€** | **19.00** |
| - DCF (WACC 6.9%, beta 1.0, ERP 5.0%, RFR 4.1%) | | |
| **12-month target** | **€** | **19.00** |
| **12-month TSR** | **%** | **+30.7** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **€m** | **8,509** |
| **Market cap** | **US$m** | **9,068** |
| **30-day avg turnover** | **€m** | **19.8** |
| **Number shares on issue** | **m** | **565.9** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue | m | 15,332 | 16,280 | 18,418 | 18,997 |
| EBITDA | m | 2,651 | 2,795 | 3,135 | 3,297 |
| EBIT | m | 1,290 | 1,351 | 1,604 | 1,767 |
| Reported profit | m | 420 | 499 | 636 | 733 |
| Adjusted profit | m | 420 | 499 | 636 | 733 |
| Gross cashflow | m | 1,983 | 2,159 | 2,421 | 2,536 |
| CFPS | € | 3.62 | 3.75 | 3.90 | 4.09 |
| CFPS growth | % | -9.6 | 3.4 | 4.2 | 4.8 |
| PGCFPS | x | 4.1 | 4.0 | 3.9 | 3.7 |
| EPS adj | € | 0.77 | 0.87 | 1.03 | 1.18 |
| EPS adj growth | % | 0.5 | 12.9 | 18.4 | 15.1 |
| PER adj | x | 19.6 | 17.3 | 14.7 | 12.7 |
| Total DPS | € | 0.65 | 0.65 | 0.67 | 0.77 |
| Total div yield | % | 4.3 | 4.3 | 4.5 | 5.1 |
| ROA | % | 4.5 | 4.4 | 5.0 | 5.4 |
| ROE | % | 7.7 | 9.0 | 11.2 | 12.5 |
| Net debt/equity | % | 109.2 | 113.5 | 111.3 | 107.3 |
| P/BV | x | 1.5 | 1.6 | 1.6 | 1.6 |

**SEV FP vs France CAC 40, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, April 2017

(all figures in EUR unless noted)

**Analyst(s)**

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11 April 2017
Macquarie Capital (Europe) Limited

# SUEZ

## US growth opportunity

### Event

- Suez is still our preferred French water & waste company. Our global water report highlights that the US needs to invest a minimum of US$123bn annually (in 2016 dollars) in its water infrastructure over the next decade. This is more than triple the ~US$40bn, which was invested in 2016. We see Suez as a key beneficiary of this development firstly through the purchase of GE Water and secondly through its ownership of the third largest regulated US water utility United Water. We are therefore reiterating our Outperform rating with an unchanged €19.0 price target.

### Impact

- There has been continued market scepticism over the merits of Suez's $3.4bn acquisition of GE Water (70%/30% transaction with CDPQ), which is expected to close in 3Q17. Based on our analysis there is a significant need for investment in US water infrastructure over the next decades. In our view Suez through GE Water is uniquely set up to profit from this development based on its unparalleled industrial water solutions & services platform and leading presence across the entire industrial water value chain, particularly in the US. Around 15% of GE Water's revenue is with municipal clients. This masks the significant exposure of Suez to US local authorities' clients; after closing of the GE Water transaction Suez will have US revenues of ~€2.1bn (half with industrials, half with local authorities including regulated assets).

### Earnings and target price revision

- No change

### Price catalyst

- 12-month price target: €19.00 based on a Sum of Parts methodology.
- Catalyst: 1Q17 results on 10th May 2017

### Action and recommendation

- Suez shares have underperformed the European utility sector by ~5% since the first press speculation emerged mid of February of a possible bidding interest in the GE Water assets. Based on the transaction being EPS accretive reaching 10% in 2019 and the ~€1.0/share value creation, we see this underperformance as unjustified. Although there might be concerns that Suez overpaid we believe the ultimate market assessment of the deal will be positive based on the historic importance of the EPS evolution for Suez.
- We see an attractive investment case in Suez (GE Water deal, cost cutting, regulated exposure, possible Engie buyout and waste recovery). Shares are trading at a 2018E PE of ~15x with a 2016E- 20E EPS CAGR of ~14% (of which ~50% is self-help), with a dividend yield of ~4.3% in 2017E reaching ~6% in 2020.

## Analysis

### Fig 1 Suez – Sum-of-the-parts analysis

| Business units | Valuation (€m) | €/share | Share of EV | Methodology | 2018E Multiples | 2018E EBITDA (€m) |
|---|---|---|---|---|---|---|
| Water Europe | 9,707 | 15.7 | 34% | Multiples | 8.8x | 1,103 |
| Recycling & Recovery Europe | 6,008 | 9.7 | 21% | Multiples | 8.0x | 751 |
| International | 8,662 | 14.0 | 30% | Multiples | 10.5x | 828 |
| - United Water | 3,271 | 5.3 | 11% | Premium to Rate Base | 180% | 1,817 |
| - Other International | 5,391 | 8.7 | 19% | Multiples | 9.6x | 559 |
| GE Water | 4,158 | 6.7 | 15% | Multiples | | |
| Other | (879) | (1.4) | (3%) | Multiples | 7.0x | (126) |
| Core business | 27,656 | 44.6 | 97% | | 10.8x | 2,556 |
| Financial assets | 878 | 1.4 | 3% | 2016A BV | | |
| **Group EV** | **28,535** | **46.0** | **100%** | | **11.2x** | **2,556** |
| Net Debt | (9,142) | (14.7) | (32%) | 2016A BV, ex hybrid | | |
| Hybrid Debt | (1,550) | (2.5) | (5%) | 2016A BV | | |
| Provisions | (1,370) | (2.2) | (5%) | 2016A BV | | |
| Minorities | (4,690) | (7.6) | (16%) | 17.5x 2016A PE | | |
| **Equity** | **11,783** | **19.0** | **41%** | | | |
| Shares outstanding (m) | 620.2 | | | | | |
| **Equity value (€ / share)** | **19.0** | | | | | |

Source: Macquarie Research, April 2017

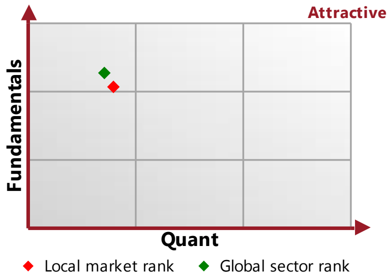
## Macquarie Quant View

The quant model currently holds a marginally negative view on SUEZ. The strongest style exposure is Valuations, indicating this stock is under-priced in the market relative to its peers. The weakest style exposure is Price Momentum, indicating this stock has had weak medium to long term returns which often persist into the future.

**330/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 72% (13/18) |
| **Number of Price Target downgrades** | 8 |
| **Number of Price Target upgrades** | 3 |

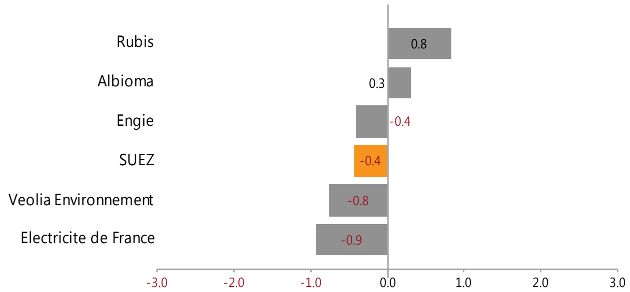



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Europe) and Global sector (Utilities)

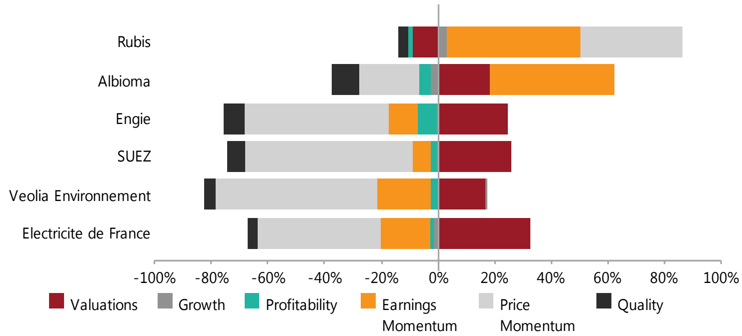
### Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



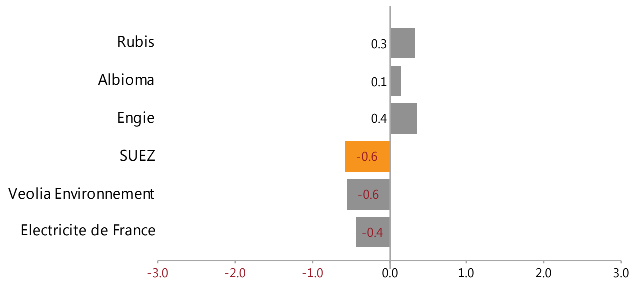

### Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



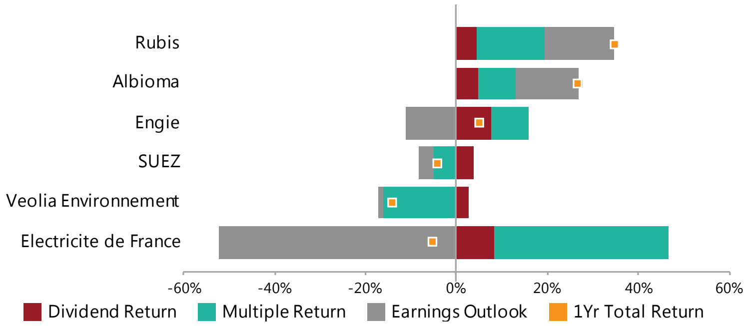

### Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



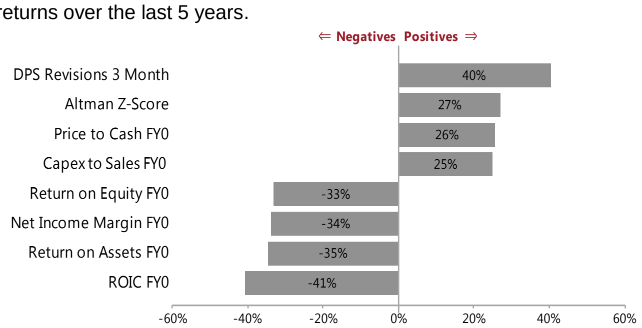

### Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



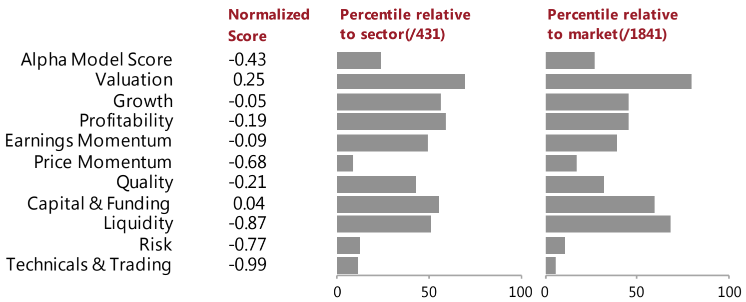

### What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




### How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

**UNITED KINGDOM**

| | |
|---|---|
| UU/ LN | Neutral |
| **Price** (at 22:45, 07 Apr 2017 GMT) | £10.03 |

| | | |
|---|---|---|
| **Valuation** - DCF (WACC 4.1%) | £ | 10.40 |
| **12-month target** | £ | 10.40 |
| **12-month TSR** | % | +7.7 |
| **GICS sector** | | Utilities |
| **Market cap** | £m | 6,839 |
| **Market cap** | US$m | 8,547 |
| **30-day avg turnover** | £m | 18.3 |
| **Number shares on issue** | m | 681.9 |

**Investment fundamentals**

| Year end 31 Mar | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue | m | 1,730.0 | 1,703.2 | 1,728.7 | 1,797.4 |
| EBITDA | m | 967.8 | 988.5 | 1,014.3 | 1,073.1 |
| EBIT | m | 604.1 | 613.3 | 630.1 | 673.9 |
| Reported profit | m | 397.5 | 367.5 | 288.9 | 306.8 |
| Adjusted profit | m | 325.3 | 307.5 | 288.9 | 306.8 |
| Gross cashflow | m | 689.0 | 682.7 | 673.1 | 706.0 |
| CFPS | £ | 1.01 | 1.00 | 0.99 | 1.04 |
| CFPS growth | % | -2.5 | -0.9 | -1.4 | 4.9 |
| PGCFPS | x | 9.9 | 10.0 | 10.2 | 9.7 |
| EPS adj | £ | 0.48 | 0.45 | 0.42 | 0.45 |
| EPS adj growth | % | -8.1 | -5.5 | -6.1 | 6.2 |
| PER adj | x | 21.0 | 22.2 | 23.7 | 22.3 |
| Total DPS | £ | 0.38 | 0.39 | 0.40 | 0.41 |
| Total div yield | % | 3.8 | 3.9 | 4.0 | 4.1 |
| ROA | % | 5.6 | 5.5 | 5.6 | 5.9 |
| ROE | % | 12.8 | 11.4 | 10.5 | 11.1 |
| EV/EBITDA | x | 13.8 | 13.5 | 13.1 | 12.4 |
| Net debt/equity | % | 232.2 | 236.6 | 242.9 | 247.0 |
| P/BV | x | 2.6 | 2.5 | 2.5 | 2.5 |

Source: FactSet, Macquarie Research, April 2017
(all figures in GBP unless noted)

**Analyst(s)**
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11 April 2017
Macquarie Capital (Europe) Limited

# United Utilities Group

## Downgrade to Neutral

### RORE to peak at 12%, but trading at our TP

Whilst United Utilities scores weakly on ODIs and totex outperformance, it has amongst the lowest cost of debt in UK water companies. Consequently we see its RORE peaking at c.12% in this review. This should underpin a 17.5% premium to RAB valuation in our view (March 2018.)

We see allowed 'baseline' RORE at 7.5% nominal (c.4.5% real, RPI-only, with RPI at 3%) in the next review, but that United Utilities should be able to Outperform by between 50-100bps in the medium term.

We value United Utilities at a 15% premium to RAB in 2020.

### United Utilities is in a weaker position than others

United Utilities has a number of factors which puts it in a structurally challenging environment. These are: i) it has the highest exposure to coming competition in both water resources and sludge trading, ii) high bad debt rates, with amongst the highest rates in the country, iii) lowest RAB growth and iv) a legacy of being a persistent poor performer which takes time to turn around (which we believe management are indeed now doing).

### Pension surplus a plus, but lowest +ve RPI exposure

United Utilities have put into place a pension contribution policy that now means a pension surplus, even as other pension shortfalls have increased.

United Utilities has the highest level of RPI indexed debt out of the listed water companies, and every 1% increase in RPI increases RORE by just 1.5%.

### Trading at our price target: downgrade to Neutral

- We estimate that United Utilities trades at a 15.2% premium to March 2018 RAB, in line with the sector, and at our valuation. We estimate at the current share price, the premium to RAB falls to 12% premium at March 2020.
- Total return is 6.9% annual TSR out to 2020, and we have a 7.7% 12-month TSR. Our new price target is 1040p/share and we therefore downgrade to Neutral.
- Our quant analysis shows a poor score for United Utilities where the stock is ranked in the bottom quartile (see back page).
- Headline 2017/18e PEs, at c.23.7x, look optically high. However once IFRS/regulatory accounting is taken into account and an economic earnings number calculated, PE falls to a reasonable 13.8x.
- Dividend yield, at 4.0% for 2017/18e is in line with the utility sector, however we estimate the debt/RAB position falls to 59% by 2020, and raising leverage to the regulatory 62.5% level would allow up to £400mn special dividend, or c. 7% distribution.
- A 40% premium to RAB would value United Utilities at 1400p/share, 40% upside from here.

## Inside



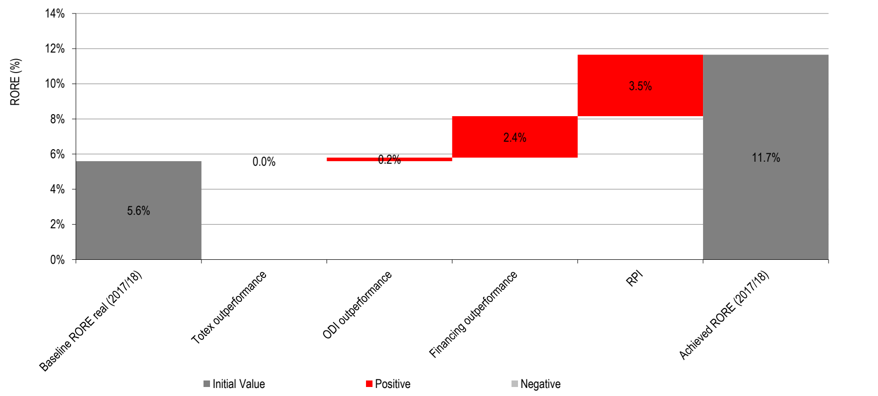
# United Utilities

## Company profile

United Utilities is a water and wastewater company operating in Northwest England and Wales. It is the second largest water company in the UK with a RCV of c.£11.0bn and 3.3mn properties served.

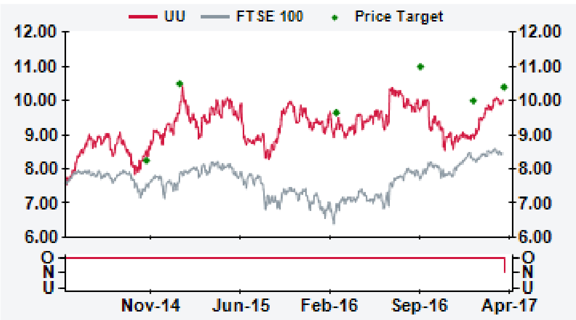
Its network business is regulated by Ofwat, and the current review runs to March 2020. Its non-household retail business has been folded into a JV with Severn Trent and its household retail business is regulated with a 1% margin.

**Fig 1 2017/18e RORE outperformance is driven by financing rather than totex**




Source: Ofwat, Macquarie Estimates, April 2017

**Fig 2 UU/ LN vs FTSE 100, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Research, April 2017 (all figures in GBP unless noted)

# Downgrade to Neutral

## We nudge up TP to 1040p/share but after a strong run we downgrade to Neutral

### Fig 3 Summary of earnings and price target change

| United Utilities | 2016A | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| New EPS (adjusted) p/share | 47.7 | 45.1 | 42.4 | 45.0 | 51.7 |
| Old EPS (adjusted) p/share | 47.7 | 44.9 | 44.8 | 46.2 | 51.8 |
| % change | 0% | 0% | -5% | -3% | 0% |
| PBT new £mn | 408.1 | 384.4 | 361.1 | 383.6 | 440.7 |
| PBT old £mn | 408.1 | 383.0 | 381.7 | 393.5 | 441.6 |
| % change | 0% | 0% | -5% | -3% | 0% |
| Price target new p/share | 1,040 | | | | |
| Price target old p/share | 1,000 | | | | |
| % change | 4% | | | | |

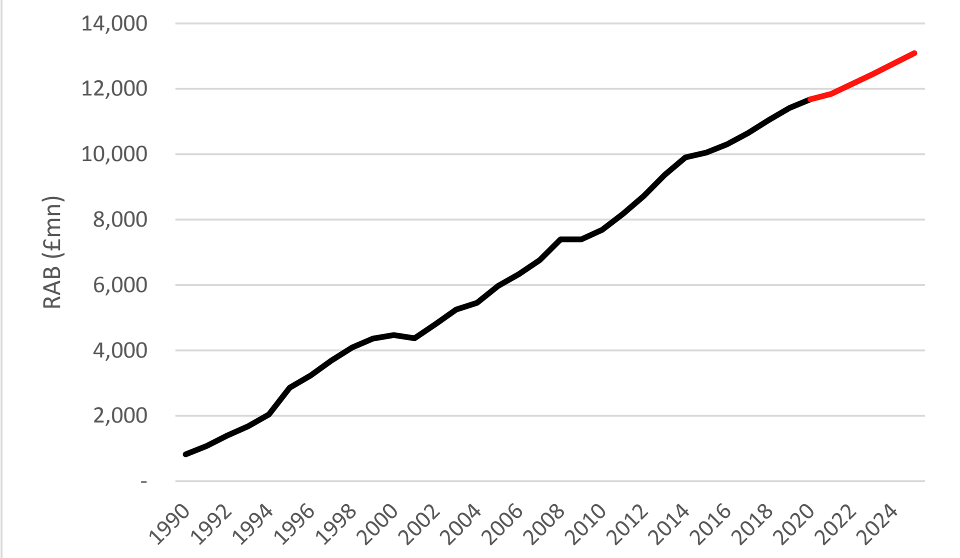
Source: Company reports, Macquarie Research, April 2017

### Fig 4 We estimate United Utilities can deliver an annual TSR return of 7.4%

| United Utilities | Mar-17 | Mar-18 | Mar-19 | Mar-20 |
|---|---|---|---|---|
| price paid (p/share) | 1,003.0 | | | |
| dividend (p/share) | 25.9 | 39.7 | 41.1 | 42.3 |
| RCV adjusted (£mn) | 10,728 | 11,136 | 11,472 | 11,770 |
| Adjustments | | | | (169) |
| exit multiple (x) | | | | 1.15 |
| Retail | | | | 407 |
| | | | | 13,748 |
| Other (£mn) | | | | 200 |
| provisions etc (£mn) | | | | 215 |
| net debt (£mn) | | | | (6,927) |
| Equity exit value (£mn) | | | | 7,237 |
| Shares (mn) | | | | 682 |
| | | | | 1,061.25 |
| Total equity return (p/share) | (977.1) | 39.7 | 41.1 | 1,103.6 |
| Total return | 6.9% | IRR | | |

Source: Macquarie Research, April 2017

**Fig 5 We see nominal RAB growth through to 2025, but see real RAB decline**




Source: Ofwat, Macquarie Research, April 2017

**Fig 6 Our value for United Utilities is 1040p/share**

| **Mar-18** | **Water (£mn)** | **premium to RAB** | **£ per share** |
|---|---|---|---|
| Water & sewerage | | | |
| Water RCV | 3,944 | | 5.78 |
| Totex outperformance | 57 | | 0.08 |
| ODI outperformance | (43) | | -0.06 |
| CIS adjustment | (70) | | |
| Outperformance | 770 | | 1.13 |
| **Total value** | **4,658** | **18.1%** | **6.83** |
| | | | |
| Wastewater RCV | 7,071 | | 10.37 |
| Totex outperformance | 122 | | 0.18 |
| ODI outperformance | 58 | | 0.08 |
| CIS adjustment | (118) | | |
| Outperformance | 1,375 | | 2.02 |
| Total value | 8,508 | 20.3% | 12.48 |
| Embedded debt | (86) | | -0.13 |
| **Adjusted log-up in RAB** | **122** | | |
| **Total regulated value** | **13,080** | **17.5%** | **19.18** |
| | | | |
| Household retail | 292 | | 0.43 |
| Non-household retail (50% JV) | 115 | | 0.17 |
| Tallinn Water, competitive retail, solar panels | 200 | | 0.29 |
| Total | 13,687 | | 20.07 |
| | | | |
| Net debt | (6,811) | | -9.99 |
| Provisions | 215 | | 0.32 |
| **Equity value** | **7,091** | | **10.40** |
| | | | |
| Number of ordinaries fully diluted | 682 | | |

Source: Macquarie Research, April 2017

## Summary financials

### Fig 7 United Utilities Summary financials

| | 2015 | 2016 | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|
| PBT | 342 | 354 | 384 | 361 | 384 | 441 |
| PBT growth | -37% | 3% | 9% | -6% | 6% | 15% |
| PBT (norm) | 447 | 408 | 384 | 361 | 384 | 441 |
| PBT growth (norm) | 15% | -9% | -6% | -6% | 6% | 15% |
| | | | | | | |
| EPS total: headline | 39.8 | 58.3 | 53.9 | 42.4 | 45.0 | 51.7 |
| | 39.8 | 58.3 | | | | |
| EPS adjusted(pre-exceptional, pre-goodwill) | 51.9 | 47.7 | 45.1 | 42.4 | 45.0 | 51.7 |
| | 51.9 | 47.7 | | | | |
| Eps growth | 16% | -8% | -5% | -6% | 6% | 15% |
| PE | 19.3 | 21.0 | 22.2 | 23.7 | 22.3 | 19.4 |
| | | | | | | |
| Dps | 37.70 | 38.4 | 38.9 | 39.7 | 41.1 | 42.3 |
| Dps growth | 5% | 2% | 1% | 2% | 3% | 3% |
| Dividend cover (pre-exceptional, pre-goodwill) | 1.4 | 1.2 | 1.2 | 1.1 | 1.1 | 1.2 |
| Dividend cover (headline) | 1.1 | 1.5 | 1.4 | 1.1 | 1.1 | 1.2 |
| Dividend yield | 3.8% | 3.8% | 3.9% | 4.0% | 4.1% | 4.2% |
| | 5% | -5% | | | | |
| EBITDA | 1,016.9 | 967.8 | 988.5 | 1,014.3 | 1,073.1 | 1,141.6 |
| EV/EBITDA | 12.7 | 13.7 | 13.7 | 13.6 | 13.0 | 12.2 |
| | | | | | | |
| No. of shares (end-year) | 682 | 682 | 682 | 682 | 682 | 682 |
| No. of shares (year average) | 682 | 682 | 682 | 682 | 682 | 682 |
| | | | | | | |
| EBIT Interest cover | 2.9 | 2.8 | 2.6 | 2.3 | 2.2 | 2.4 |
| FFO Interest cover | 2.8 | 3.4 | 3.0 | 2.5 | 2.4 | 2.6 |
| FFO/net debt | 10.6% | 11.1% | 10.6% | 10.1% | 10.3% | 11.3% |
| FFO-capex/interest cover | (0.81) | 0.23 | 0.16 | 0.25 | 0.37 | 1.04 |
| Water RAB (nominal) year end | | 3,718 | 3,820 | 3,944 | 4,077 | 4,145 |
| Wastewater RAB (nominal) year end | | 6,478 | 6,712 | 7,071 | 7,394 | 7,618 |
| RAB total | 10,028 | 10,302 | 10,728 | 11,136 | 11,472 | 11,770 |
| Water debt | 6,402 | 6,368 | 6,353 | 6,339 | 6,360 | 6,284 |
| Water debt / RAB | 64% | 62% | 59% | 57% | 55% | 53% |
| | | | | | | |
| Group debt | 5,924 | 6,261 | 6,596 | 6,811 | 6,965 | 6,927 |
| Group debt / RAB | 59% | 61% | 61% | 61% | 61% | 58.9% |
| | 343 | | | | | |
| | | | | | | |
| Totex ROE | | -2.2% | 0.1% | 0.0% | 0.3% | 1.8% |
| ODI ROE | | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |

Source: Company reports, Macquarie Research, April 2017

## Fig 8 United Utilities summary profit and loss

| Income Statement Summary | | 2015 | 2016 | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|---|
| Water | £mn | 1,720.2 | 707.0 | 720.2 | 732.2 | 768.4 | 800.2 |
| Wastewater | £mn | - | 833.7 | 848.4 | 868.1 | 905.5 | 944.6 |
| Retail revenues | £mn | - | 165.8 | 127.6 | 121.4 | 116.4 | 118.9 |
| Other (Scotland, non-appointed) | £mn | - | 23.5 | 7.0 | 7.0 | 7.0 | 7.0 |
| Total turnover | £mn | 1,720.2 | 1,730.0 | 1,703.2 | 1,728.7 | 1,797.4 | 1,870.7 |
| | | | | | | | |
| Operating costs incl corporate costs | £mn | (1,055.9) | (459.2) | (440.4) | (431.0) | (445.1) | (447.2) |
| | | | | | | | |
| EBITDA | £mn | 1,016.9 | 967.8 | 988.5 | 1,014.3 | 1,073.1 | 1,141.6 |
| | | | | | | | |
| EBIT (pre-goodwill) | | | | | | | |
| Water | | 664.3 | 247.8 | 279.8 | 301.2 | 323.4 | 353.0 |
| Wastewater | | - | 312.5 | 317.0 | 315.6 | 336.8 | 360.2 |
| Retail revenues | | - | 9.5 | 5.9 | 6.4 | 6.8 | 7.2 |
| Other (Scotland, non-appointed) | | - | 34.2 | 10.5 | 7.0 | 7.0 | 7.0 |
| Underlying operating profit (pre-goodwill pre exceptional) | £mn | 664.3 | 604.1 | 613.3 | 630.1 | 673.9 | 727.4 |
| | | | | | | | |
| Exceptionals | £mn | (11.0) | (36.2) | - | - | - | - |
| EBIT (pre-goodwill, post-exceptionals) | £mn | 653.3 | 567.9 | 613.3 | 630.1 | 673.9 | 727.4 |
| | | | | | | | |
| Underlying interest cosst | £mn | (222.0) | (201.0) | (233.7) | (277.5) | (301.9) | (300.4) |
| | | | | | | | |
| Profit before tax (pre-goodwill, pre-exceptional) | £mn | 447.4 | 408.1 | 384.4 | 361.1 | 383.6 | 440.7 |
| | | | | | | | |
| Profit before tax (post-goodwill, post-exceptional) | £mn | 341.6 | 353.5 | 384.4 | 361.1 | 383.6 | 440.7 |
| | | | | | | | |
| Tax (cash) | £mn | (69.3) | (55.2) | (53.8) | (50.6) | (53.7) | (61.7) |
| Tax (deferred) | £mn | (24.0) | (27.6) | (23.1) | (21.7) | (23.0) | (26.4) |
| 0 | £mn | - | - | - | - | - | - |
| Net income (pre execpetional) | £mn | 354.1 | 325.3 | 307.5 | 288.9 | 306.8 | 352.5 |
| Net income headline | £mn | 271.2 | 397.5 | 367.5 | 288.9 | 306.8 | 352.5 |
| Ordinary dividends | £mn | (257.1) | (262.2) | (264.9) | (270.7) | (280.2) | (288.6) |
| Retained profit | £mn | 14.1 | 135.3 | 102.6 | 18.2 | 26.6 | 63.9 |

Source: Company reports, Macquarie Research, April 2017

## Fig 9 United Utilities Balance Sheet

| Balance Sheet | | 2015 | 2016 | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|---|
| Intangible assets | £mn | 145 | 162 | 162 | 162 | 162 | 162 |
| Tangible assets | £mn | 9,716 | 10,047 | 10,318 | 10,533 | 10,722 | 10,759 |
| Investments | £mn | 40 | 44 | 44 | 44 | 44 | 44 |
| Tangible fixed assets | £mn | 9,902 | 10,253 | 10,524 | 10,739 | 10,928 | 10,965 |
| Stocks | £mn | 41 | 29 | 29 | 29 | 29 | 29 |
| Debtors | £mn | 356 | 370 | 370 | 370 | 370 | 370 |
| Creditors < 1 year | £mn | (402) | (354) | (324) | (284) | (244) | (204) |
| Net current assets excluding cash | £mn | (6) | 45 | 75 | 115 | 155 | 195 |
| Reported Net cash/(debt) | £mn | (6,401) | (6,764) | (7,100) | (7,314) | (7,469) | (7,430) |
| derivative positions | £mn | 477 | 504 | 504 | 504 | 504 | 504 |
| Adjusted net debt | | (5,924) | (6,261) | (6,596) | (6,811) | (6,965) | (6,927) |
| Creditors > 1 year | £mn | (480) | (531) | (471) | (471) | (471) | (471) |
| Provisions | £mn | (1,057) | (802) | (825) | (847) | (870) | (896) |
| Net assets | £mn | 2,434 | 2,706 | 2,708 | 2,726 | 2,778 | 2,867 |
| | | | | | | | |
| Ordinary share capital | £mn | (500) | (500) | (500) | (500) | (500) | (500) |
| Non-equity share capital | £mn | 0 | 0 | 0 | 0 | 0 | 0 |
| Share premium | £mn | (3) | (3) | (3) | (3) | (3) | (3) |
| Other reserves | £mn | (321) | (324) | (324) | (324) | (324) | (324) |
| Capital redemption reserve | £mn | 0 | 0 | 0 | 0 | 0 | 0 |
| Profit and loss account | £mn | (1,611) | (1,879) | (1,981) | (2,000) | (2,026) | (2,090) |
| Minority | £mn | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Share Capital | £mn | (2,434) | (2,706) | (2,808) | (2,826) | (2,853) | (2,917) |

Source: Company reports, Macquarie Research, April 2017

## Fig 10 United Utilities Cash flow summary

| Cash Flow Statement | | 2015 | 2016 | 2017E | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|---|---|
| Operating cash flow (EBIT (pre-goodwill, pre exceptional) + JVs) | £mn | 669.4 | 609.1 | 618.1 | 638.7 | 685.4 | 741.1 |
| Depreciation | | | | | | | |
| - water | £mn | 352.6 | 120.6 | 127.6 | 131.6 | 138.6 | 145.6 |
| - retail non-household | £mn | | | | | | |
| - retail non-household | £mn | | | | | | |
| Depreciation and amortisation total | £mn | 352.6 | 363.7 | 375.2 | 384.2 | 399.2 | 414.2 |
| check: from annual report | | | | -375.2 | -384.2 | -399.2 | -414.2 |
| Tax (cash tax) | £mn | -69.3 | -55.2 | -53.8 | -50.6 | -53.7 | -61.7 |
| Cashflow from operations | £mn | 952.7 | 917.6 | 939.5 | 972.3 | 1030.9 | 1093.6 |
| Capex cashflow total | | | | | | | |
| - water | £mn | -746.6 | -188.6 | -198.8 | -242.4 | -245.5 | -204.4 |
| - intangible | | -64.2 | | | | | |
| - grants and dsiposals to get to gross | £mn | | -17.3 | -17.3 | -17.3 | -17.3 | -17.3 |
| - Timing issues | | | | -90.0 | 75.0 | 120.0 | -5.0 |
| Capex cashflow total | £mn | -810.8 | -647.3 | -663.6 | -615.8 | -605.5 | -468.3 |
| - grants and disposals | £mn | 18.1 | 17.3 | 17.3 | 17.3 | 17.3 | 17.3 |
| Capex cashflow total | £mn | -792.7 | -630.0 | -646.3 | -598.6 | -588.2 | -451.1 |
| Operating cashflow | £mn | 160.0 | 287.6 | 293.1 | 373.7 | 442.7 | 642.5 |
| Acquisitions and disposals | £mn | | | | | | |
| Interest charges and return from investments | £mn | -316.8 | -219.4 | -233.7 | -277.5 | -301.9 | -300.4 |
| Cash to equity (pre-exceptional) | £mn | -156.8 | 48.2 | 29.4 | 56.2 | 100.8 | 302.1 |
| Ordinary dividends paid | £mn | -257.1 | -262.2 | -264.9 | -270.7 | -280.2 | -288.6 |
| Cash after dividends | £mn | -402.7 | -239.3 | -235.5 | -214.6 | -179.4 | 13.4 |

Source: Company reports, Macquarie Research, April 2017

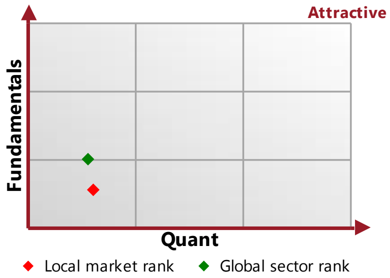
# Macquarie Quant View

The quant model currently holds a reasonably negative view on United Utilities Group. The strongest style exposure is Growth, indicating this stock has good historic and/or forecast growth. Growth metrics focus on both top and bottom line items. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**352/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 42% (5/12) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 2 |

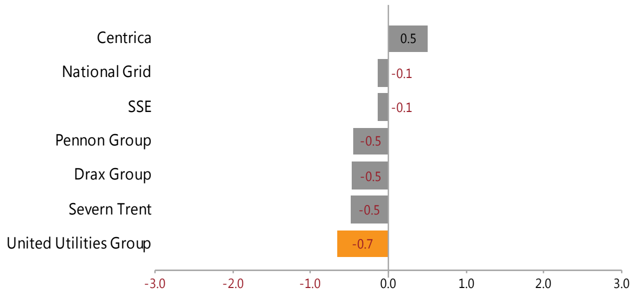



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Europe) and Global sector (Utilities)

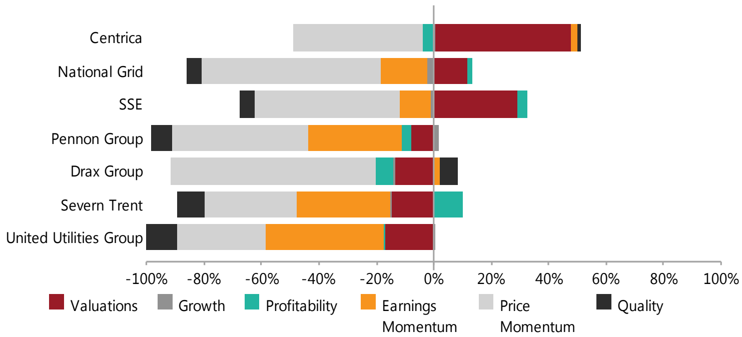
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



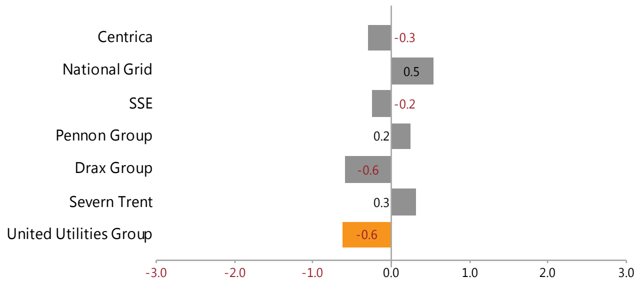

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



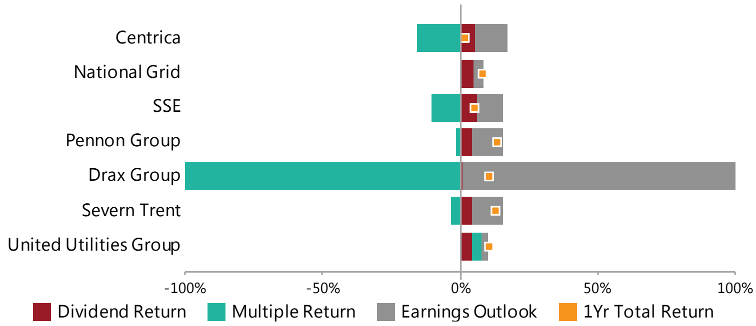

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



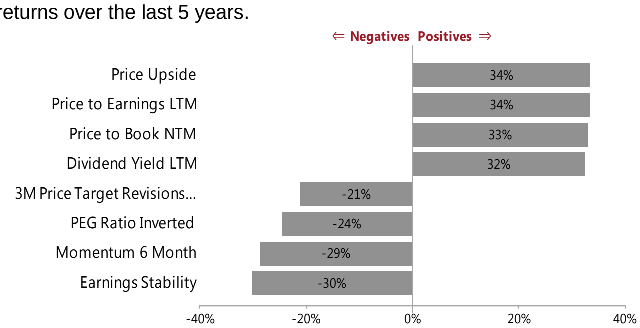

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.




## What drove this Company in the last 5 years

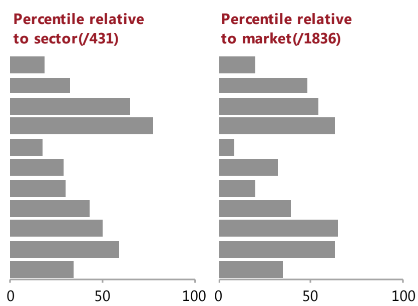
Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.

| | Normalized Score |
|---|---|
| Alpha Model Score | -0.66 |
| Valuation | -0.16 |
| Growth | 0.01 |
| Profitability | -0.02 |
| Earnings Momentum | -0.57 |
| Price Momentum | -0.32 |
| Quality | -0.34 |
| Capital & Funding | -0.08 |
| Liquidity | -0.90 |
| Risk | 0.05 |
| Technicals & Trading | -0.36 |




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

**FRANCE**

**VIE FP** Neutral

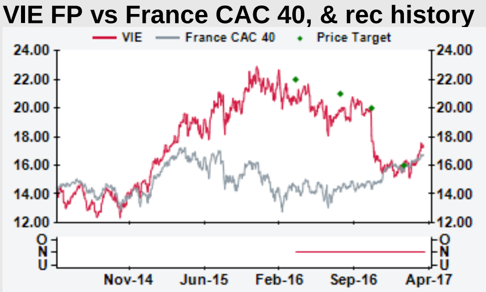
**Price** (at 22:45, 07 Apr 2017 GMT) €17.40

| | | |
|---|---|---|
| **Valuation** | € | **16.00** |
| - DCF (WACC 7.3%, beta 1.0, ERP 5.0%, RFR 4.4%) | | |
| **12-month target** | € | **16.00** |
| **12-month TSR** | % | **-3.2** |
| **GICS sector** | | **Utilities** |
| **Market cap** | €m | **9,800** |
| **Market cap** | US$m | **10,444** |
| **30-day avg turnover** | €m | **41.0** |
| **Number shares on issue** | m | **563.4** |

**Investment fundamentals**

| Year end 31 Dec | | 2016A | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| Revenue | m | 24,390 | 24,921 | 25,479 | 27,368 |
| EBITDA | m | 3,056 | 3,128 | 3,296 | 3,559 |
| EBIT | m | 1,291 | 1,285 | 1,412 | 1,549 |
| Reported profit | m | 610 | 595 | 685 | 749 |
| Adjusted profit | m | 610 | 595 | 685 | 749 |
| Gross cashflow | m | 2,485 | 2,550 | 2,685 | 2,885 |
| CFPS | € | 4.53 | 4.65 | 4.89 | 5.26 |
| CFPS growth | % | 0.6 | 2.6 | 5.3 | 7.5 |
| PGCFPS | x | 3.8 | 3.7 | 3.6 | 3.3 |
| EPS adj | € | 1.11 | 1.08 | 1.25 | 1.37 |
| EPS adj growth | % | 5.2 | -2.6 | 15.2 | 9.4 |
| PER adj | x | 15.6 | 16.0 | 13.9 | 12.7 |
| Total DPS | € | 0.80 | 0.81 | 0.87 | 0.96 |
| Total div yield | % | 4.6 | 4.7 | 5.0 | 5.5 |
| ROA | % | 3.7 | 3.6 | 4.0 | 4.3 |
| ROE | % | 7.6 | 7.6 | 9.4 | 10.8 |
| Net debt/equity | % | 88.2 | 87.2 | 118.7 | 106.8 |
| P/BV | x | 1.2 | 1.2 | 1.4 | 1.3 |

**VIE FP vs France CAC 40, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Research, April 2017
(all figures in EUR unless noted)

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11 April 2017
Macquarie Capital (Europe) Limited

# Veolia Environnement

## Too soon to buy

### Event

- Our view remains that although Veolia's valuation might seem attractive it is still too early to buy Veolia. FY16 results on 23 Feb supported our existing cautious view of the EPS evolution of the group (updated 2017-2019 outlook implied EPS consensus downside / management stepped away from 10% DPS CAGR target). Investors have become more concerned about future EPS evolution as evidenced by Veolia's ~12% share price decline since 1 Nov 2016 (~16% underperformance over the European utility sector).

### Impact

- We expect the market will pay close attention to the financial performance of Veolia at quarterly results in 2017 (1Q17 results on 4 May, 2Q17 on 31 Jul and 3Q17 on 7 Nov). We see the main market focus on the financial outturn compared to expectations. This includes further evidence of improved operational performance because of better macro conditions and cost cutting.

### Earnings and target price revision

- No change

### Price catalyst

- 12-month price target: €16.00 based on a Sum of Parts methodology.
- Catalyst: 1Q17 results on 4th May 2017

### Action and recommendation

- Our main concern on Veolia remains centred on the expected lack of near-term positive EPS revisions. We however disagree with the view of bears that Veolia is trading at overly high valuation metrics as the shares are currently below their historic average for PER both absolute & against the European Industrial Goods & Services sector (Veolia is ~35% below the long-term valuation average). In our view the five-year 2016-21E EPS CAGR of around 5% we project for Veolia is attractive as it is superior to many companies in its peer group. This strong EPS growth drives a ~5% dividend yield of Veolia from 2017E, which compares favourably.

## Analysis

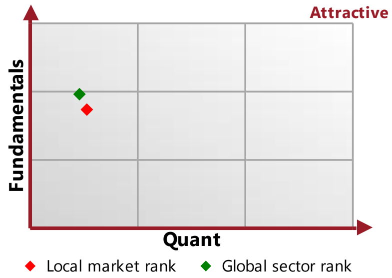
### Fig 1 Veolia – Sum-of-the-parts valuation

| Business units | Valuation (€m) | €/share | Share of EV | Methodology | 2017E Multiples | 2017E EBITDA (€m) |
|---|---|---|---|---|---|---|
| France | 2,908 | 5.3 | 13% | Multiples | 5.8x | 499 |
| Europe excl. France | 8,434 | 15.4 | 39% | Multiples | 7.6x | 1,104 |
| Rest of the World | 6,086 | 11.1 | 28% | Multiples | 7.5x | 814 |
| Global Businesses | 1,763 | 3.2 | 8% | Multiples | 6.8x | 259 |
| Other | 39 | 0.1 | 0% | Multiples | 8.0x | 5 |
| Core business | 19,231 | 35.1 | 89% | Multiples | 7.2x | 2,681 |
| Financial assets | 2,454 | 4.5 | 11% | 2016E BV | | |
| **Group EV** | **21,685** | **39.5** | **100%** | | **8.1x** | **2,681** |
| Net Debt | (7,829) | (14.3) | (36%) | 2016E BV, ex hybrid | | |
| Hybrid Debt | (1,484) | (2.7) | (7%) | 2016E BV | | |
| Provisions | (1,596) | (2.9) | (7%) | 2016E BV | | |
| Minorities | (1,908) | (3.5) | (9%) | 17x 2018E PE | | |
| **Equity** | **8,867** | **16.2** | **41%** | | | |
| Shares outstanding (m) | 548.5 | | | | | |
| **Equity value (€ / share)** | **16.2** | | | | | |

Source: Macquarie Research, April 2017

# Macquarie Quant View

The quant model currently holds a reasonably negative view on Veolia Environnement. The strongest style exposure is Valuations, indicating this stock is under-priced in the market relative to its peers. The weakest style exposure is Price Momentum, indicating this stock has had weak medium to long term returns which often persist into the future.




Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (Europe) and Global sector (Utilities)

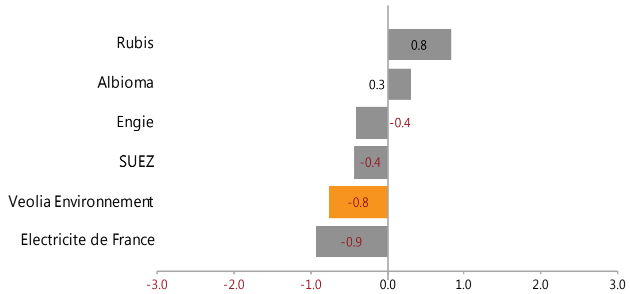
**366/431**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 56% (10/18) |
| **Number of Price Target downgrades** | 2 |
| **Number of Price Target upgrades** | 1 |

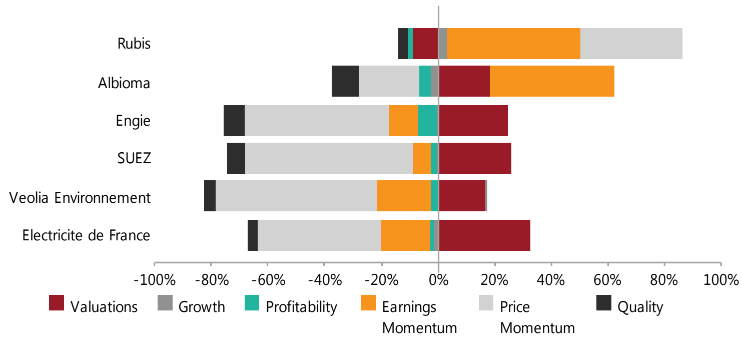
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



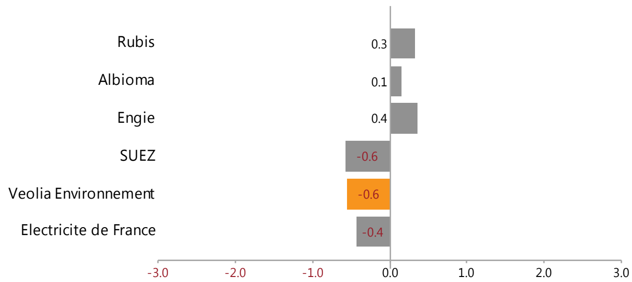

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



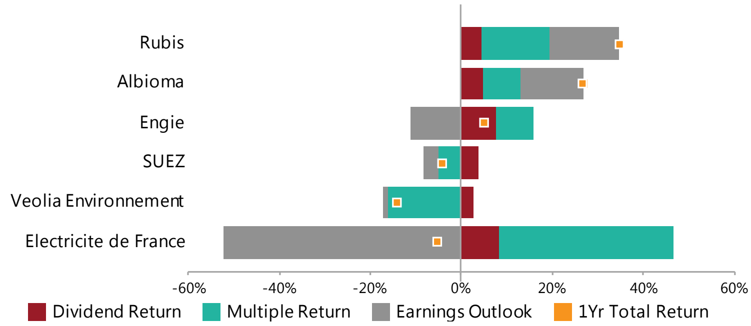

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



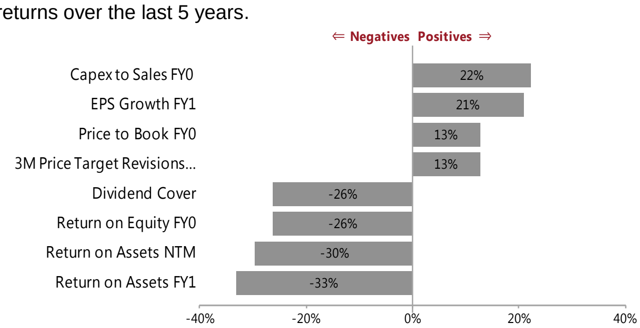

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



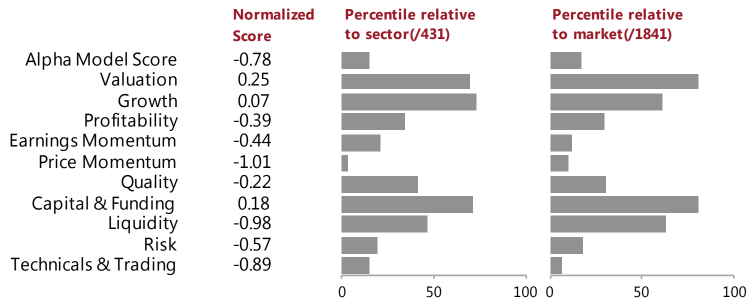

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 March 2017

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 47.26% | 55.50% | 38.46% | 45.47% | 59.09% | 48.21% | (for global coverage by Macquarie, 8.20% of stocks followed are investment banking clients) |
| Neutral | 38.01% | 29.31% | 42.86% | 48.77% | 37.88% | 36.79% | (for global coverage by Macquarie, 8.25% of stocks followed are investment banking clients) |
| Underperform | 14.73% | 15.19% | 18.68% | 5.76% | 3.03% | 15.00% | (for global coverage by Macquarie, 8.00% of stocks followed are investment banking clients) |

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|---|---|
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| Atish Jogi (Johannesburg) | (27 11) 583 2252 |
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## UNITED STATES

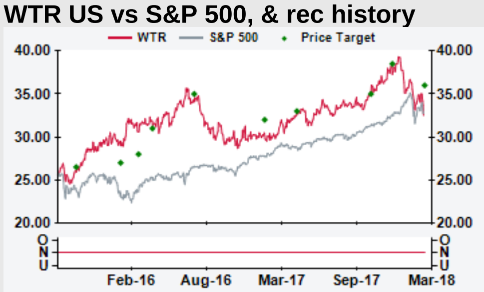
| WTR US | Neutral |
|---|---|
| **Price** (at 04:00, 03 Mar 2018 GMT) | US$32.50 |

| | | |
|---|---|---|
| **Valuation** - PER | **US$** | **35.79** |
| **12-month target** | **US$** | **36.00** |
| **12-month TSR** | **%** | **+13.4** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **5,777** |
| **30-day avg turnover** | **US$m** | **23.1** |
| **Number shares on issue** | **m** | **177.8** |

**Investment fundamentals**

| Year end 31 Dec | | 2017A | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| EPS adj | US$ | 1.35 | 1.39 | 1.46 | 1.56 |
| EPS adj growth | % | 2.3 | 3.5 | 4.5 | 7.1 |
| PER adj | x | 24.1 | 23.3 | 22.3 | 20.8 |
| Total DPS | US$ | 0.79 | 0.85 | 0.91 | 0.97 |
| Total div yield | % | 2.4 | 2.6 | 2.8 | 3.0 |

**WTR US vs S&P 500, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Capital (USA), March 2018

(all figures in USD unless noted)

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5 March 2018
Macquarie Capital (USA) Inc.

# Aqua America

## Slow growth for longer

### Event

- WTR's EPS growth of ~4% through at least 2019 continues to trail the ~7% rate base growth as the company gradually reduces its overearning (in PA) through accelerated investments into its rate base in the state. The reduction in the federal tax rate should weigh on WTR's earnings in PA until new rates are implemented in the state. We recognize PA's premium regulatory environment and WTR's strong regulatory relationships in the state, but years of overearning of the allowed ROE by WTR's PA subsidiary together with a highly aggressive capital plan could complicate the upcoming rate case, we believe. Even before the capex step up, WTR's rate base per customer for its PA utility is already close to 50% higher than that for AWK's subsidiary in the state. We reiterate our Neutral rating as we await the filing of the PA rate case.
- WTR hosted an analyst day and launched its 2018 EPS guidance range of US$1.37-1.42 below our/consensus expectations at that time of US$1.42/1.43.

### Impact

- **PA rate case:** The rate case, to be filed by early summer, will include two years of projections and given the sharp pick-up in spending (ahead of the rate case), WTR's PA subsidiary should start underearning its ROE come late 2019. We recognize PA's premium regulatory environment and WTR's strong regulatory relationships in the state, but years of overearning of the allowed ROE by WTR's PA subsidiary together with a highly aggressive capital plan could complicate the upcoming rate case, we believe. To us, WTR's PA water system is already seemingly overinvested vs. that of AWK, even before the capex step-up. (Fig. 1).
- **Municipal M&A:** WTR has six signed municipal acquisitions that should close in 2018, though we note that half of them are below the company's targeted customer threshold of 2,500-25,000 connections. That together with management's comments from the analyst day underscores the challenging environment for meaningful municipal acquisitions even in states seemingly open to muni deals, such as PA.

### Earnings and target price revision

- We have lowered our earnings estimates to reflect an increase in WTR's effective income tax rate given the lower reduction associated with the flow-through repair tax accounting. Our new '18/'19/'20 EPS estimates are US$1.39/1.46/1.56 down from US$1.42/1.51/1.59, respectively. We recognize some upside to our '20 estimate depending on the outcome of the PA rate case and cost trends, and most importantly, approved capex levels. We lower our TP to US$36 (23x '20 EPS) from US$38.50 (24.2x '20 EPS) in recognition of WTR's slow earnings growth through at least 2019.

### Price catalyst

- 12-month price target: US$36.00 based on a PER methodology.
- Catalyst: General rate case in PA, new municipal M&A.

### Action and recommendation

- We reiterate our Neutral rating.

**Please refer to page 4 for important disclosures and analyst certification, or on our website www.macquarie.com/research/disclosures.**

**Fig 1 PA water utilities: WTR's water system seems meaningfully overinvested compared to that of AWK even before the proposed capex step up**

| | AWK | WTR | Variance (%) |
|---|---|---|---|
| Last reported rate base ($) | 3,162,597,000 | 2,831,000,000 | |
| Customer connections | 722,000 | 437,985 | |
| Rate base/customer connections ($/connection) | 4,380 | 6,464 | 48% |

Source: Company data, Macquarie Capital (USA), March 2018

**Fig 2 WTR: Abbreviated financials and trading multiples**

| | 2016 | 2017 | 2018E | 2019E | 2020E | 2017-2020 CAGR |
|---|---|---|---|---|---|---|
| EPS (US$) | 1.32 | 1.35 | 1.39 | 1.46 | 1.56 | 5.0% |
| DPS (US$) | 0.74 | 0.79 | 0.85 | 0.91 | 0.97 | 7.0% |
| Dividend payout | 56% | 59% | 61% | 63% | 63% | |
| EV/rate base @US$32.50 | | | 1.77x | 1.71x | 1.60x | |
| PE @US$32.50 | | | 23.3x | 22.3x | 20.8x | |

Source: FactSet, Macquarie Capital (USA), March 2018

**Fig 3 WTR: Financial projections (US$m except per share data)**

| | 2016 | 2017 | 2018E | 2019E | 2020E |
|---|---|---|---|---|---|
| EBITDA | 459 | 465 | 506 | 531 | 572 |
| Ordinary Profit Before Tax | 255 | 257 | 282 | 297 | 314 |
| Income tax | 21 | 17 | 34 | 37 | 37 |
| Net profit | 234 | 240 | 248 | 259 | 278 |
| S/O (m) | 178 | 178 | 178 | 178 | 178 |
| **Diluted EPS** | **1.32** | **1.35** | **1.39** | **1.46** | **1.56** |
| **DPS** | **0.74** | **0.79** | **0.85** | **0.91** | **0.97** |
| | | | | | |
| Cash | 4 | 4 | 5 | 5 | 5 |
| Receivables | 97 | 99 | 104 | 108 | 114 |
| Inventory | 13 | 13 | 13 | 13 | 14 |
| Other short-term assets | 15 | 16 | 16 | 16 | 16 |
| Other-long term assets | 1,029 | 801 | 801 | 801 | 801 |
| Property, plant, and equipment | 5,002 | 5,400 | 5,759 | 6,067 | 6,367 |
| **Total assets** | **6,159** | **6,332** | **6,697** | **7,010** | **7,316** |
| Financial liabilities | 157 | 117 | 117 | 117 | 117 |
| Operating liabilities | 60 | 59 | 61 | 62 | 63 |
| Other liabilities | 84 | 108 | 108 | 108 | 108 |
| Deferred credits | 2,270 | 2,083 | 2,096 | 2,110 | 2,124 |
| Long-term debt | 1,738 | 2,007 | 1,975 | 2,254 | 2,202 |
| Shareholders' equity | 1,850 | 1,958 | 2,340 | 2,359 | 2,702 |
| **Total liabilities and equity** | **6,159** | **6,332** | **6,697** | **7,010** | **7,316** |
| | | | | | |
| Net income | 234 | 240 | 248 | 259 | 278 |
| D&A, goodwill amortisation | 133 | 136 | 141 | 151 | 161 |
| Other non-cash elements | 28 | 25 | 25 | 25 | 25 |
| Non-cash working capital | 1 | -20 | 7 | 5 | 7 |
| Operating cash flow | 396 | 381 | 422 | 441 | 471 |
| Net investments in fixed assets | -385 | -483 | -500 | -460 | -460 |
| Free cash flow before dividends | 13 | -99 | -78 | -19 | 11 |
| Dividends paid | -131 | -141 | -151 | -161 | -172 |
| Free cash flow after dividends | -118 | -240 | -229 | -180 | -161 |
| Changes in debt | 123 | 231 | 229 | 179 | 160 |
| Adjustments | -4 | 9 | 1 | 1 | 1 |
| Increase in cash | 1 | 0 | 1 | 0 | 0 |

Source: Macquarie Capital (USA), March 2018

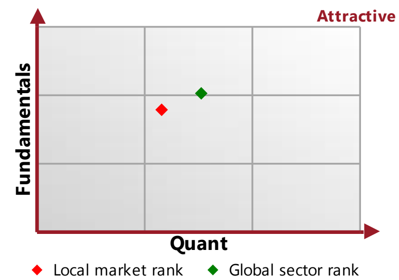
# Macquarie Quant View

The quant model currently holds a neutral view on Aqua America. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**215/436**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 44% (4/9) |
| **Number of Price Target downgrades** | 4 |
| **Number of Price Target upgrades** | 0 |

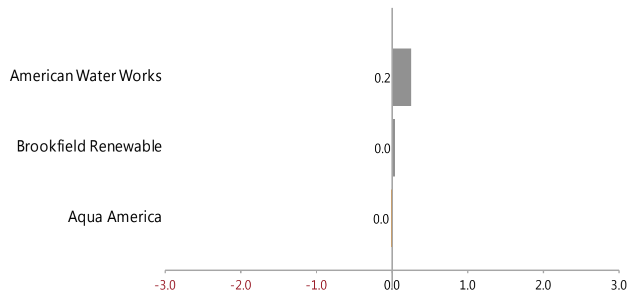



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

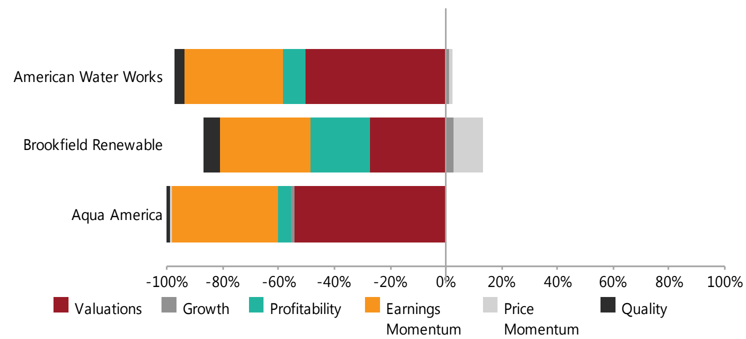
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



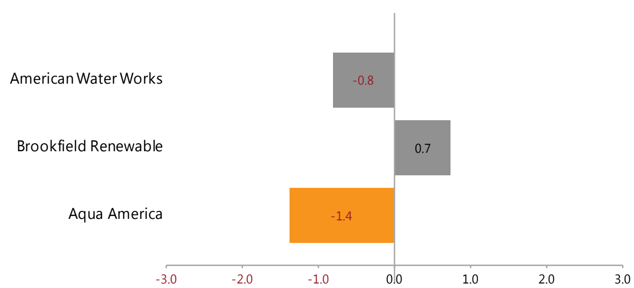

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



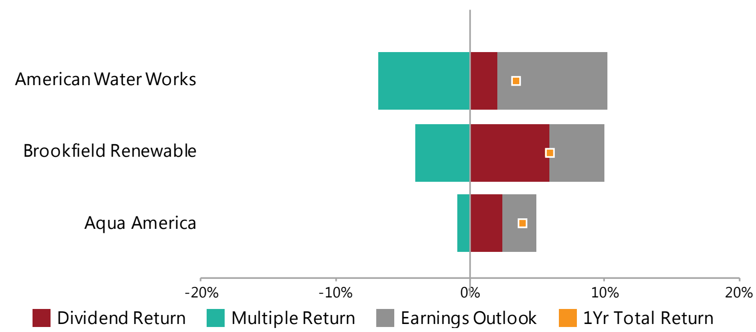

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



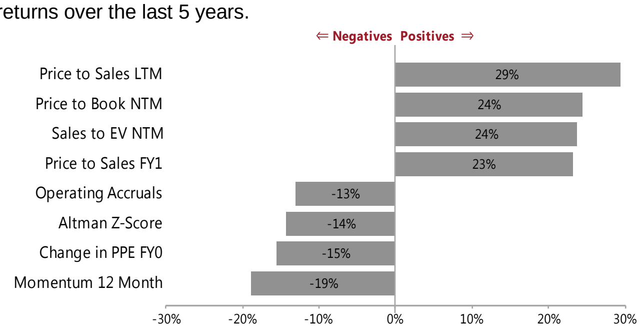

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



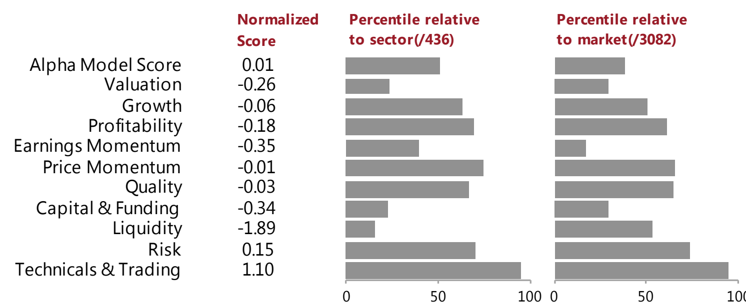

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

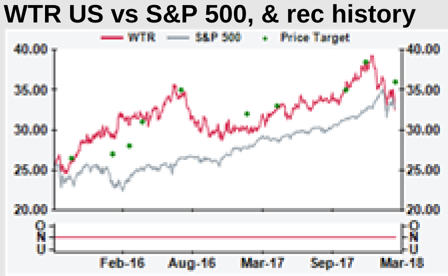
**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 December 2017

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 51.82% | 55.57% | 44.05% | 45.06% | 60.00% | 42.51% | (for global coverage by Macquarie, 4.36% of stocks followed are investment banking clients) |
| Neutral | 35.40% | 28.60% | 36.90% | 47.59% | 28.67% | 40.42% | (for global coverage by Macquarie, 2.58% of stocks followed are investment banking clients) |
| Underperform | 12.77% | 15.83% | 19.05% | 7.34% | 11.33% | 17.07% | (for global coverage by Macquarie, 0.69% of stocks followed are investment banking clients) |

### WTR US vs S&P 500, & rec history




(all figures in USD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Capital (USA), March 2018

### 12-month target price methodology

WTR US: US$36.00 based on a PER methodology

**Company-specific disclosures:**

Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/research/disclosures.

| Date | Stock Code (BBG code) | Recommendation | Target Price |
|---|---|---|---|
| 05-Mar-2018 | WTR US | Neutral | US$36.00 |
| 12-Dec-2017 | WTR US | Neutral | US$38.50 |
| 18-Oct-2017 | WTR US | Neutral | US$35.00 |
| 11-Apr-2017 | WTR US | Neutral | US$33.00 |
| 18-Jan-2017 | WTR US | Neutral | US$32.00 |
| 21-Jul-2016 | WTR US | Neutral | US$35.00 |
| 05-Apr-2016 | WTR US | Neutral | US$31.00 |
| 29-Feb-2016 | WTR US | Neutral | US$28.00 |
| 14-Jan-2016 | WTR US | Neutral | US$27.00 |
| 22-Sep-2015 | WTR US | Neutral | US$26.50 |

**Target price risk disclosures:**
**WTR US:** Our US$36.00 TP is based on 23x our 2020EPS estimate. Risks include: outcomes of pending and future rate cases, especialy in PA, cost controls, municipal M&A, and the level of market interest rates.

**Analyst certification:**
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Equities

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EQUITIES

Please see company specific write-ups starting on page 2 for AWK, CWT, WTR, & AWR.

# Water Utilities
## Corporate M&A dominates, but muni deals still scarce

### Key points

- Corporate M&A has been dominating the US water utilities sector recently.
- We think that the CWT-SJW merger of two water utilities with headquarters in the same CA city makes far more sense than the SJW-CWTS proposal.
- The appropriate size of the premium for large cap water utilities vs electric PEs remains hotly debated especially given the rise in interest rates.

### Event

- Between **AWK**'s heavily equitized Pivotal acquisition, an unprecedented proxy fight involving CWT, SJW (not covered), CWTS (not covered) and ES, and **WTR**'s renewing its interest in gas utilities, corporate M&A has been dominating the US water utilities sector recently. The valuation debate about the premium for water over electric utilities is raging, and sizable municipal water deals, like those announced by **AWK**, would be more helpful than corporate deals. Then again, we admit that it makes little economic sense to have multiple investor-owned water utilities per state, and overhead efficiencies achieved through such corporate mergers could allow for faster upgrades of underinvested water systems.
  AWK remains our top pick (and the only Outperform) among US water utilities.

### Impact

- We don't expect the companies to be successful at getting two-thirds of all of **CWTS**'s shareholders on board with the SJW-CWTS merger. We think that the CWT-SJW merger of two water utilities with headquarters in the same CA city and seemingly contiguous service territories makes far more sense than the SJW-CWTS proposal; SJW shareholders would benefit more from **CWT**'s US$68.25/sh cash offer price, and more cost synergies could be shared with customers from combining the two nearby CA utilities.
- **AWK**'s EPS CAGR to ~9% through 2022 now seems strongly supported by a combination of regulated utility growth, enhanced by muni M&A and growth in market-based operations, recently supported by the acquisition of Pivotal Home Services. While we expect that some were surprised by the Pivotal deal because until recently **AWK** has been strongly stating its commitment to water-only operations, given that the equity offering was heavily oversubscribed, the Pivotal deal must have been well received.
- We hope that the added collective banking experience resulting from **WTR**'s management changes will aid in municipal water M&A, and not corporate gas acquisitions, as we think the latter would dilute **WTR**'s PE multiple. Gas (and electric) utilities trade at a discount to water utilities (~34% on our 2020 estimates), and an acquisition of a gas distribution business could signal limited municipal water M&A opportunities.
- Despite tax reform, **AWR**'s A+ credit rating and stable outlook were affirmed by S&P in April, and **AWR** should escape equity issuances for the foreseeable future.

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**Please refer to page 6 for important disclosures and analyst certification, or on our website www.macquarie.com/research/disclosures.**

## American Water Works (AWK, US$83.23, OP, TP US$93) – Strong EPS/DPS growth despite some inconsistent messaging YTD

**Fig 1 AWK: Abbreviated financials and trading multiples**

| | 2017 | 2018E | 2019E | 2020E | 2017-2020 CAGR |
|---|---|---|---|---|---|
| Sales | 3,357 | 3,335 | 3,576 | 3,741 | |
| Operating expenses | 1,643 | 1,693 | 1,709 | 1,718 | |
| EBITDA | 1,714 | 1,642 | 1,867 | 2,023 | |
| Depreciation | 492 | 534 | 642 | 680 | |
| EBIT | 1,222 | 1,109 | 1,225 | 1,343 | |
| Net interest expense | 325 | 335 | 378 | 405 | |
| Ordinary Profit Before Tax | 905 | 789 | 862 | 953 | |
| Income tax | 362 | 197 | 215 | 238 | |
| Net profit | 543 | 592 | 646 | 715 | |
| S/O (m) | 179 | 180 | 181 | 181 | |
| **Diluted EPS** | **$3.03** | **$3.28** | **$3.56** | **$3.94** | 9.1% |
| **DPS** | **$1.62** | **$1.79** | **$1.97** | **$2.16** | 10.1% |
| **EV/Rate base** | **1.82x** | **1.74x** | **1.66x** | **1.56x** | |
| **P/E** | **27.44x** | **25.34x** | **23.35x** | **21.11x** | |

Source: Company data, Macquarie Capital (USA), May 2018

**Higher operating cash flows:** Some changes in the application of bonus depreciation coupled with more visibility into the application of the tax reform to AWK's rates and deferred tax balances by its state regulators and the recently announced Pivotal acquisition should result in stronger operating cash flows at AWK than management projected back in January. It's not yet clear if AWK can avoid a one-notch credit downgrade; we may need more updates from AWK's state regulators, but we are hopeful.

**Pivotal acquisition supports solid EPS CAGR:** AWK's EPS CAGR to ~9% through 2022 now seems strongly supported by a combination of regulated utility growth, enhanced by muni M&A and growth in market-based operations, recently supported by the acquisition of Pivotal Home Services, even if some jokingly compared the business to BestBuy's warranty offering. We expect that some were surprised by the Pivotal deal because until recently AWK has been strongly stating its commitment to water-only operations. For a company as large as AWK, investors typically expect nuances in strategy to be telegraphed in advance of any deal announcements. Additionally, the deal was heavily over equitized which may have been viewed as a way to shore up AWK's balance sheet while adhering to management's prior commitments not to issue equity on the back of the tax reform; Then again, we note that the equity offering was heavily oversubscribed so the Pivotal deal must have been well received after all. While the valuation debate vs. electrics is here to stay, to us AWK remains a core long-term holding in the US utilities industry.

**Catalysts:** More municipal water deals; more clarity on tax-related adjustments to AWK's regulated water rates.

**Estimate/TP changes:** Our estimates and TP remain unchanged, and we reiterate our Outperform rating. Few investors dispute AWK's premium growth prospects and their multi-decade longevity. Yet, the size of the PE premium for large cap water utilities vs. electric PEs remains hotly debated especially given the rise in interest rates. More sizeable (20,000 connections +) water and wastewater deals could support further PE premium expansion, we believe.

## California Water Service Group (CWT, US$39.15, N, TP US$38): SJW drama and upcoming GRC filing

**Fig 2 CWT: Abbreviated financials and trading multiples**

| | 2017 | 2018E | 2019E | 2020E | 2017-2020 CAGR |
|---|---|---|---|---|---|
| Operating revenue | 667 | 666 | 691 | 707 | |
| Water production costs | 242 | 244 | 246 | 246 | |
| Administrative and general | 103 | 105 | 105 | 104 | |
| Maintenance | 23 | 24 | 26 | 28 | |
| Depreciation and amortization | 77 | 82 | 89 | 96 | |
| Income tax benefit/expense | 29 | 14 | 16 | 16 | |
| Property and other taxes | 25 | 26 | 29 | 31 | |
| Net operating income | 95 | 95 | 104 | 109 | |
| EBITDA | 204 | 192 | 211 | 224 | |
| Net interest expense | 34 | 33 | 34 | 35 | |
| Net income | 67 | 68 | 76 | 81 | |
| **Diluted EPS** | **$1.40** | **$1.40** | **$1.51** | **$1.60** | **4.5%** |
| **DPS** | **$0.72** | **$0.75** | **$0.78** | **$0.81** | **4.1%** |
| **EV/Rate base** | **2.14x** | **2.02x** | **1.87x** | **1.76x** | |
| **P/E** | **27.94x** | **27.98x** | **25.99x** | **24.48x** | |

Source: Company data, Macquarie Capital (USA), May 2018

**Closure of proposed SJW acquisition not guaranteed:** The first shareholder meeting pitching the SJW-CWTS merger should happen by late June, we believe, but we don't expect the companies to be successful at getting two thirds of all of CWTS's shareholders on board with this merger, if only because of large retail ownership of CWTS and ES likely sweetening its bid for CWTS, we believe. Still, SJW claims they are not for sale even if the CWTS merger falls through, and as such CWT may not be able to close an acquisition of SJW regardless of the SJW-CWTS outcome. We think that the CWT-SJW merger of two water utilities with headquarters in the same CA city and seemingly contiguous service territories makes far more sense than the SJW-CWTS proposal; SJW shareholders would benefit more from CWT's US$68.25/sh cash offer price, and more cost synergies could be shared with customers from combining the two nearby CA utilities, which would go further in improving bill affordability and thus capex opportunities in their underinvested water systems in CA.

**Equity likely after more clarity from GRC capex:** Our model assumes ~3 million shares will be issued on 9/1/18 (on a standalone basis), as CWT will need to replace its credit line by October 2018 with more permanent financing. While management has yet to decide if the credit line will be replaced entirely with new debt financing, for now we assume closer to ~53.4% will be replaced with equity, in line with the CPUC-authorized 53.4% capital structure from the 3/22/18 cost of capital decision. CWT should file its 2018 CA General Rate Case (GRC) in July, and CWT plans to forecast its capex and rate base growth for 2019-2022 in the 2Q18 earnings release. While we don't know how much CWT will request in terms of a capex step up, it could be as large as a 50% increase (on top of the previous GRC which was already a 50% step up), and that in turn could revive this stock, with or without the SJW deal. At this point, no one knows what CWT's earnings power will be starting in 2020.

**Catalysts:** GRC filing (expected July); outcome of proposed SJW acquisition.

**Estimate/TP changes:** CWT reported 1Q18 EPS of (US$0.05) below our/consensus US$0.04/0.05 due in part to a reduction in unrealized income from benefit plan investments resulting from market conditions together with an increase in uninsured losses due to water main breaks.

We've tweaked our '18 EPS estimate from US$1.41 to US$1.40 reflecting the weaker than expected 1Q18 results, while our '19/'20 EPS estimates remain unchanged. Our US$38 TP is unchanged, which is based on a 50% premium to our anchor '20 PE multiple for regulated electric utilities of 16x. We reiterate our Neutral rating.

## Aqua America (WTR, US$34.18, N, TP US$36): PA rate case and recurring gas M&A scare us

**Fig 3 WTR: Abbreviated financials and trading multiples**

| | 2017 | 2018E | 2019E | 2020E | 2017-2020 CAGR |
|---|---|---|---|---|---|
| Sales | 810 | 857 | 890 | 938 | |
| Operating expenses | 344 | 352 | 359 | 366 | |
| Operational EBITDA | 465 | 506 | 531 | 572 | |
| Depreciation | 136 | 141 | 151 | 161 | |
| Operational EBIT | 329 | 364 | 380 | 411 | |
| Net interest expense | 89 | 99 | 99 | 113 | |
| Ordinary Profit Before Tax | 257 | 282 | 297 | 314 | |
| Income tax | 17 | 34 | 37 | 37 | |
| Net profit | 240 | 248 | 259 | 278 | |
| S/O (m) | 178 | 178 | 178 | 178 | |
| **Diluted EPS** | **$1.35** | **$1.39** | **$1.46** | **$1.56** | **5.0%** |
| **DPS** | **$0.79** | **$0.85** | **$0.91** | **$0.97** | **7.0%** |
| **EV/Rate base** | **2.01x** | **1.84x** | **1.77x** | **1.66x** | |
| **P/E** | **25.40x** | **24.54x** | **23.47x** | **21.92x** | |

Source: Company data, Macquarie Capital (USA), May 2018

**PA rate case:** We're cautious ahead of the PA rate case, which WTR's PA subsidiary should file in 3Q18 with effective rates in mid-2019. This will be one of the only utilities asking for a rate increase following the tax reform. While it's true that the likely rate increase request has to do with a repair tax issue and the lack of rate increases since the conclusion of the 2011 rate case, it's just hard for us to get constructive on WTR before and through this rate case. Some ratepayers will undoubtedly be expecting reduced rates on the back of tax reform as in other states, and the relatively new set of commissioners may not be as quick to allow WTR to continue to substantially over earn its allowed ROE as it has since 2012.

**Management changes and M&A outlook:** WTR's CFO, Dave Smeltzer, is retiring. While it's a relief that he'll stay on board until October to aid with the PA rate case filing, this retirement has prompted material changes to the executive team. Matthew Rhodes has been named the EVP of Strategy and Corporate Development - he previously spent 11 years as an investment banker, most recently working on M&A transactions involving gas utilities. Dan Schuller will be the new CFO, and he also has previous banking experience. We hope that the collective banking experience will aid in municipal water M&A and not corporate gas acquisitions, as we think the latter would dilute WTR's PE multiple. Gas (and electric) utilities trade at a discount to water utilities (~34% on our 2020 estimates), and an acquisition of a gas distribution business could signal limited municipal water M&A opportunities, especially as WTR has not signed any municipal acquisitions for 2018 closure since the 2/28/18 analyst day. Management is "close", however, to announcing a few more municipal transactions with over 10,000 connections.

**Catalysts:** PA rate case filing (expected 3Q18); additional municipal water M&A.

**Estimate/TP changes:** WTR reported 1Q18 EPS of US$0.29 in line with our/consensus estimates. Management reiterated its'18 EPS guidance of US$1.37-1.42. Our annual EPS estimates are unchanged, and we maintain our US$36 TP, which is based on a 45% premium to our anchor '20 PE multiple for regulated electric utilities of 16x. We reiterate our Neutral rating.

## American States Water (AWR, US$54.82, N, TP US$49): No equity expected, but fully valued

**Fig 4 AWR: Abbreviated financials and trading multiples**

| | 2017 | 2018E | 2019E | 2020E | 2017-2020 CAGR |
|---|---|---|---|---|---|
| Total Operating Revenues | 441 | 439 | 450 | 458 | |
| Water and Electric Supply Costs | 88 | 100 | 102 | 103 | |
| Administrative and General | 82 | 80 | 80 | 80 | |
| Depreciation and Amortization | 39 | 39 | 42 | 43 | |
| Maintenance | 15 | 16 | 17 | 18 | |
| Property and Other Taxes | 18 | 19 | 20 | 21 | |
| ASUS Construction | 42 | 49 | 48 | 46 | |
| Operating income | 127 | 106 | 112 | 116 | |
| Interest expense | (23) | (24) | (25) | (25) | |
| Income tax expense | 39 | 19 | 19 | 20 | |
| Net income | 69 | 66 | 69 | 72 | |
| **Diluted EPS** | **$1.90** | **$1.79** | **$1.88** | **$1.97** | **1.2%** |
| **DPS** | **$0.99** | **$1.02** | **$1.05** | **$1.08** | **2.9%** |
| **EV/Rate Base** | **2.35x** | **2.27x** | **2.15x** | **2.05x** | |
| **P/E** | **28.89x** | **30.60x** | **29.14x** | **27.84x** | |

Source: Company data, Macquarie Capital (USA), May 2018

**Strong credit quality, but fully valued:** Despite tax reform, AWR's A+ credit rating and stable outlook were affirmed by S&P in April, and AWR should escape equity issuances for the foreseeable future. It seems AWR trades more with smid-cap stocks as opposed to water utilities, and at 27.8x our '20 EPS, we believe an accretive acquisition of AWR would be difficult, while we don't think AWR would be an acquirer with regards to corporate M&A.

**Water rate case hearing delay:** Hearings for the general rate case of AWR's GSW (to set rates for 2019-2021) have been postponed by a week to May 21st to allow more time for settlement discussions with the consumer advocate (ORA), and management is "not afraid" to take the entire capital budget to a hearing. Still, management expects a final decision by YE18.

**ASUS tax flowthrough and cost of capital decision:** While existing 50-year military contracts at ASUS do not specifically address changes in the tax rate, AWR assumes the government will request a pricing adjustment retroactive to 1/1/18. AWR reaffirmed its expectation of US$0.38-0.42 for 2018 ASUS EPS which never assumed a tax benefit. Separately, the ROE reduction from 9.43% to 8.90% due to the cost of capital decision should be a US$0.07 headwind in 2018, though our estimates already assumed a 9% ROE and we think the difference will be offset by potential cost efficiencies.

**Catalysts:** Settlement or a final decision in GSW's general rate case (expected by YE18); possible pricing changes at ASUS.

**Estimate/TP changes:** AWR reported 1Q18 EPS of US$0.29 below our/consensus US$0.35/0.34 due in part to losses incurred on the company's retirement benefit plan investments as a result of market conditions. Our annual EPS estimates are unchanged though we recognize some negative impact associated with the ROE reduction. We maintain our US$49 TP, which is based on a 55% premium to our anchor '20 PE multiple for regulated electric utilities of 16x. We reiterate our Neutral rating.

### Other stocks mentioned

Eversource Energy (ES US, US$57.00, Neutral, TP: US$62.00)

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

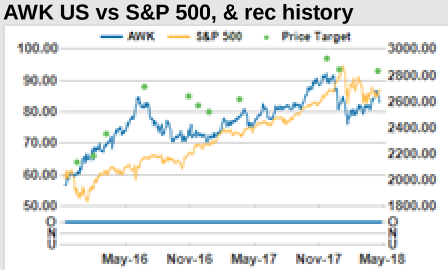
**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 March 2018

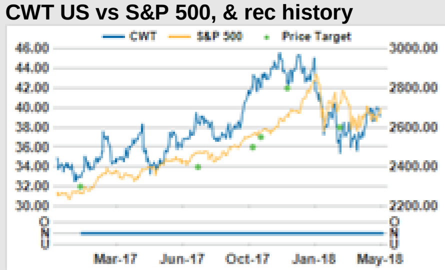
| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 54.38% | 58.90% | 48.35% | 43.91% | 69.03% | 45.26% | (for global coverage by Macquarie, 3.69% of stocks followed are investment banking clients) |
| Neutral | 32.48% | 27.88% | 34.07% | 48.73% | 21.29% | 38.95% | (for global coverage by Macquarie, 3.07% of stocks followed are investment banking clients) |
| Underperform | 13.14% | 13.21% | 17.58% | 7.37% | 9.68% | 15.79% | (for global coverage by Macquarie, 0.39% of stocks followed are investment banking clients) |

**AWK US vs S&P 500, & rec history**



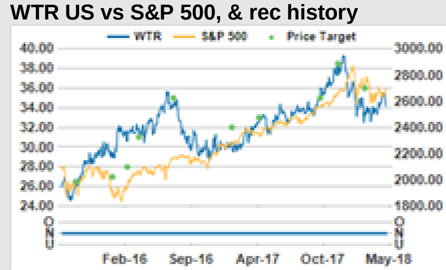

(all figures in USD currency unless noted)

**CWT US vs S&P 500, & rec history**



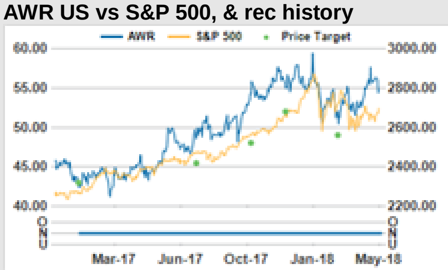

(all figures in USD currency unless noted)

**WTR US vs S&P 500, & rec history**




(all figures in USD currency unless noted)

**AWR US vs S&P 500, & rec history**




(all figures in USD currency unless noted)

**ES US vs S&P 500, & rec history**


(all figures in USD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Research, May 2018

### 12-month target price methodology

AWK US: US$93.00 based on a PER methodology

CWT US: US$38.00 based on a PER methodology

WTR US: US$36.00 based on a PER methodology

AWR US: US$49.00 based on a PER methodology

ES US: US$62.00 based on a PER methodology

**Company-specific disclosures**:
**ES US:** Eversource Energy completed an acquisition of Aquarion Water Company from a consortium including Macquarie Infrastructure Partners on December 4, 2017.
Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/research/disclosures.

**Target price risk disclosures**:
**AWK US:** Our US$93.50 TP is based on 23.6x our '20 EPS. Risks to the downside include: the slower pace of future municipal acquisitions, lower cost efficiencies, and slower growth in non-regulated operations.
**CWT US:** Our TP is based on a '20 P/E multiple of 23.8x, derived by affording a 40% premium to our 17x '20 P/E multiple for U.S. regulated electric utilities. Risks to the upside include higher regulated capex in CA. Risks to the downside include higher market interest rates.
**WTR US:** Our US$36.00 TP is based on 23x our 2020EPS estimate. Risks include: outcomes of pending and future rate cases, especialy in PA, cost controls, municipal M&A, and the level of market interest rates.
**AWR US:** Our TP is based on a '20 P/E multiple of 24.7x, derived by affording a 45% premium to our 17x '20P/E multiple for U.S. regulated electric utilities. Risks to the upside include additional water service contracts for military bases. Risks to the downside include the level of market interest rates.
**ES US:** Our TP is based on 17x our '20 EPS. Key risks include delays or cancellations in transmission/pipeline investments, realized synergies from the NSTAR merger, and economic weakness or energy efficiency/conservation efforts hurting revenues.

# Research

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Macquarie Research

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Equities

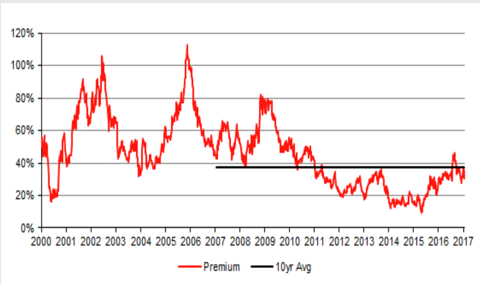
## UNITED STATES

**Companies discussed in the report:**

**AWK** (US$75.68, OP, TP: **US$84**)
**AWR** (US$43.66, N, TP: **US$43)**
**CWT** (US$34.55, N, TP: **US$32**)
**WTR** (US$31.73, N, TP: **US$33)**

Note: Share prices as of close on May 4, 2017

**FY2 PE premium for US water over electric utilities stands at 31% vs 37% historical average**




Source: FactSet, Macquarie Capital (USA) May 2017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8 May 2017
Macquarie Capital (USA) Inc.


# Water utilities

## 1Q17: Few new data points vs rising rates

### Event

- The sharp selloff in US water stocks following their 1Q17 earning prints was likely driven by rising interest rates and the lack of any meaningful positive updates, especially on municipal water M&A. Muni deals are lumpy in nature and ongoing legislative changes (most recently in VA and NJ) should be supportive of the consolidation of the US water sector, we believe. Yet, the exact timing of muni water deals is tough to call. Stocks of US water utilities, especially the smid caps, already price in sharply improving growth prospects or large M&A premiums, neither of which seem justified to us.
- Our earnings expectations for US water utilities remain largely unchanged with minor reductions to '17 EPS estimates for **AWK** due to a tax law change in NY offset by a federal tax benefit associated with stock-based compensation, and **AWR** due to minor model adjustments. Please see Fig. 2 for updated earnings estimates for US water names. **AWK** remains our top pick for US water stocks.

### Impact

- **Muni M&A activity is lumpy:** The long-awaited privatization of the municipal water sector seems to have finally begun, although muni deals can take years to originate and complete. While sell-side EPS consensus expectations for water utilities never really included municipal M&A, the buy-side could have already embedded this driver in their projections, thus explaining (at least partly) a recent sharp correction in US water utility stocks given the absence of municipal M&A updates. **AWK** and **WTR** indicate that they have been working on numerous municipal water and wastewater system acquisitions but had nothing new to report during the 1Q17 earnings season besides ongoing regulatory improvements in support of such transactions in NJ and VA. We remain patient on the municipal water sector consolidation and still prefer muni deals to corporate M&A, even if in the water sector.
- **Water service contracts for military bases:** The end of the military sequester under Trump should allow for increased budgets of military bases and more auctions of water service contracts for military bases, although we may need to wait until October. **AWK** is seeing lower military water capex in '17 due to the sequester, while **AWR** is about to assume operations of water and waste water systems at the Eglin Air Force Base in FL, and management hopes for an increase in contract fees associated with a larger than expected scope of work.
- **Cost of capital proceeding and end of drought in CA:** In early April, **AWR, AWK** and **CWT** filed their cost of capital applications in CA. Procedural schedules have not been issued yet but the utilities seem to hope to be able to settle on the allowed ROEs and equity levels once the CA consumer advocate (ORA) files its position in the case. While all three utilities are asking for an increase in the allowed ROE and a higher equity layer, our estimates assume a reduction in allowed ROEs to ~9.2% (from 9.43% for **AWR** and **CWT**, and 9.99% for **AWK**) and a 50% equity ratio for all three starting in '18. We would still prefer a settlement over a fully litigated case, however. The end of drought conditions in CA should support earnings of water utilities in the state even if they don't expect a change in water consumption patterns of their customers.

**Fig 1 US water utilities: Valuations multiples**

| Ticker | AWK | AWR | CWT | WTR |
|---|---|---|---|---|
| Share price @5/4/17 | $75.68 | $43.66 | $34.55 | $31.73 |
| TP | $84.00 | $43.00 | $32.00 | $33.00 |
| Rating | Outperform | Neutral | Neutral | Neutral |
| **PE multiples** | | | | |
| 2017 | 25.2x | 25.5x | 26.9x | 23.2x |
| 2018 | 23.1x | 24.0x | 24.6x | 22.2x |
| 2019 | 21.4x | 22.5x | 23.8x | 21.3x |
| **EV/Rate base** | | | | |
| 2017 | 1.78x | 1.99x | 2.14x | 1.93x |
| 2018 | 1.84x | 1.89x | 1.95x | 1.86x |
| 2019 | 1.56x | 1.77x | 1.83x | 1.79x |

Source: FactSet, Macquarie Capital (USA), May 2017

**Fig 2 US water utilities: EPS changes**

| | 2017 | | 2018 | | 2019 | |
|---|---|---|---|---|---|---|
| | New | Old | New | Old | New | Old |
| AWK | **3.02** | **3.04** | 3.29 | 3.29 | 3.55 | 3.55 |
| AWR | **1.71** | **1.72** | 1.82 | 1.82 | 1.94 | 1.94 |
| CWT | 1.29 | 1.29 | 1.40 | 1.40 | 1.45 | 1.45 |
| WTR | 1.37 | 1.37 | 1.43 | 1.43 | 1.49 | 1.49 |

Source: Macquarie Capital (USA), May 2017

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

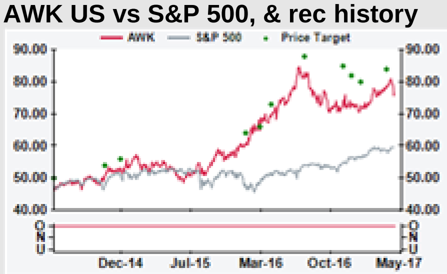
**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 March 2017

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 47.26% | 55.50% | 38.46% | 45.47% | 59.09% | 48.21% | (for global coverage by Macquarie, 8.20% of stocks followed are investment banking clients) |
| Neutral | 38.01% | 29.31% | 42.86% | 48.77% | 37.88% | 36.79% | (for global coverage by Macquarie, 8.25% of stocks followed are investment banking clients) |
| Underperform | 14.73% | 15.19% | 18.68% | 5.76% | 3.03% | 15.00% | (for global coverage by Macquarie, 8.00% of stocks followed are investment banking clients) |

### AWK US vs S&P 500, & rec history

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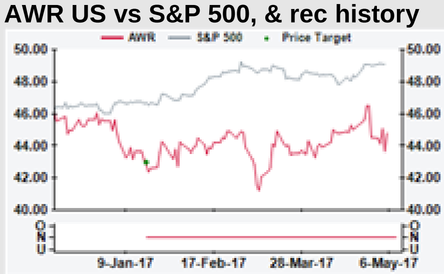
### AWR US vs S&P 500, & rec history

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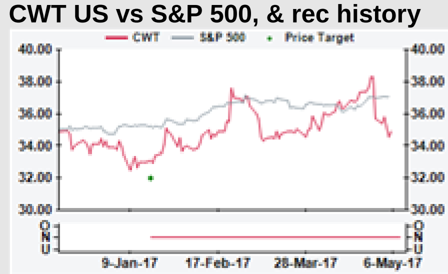
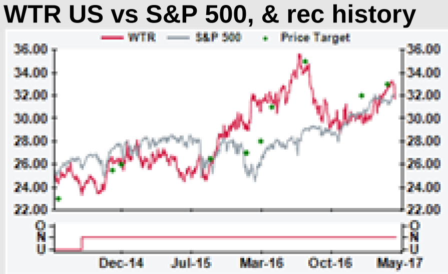
### CWT US vs S&P 500, & rec history




(all figures in USD currency unless noted)

### WTR US vs S&P 500, & rec history




(all figures in USD currency unless noted)

Note: Recommendation timeline – if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.
Source: FactSet, Macquarie Capital (USA), May 2017

### 12-month target price methodology

AWK US: US$84.00 based on a PER methodology

AWR US: US$43.00 based on a PER methodology

CWT US: US$32.00 based on a PER methodology

WTR US: US$33.00 based on a PER methodology

**Company-specific disclosures:**

Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/research/disclosures.

**Target price risk disclosures:**

**AWK US:** Our US$84 TP is based on 23.6x our '19 EPS. Risks include: volumes of water consumption, outcomes of pending and future rate cases, cost controls, and the level of market interest rates, as well as the pace of future municipal acquisitions.

**AWR US:** Our TP is based on a '19 P/E multiple of 22.4x, derived by affording a 40% premium to our 16.0x '19 P/E multiple for U.S. regulated electric utilities.

**CWT US:** Our TP is based on a '19 P/E multiple of 22.4x, derived by affording a 40% premium to our 16.0x '19 P/E multiple for U.S. regulated electric utilities.

**WTR US:** Our US$33TP is based on 23.2x our '19EPS estimate. Risks include: outcomes of pending and future rate cases, cost controls, execution of non-regulated water capex and market interest rates.

**Analyst certification:**

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This publication was disseminated on 08 May 2017 at 04:30 UTC.

MACQUARIE

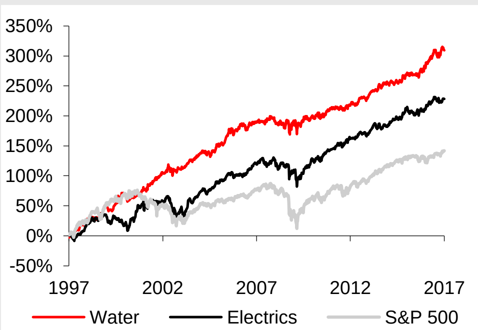
## UNITED STATES

### Companies discussed in the report:

**AWK** (US$70.82, OP, TP: **US$80 down from US$82**)
**AWR** (US$43.66, N, TP: **US$43)**
**CWT** (US$33.00, N, TP: **US$32**)
**WTR** (US$30.28, N, TP: **US$32 down from US$35)**

Note: Share prices as of close on January 13, 2017

**Fig 1 Total return for water utilities vs. the S&P over the last 20 years**




Source: FactSet, Macquarie Capital (USA) January 2017

## Inside



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17 January 2017
Macquarie Capital (USA) Inc.

# Regulated water utilities

## Still thirsty for water?

### Event

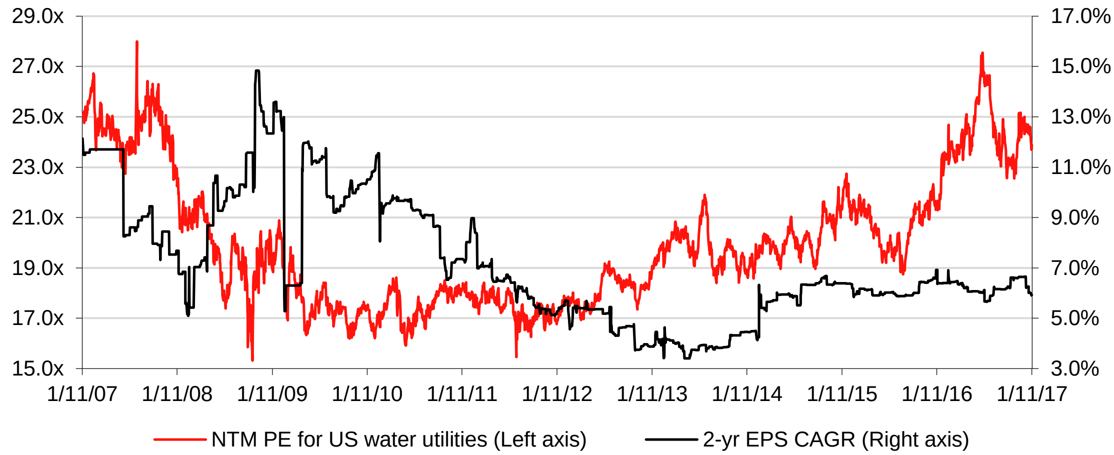
- We like US water utilities for their low operating and regulatory risk, good EPS/DPS growth, and strong balance sheets. However, following yet another strong year, water utilities are trading at close to historically high P/E multiples for the group on an absolute level and vs. electric utilities, despite seemingly similar EPS growth prospects for both groups. The low-risk profile of water utilities could be yet again in high demand later this year, we believe, but for now, it's hard for us to envision further expansion of P/E multiples for water stocks. Therefore, we are reducing our anchor P/E multiple for water utilities to 22.4x from 25x and we roll forward our valuations to '19 from '18.
- We are expanding our coverage of water utilities by adding California-concentrated **AWR** and **CWT**, but we are waiting for a better entry point for both of these stories, especially ahead of their cost-of-capital proceeding in CA and following a strong run-up in these smid cap stocks after the Trump election. **AWK** remains our top pick for the sector.

### Impact

- **Valuation debate is back:** How much should you pay for the non-cyclical and highly visible EPS growth of water utilities, even if it's only marginally higher (if at all) than the EPS growth of electric utilities? The P/E premium for water vs. electric utilities has sharply expanded since late 2015 despite little (if any) change in sell-side EPS growth expectations for water (or electric) utilities (Fig. 2 and 3). An average water utility should grow its EPS at a 5-6% CAGR between '16 and '19, with AWK ~8%, thanks to its market-based operations. Electric utilities should grow at 5-6% on average, with a couple at 7-8%. Water utility systems in the US remain underinvested, though the rate base per customer for investor-owned water utilities in the US seems similar to the US$3,600/customer average for UK water utilities (Fig. 6) and the affordability of water bills seems to be a limiting factor for higher water capex. To us, the P/E premium of water over electric utilities is primarily a function of the scarcity of sizeable public water utility stocks and their low risk profile, though those factors do not explain the spike in water P/E premia over the last 12-15 months.
- **Sector consolidation:** The long-awaited privatization of the municipal water sector has finally begun, though municipal deals can take years to complete, not to mention that federal funding support for water infrastructure could potentially decelerate the sector consolidation. While sell-side EPS consensus expectations for water utilities never included municipal M&A, buy-side could have already embedded this driver in their projections, thus explaining the P/E expansion for the water sector over the last year or so. Large investor-owned water utilities, **AWK** and **WTR**, indicate that they have been working on numerous municipal water and wastewater system acquisitions, and new deal announcements could result in positive sell-side earnings revisions. That in turn could rebuild support for water P/Es, but we may first have to wait for clarity behind Trump's water infrastructure spending plan.

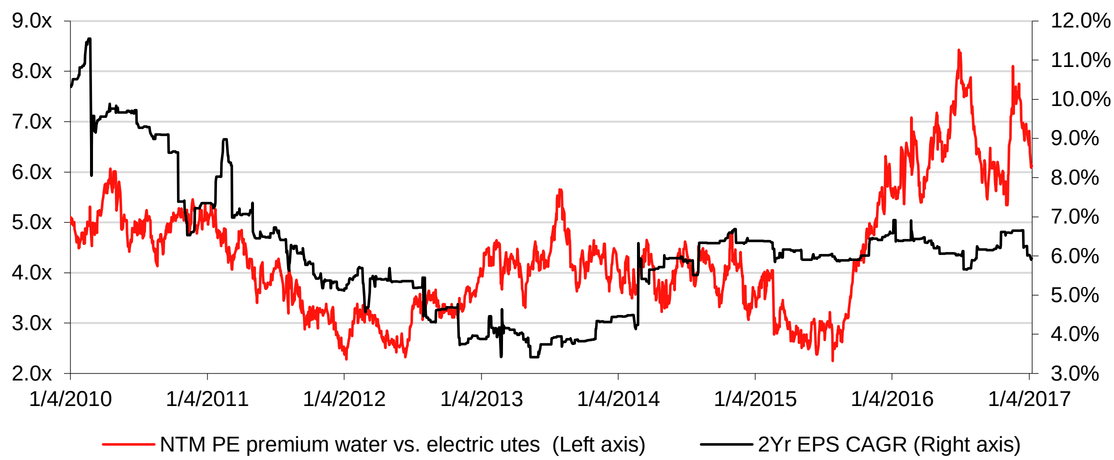
**Please refer to page 23 for important disclosures and analyst certification, or on our website www.macquarie.com/research/disclosures.**

**Fig 2 Valuations of water utilities have continued to climb over the last three years despite largely unchanged earnings growth expectations for the group.**




Source: FactSet, Macquarie Capital (USA), January 2017

**Fig 3 The P/E premium for water vs. electric utilities has sharply expanded since bottoming in late 2016, again with no change in sell-side EPS growth expectations for either of the groups.**




Source: FactSet, Macquarie Capital (USA), January 2017

### Fig 4 US water utilities: By 2019, stock valuations based on regulated operations converge, except for AWK

| Regulated EV/rate base as of 01/13/17 | 2017 | 2018 | 2019 |
|---|---|---|---|
| AWK | 1.76x | 1.69x | 1.61x |
| WTR | 1.88x | 1.78x | 1.75x |
| AWR | 1.97x | 1.90x | 1.80x |
| CWT | 1.98x | 1.98x | 1.76x |

Source: FactSet, Macquarie Capital (USA), January 2017

### Fig 5 US water utilities: Small cap water utilities trade at premium P/Es vs. LC peers, despite no premium EPS/DPS growth

| PE multiples as of 01/13/17 | 2017 | 2018 | 2019 |
|---|---|---|---|
| AWK | 23.3x | 21.5x | 19.8x |
| WTR | 22.1x | 21.3x | 20.4x |
| AWR | 25.4x | 23.9x | 22.5x |
| CWT | 25.5x | 23.6x | 22.8x |

Source: FactSet, Macquarie Capital (USA), January 2017

### Fig 6 Regulated rate base per customer: The level of water system investments for US investor-owned utilities seems largely similar to that of those in developed markets (UK in particular), except for in the case of CWT, partly due to its HI operations distorting the metric.

| | AWK | WTR | AWR | CWT |
|---|---|---|---|---|
| No. of customer accounts (2017E) | 3,336,863 | 988,762 | 283,997 | 509,000 |
| Rate base per customer account (2017 E) | 3,326 | 4,041 | 4,010 | 2,240 |
| Rate base CAGR 2016-2019 | 5.7% | 6.6% | 6.9% | 9.5% |

Source: Company data, Macquarie Capital (USA), January 2017

### Fig 7 US and European water utilities: Trading multiples

| Ticker | AWK | AWR | CWT | WTR | PNN | SEV | SVT | UU | VIE |
|---|---|---|---|---|---|---|---|---|---|
| Name | American Water Works | American States Water | California Water Service | Aqua America | Pennon Gr. | Suez | Severn Trent | United Utilities Gr. | Veolia Envir. |
| Share price @1/13/17 | $70.82 | $43.66 | $33.00 | $30.28 | £7.77 | € 13.66 | £22.15 | £8.90 | € 15.36 |
| TP | $80.00 | $43.00 | $32.00 | $32.00 | £9.70 | € 18.50 | £27.00 | £11.00 | € 20.00 |
| Rating | Outperform | Neutral | Neutral | Neutral | Outperform | Outperform | Outperform | Outperform | Neutral |
| **PE multiples** | | | | | | | | | |
| 2017 | 23.3x | 25.4x | 25.5x | 22.1x | 18.89x | 14.34x | 20.84x | 19.76x | 12.59x |
| 2018 | 21.5x | 23.9x | 23.6x | 21.3x | 18.63x | 12.84x | 19.87x | 20.52x | 10.94x |
| 2019 | 19.8x | 22.5x | 22.8x | 20.4x | 15.04x | N/A | 17.91x | 17.63x | N/A |
| **EV/Rate Base multiples** | | | | | | | | | |
| 2017 | 1.76x | 1.97x | 1.98x | 1.88x | 1.17x | N/A | 1.13x | 1.13x | N/A |
| 2018 | 1.69x | 1.90x | 1.98x | 1.78x | 1.12x | N/A | 1.09x | 1.11x | N/A |
| 2019 | 1.61x | 1.80x | 1.76x | 1.75x | 1.06x | N/A | 1.06x | 1.09x | N/A |

Source: FactSet, Macquarie Capital (USA), January 2017

## American Water Works (AWK, US$70.82, Outperform, TP US$80 down from US$82): Premium EPS/DPS growth, valuation discount largely gone

**Fig 8 AWK: Abbreviated financial projections and valuation multiples**

| | 2015 | 2016E | 2017E | 2018E | 2019E | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| EPS - regulated operations | 2.63 | 2.87 | 3.01 | 3.19 | 3.42 | 6.0% |
| EPS - market-based operations | 0.24 | 0.22 | 0.31 | 0.36 | 0.42 | 24.1% |
| EPS - parent | -0.23 | -0.25 | -0.28 | -0.27 | -0.27 | 2.6% |
| **EPS – Total (US$)** | **2.64** | **2.84** | **3.04** | **3.29** | **3.57** | **7.9%** |
| **DPS (US$)** | **1.33** | **1.50** | **1.63** | **1.76** | **1.90** | **8.2%** |
| Dividend payout | 50.4% | 52.8% | 53.7% | 53.5% | 53.2% | |
| Regulatory rate base (US$bn) | 9.7 | 10.4 | 11.1 | 11.6 | 12.3 | 5.6% |
| EV/Rate base @ $70.82 | | | 1.76x | 1.69x | 1.61x | |
| P/E @ $70.82 | | | 23.3x | 21.5x | 19.8x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth**: We expect AWK to grow its EPS at a 7.9% CAGR between ’16 and ‘19 with visibility into growth through at least ’20. That’s down from a ~12% EPS CAGR for ’10-’15, but still faster than AWK’s water peers, even if the premium EPS growth comes from contract-based rather than regulated operations. AWK’s rate base is growing at a 5.6% between ’16 and ’19, which is just below the 6% average for the sector – the growth CAGR for AWK already reflects the growth associated with acquisitions of municipal water systems, but is same system for other water utilities.
- As the largest investor-owned water utility in the US, AWK has been most focused and most successful at acquisitions of municipal water and wastewater systems, adding ~55k customers in ‘16 (+1.7% YoY). Although the company is working on municipal deals which could add even 145k in customers, for now management seems reluctant to boost its long-term EPS growth CAGR on the back of the M&A. We are concerned that the pace of the privatization of municipal water systems could decelerate if the federal government were to provide low-cost funding to states (and thus municipalities) for water infrastructure upgrades.
- AWK’s military base earnings could see some pick up if the Trump administration ends the military sequester though the timing of new awards of military contracts is difficult to gauge.
- AWK’s ‘17 EPS guidance seemed a bit soft to us, but could be driven by the timing of the CA GRC (with new rates to come into effect in 2018) and the uncertainty over the closing of the Scranton wastewater acquisition (now closed). Then again, the 2018 could see another headwind from CA as a new, lower allowed ROE should be imposed on AWK’s California subsidiary – our estimates are a drop in the allowed ROE from the current 9.99% to 9.2% starting 1/1/18.
- **DPS growth:** AWK’s DPS growth should exceed the EPS growth, given the low dividend payout, but it’s tough for us to expect the company to commit to it at this point given the upcoming corporate tax reform and the issue of normalization of deferred tax liabilities which could determine future cash flow generation of regulated utilities in the US.
- **Changes in earnings/TPs:** Our earnings estimates for AWK remain unchanged, but we lower our TP to US$80 from US$82 as we roll forward our valuation to 2019 (from 2018) and we lower our anchor PE multiple for water utilities to 22.4x down from 25x.

## **American States Water (AWR, US$43.66, Neutral, TP US$43):** Lower impending allowed ROE partially offset by market-based operations

**Fig 9 AWR: Abbreviated financial projections and trading multiples**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| **EPS (US$)** | **1.56** | **1.62** | **1.73** | **1.84** | **1.94** | **6.2%** |
| **DPS (US$)** | **0.87** | **0.91** | **0.96** | **1.01** | **1.06** | **5.0%** |
| Dividend payout | 56% | 56% | 55% | 55% | 55% | |
| Rate base (US$bn) | | 745 | 792 | 840 | 888 | 6.1% |
| EV/Rate base @ $43.66 | | | 1.97x | 1.90x | 1.80x | |
| P/E @ $43.66 | | | 25.4x | 23.9x | 22.5x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth:** We expect a 6.2% ’17-’19 EPS CAGR from CWT, with no equity funding needs in the medium term. The company anticipates using its revolver to cover upcoming spending needs, but then would be more likely to pay it down with an issuance of long-term debt.
- On the regulatory front, a potentially contentious cost of capital proceeding is likely to start soon in CA, with filings due in late March. Also, an electric GRC is scheduled to be filed with the CPUC by the end of January.
- AWR is interested in municipal water sector acquisitions outside of CA (perhaps even in the East), but also acquisition of privately-owned water systems. We do not expect any material acquisitions by AWR while valuations for these smaller water systems remain at currently elevated levels, but would expect more activity here in the future. Also, we note that while we don’t see CA concentrated water utilities as particularly likely targets of M&A, should that change, AWR’s ~75,000 acre-feet of water rights could represent substantial value depending on the structure of the transaction.
- **DPS growth:** We expect CWT to grow its DPS at 5%, in line with its long-term goal of at least a 5% DPS CAGR.

## **California Water Service Group (CWT, US$33.00, Neutral, TP US$32):** Capital investment opportunities abound, no need to look around

**Fig 10 CWR: Abbreviated financial projections and valuation multiples**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| **EPS (US$)** | **0.94** | **0.95** | **1.29** | **1.40** | **1.45** | **15.0%** |
| **DPS (US$)** | **0.67** | **0.69** | **0.71** | **0.73** | **0.75** | **3%** |
| Dividend payout | 71% | 72% | 55% | 52% | 52% | |
| Regulatory rate base (US$bn) | 1,004 | 1,067 | 1,140 | 1,249 | 1,399 | 9.5% |
| EV/Rate base @ $33.00 | | | 1.98x | 1.98x | 1.76x | |
| P/E @ $33.00 | | | 25.5x | 23.6x | 22.8x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth:** We expect CWT to grow its EPS/DPS at a 15.0%/3.0% CAGR between ’16 and ’19, although this due to a significant step-up in ’17 following the conclusion of its most recent rate case. From ’17-’19, we expect EPS growth to be closer to 5%, trailing potential rate base growth of 7-10%. We factor in anticipated equity needs, but acknowledge that a material reduction of the current allowed ROE would reduce our EPS estimates. The next cost of capital filing proceeding is likely to begin after the company’s required filing in March.
- Cal Water, CWT’s primary utility, has substantial capital spending opportunities ahead of it. The company was successful in reducing the replacement rate of its water mains from 300yrs down to 200yrs, but this still heavily lags its CA peers who are closer to 100yrs. Its wells are nearing the 50yr suggested life by the American Water Works Association (AWWA), and while this is not a hard and fast deadline, suggests another set of major capital spending (>US$2.5bn) which will be required over time.
- **DPS growth:** We expect CWT to grow its DPS at just a 3% CAGR between ’16 and ’19, as the company needs to fund its sharply increased capex using some external equity as well internally generated cash flows.

## **Aqua America (WTR, US$30.28, Neutral, TP US$32 down from US$35):** Rate case in PA, M&A overhang

**Fig 11 WTR: Abbreviated financial projections and valuation multiples**

| | 2015 | 2016E | 2017E | 2018E | 2019E | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| **EPS** | **1.26** | **1.32** | **1.37** | **1.42** | **1.49** | **4.1%** |
| **DPS** | **0.69** | **0.74** | **0.79** | **0.86** | **0.92** | **7.8%** |
| Dividend payout | 54.1% | 55.7% | 57.6% | 60.1% | 61.4% | |
| Regulatory rate base (US$bn) | 3.5 | 3.7 | 4.0 | 4.2 | 4.5 | 6.6% |
| EV/Rate base @ $30.28 | | | 1.88x | 1.78x | 1.75x | |
| P/E @ $30.28 | | | 22.1x | 21.3x | 20.4x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth:** We expect WTR to grow its EPS at a 4.1% CAGR between '16 and '19. The EPS CAGR should trail WTR's same-system rate base CAGR of 6.6%, we estimate, as WTR over-earns its allowed ROE in PA, where close to 70% of its rate base is located. We expect WTR to file for a DSIC mechanism in PA in late '17 and a general rate case in '18 – the rate case should coincide with a federal corporate tax reform and new rates are likely to reflect a real corporate tax expense. In preparation for the PA rate case, the company has sharply boosted its capital spending as updated on the 2017 earnings call held today (1/17/17).
- The current overearning of the allowed ROE by Aqua Pennsylvania is driven by a flow through tax accounting for repair cost deductions in the state. Qualified repair capex (as opposed to improvements) is expensed for tax purposes in the year it was incurred rather than capitalized and depreciated over the life of an asset. As a result, WTR's effective tax rate in PA is sharply below its statutory level which is reflected in the water rates Aqua Pennsylvania collects. And while WTR is not the only utility in our universe benefitting from this tax treatment (with California utilities also using the flow through tax accounting for repair costs), this is the only instance where the utility has been allowed to keep the benefit and is not required to file a rate case in a specified time frame to true up its rates. WTR points out that its rates in PA remained flat thanks to the tax change, but we argue that they should have dropped, otherwise Aqua PA would not be earning in excess of its allowed ROE. We are concerned about the treatment of this very large tax benefit during the upcoming rate case in PA, even if we recognize that a claw back of the benefit could be considered a retroactive ratemaking.
- On the M&A front, WTR remains excited on potential municipal water deals, and its appetite for gas/electric utility deals seems to have subsided, which could be just a function of the poor performance of WTR's stock relative to its water peers since the gas/electric M&A possibility was first disclosed.
- **DPS growth:** We expect WTR to grow its dividends ahead of its EPS growth rate – at a 7.8% CAGR through '19 – given WTR's strong balance sheet and cash flows even if by 2019 the dividend payout should exceed 61%, just above the 55-60% payout typically targeted by water utilities. Given WTR's sizeable NOL position, we do not expect its cash flows to benefit from changes in the corporate tax code, including expensing of capex at a 100% rate.
- **Earnings/TP changes:** We have lowered our earnings estimates for WTR to reflect the higher level of spending and an upcoming rate case in PA whose outcome is hard for us to determine. Our new '17/'18/'19 EPS estimates are US$1.37/1.42/1.49 down from US$1.38/1.45/1.52, respectively. We lower our TP to US$32 (from US$35) on the back of lower estimates and as we roll forward our valuation to 2019 (from 2018) and lower our anchor PE multiple for water utilities to 22.4x from 25x.

UNITED STATES

AWR US Neutral

**Price** (at 04:26, 14 Jan 2017 GMT) US$43.66

| | | |
|---|---|---|
| **Valuation** - PER | **US$** | **43.00** |
| **12-month target** | **US$** | **43.00** |
| **12-month TSR** | **%** | **+0.7** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **1,597** |
| **30-day avg turnover** | **US$m** | **4.2** |
| **Number shares on issue** | **m** | **36.57** |

**Investment fundamentals**

| Year end 31 Dec | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| EPS adj | US$ | 1.61 | 1.62 | 1.72 | 1.82 |
| EPS adj growth | % | 2.5 | 0.5 | 6.0 | 6.2 |
| PER adj | x | 27.1 | 27.0 | 25.4 | 23.9 |
| Total DPS | US$ | 0.87 | 0.91 | 0.96 | 1.01 |
| Total DPS growth | % | 5.2 | 4.6 | 5.0 | 5.0 |
| Total div yield | % | 2.0 | 2.1 | 2.2 | 2.3 |

Source: FactSet, Macquarie Capital (USA), January 2017
(all figures in USD unless noted)

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17 January 2017
Macquarie Capital (USA) Inc.

# American States Water

## A good water utility but fully valued

### Initiating with Neutral, US$43 target price

Rate base growth of ~5-6% is roughly in line with peers and a lower than average allowed ROE of 9.43% for its regulated water utility operations will likely see a decline following an imminent cost of capital proceeding. The utility currently has been enjoying a 55% equity layer vs. peers closer at 53.4%, and has both an electric utility with a higher allowed ROE and non-regulated 50yr military contracts, which should allow AWR to earn above the water ROE assigned to it by the CPUC. Having seen AWK's success with its market-based operations managing water and wastewater systems on 12 military bases around the U.S., we are optimistic about AWR's fundamentals given an earnings mix that has reached 20% non-regulated as of '16. Whether or not investors are fully recognizing the appeal of AWR's operations and growth potential relative to peers, sentiment for the group overall has pushed valuations to near 10yr highs. We initiate coverage at Neutral, with a US$43 TP.

### A clear stream of revenues but with ebbs and flows

California has suffered from significant droughts in the past and is expected to continue to. However, unlike most other states, CA has allowed for revenues and water sales volumes to be decoupled, which protected AWR's water utility when conservation orders resulted in a >25% decline in water usage. While the company's P&L is not impacted by volumes, cash recovery can stretch out over 12-18mo or potentially longer. An advantage of this system from a ratepayer perspective has been that the cash shortfall has typically been paid down more by heavy users, as rates are tiered and rise with consumption.

### Not too slow but steady in the long run

We expect AWR to grow its EPS/DPS both by ~5%-6% from '16-'19, roughly in line with its stated LT DPS CAGR and regulated peers overall. The downside risk comes mostly from a reduction to its current water allowed ROE of 9.43% and equity layer of 55%, while in the longer term it could outperform peers via its market-based operations. Looking ahead only to the next few years, we note that the current 55% payout ratio was highlighted by management as a potential way to augment DPS growth, a sign that significantly higher EPS growth is not to be expected, we believe. Our initial '16/'17/'18/'19 EPS estimates are US$1.62/1.72/1.82/1.94, vs. consensus of US$1.64/1.73/1.84/*N/A*.

### Valuation

High visibility into earnings, revenue decoupling and non-regulated operations with long-term government contracts are certainly appealing. A ~5-6% EPS/DPS CAGR is merely in line with peers, however. Based on scarcity of investable water utilities and excellent visibility into long-term growth, the historical 40% premium for water names over electrics still seems appropriate to us. Starting from our regulated electric FY3 P/E of 16.0x, we reach a FY3 water P/E of 22.4x. When combined with our '19 EPS estimate of US$1.94, we initiate coverage with a US$43 TP and a Neutral rating.

## Inside



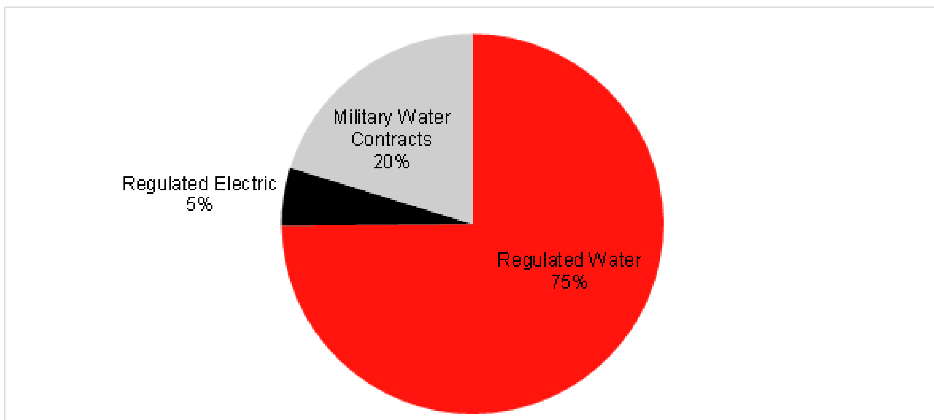
# American States Water Company

## Company profile

American States Water Company (AWR US) operates two primary subsidiaries:

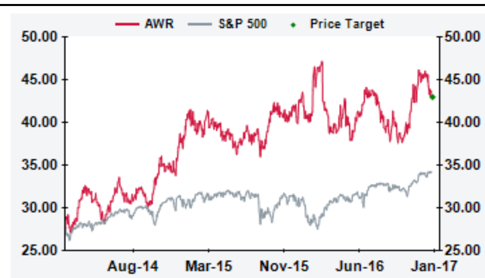
- **Golden State Water Co. (GSWC)** operates 39 water systems, serving ~260k customers across 75 cities in 10 counties in CA, as well as providing electricity to ~24k customers in several San Bernardino County mountain communities in CA through its subsidiary, Bear Valley Electric Service.
- **American States Utility Services, Inc. (ASUS)**, headquartered in VA, operates and maintains water and wastewater systems under 50-year contracts at several U.S. government military bases in FL, MD, NC, NM, SC, TX and VA.

**Fig 1 AWR's non-regulated net income now makes up 20% of its total as of '16, and could offer the opportunity to exceed the ROEs of its regulated businesses**




Source: Company disclosures, Macquarie Capital (USA), January 2017

**Fig 2 AWR US vs S&P 500, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Capital (USA), January 2017

(all figures in USD unless noted)

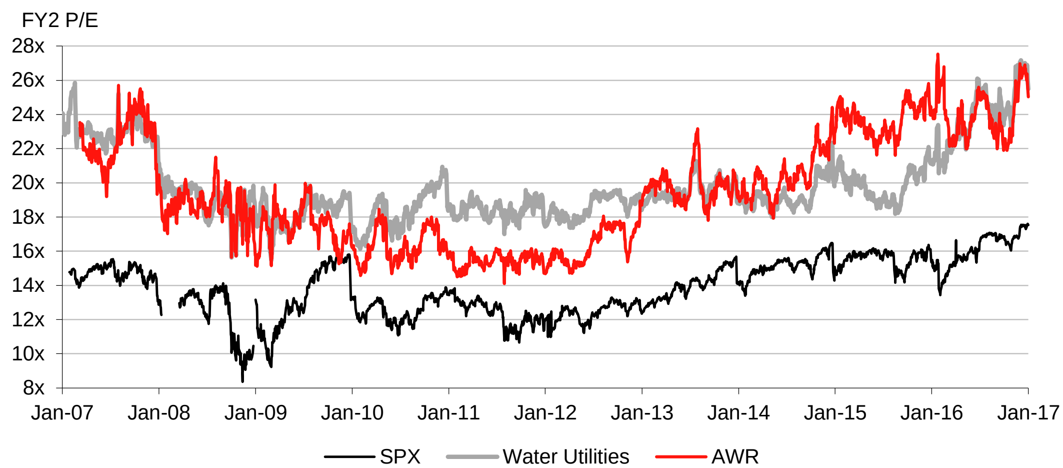
# A good water utility but fully valued

## Initiating with Neutral, US$43 target price

***We like AWR's fundamentals and business prospects, but would encourage investors to look for a more attractive entry point.***

AWR combines the attractive aspects, namely the transparency, LT visibility and revenue decoupling of its sole regulated jurisdiction of California, with a portfolio of 50-year contracts on U.S. military bases. Having seen AWK's success with its market-based operations managing water and wastewater systems on 12 military bases around the U.S., we are optimistic about AWR's fundamentals given an earnings mix that has reached 20% non-regulated as of '16. The result is a regulated water utility with reduced sensitivity to droughts/conservation, and an opportunity to exceed its authorized ROE via its non-regulated businesses. The drawbacks are vigilant and formidable adversaries in the form of the CPUC's Office of Ratepayer Advocates (ORA) and The Utility Reform Network (TURN), as well as the potential limitation or removal of decoupling during or immediately followed by another drought, and a cost of capital proceeding that could take place while equity valuations are stretched and bond yields have not yet reached their next plateau. We note that following post-election mentions of both water infrastructure investment and increased defense spending, AWR rose 2.5 turns on its FY3 P/E vs. an average of 1 turn for its water peers, and is within ~10% of its 10-year max P/E for both FY2/FY3.

**Fig 3 Even after the recent pullback, AWR is near its highest valuation in a decade**




Source: FactSet, Macquarie Capital (USA), January 2017

**Fig 4 AWR: Financial metrics (Note: CPUC has not decided the '18/'19 cost of capital and equity ratio yet)**

| | 2015 | 2016E | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| EPS | 1.56 | 1.62 | 1.72 | 1.82 | 1.94 |
| EPS growth | -1.0% | 3.5% | 6.0% | 6.2% | 6.4% |
| DPS | 0.87 | 0.91 | 0.96 | 1.01 | 1.06 |
| DPS growth | 5.2% | 4.6% | 5.0% | 5.0% | 5.0% |
| Payout ratio | 56% | 56% | 56% | 55% | 55% |
| Diluted shares outstanding | 39 | 37 | 37 | 37 | 37 |
| Capex (US$m) | 87 | 110 | 90 | 90 | 90 |
| Regulatory rate base (US$m) | | 745 | 792 | 840 | 888 |
| Equity ratio | 55% | 55% | 55% | 55% | 55% |
| EV/Rate Base | | 2.04x | 1.97x | 1.90x | 1.80x |
| Authorized ROE (GSWC) | 9.43% | 9.43% | 9.43% | 9.43% | 9.43% |

Source: Company data, Macquarie Capital (USA), as of January 13, 2017

# Valuation, recommendation, risks

High visibility into earnings, revenue decoupling, and non-regulated operations with long-term government contracts are certainly appealing. A ~5%-6% EPS/DPS CAGR is merely in line with peers, however. AWR currently trades at FY2/FY3 P/E ratios which are >90% of its 10-year max valuations, although its peers do as well. Based on scarcity of investable water utilities, as well as excellent visibility into long-term growth, the historical 40% premium for water names over electrics still seems appropriate to us. We are wary of the upcoming cost of capital proceeding, which is due to commence after a filing due in March. Whether or not investors are fully recognizing the appeal of AWR's operations and growth potential relative to peers, sentiment for the group overall has pushed valuations to near 10yr highs.

***Wait for water utilities to re-price before buying.***

Starting from our regulated electric FY3 P/E of 16.0x, we reach a FY3 water P/E of 22.4x. Combined with our '19 EPS estimate of US$1.94, we initiate coverage with a US$43 TP and a Neutral rating.

**Fig 5 AWR: FY3 P/E valuation**

| | |
|---|---|
| 2019 Earnings Per Share | $1.94 |
| FY3 (2019) sector P/E multiple for Regulated Electrics | 16.0x |
| Premium for Regulated Water Utilities | 40% |
| FY3 (2019) sector P/E multiple for Regulated Water | 22.4x |
| **AWR Target Price** | **$43.00** |
| Stock Price | $43.66 |
| **TSR Upside/Downside** | **2% (including '17 DPS)** |

Source: FactSet, Macquarie Capital (USA) , as of January 13, 2017

**Fig 6 10-year statistics for FY2 P/E ratios show that the group is trading very close to its highest levels in a decade**

| FY2 P/E | SPX | XLU | Water Utilities | AWK | WTR | CWT | AWR | SJW | CTWS | YORW |
|---|---|---|---|---|---|---|---|---|---|---|
| Max | 17.6x | 18.5x | 27.2x | 27.8x | 30.6x | 27.0x | 27.5x | 28.9x | 25.8x | 38.3x |
| Median | 13.9x | 15.0x | 19.2x | 16.6x | 20.7x | 17.9x | 19.0x | 19.7x | 19.8x | 22.1x |
| Mean | 13.9x | 14.6x | 19.8x | 17.2x | 21.1x | 18.4x | 19.4x | 20.1x | 19.8x | 22.7x |
| Min | 8.4x | 10.6x | 15.5x | 11.6x | 17.0x | 14.7x | 14.1x | 13.3x | 15.0x | 15.9x |
| Current | 17.5x | 17.0x | 25.5x | 23.5x | 21.6x | 24.7x | 25.0x | 24.9x | 23.9x | 34.7x |
| % of Max | 100% | 92% | 94% | 85% | 71% | 92% | 91% | 86% | 93% | 91% |
| Premium to median | 26% | 13% | 33% | 42% | 5% | 38% | 32% | 26% | 21% | 57% |

Source: FactSet, Macquarie Capital (USA), as of January 10, 2017

# Enviable regulatory mechanisms

## A clear stream of revenues but with ebbs and flow

California has suffered from significant droughts in the past and is expected to continue to. However, unlike most other states, CA has allowed for revenues and water sales volumes to be decoupled, which protected AWR's water utility when conservation orders resulted in a >25% decline in water usage. While on the positive side, the company's P&L is not impacted by volumes, cash recovery can stretch out over 12-18mo or potentially longer. This has led to an interesting outcome for ratepayers however, where the heaviest consumers see their rates rise according to their level of usage and therefore ends up with those who choose to consume the most subsidizing what otherwise would have been essentially fixed cost increases on the lowest users.

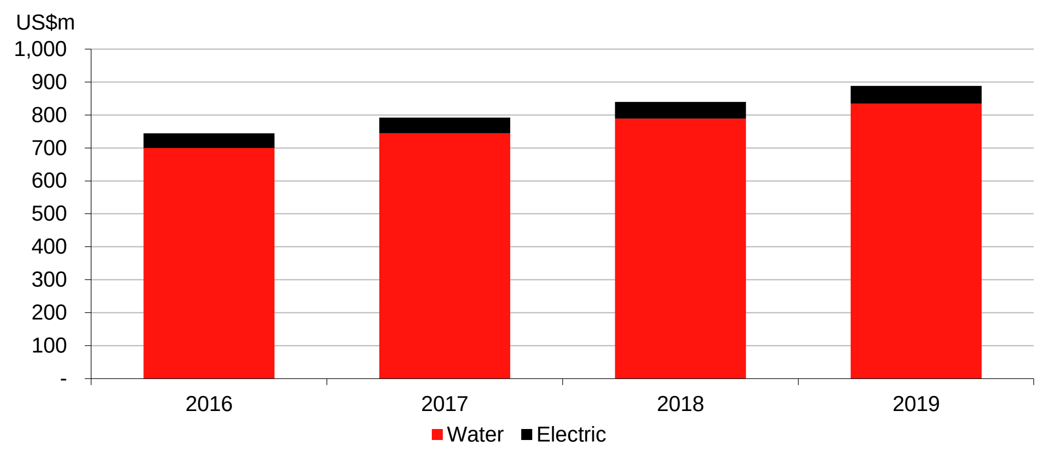
## Not too slow but steady in the long run

***AWR's earnings are more likely to see plateaus and step-ups as opposed to the relatively smoothly increasing regulatory asset base.***

We expect AWR to grow its EPS/DPS both by ~5-6% from '16-'19, in line with its stated LT DPS CAGR and regulated peers overall. The company has been enjoying a higher than average equity layer, 55% vs. peers at 53.4%, which could potentially be reduced along with its current 9.43% allowed ROE. A cost of capital filing is due in March, with the proceedings likely to commence soon thereafter. We note that the current 55% payout ratio was highlighted by management as a potential way to augment DPS growth, a sign that significantly higher EPS growth is not to be expected in the near-term, we believe. We expect the company's market-based operations to continue to play a bigger role in the earnings mix over time, potentially affording the opportunity to consistently out earn its allowed water ROE overall.

While we would expect that the company's regulated earnings growth should track its rate base growth over the longer term, we are also pleased to see management's focus on a LT DPS CAGR, currently 'at least 5%'. Our initial '16/'17/'18/'19 EPS estimates are US$1.62/1.73/1.84/1.94, vs. consensus of US$1.64/1.73/1.84/N/A.

**Fig 7 Rate base: GSWC's most recent GRC approved a water rate base of ~US$700m 2016, as well as annual capex of ~US$90m. An electric GRC is due this month.**




Source: Company data, Macquarie Capital (USA), January 2017

# Financial Summary

**Fig 8 AWR: all figures in US$m unless noted**

| | 2015 | 2016E | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| **Income Statement** | | | | | |
| Operating revenues | | | | | |
| Water | $ 329 | $ 337 | $ 339 | $ 346 | $ 366 |
| Electric | 36 | 36 | 37 | 38 | 38 |
| Contracted services | 94 | 98 | 110 | 115 | 118 |
| **Total Operating Revenues** | **459** | **471** | **486** | **499** | **522** |
| Operating expenses | | | | | |
| Water and Electric Supply Costs | 104 | 101 | 103 | 105 | 105 |
| Other Operation | 28 | 28 | 28 | 28 | 28 |
| Administrative and General | 80 | 80 | 83 | 85 | 89 |
| Depreciation and Amortization | 42 | 43 | 46 | 48 | 51 |
| Maintenance | 17 | 17 | 19 | 18 | 22 |
| Property and Other Taxes | 17 | 18 | 19 | 20 | 21 |
| ASUS Construction | 53 | 65 | 61 | 60 | 62 |
| Total Operating Expenses | 340 | 353 | 360 | 363 | 378 |
| **Operating income** | **118** | **118** | **126** | **135** | **144** |
| Interest expense | (21) | (23) | (26) | (28) | (30) |
| Other, net | 1 | 1 | 1 | 1 | 1 |
| EBT | 98 | 96 | 102 | 108 | 115 |
| Income tax expense | 38 | 37 | 39 | 42 | 44 |
| **Net income** | **$ 60** | **$ 59** | **$ 63** | **$ 67** | **$ 71** |
| Weighted avg diluted shares outstanding | 39 | 37 | 37 | 37 | 37 |
| **Diluted EPS** | **$1.56** | **$1.62** | **$1.72** | **$1.82** | **$1.94** |
| | | | | | |
| **Cash Flow Statement** | | | | | |
| Net income | 60 | 59 | 63 | 67 | 71 |
| Adjustments to reconcile non-cash charges | 58 | 57 | 60 | 62 | 65 |
| Changes in assets and liabilities | (23) | (23) | (23) | (23) | (23) |
| **CFO** | **95** | **94** | **99** | **106** | **113** |
| Capital expenditures | (87) | (110) | (90) | (90) | (90) |
| Other | (3) | 0 | 0 | 0 | 0 |
| **CFI** | **(90)** | **(110)** | **(90)** | **(90)** | **(90)** |
| Issuance/repurchase of common stock | (72) | 1 | 1 | 1 | 1 |
| Long-term debt issued/repaid | (0) | 50 | 41 | 41 | 1 |
| Short-term debt issued/repaid | 28 | 49 | 25 | 20 | 55 |
| Dividends paid | (33) | (34) | (36) | (38) | (40) |
| Other | (0) | (0) | (0) | (0) | (0) |
| **CFF** | **(77)** | **66** | **30** | **24** | **17** |
| Net change in cash and cash equivalents | (72) | 49 | 40 | 2 | 40 |
| Cash and cash equivalents, end of period | 4 | 53 | 93 | 133 | 173 |
| | | | | | |
| **Balance Sheet** | | | | | |
| Current assets | $ 133 | $ 181 | $ 220 | $ 259 | $ 298 |
| P,P&E | 1,081 | 1,166 | 1,243 | 1,306 | 1,403 |
| Regulatory and other assets | 135 | 135 | 135 | 135 | 135 |
| **Total assets** | **1,349** | **1,482** | **1,598** | **1,700** | **1,836** |
| Current liabilities | 124 | 173 | 179 | 185 | 191 |
| Long-term debt | 326 | 375 | 416 | 456 | 457 |
| Other liabilities (including construction) | 434 | 434 | 434 | 434 | 434 |
| Total liabilities | 883 | 981 | 1,028 | 1,075 | 1,081 |
| **Total Shareholders' Equity** | **466** | **501** | **570** | **625** | **755** |
| **Liabilities and Shareholders' Equity** | **$ 1,349** | **$ 1,482** | **$ 1,598** | **$ 1,700** | **$ 1,836** |

Source: Company data, Macquarie Capital (USA), January 2017

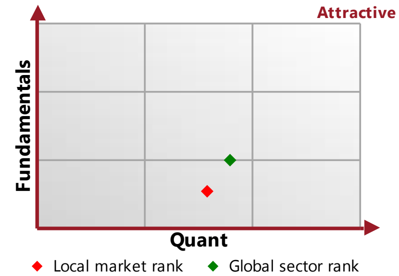
# Macquarie Quant View

The quant model currently holds a marginally positive view on American States Water. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Valuations, indicating this stock is over-priced in the market relative to its peers.

**175/433**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 0% (0/5) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 0 |

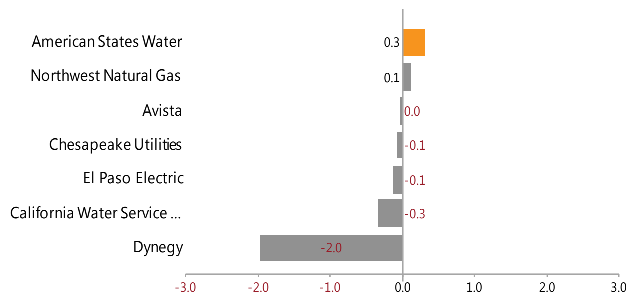



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

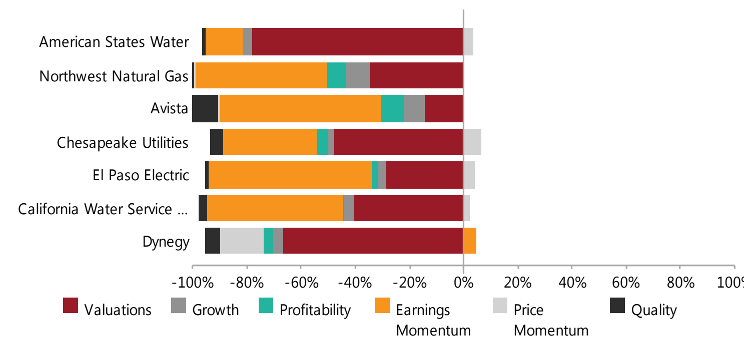
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



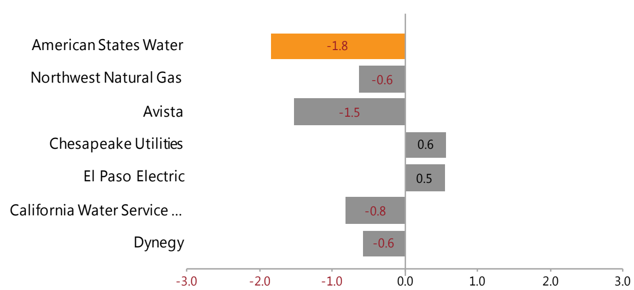

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



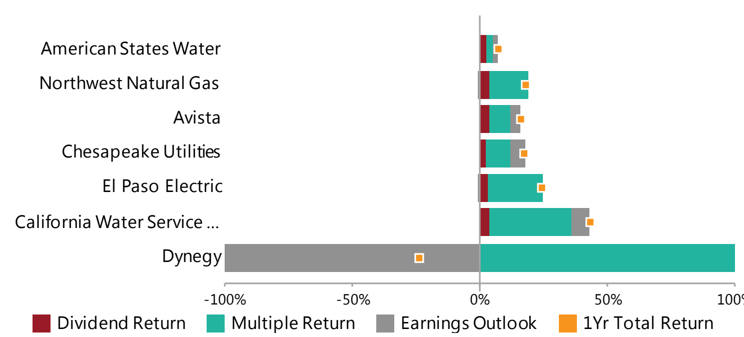

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



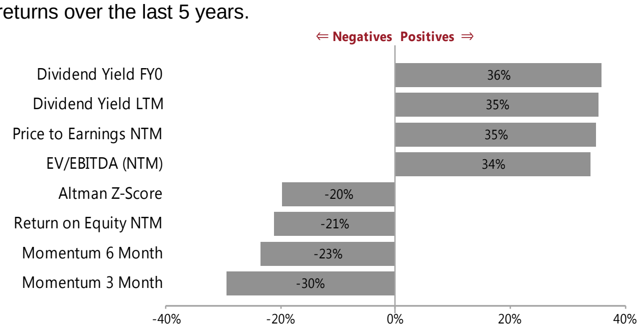

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



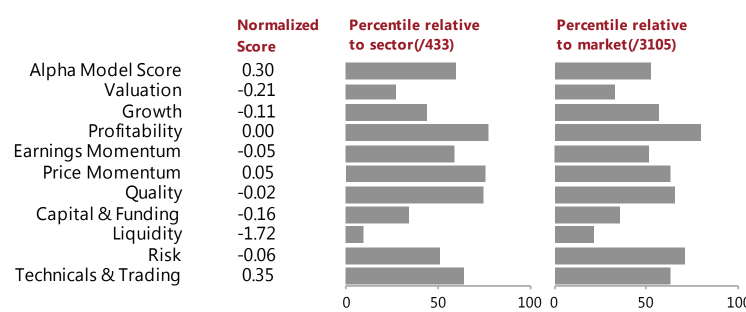

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

**UNITED STATES**


| | | |
|---|---|---|
| CWT US | | Neutral |
| **Price** (at 04:26, 14 Jan 2017 GMT) | | US$33.00 |
| **Valuation** - PER | **US$** | **32.00** |
| **12-month target** | **US$** | **32.00** |
| **12-month TSR** | **%** | **-0.9** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **1,583** |
| **30-day avg turnover** | **US$m** | **6.4** |
| **Number shares on issue** | **m** | **47.97** |

**Investment fundamentals**

| Year end 31 Dec | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| EPS adj | US$ | 0.95 | 0.95 | 1.29 | 1.40 |
| EPS adj growth | % | -20.6 | 0.8 | 35.7 | 8.1 |
| PER adj | x | 34.9 | 34.6 | 25.5 | 23.6 |
| Total DPS | US$ | 0.67 | 0.69 | 0.71 | 0.73 |
| Total DPS growth | % | 3.1 | 3.0 | 3.0 | 3.0 |
| Total div yield | % | 2.0 | 2.1 | 2.2 | 2.2 |

Source: FactSet, Macquarie Capital (USA), January 2017
(all figures in USD unless noted)

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17 January 2017
Macquarie Capital (USA) Inc.

# California Water Service Group

## Welcome to the Hotel California

### Initiating with Neutral, US$32 target price

Rate base growth of ~6% appears well supported by extensive capital investment needs within existing service territories, which should provide matching EPS/DPS growth over the longer term. An upcoming cost of capital proceeding is likely to result in a reduction to the 9.43% ROE which Cal Water has been earning since ’13, and so EPS growth should trail rate base growth in the near term, we believe. We like the pure play regulated water business in general and regard California as an average regulatory jurisdiction with some unique but offsetting features. Although allowed ROEs are lower than throughout most of the rest of the country, triennial rate cases and revenue decoupling provides some balance to the less favourable upfront economics. CWT has benefitted considerably from revenue decoupling in CA, allowing it to promote conservation and withstand significant volume declines while still eventually collecting its revenue requirements. CWT offers water utility investors ~5-6%/3% EPS/DPS CAGRs for ’17-’19, in line with its peer averages of ~5-6%, but isn’t reliant on acquisitions or non-regulated operations, affording it higher than average visibility in a space which already offers plenty to begin with. Using a Water sector FY3 P/E multiple of 22.4x (40% premium to regulated electrics), we initiate coverage of CWT with a US$32 TP and Neutral rating.

### Single jurisdiction concentration more a blessing than a curse

Despite operating in four states, CWT’s business is 98% regulated and 94% CA-focused, making the company for all intents and purposes a completely regulated California water utility. While this leads to high regulatory visibility, it also means that the operations in HI, NM, and WA are not sizable enough to cause the weighted authorized ROE to differ from the 9.43% adopted in CA. With Cal Water’s most recent rate case (covering ’17-’19) just completed in Dec ’16, ‘18/’19 earnings are heavily dependent on the outcome of what appears to be a likely fully litigated upcoming cost of capital proceeding for ’18-‘20, due to commence in late March.

### Like many of its customers, CWT prefers organic

Cal Water has just advanced from a 300yr water main replacement cycle down to 200 years (with a ~50% increase in annual capex), and yet it still lags other CA water utilities who are replacing mains at nearly double that rate. While we see an attractive opportunity for many water utilities to grow their rate base via acquisitions of municipal systems, Cal Water stands out as having a particularly significant level of capital investment needed, with the rate base per customer being significantly below average for investor-owned water utilities in the US. We agree with management’s assessment that focusing on its existing footprint is best.

### Valuation

Our US$32 TP is based on our ’19 EPS estimate of US$1.45 and a P/E multiple of 22.4x (a 40% premium to our FY3 regulated electric multiple of 16.0x). We like the fundamentals, but struggle with paying up for the stock when it is trading at ~90% of its highest P/E in 10 years, even after selling off somewhat in recent days. We encourage investors considering water utilities to wait for a more attractive entry point. We initiate coverage with a Neutral rating.

## Inside

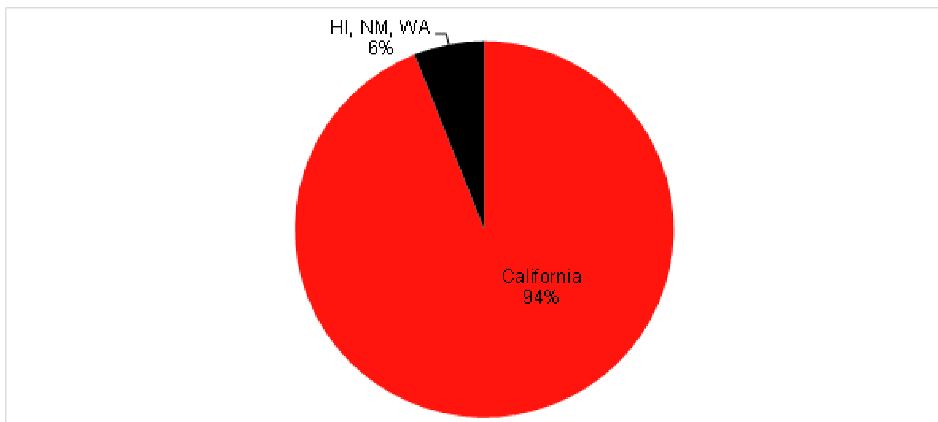


# California Water Service Group

## Company profile

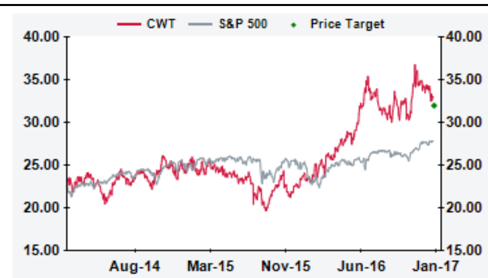
- California Water Service Group (CWT US) provides water and wastewater services on a regulated basis in CA, HI, NM, and WA, as well as non-regulated utility services businesses in CA and HI.
- Third-largest publicly traded water utility (after AWK and WTR).
- >2m customers, >6,000mi of mains, 1,130 wells, 662 storage tanks, 6 surface water treatment plants, 10 wastewater treatment plants.
- General corporate rating of A+ stable from S&P.

**Fig 1 CWT's business3yr trailing revenues are 98% regulated, and despite operating in four states, highly concentrated, with 94% in California**




Source: Company data, Macquarie Capital (USA), January 2017

**Fig 2 CWT US vs S&P 500, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Capital (USA), January 2017

(all figures in USD unless noted)

# Welcome to the Hotel California

## Initiating with Neutral, US$32 target price

***CA is a somewhat favourable jurisdiction to be a water utility at the moment. We continue to prefer a healthy level of acquisition-driven growth to augment organic capex.***

We like the pure play regulated water business in general and regard California as currently one of the friendliest jurisdictions for water utilities, although an upcoming cost of capital proceeding may test that view. CWT benefits from revenue decoupling in CA, allowing it to promote conservation and withstand significant volume declines while still eventually collecting its revenue requirements. CWT offers water utility investors 15%/3% EPS/DPS CAGRs for ’16-’19, due to a large step-up in ’17 following the conclusion of its latest rate case. After accounting for that jump, EPS growth is more in line with peers’ average of ~5-6%. Following several years of drought, CWT has shown the effectiveness of its WRAM mechanism and stands to benefit from significant investment needs in the state in order to improve the existing infrastructure’s efficiency and to prevent water from being wasted. The trade-offs however, are a lack of interest in pursuing municipal acquisitions at a time when its peers are doing so, very capable and potentially aggressive consumer advocates, and pushback from Californians (although the CPUC is not subject to Prop 218) about tiered rates, particularly during the next drought.

CWT stands to benefit from significant investment needs in the state in order to improve the existing infrastructure’s efficiency and to prevent water from being wasted. So long as there continue to be ample opportunities to expand the existing footprint’s rate base, we understand management’s preference for internal growth instead of municipal acquisitions. We expect Cal Water’s 9.43% allowed ROE to fall as a result of the impending cost of capital proceeding, which is due to commence following the company’s required filing in March.

We note the significant run-up and then partial reversal in Water utilities since the Nov ’16 election, where investing in water infrastructure was mentioned in the President-elect’s speech. While we like CWT’s fundamentals, we believe sentiment is overly optimistic at the moment, and therefore encourage investors to wait for a more attractive entry point.

**Fig 3 CWT: Financial metrics (Note: the ‘18/’19 cost of capital and equity ratio are dependent on the CPUC review)**

| | 2015A | 2016 | 2017 | 2018 | 2019 | 3yr CAGR |
|---|---|---|---|---|---|---|
| EPS | 0.94 | 0.95 | 1.29 | 1.40 | 1.45 | 15.0% |
| EPS growth | -20.8% | 1.3% | 35.7% | 8.1% | 3.6% | |
| DPS | 0.67 | 0.69 | 0.71 | 0.73 | 0.75 | 3.0% |
| DPS growth | 3.1% | 3.0% | 3.0% | 3.0% | 3.0% | |
| Payout ratio | 71% | 72% | 55% | 52% | 52% | |
| Diluted shares outstanding | 48 | 48 | 48 | 52 | 51 | |
| Capex (US$m) | 177 | 195 | 215 | 225 | 235 | |
| Regulatory rate base (US$m) | 1,004 | 1,067 | 1,140 | 1,249 | 1,399 | 9.5% |
| Equity ratio | 53.4% | 53.4% | 53.4% | 53.4% | 53.4% | |
| EV/Rate base | 2.07x | 2.04x | 1.98x | 1.98x | 1.76x | |
| Authorized ROE (Cal Water) | 9.43% | 9.43% | 9.43% | 9.43% | 9.43% | |

Source: FactSet, Macquarie Capital (USA), as of January 13, 2017

# Valuation, recommendation, risks

***Wait for water utilities to re-price before buying.***

## Water utilities tend to be pricey, but its best to hold back right now

Our US$32 TP is based on a ’19 EPS estimate of US$1.45 and a P/E multiple of 22.4x (a 40% premium to our FY3 regulated electric multiple of 16.0x). We like the company’s fundamentals, but struggle with paying up for the stock when it is trading at ~90% of its highest P/E in 10 years, even after selling off somewhat in recent days. We encourage investors considering water utilities to wait for a more attractive entry point. We initiate coverage with a Neutral rating. We note the significant run up and then partial reversal in Water utilities following President-elect Trump’s acceptance speech during the Nov ’16 election. Specific mention was made of investing in water infrastructure, with a nod towards avoiding another Flint-like incident.

**Fig 4 CWT: FY3 P/E valuation**

| | |
|---|---|
| 2019 Earnings Per Share | $1.45 |
| FY3 (2019) sector P/E multiple for Regulated Electrics | 16.0x |
| Premium for Regulated Water Utilities | 40% |
| FY3 (2019) sector P/E multiple for Regulated Water | 22.4x |
| **CWT Target Price** | **$32.00** |
| Stock Price | $33.00 |
| **TSR Upside/Downside** | **-1% (including ’17 dividend yield)** |

Source: FactSet, Macquarie Capital (USA) , as of January 13, 2017

**Fig 5 10-year statistics for FY2 P/E ratios show that the group is trading very close to its highest levels in a decade**

| FY2 P/E | SPX | XLU | Water Utilities | AWK | WTR | CWT | AWR | SJW | CTWS | YORW |
|---|---|---|---|---|---|---|---|---|---|---|
| Max | 17.6x | 18.5x | 27.2x | 27.8x | 30.6x | 27.0x | 27.5x | 28.9x | 25.8x | 38.3x |
| Median | 13.9x | 15.0x | 19.2x | 16.6x | 20.7x | 17.9x | 19.0x | 19.7x | 19.8x | 22.1x |
| Mean | 13.9x | 14.6x | 19.8x | 17.2x | 21.1x | 18.4x | 19.4x | 20.1x | 19.8x | 22.7x |
| Min | 8.4x | 10.6x | 15.5x | 11.6x | 17.0x | 14.7x | 14.1x | 13.3x | 15.0x | 15.9x |
| Current | 17.5x | 17.0x | 25.5x | 23.5x | 21.6x | 24.7x | 25.0x | 24.9x | 23.9x | 34.7x |
| % of Max | 100% | 92% | 94% | 85% | 71% | 92% | 91% | 86% | 93% | 91% |
| Premium to median | 26% | 13% | 33% | 42% | 5% | 38% | 32% | 26% | 21% | 57% |

Source: FactSet, Macquarie Capital (USA), as of January 10, 2017

***We view CA as an average regulatory jurisdiction for water utilities at the moment***

# California dreaming for water utilities

## Single jurisdiction concentration more a blessing than a curse

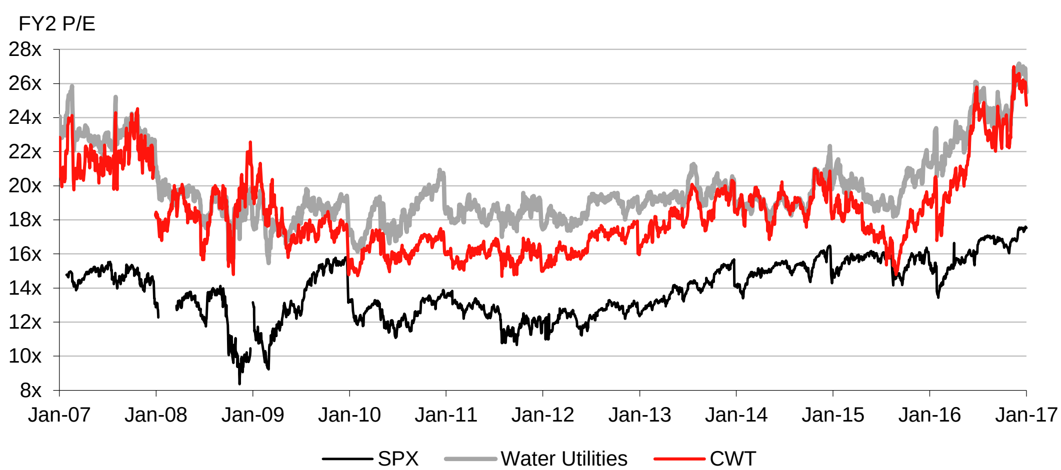
Despite operating in four states, CWT's business is 98% regulated and 94% CA-focused, making the company essentially a completely regulated California water utility. This results in a high level of regulatory visibility, and at least as far as decoupling and Tier 1 Advice Letters are concerned, an at least average regulatory backdrop when compared to other jurisdictions in the US, albeit with among the lowest authorized ROEs for water utilities. Pennsylvania still remains our favourite jurisdiction due to its pro-consolidation legislation.

The Water Revenue Adjustment Mechanism (WRAM) created a formal separation between sales volumes and revenues, and has proven its value during the most recent heavy drought. Revenue decoupling was authorized by the CPUC in 2008 to further promote water conservation. Forward-looking test years for highly transparent three-year general rate cases and a multitude of tracking mechanisms are slightly offset however, by active interveners and aggressive consumer advocates in the form of the CPUC's Office of Ratepayer Advocates (ORA), and The Utility Reform Network (TURN).

Although the company has operations in Hawaii, New Mexico, and Washington state, even when aggregated they are not sizable enough to cause CWT's consolidated, weighted authorized ROE to differ from the 9.43% assigned to Cal Water by the CPUC effective 2013. This is important because after three annual extensions, Cal Water is due for another Cost of Capital review by March 31, 2017. In Dec '16, Cal Water and three other large CA water utilities jointly filed a request with the CPUC for another extension. The Office of Ratepayer Advocates (ORA) was quite pointed in its reply, suggesting that the recently concluded triennial General Rate Case process already addressed the issues and proceedings which the joint parties cited as the reasons for requesting another extension.

We expect the 2017 cost of capital proceeding to occur as scheduled, and are hopeful that the decline in allowed the ROE will not be significant, although we a reduction of some sort is fairly certain, we believe. While the cost of debt is the most straightforward element in the cost of capital, we note that the ORA mentioned equity market returns and how they might tie in to an appropriate ROE. While we offer no comment on general market valuations, we note that water utilities have recently touched their highest valuations in the last 10 years.

**Fig 6 Water utilities have recently hit their highest valuation in a decade**




Source: FactSet, Macquarie Capital (USA), January 2017

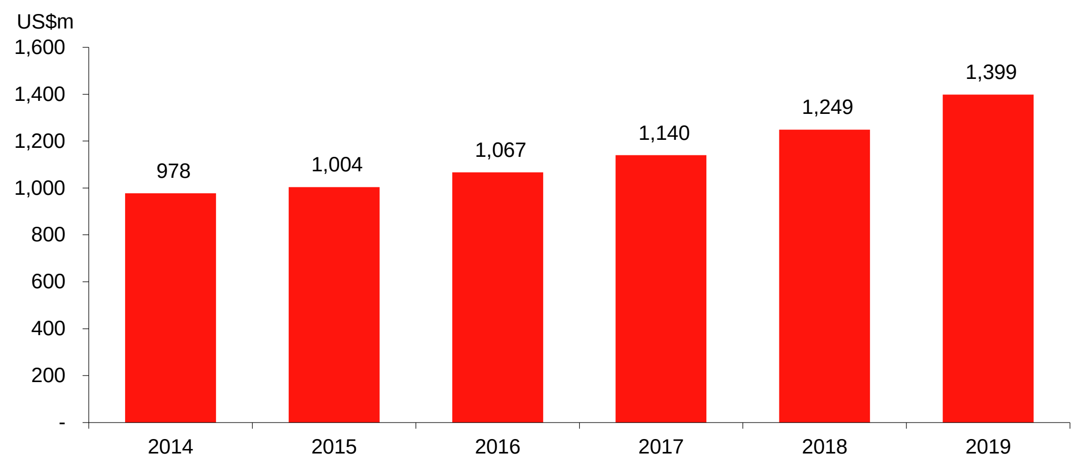
# Like its customers, CWT prefers organic

## Investing in its existing footprint is the primary growth strategy

For most water utilities, we are most excited about the opportunities for industry consolidation, as <20% of water systems are investor owned vs. nearly ~70% of electric utilities, by customer base. However, Cal Water has just advanced from a 300yr water main replacement cycle down to 200 years, and yet it still lags other CA water utilities who are replacing mains at nearly double that rate. The company has significant capital spending opportunities available, and therefore is unlikely to participate in these municipal acquisitions or other M&A in a meaningful way, we believe.

We certainly do not disagree that Cal Water has plenty of investment opportunities available to it, but we hope that CWT remains open to expanding into higher earning jurisdictions, should the reduction to its allowed ROE put it at a disadvantage to peers in terms of EPS growth. If acquisitions were pursued, we would be more supportive of non-CA growth to help offset the current effectively single jurisdiction exposure. Triennial rate cases with forward test years are nice to have, but the appeal can quickly fade if a subsequent ROE review, like the imminent 2017 Cost of Capital proceeding, were to change the return profile of that hard sought rate base growth.

**Fig 7 Cal Water's Rate Base could grow at a high single digit CAGR (7-9%) through 2019, depending on the outcome of its anticipated Advice Letter filings**




Source: Company data, Macquarie Capital (USA), January 2017

# Financial Summary

**Fig 8 CWT: all figures in US$m unless noted**

| | 2015A | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| **Income Statement** | | | | | |
| Operating revenue | $ 588 | $ 610 | $ 649 | $ 676 | $ 694 |
| Water production costs | 208 | 222 | 218 | 216 | 218 |
| Administrative and general | 113 | 103 | 104 | 107 | 105 |
| Other operations | 67 | 70 | 73 | 77 | 79 |
| Maintenance | 21 | 22 | 25 | 27 | 29 |
| Depreciation and amortization | 61 | 69 | 74 | 80 | 87 |
| Income tax benefit/expense | 25 | 24 | 32 | 35 | 36 |
| Property and other taxes | 22 | 24 | 26 | 28 | 31 |
| **Net operating income** | **71** | **76** | **96** | **106** | **109** |
| EBIT | 96 | 101 | 130 | 143 | 147 |
| EBITDA | 159 | 170 | 204 | 223 | 235 |
| Net other income / loss | 1 | 1 | 1 | 1 | 1 |
| Net interest expense | 27 | 31 | 35 | 40 | 41 |
| Net income | 45 | 45 | 62 | 67 | 69 |
| **Earnings per share - diluted** | **$0.94** | **$0.95** | **$1.29** | **$1.40** | **$1.45** |
| **Dividends per share** | **$0.67** | **$0.69** | **$0.71** | **$0.73** | **$0.75** |
| Payout ratio | 71% | 72% | 55% | 52% | 52% |
| | **2015** | **2016** | **2017** | **2018** | **2019** |
| **Cash Flow Statement** | | | | | |
| **CFO** | **$ 145** | **$ 115** | **$ 136** | **$ 147** | **$ 156** |
| Utility plant expenditures | (177) | (195) | (215) | (225) | (236) |
| Other | (1) | - | - | - | - |
| **CFI** | **(178)** | **(195)** | **(215)** | **(225)** | **(236)** |
| Issuance of common stock | - | - | - | 110 | - |
| Issuance of debt | 46 | 105 | 104 | 92 | 15 |
| Dividends | (32) | (33) | (34) | (38) | (39) |
| Other | 9 | 9 | 9 | 9 | 9 |
| **CFF** | **23** | **82** | **79** | **173** | **(14)** |
| | | | | | |
| Change in cash and cash equivalents | (11) | 1 | - | 95 | (95) |
| Cash and cash equivalents at beginning of period | 20 | 9 | 10 | 10 | 105 |
| Cash and cash equivalents at end of period | $ 9 | $ 10 | $ 10 | $ 105 | $ 10 |
| | **2015** | **2016** | **2017** | **2018** | **2019** |
| **Balance Sheet** | | | | | |
| Total utility plant | $ 2,507 | $ 2,702 | $ 2,917 | $ 3,142 | $ 3,378 |
| Accumulated depreciation and amortization | (805) | (874) | (949) | (1,029) | (1,116) |
| Net utility plant | 1,702 | 1,828 | 1,968 | 2,113 | 2,262 |
| Cash and cash equivalents | 9 | 10 | 10 | 105 | 10 |
| Other current assets | 119 | 119 | 119 | 119 | 119 |
| Total current assets | 128 | 129 | 129 | 223 | 129 |
| Regulatory assets | 362 | 362 | 362 | 362 | 362 |
| Goodwill | 3 | 3 | 3 | 3 | 3 |
| Other assets | 52 | 52 | 52 | 52 | 52 |
| **Total assets** | **$ 2,246** | **$ 2,373** | **$ 2,514** | **$ 2,753** | **$ 2,808** |
| | | | | | |
| Total common stockholders' equity | $ 642 | $ 654 | $ 682 | $ 820 | $ 851 |
| Long-term debt, less current maturities | 512 | 596 | 676 | 768 | 777 |
| **Total capitalization** | **1,154** | **1,251** | **1,358** | **1,588** | **1,628** |
| Total current liabilities | 148 | 170 | 194 | 194 | 199 |
| Deferred income taxes | 265 | 265 | 265 | 265 | 265 |
| Pension and postretirement benefits | 236 | 236 | 236 | 236 | 236 |
| Other long-term liabilities | 82 | 82 | 82 | 82 | 82 |
| Advances for construction | 180 | 180 | 180 | 180 | 180 |
| Contributions in aid of construction | 178 | 187 | 196 | 205 | 215 |
| **Total capitalization and liabilities** | **$ 2,246** | **$ 2,373** | **$ 2,514** | **$ 2,753** | **$ 2,808** |

Source: Macquarie Capital (USA), January 2017

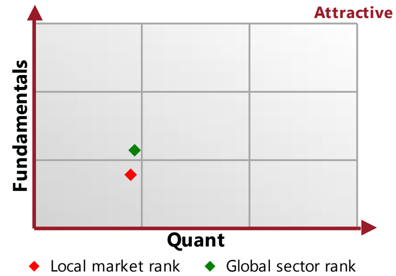
# Macquarie Quant View

The quant model currently holds a marginally negative view on California Water Service Group. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**299/433**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 0% (0/7) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 0 |

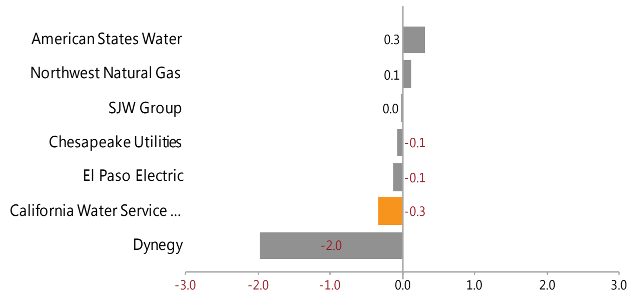



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

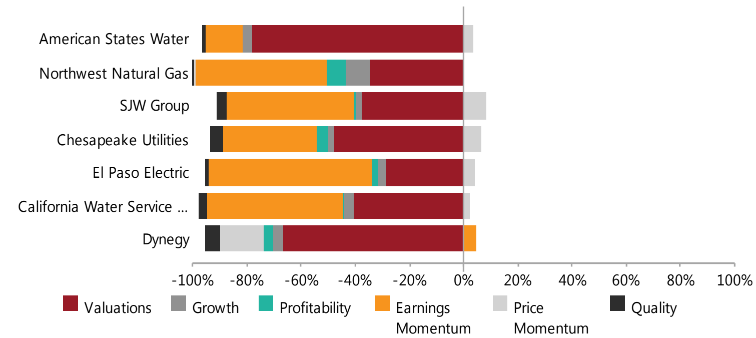
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



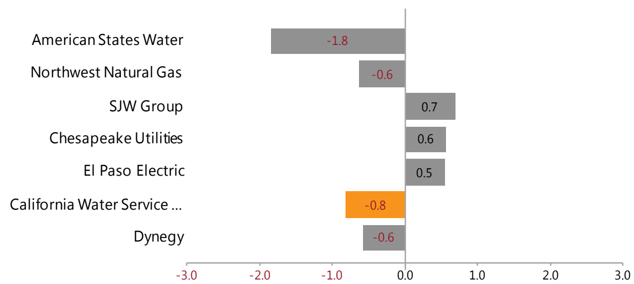

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



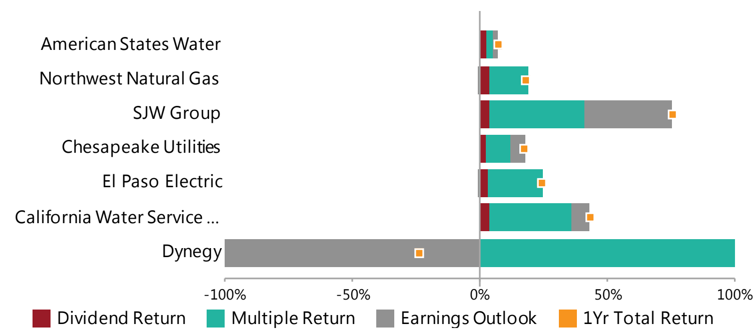

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



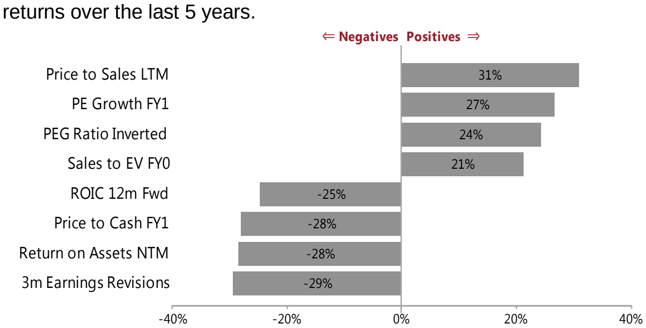

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



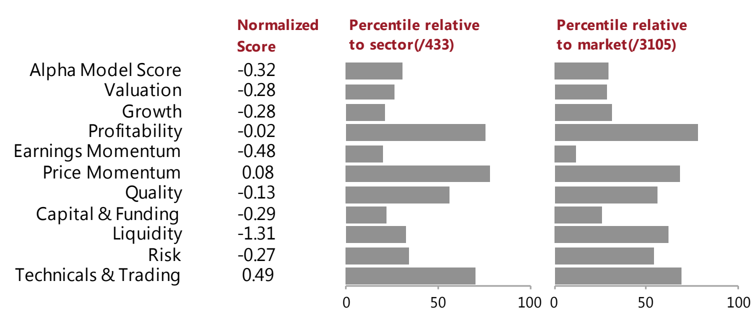

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 December 2016

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 57.53% | 50.72% | 45.57% | 42.28% | 60.58% | 52.79% | (for global coverage by Macquarie, 8.71% of stocks followed are investment banking clients) |
| Neutral | 33.90% | 33.97% | 43.04% | 50.11% | 37.23% | 35.62% | (for global coverage by Macquarie, 8.05% of stocks followed are investment banking clients) |
| Underperform | 8.56% | 15.30% | 11.39% | 7.61% | 2.19% | 11.59% | (for global coverage by Macquarie, 4.63% of stocks followed are investment banking clients) |

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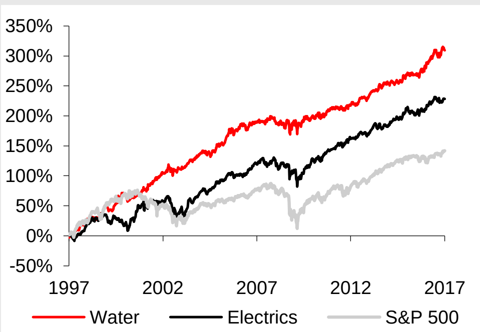
**UNITED STATES**

**Companies discussed in the report:**

**AWK** (US$70.82, OP, TP: **US$80 down from US$82**)
**AWR** (US$43.66, N, TP: **US$43)**
**CWT** (US$33.00, N, TP: **US$32**)
**WTR** (US$30.28, N, TP: **US$32 down from US$35)**

Note: Share prices as of close on January 13, 2017

**Fig 1 Total return for water utilities vs. the S&P over the last 20 years**




Source: FactSet, Macquarie Capital (USA) January 2017

## Inside



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17 January 2017
Macquarie Capital (USA) Inc.

# Regulated water utilities

## Still thirsty for water?

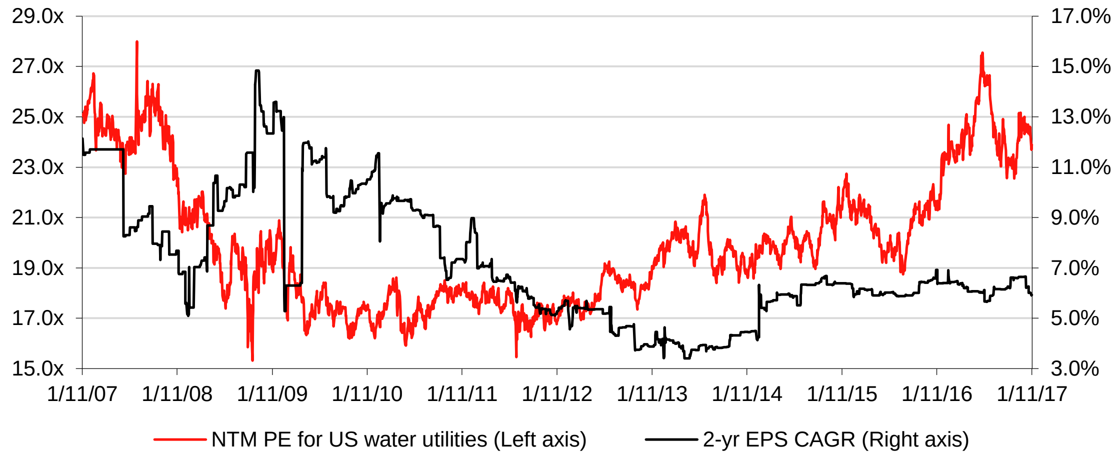
### Event

- We like US water utilities for their low operating and regulatory risk, good EPS/DPS growth, and strong balance sheets. However, following yet another strong year, water utilities are trading at close to historically high P/E multiples for the group on an absolute level and vs. electric utilities, despite seemingly similar EPS growth prospects for both groups. The low-risk profile of water utilities could be yet again in high demand later this year, we believe, but for now, it's hard for us to envision further expansion of P/E multiples for water stocks. Therefore, we are reducing our anchor P/E multiple for water utilities to 22.4x from 25x and we roll forward our valuations to '19 from '18.
- We are expanding our coverage of water utilities by adding California-concentrated **AWR** and **CWT**, but we are waiting for a better entry point for both of these stories, especially ahead of their cost-of-capital proceeding in CA and following a strong run-up in these smid cap stocks after the Trump election. **AWK** remains our top pick for the sector.

### Impact

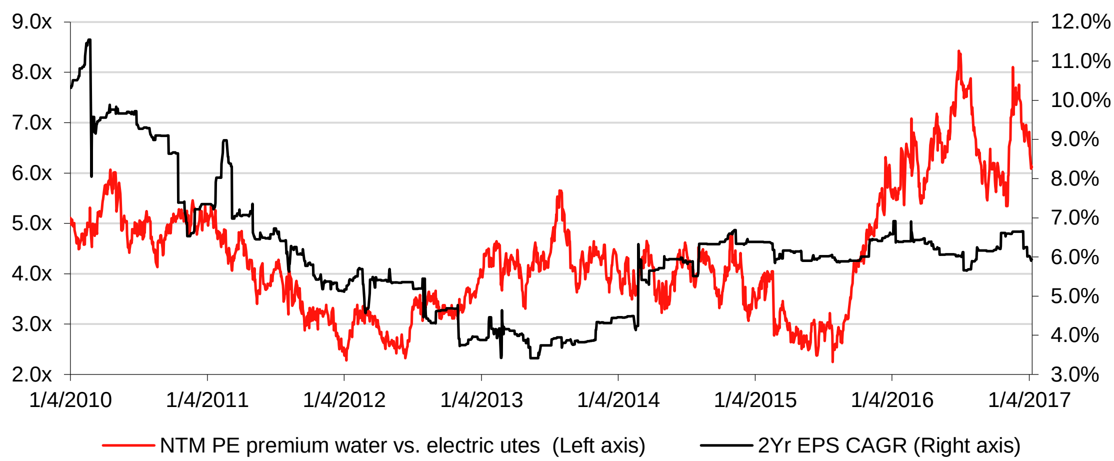
- **Valuation debate is back:** How much should you pay for the non-cyclical and highly visible EPS growth of water utilities, even if it's only marginally higher (if at all) than the EPS growth of electric utilities? The P/E premium for water vs. electric utilities has sharply expanded since late 2015 despite little (if any) change in sell-side EPS growth expectations for water (or electric) utilities (Fig. 2 and 3). An average water utility should grow its EPS at a 5-6% CAGR between '16 and '19, with AWK ~8%, thanks to its market-based operations. Electric utilities should grow at 5-6% on average, with a couple at 7-8%. Water utility systems in the US remain underinvested, though the rate base per customer for investor-owned water utilities in the US seems similar to the US$3,600/customer average for UK water utilities (Fig. 6) and the affordability of water bills seems to be a limiting factor for higher water capex. To us, the P/E premium of water over electric utilities is primarily a function of the scarcity of sizeable public water utility stocks and their low risk profile, though those factors do not explain the spike in water P/E premia over the last 12-15 months.
- **Sector consolidation:** The long-awaited privatization of the municipal water sector has finally begun, though municipal deals can take years to complete, not to mention that federal funding support for water infrastructure could potentially decelerate the sector consolidation. While sell-side EPS consensus expectations for water utilities never included municipal M&A, buy-side could have already embedded this driver in their projections, thus explaining the P/E expansion for the water sector over the last year or so. Large investor-owned water utilities, **AWK** and **WTR**, indicate that they have been working on numerous municipal water and wastewater system acquisitions, and new deal announcements could result in positive sell-side earnings revisions. That in turn could rebuild support for water P/Es, but we may first have to wait for clarity behind Trump's water infrastructure spending plan.

**Fig 2 Valuations of water utilities have continued to climb over the last three years despite largely unchanged earnings growth expectations for the group.**




Source: FactSet, Macquarie Capital (USA), January 2017

**Fig 3 The P/E premium for water vs. electric utilities has sharply expanded since bottoming in late 2016, again with no change in sell-side EPS growth expectations for either of the groups.**




Source: FactSet, Macquarie Capital (USA), January 2017

### Fig 4 US water utilities: By 2019, stock valuations based on regulated operations converge, except for AWK

| Regulated EV/rate base as of 01/13/17 | 2017 | 2018 | 2019 |
|---|---|---|---|
| AWK | 1.76x | 1.69x | 1.61x |
| WTR | 1.88x | 1.78x | 1.75x |
| AWR | 1.97x | 1.90x | 1.80x |
| CWT | 1.98x | 1.98x | 1.76x |

Source: FactSet, Macquarie Capital (USA), January 2017

### Fig 5 US water utilities: Small cap water utilities trade at premium P/Es vs. LC peers, despite no premium EPS/DPS growth

| PE multiples as of 01/13/17 | 2017 | 2018 | 2019 |
|---|---|---|---|
| AWK | 23.3x | 21.5x | 19.8x |
| WTR | 22.1x | 21.3x | 20.4x |
| AWR | 25.4x | 23.9x | 22.5x |
| CWT | 25.5x | 23.6x | 22.8x |

Source: FactSet, Macquarie Capital (USA), January 2017

### Fig 6 Regulated rate base per customer: The level of water system investments for US investor-owned utilities seems largely similar to that of those in developed markets (UK in particular), except for in the case of CWT, partly due to its HI operations distorting the metric.

| | AWK | WTR | AWR | CWT |
|---|---|---|---|---|
| No. of customer accounts (2017E) | 3,336,863 | 988,762 | 283,997 | 509,000 |
| Rate base per customer account (2017 E) | 3,326 | 4,041 | 4,010 | 2,240 |
| Rate base CAGR 2016-2019 | 5.7% | 6.6% | 6.9% | 9.5% |

Source: Company data, Macquarie Capital (USA), January 2017

### Fig 7 US and European water utilities: Trading multiples

| Ticker | AWK | AWR | CWT | WTR | PNN | SEV | SVT | UU | VIE |
|---|---|---|---|---|---|---|---|---|---|
| Name | American Water Works | American States Water | California Water Service | Aqua America | Pennon Gr. | Suez | Severn Trent | United Utilities Gr. | Veolia Envir. |
| Share price @1/13/17 | $70.82 | $43.66 | $33.00 | $30.28 | £7.77 | € 13.66 | £22.15 | £8.90 | € 15.36 |
| TP | $80.00 | $43.00 | $32.00 | $32.00 | £9.70 | € 18.50 | £27.00 | £11.00 | € 20.00 |
| Rating | Outperform | Neutral | Neutral | Neutral | Outperform | Outperform | Outperform | Outperform | Neutral |
| **PE multiples** | | | | | | | | | |
| 2017 | 23.3x | 25.4x | 25.5x | 22.1x | 18.89x | 14.34x | 20.84x | 19.76x | 12.59x |
| 2018 | 21.5x | 23.9x | 23.6x | 21.3x | 18.63x | 12.84x | 19.87x | 20.52x | 10.94x |
| 2019 | 19.8x | 22.5x | 22.8x | 20.4x | 15.04x | N/A | 17.91x | 17.63x | N/A |
| **EV/Rate Base multiples** | | | | | | | | | |
| 2017 | 1.76x | 1.97x | 1.98x | 1.88x | 1.17x | N/A | 1.13x | 1.13x | N/A |
| 2018 | 1.69x | 1.90x | 1.98x | 1.78x | 1.12x | N/A | 1.09x | 1.11x | N/A |
| 2019 | 1.61x | 1.80x | 1.76x | 1.75x | 1.06x | N/A | 1.06x | 1.09x | N/A |

Source: FactSet, Macquarie Capital (USA), January 2017

## American Water Works (AWK, US$70.82, Outperform, TP US$80 down from US$82): Premium EPS/DPS growth, valuation discount largely gone

**Fig 8 AWK: Abbreviated financial projections and valuation multiples**

| | 2015 | 2016E | 2017E | 2018E | 2019E | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| EPS - regulated operations | 2.63 | 2.87 | 3.01 | 3.19 | 3.42 | 6.0% |
| EPS - market-based operations | 0.24 | 0.22 | 0.31 | 0.36 | 0.42 | 24.1% |
| EPS - parent | -0.23 | -0.25 | -0.28 | -0.27 | -0.27 | 2.6% |
| **EPS – Total (US$)** | **2.64** | **2.84** | **3.04** | **3.29** | **3.57** | **7.9%** |
| **DPS (US$)** | **1.33** | **1.50** | **1.63** | **1.76** | **1.90** | **8.2%** |
| Dividend payout | 50.4% | 52.8% | 53.7% | 53.5% | 53.2% | |
| Regulatory rate base (US$bn) | 9.7 | 10.4 | 11.1 | 11.6 | 12.3 | 5.6% |
| EV/Rate base @ $70.82 | | | 1.76x | 1.69x | 1.61x | |
| P/E @ $70.82 | | | 23.3x | 21.5x | 19.8x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth**: We expect AWK to grow its EPS at a 7.9% CAGR between '16 and '19 with visibility into growth through at least '20. That's down from a ~12% EPS CAGR for '10-'15, but still faster than AWK's water peers, even if the premium EPS growth comes from contract-based rather than regulated operations. AWK's rate base is growing at a 5.6% between '16 and '19, which is just below the 6% average for the sector – the growth CAGR for AWK already reflects the growth associated with acquisitions of municipal water systems, but is same system for other water utilities.
- As the largest investor-owned water utility in the US, AWK has been most focused and most successful at acquisitions of municipal water and wastewater systems, adding ~55k customers in '16 (+1.7% YoY). Although the company is working on municipal deals which could add even 145k in customers, for now management seems reluctant to boost its long-term EPS growth CAGR on the back of the M&A. We are concerned that the pace of the privatization of municipal water systems could decelerate if the federal government were to provide low-cost funding to states (and thus municipalities) for water infrastructure upgrades.
- AWK's military base earnings could see some pick up if the Trump administration ends the military sequester though the timing of new awards of military contracts is difficult to gauge.
- AWK's '17 EPS guidance seemed a bit soft to us, but could be driven by the timing of the CA GRC (with new rates to come into effect in 2018) and the uncertainty over the closing of the Scranton wastewater acquisition (now closed). Then again, the 2018 could see another headwind from CA as a new, lower allowed ROE should be imposed on AWK's California subsidiary – our estimates are a drop in the allowed ROE from the current 9.99% to 9.2% starting 1/1/18.
- **DPS growth:** AWK's DPS growth should exceed the EPS growth, given the low dividend payout, but it's tough for us to expect the company to commit to it at this point given the upcoming corporate tax reform and the issue of normalization of deferred tax liabilities which could determine future cash flow generation of regulated utilities in the US.
- **Changes in earnings/TPs:** Our earnings estimates for AWK remain unchanged, but we lower our TP to US$80 from US$82 as we roll forward our valuation to 2019 (from 2018) and we lower our anchor PE multiple for water utilities to 22.4x down from 25x.

## **American States Water (AWR, US$43.66, Neutral, TP US$43):** Lower impending allowed ROE partially offset by market-based operations

**Fig 9 AWR: Abbreviated financial projections and trading multiples**

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| **EPS (US$)** | **1.56** | **1.62** | **1.73** | **1.84** | **1.94** | **6.2%** |
| **DPS (US$)** | **0.87** | **0.91** | **0.96** | **1.01** | **1.06** | **5.0%** |
| Dividend payout | 56% | 56% | 55% | 55% | 55% | |
| Rate base (US$bn) | | 745 | 792 | 840 | 888 | 6.1% |
| EV/Rate base @ $43.66 | | | 1.97x | 1.90x | 1.80x | |
| P/E @ $43.66 | | | 25.4x | 23.9x | 22.5x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth:** We expect a 6.2% ’17-’19 EPS CAGR from CWT, with no equity funding needs in the medium term. The company anticipates using its revolver to cover upcoming spending needs, but then would be more likely to pay it down with an issuance of long-term debt.
- On the regulatory front, a potentially contentious cost of capital proceeding is likely to start soon in CA, with filings due in late March. Also, an electric GRC is scheduled to be filed with the CPUC by the end of January.
- AWR is interested in municipal water sector acquisitions outside of CA (perhaps even in the East), but also acquisition of privately-owned water systems. We do not expect any material acquisitions by AWR while valuations for these smaller water systems remain at currently elevated levels, but would expect more activity here in the future. Also, we note that while we don’t see CA concentrated water utilities as particularly likely targets of M&A, should that change, AWR’s ~75,000 acre-feet of water rights could represent substantial value depending on the structure of the transaction.
- **DPS growth:** We expect CWT to grow its DPS at 5%, in line with its long-term goal of at least a 5% DPS CAGR.

## California Water Service Group (CWT, US$33.00, Neutral, TP US$32):
Capital investment opportunities abound, no need to look around

### Fig 10 CWR: Abbreviated financial projections and valuation multiples

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| **EPS (US$)** | **0.94** | **0.95** | **1.29** | **1.40** | **1.45** | **15.0%** |
| **DPS (US$)** | **0.67** | **0.69** | **0.71** | **0.73** | **0.75** | **3%** |
| Dividend payout | 71% | 72% | 55% | 52% | 52% | |
| Regulatory rate base (US$bn) | 1,004 | 1,067 | 1,140 | 1,249 | 1,399 | 9.5% |
| EV/Rate base @ $33.00 | | | 1.98x | 1.98x | 1.76x | |
| P/E @ $33.00 | | | 25.5x | 23.6x | 22.8x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth:** We expect CWT to grow its EPS/DPS at a 15.0%/3.0% CAGR between ’16 and ’19, although this due to a significant step-up in ’17 following the conclusion of its most recent rate case. From ’17-’19, we expect EPS growth to be closer to 5%, trailing potential rate base growth of 7-10%. We factor in anticipated equity needs, but acknowledge that a material reduction of the current allowed ROE would reduce our EPS estimates. The next cost of capital filing proceeding is likely to begin after the company’s required filing in March.
- Cal Water, CWT’s primary utility, has substantial capital spending opportunities ahead of it. The company was successful in reducing the replacement rate of its water mains from 300yrs down to 200yrs, but this still heavily lags its CA peers who are closer to 100yrs. Its wells are nearing the 50yr suggested life by the American Water Works Association (AWWA), and while this is not a hard and fast deadline, suggests another set of major capital spending (>US$2.5bn) which will be required over time.
- **DPS growth:** We expect CWT to grow its DPS at just a 3% CAGR between ’16 and ’19, as the company needs to fund its sharply increased capex using some external equity as well internally generated cash flows.

## **Aqua America (WTR, US$30.28, Neutral, TP US$32 down from US$35):** Rate case in PA, M&A overhang

**Fig 11 WTR: Abbreviated financial projections and valuation multiples**

| | 2015 | 2016E | 2017E | 2018E | 2019E | 2016-2019 CAGR |
|---|---|---|---|---|---|---|
| **EPS** | **1.26** | **1.32** | **1.37** | **1.42** | **1.49** | **4.1%** |
| **DPS** | **0.69** | **0.74** | **0.79** | **0.86** | **0.92** | **7.8%** |
| Dividend payout | 54.1% | 55.7% | 57.6% | 60.1% | 61.4% | |
| Regulatory rate base (US$bn) | 3.5 | 3.7 | 4.0 | 4.2 | 4.5 | 6.6% |
| EV/Rate base @ $30.28 | | | 1.88x | 1.78x | 1.75x | |
| P/E @ $30.28 | | | 22.1x | 21.3x | 20.4x | |

Source: FactSet, Macquarie Capital (USA), January 2017

- **EPS growth:** We expect WTR to grow its EPS at a 4.1% CAGR between '16 and '19. The EPS CAGR should trail WTR's same-system rate base CAGR of 6.6%, we estimate, as WTR over-earns its allowed ROE in PA, where close to 70% of its rate base is located. We expect WTR to file for a DSIC mechanism in PA in late '17 and a general rate case in '18 – the rate case should coincide with a federal corporate tax reform and new rates are likely to reflect a real corporate tax expense. In preparation for the PA rate case, the company has sharply boosted its capital spending as updated on the 2017 earnings call held today (1/17/17).
- The current overearning of the allowed ROE by Aqua Pennsylvania is driven by a flow through tax accounting for repair cost deductions in the state. Qualified repair capex (as opposed to improvements) is expensed for tax purposes in the year it was incurred rather than capitalized and depreciated over the life of an asset. As a result, WTR's effective tax rate in PA is sharply below its statutory level which is reflected in the water rates Aqua Pennsylvania collects. And while WTR is not the only utility in our universe benefitting from this tax treatment (with California utilities also using the flow through tax accounting for repair costs), this is the only instance where the utility has been allowed to keep the benefit and is not required to file a rate case in a specified time frame to true up its rates. WTR points out that its rates in PA remained flat thanks to the tax change, but we argue that they should have dropped, otherwise Aqua PA would not be earning in excess of its allowed ROE. We are concerned about the treatment of this very large tax benefit during the upcoming rate case in PA, even if we recognize that a claw back of the benefit could be considered a retroactive ratemaking.
- On the M&A front, WTR remains excited on potential municipal water deals, and its appetite for gas/electric utility deals seems to have subsided, which could be just a function of the poor performance of WTR's stock relative to its water peers since the gas/electric M&A possibility was first disclosed.
- **DPS growth:** We expect WTR to grow its dividends ahead of its EPS growth rate – at a 7.8% CAGR through '19 – given WTR's strong balance sheet and cash flows even if by 2019 the dividend payout should exceed 61%, just above the 55-60% payout typically targeted by water utilities. Given WTR's sizeable NOL position, we do not expect its cash flows to benefit from changes in the corporate tax code, including expensing of capex at a 100% rate.
- **Earnings/TP changes:** We have lowered our earnings estimates for WTR to reflect the higher level of spending and an upcoming rate case in PA whose outcome is hard for us to determine. Our new '17/'18/'19 EPS estimates are US$1.37/1.42/1.49 down from US$1.38/1.45/1.52, respectively. We lower our TP to US$32 (from US$35) on the back of lower estimates and as we roll forward our valuation to 2019 (from 2018) and lower our anchor PE multiple for water utilities to 22.4x from 25x.

UNITED STATES

AWR US Neutral

**Price** (at 04:26, 14 Jan 2017 GMT) US$43.66

| | | |
|---|---|---|
| **Valuation** - PER | **US$** | **43.00** |
| **12-month target** | **US$** | **43.00** |
| **12-month TSR** | **%** | **+0.7** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **1,597** |
| **30-day avg turnover** | **US$m** | **4.2** |
| **Number shares on issue** | **m** | **36.57** |

**Investment fundamentals**

| Year end 31 Dec | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| EPS adj | US$ | 1.61 | 1.62 | 1.72 | 1.82 |
| EPS adj growth | % | 2.5 | 0.5 | 6.0 | 6.2 |
| PER adj | x | 27.1 | 27.0 | 25.4 | 23.9 |
| Total DPS | US$ | 0.87 | 0.91 | 0.96 | 1.01 |
| Total DPS growth | % | 5.2 | 4.6 | 5.0 | 5.0 |
| Total div yield | % | 2.0 | 2.1 | 2.2 | 2.3 |

Source: FactSet, Macquarie Capital (USA), January 2017
(all figures in USD unless noted)

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17 January 2017
Macquarie Capital (USA) Inc.

# American States Water

## A good water utility but fully valued

### Initiating with Neutral, US$43 target price

Rate base growth of ~5-6% is roughly in line with peers and a lower than average allowed ROE of 9.43% for its regulated water utility operations will likely see a decline following an imminent cost of capital proceeding. The utility currently has been enjoying a 55% equity layer vs. peers closer at 53.4%, and has both an electric utility with a higher allowed ROE and non-regulated 50yr military contracts, which should allow AWR to earn above the water ROE assigned to it by the CPUC. Having seen AWK's success with its market-based operations managing water and wastewater systems on 12 military bases around the U.S., we are optimistic about AWR's fundamentals given an earnings mix that has reached 20% non-regulated as of '16. Whether or not investors are fully recognizing the appeal of AWR's operations and growth potential relative to peers, sentiment for the group overall has pushed valuations to near 10yr highs. We initiate coverage at Neutral, with a US$43 TP.

### A clear stream of revenues but with ebbs and flows

California has suffered from significant droughts in the past and is expected to continue to. However, unlike most other states, CA has allowed for revenues and water sales volumes to be decoupled, which protected AWR's water utility when conservation orders resulted in a >25% decline in water usage. While the company's P&L is not impacted by volumes, cash recovery can stretch out over 12-18mo or potentially longer. An advantage of this system from a ratepayer perspective has been that the cash shortfall has typically been paid down more by heavy users, as rates are tiered and rise with consumption.

### Not too slow but steady in the long run

We expect AWR to grow its EPS/DPS both by ~5%-6% from '16-'19, roughly in line with its stated LT DPS CAGR and regulated peers overall. The downside risk comes mostly from a reduction to its current water allowed ROE of 9.43% and equity layer of 55%, while in the longer term it could outperform peers via its market-based operations. Looking ahead only to the next few years, we note that the current 55% payout ratio was highlighted by management as a potential way to augment DPS growth, a sign that significantly higher EPS growth is not to be expected, we believe. Our initial '16/'17/'18/'19 EPS estimates are US$1.62/1.72/1.82/1.94, vs. consensus of US$1.64/1.73/1.84/*N/A*.

### Valuation

High visibility into earnings, revenue decoupling and non-regulated operations with long-term government contracts are certainly appealing. A ~5-6% EPS/DPS CAGR is merely in line with peers, however. Based on scarcity of investable water utilities and excellent visibility into long-term growth, the historical 40% premium for water names over electrics still seems appropriate to us. Starting from our regulated electric FY3 P/E of 16.0x, we reach a FY3 water P/E of 22.4x. When combined with our '19 EPS estimate of US$1.94, we initiate coverage with a US$43 TP and a Neutral rating.

## Inside



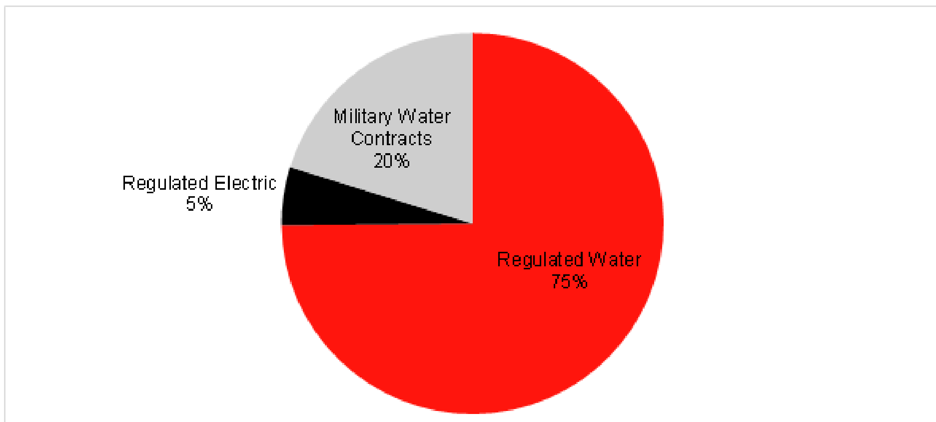
# American States Water Company

## Company profile

American States Water Company (AWR US) operates two primary subsidiaries:

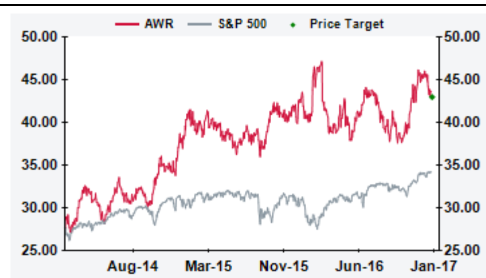
- **Golden State Water Co. (GSWC)** operates 39 water systems, serving ~260k customers across 75 cities in 10 counties in CA, as well as providing electricity to ~24k customers in several San Bernardino County mountain communities in CA through its subsidiary, Bear Valley Electric Service.
- **American States Utility Services, Inc. (ASUS)**, headquartered in VA, operates and maintains water and wastewater systems under 50-year contracts at several U.S. government military bases in FL, MD, NC, NM, SC, TX and VA.

**Fig 1 AWR's non-regulated net income now makes up 20% of its total as of '16, and could offer the opportunity to exceed the ROEs of its regulated businesses**




Source: Company disclosures, Macquarie Capital (USA), January 2017

**Fig 2 AWR US vs S&P 500, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Capital (USA), January 2017

(all figures in USD unless noted)

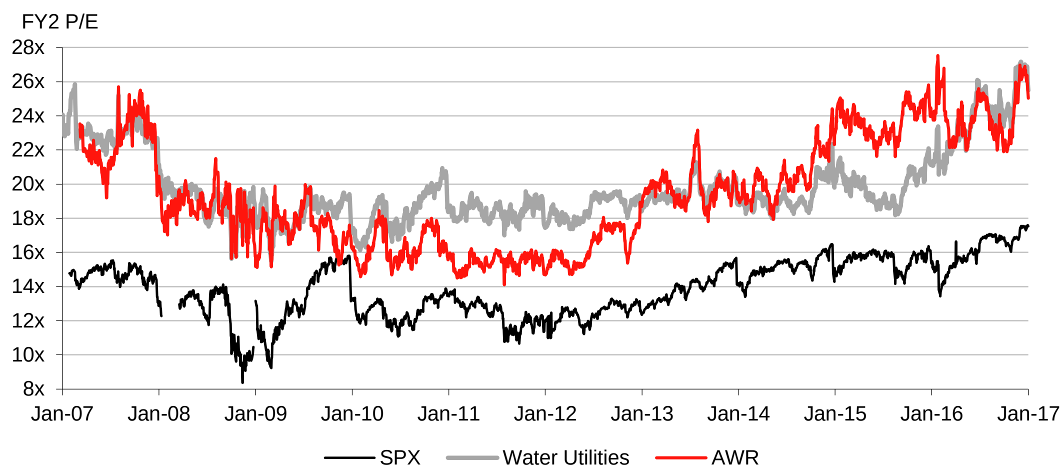
# A good water utility but fully valued

## Initiating with Neutral, US$43 target price

***We like AWR's fundamentals and business prospects, but would encourage investors to look for a more attractive entry point.***

AWR combines the attractive aspects, namely the transparency, LT visibility and revenue decoupling of its sole regulated jurisdiction of California, with a portfolio of 50-year contracts on U.S. military bases. Having seen AWK's success with its market-based operations managing water and wastewater systems on 12 military bases around the U.S., we are optimistic about AWR's fundamentals given an earnings mix that has reached 20% non-regulated as of '16. The result is a regulated water utility with reduced sensitivity to droughts/conservation, and an opportunity to exceed its authorized ROE via its non-regulated businesses. The drawbacks are vigilant and formidable adversaries in the form of the CPUC's Office of Ratepayer Advocates (ORA) and The Utility Reform Network (TURN), as well as the potential limitation or removal of decoupling during or immediately followed by another drought, and a cost of capital proceeding that could take place while equity valuations are stretched and bond yields have not yet reached their next plateau. We note that following post-election mentions of both water infrastructure investment and increased defense spending, AWR rose 2.5 turns on its FY3 P/E vs. an average of 1 turn for its water peers, and is within ~10% of its 10-year max P/E for both FY2/FY3.

**Fig 3 Even after the recent pullback, AWR is near its highest valuation in a decade**




Source: FactSet, Macquarie Capital (USA), January 2017

**Fig 4 AWR: Financial metrics (Note: CPUC has not decided the '18/'19 cost of capital and equity ratio yet)**

| | 2015 | 2016E | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| EPS | 1.56 | 1.62 | 1.72 | 1.82 | 1.94 |
| EPS growth | -1.0% | 3.5% | 6.0% | 6.2% | 6.4% |
| DPS | 0.87 | 0.91 | 0.96 | 1.01 | 1.06 |
| DPS growth | 5.2% | 4.6% | 5.0% | 5.0% | 5.0% |
| Payout ratio | 56% | 56% | 56% | 55% | 55% |
| Diluted shares outstanding | 39 | 37 | 37 | 37 | 37 |
| Capex (US$m) | 87 | 110 | 90 | 90 | 90 |
| Regulatory rate base (US$m) | | 745 | 792 | 840 | 888 |
| Equity ratio | 55% | 55% | 55% | 55% | 55% |
| EV/Rate Base | | 2.04x | 1.97x | 1.90x | 1.80x |
| Authorized ROE (GSWC) | 9.43% | 9.43% | 9.43% | 9.43% | 9.43% |

Source: Company data, Macquarie Capital (USA), as of January 13, 2017

# Valuation, recommendation, risks

High visibility into earnings, revenue decoupling, and non-regulated operations with long-term government contracts are certainly appealing. A ~5%-6% EPS/DPS CAGR is merely in line with peers, however. AWR currently trades at FY2/FY3 P/E ratios which are >90% of its 10-year max valuations, although its peers do as well. Based on scarcity of investable water utilities, as well as excellent visibility into long-term growth, the historical 40% premium for water names over electrics still seems appropriate to us. We are wary of the upcoming cost of capital proceeding, which is due to commence after a filing due in March. Whether or not investors are fully recognizing the appeal of AWR's operations and growth potential relative to peers, sentiment for the group overall has pushed valuations to near 10yr highs.

***Wait for water utilities to re-price before buying.***

Starting from our regulated electric FY3 P/E of 16.0x, we reach a FY3 water P/E of 22.4x. Combined with our '19 EPS estimate of US$1.94, we initiate coverage with a US$43 TP and a Neutral rating.

**Fig 5 AWR: FY3 P/E valuation**

| | |
|---|---|
| 2019 Earnings Per Share | $1.94 |
| FY3 (2019) sector P/E multiple for Regulated Electrics | 16.0x |
| Premium for Regulated Water Utilities | 40% |
| FY3 (2019) sector P/E multiple for Regulated Water | 22.4x |
| **AWR Target Price** | **$43.00** |
| Stock Price | $43.66 |
| **TSR Upside/Downside** | **2% (including '17 DPS)** |

Source: FactSet, Macquarie Capital (USA) , as of January 13, 2017

**Fig 6 10-year statistics for FY2 P/E ratios show that the group is trading very close to its highest levels in a decade**

| FY2 P/E | SPX | XLU | Water Utilities | AWK | WTR | CWT | AWR | SJW | CTWS | YORW |
|---|---|---|---|---|---|---|---|---|---|---|
| Max | 17.6x | 18.5x | 27.2x | 27.8x | 30.6x | 27.0x | 27.5x | 28.9x | 25.8x | 38.3x |
| Median | 13.9x | 15.0x | 19.2x | 16.6x | 20.7x | 17.9x | 19.0x | 19.7x | 19.8x | 22.1x |
| Mean | 13.9x | 14.6x | 19.8x | 17.2x | 21.1x | 18.4x | 19.4x | 20.1x | 19.8x | 22.7x |
| Min | 8.4x | 10.6x | 15.5x | 11.6x | 17.0x | 14.7x | 14.1x | 13.3x | 15.0x | 15.9x |
| Current | 17.5x | 17.0x | 25.5x | 23.5x | 21.6x | 24.7x | 25.0x | 24.9x | 23.9x | 34.7x |
| % of Max | 100% | 92% | 94% | 85% | 71% | 92% | 91% | 86% | 93% | 91% |
| Premium to median | 26% | 13% | 33% | 42% | 5% | 38% | 32% | 26% | 21% | 57% |

Source: FactSet, Macquarie Capital (USA), as of January 10, 2017

# Enviable regulatory mechanisms

## A clear stream of revenues but with ebbs and flow

California has suffered from significant droughts in the past and is expected to continue to. However, unlike most other states, CA has allowed for revenues and water sales volumes to be decoupled, which protected AWR's water utility when conservation orders resulted in a >25% decline in water usage. While on the positive side, the company's P&L is not impacted by volumes, cash recovery can stretch out over 12-18mo or potentially longer. This has led to an interesting outcome for ratepayers however, where the heaviest consumers see their rates rise according to their level of usage and therefore ends up with those who choose to consume the most subsidizing what otherwise would have been essentially fixed cost increases on the lowest users.

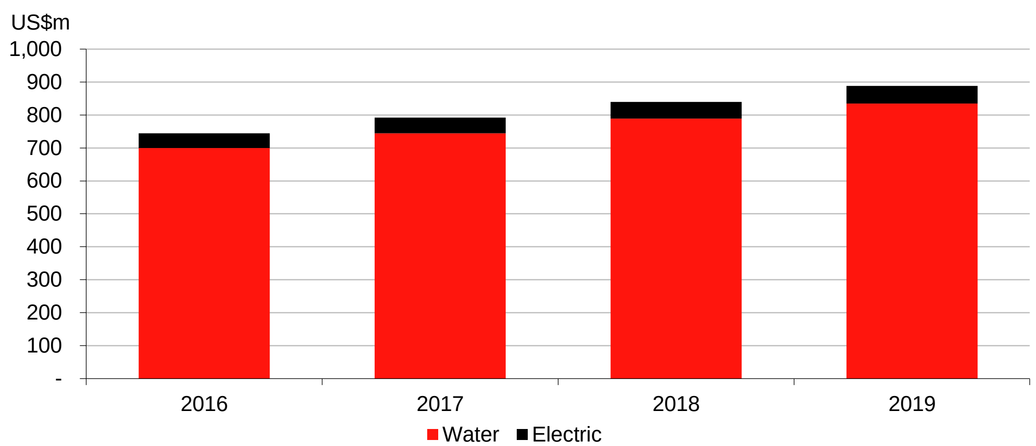
## Not too slow but steady in the long run

***AWR's earnings are more likely to see plateaus and step-ups as opposed to the relatively smoothly increasing regulatory asset base.***

We expect AWR to grow its EPS/DPS both by ~5-6% from '16-'19, in line with its stated LT DPS CAGR and regulated peers overall. The company has been enjoying a higher than average equity layer, 55% vs. peers at 53.4%, which could potentially be reduced along with its current 9.43% allowed ROE. A cost of capital filing is due in March, with the proceedings likely to commence soon thereafter. We note that the current 55% payout ratio was highlighted by management as a potential way to augment DPS growth, a sign that significantly higher EPS growth is not to be expected in the near-term, we believe. We expect the company's market-based operations to continue to play a bigger role in the earnings mix over time, potentially affording the opportunity to consistently out earn its allowed water ROE overall.

While we would expect that the company's regulated earnings growth should track its rate base growth over the longer term, we are also pleased to see management's focus on a LT DPS CAGR, currently 'at least 5%'. Our initial '16/'17/'18/'19 EPS estimates are US$1.62/1.73/1.84/1.94, vs. consensus of US$1.64/1.73/1.84/N/A.

**Fig 7 Rate base: GSWC's most recent GRC approved a water rate base of ~US$700m 2016, as well as annual capex of ~US$90m. An electric GRC is due this month.**




Source: Company data, Macquarie Capital (USA), January 2017

# Financial Summary

**Fig 8 AWR: all figures in US$m unless noted**

| | 2015 | 2016E | 2017E | 2018E | 2019E |
|---|---|---|---|---|---|
| **Income Statement** | | | | | |
| Operating revenues | | | | | |
| Water | $ 329 | $ 337 | $ 339 | $ 346 | $ 366 |
| Electric | 36 | 36 | 37 | 38 | 38 |
| Contracted services | 94 | 98 | 110 | 115 | 118 |
| **Total Operating Revenues** | **459** | **471** | **486** | **499** | **522** |
| Operating expenses | | | | | |
| Water and Electric Supply Costs | 104 | 101 | 103 | 105 | 105 |
| Other Operation | 28 | 28 | 28 | 28 | 28 |
| Administrative and General | 80 | 80 | 83 | 85 | 89 |
| Depreciation and Amortization | 42 | 43 | 46 | 48 | 51 |
| Maintenance | 17 | 17 | 19 | 18 | 22 |
| Property and Other Taxes | 17 | 18 | 19 | 20 | 21 |
| ASUS Construction | 53 | 65 | 61 | 60 | 62 |
| Total Operating Expenses | 340 | 353 | 360 | 363 | 378 |
| **Operating income** | **118** | **118** | **126** | **135** | **144** |
| Interest expense | (21) | (23) | (26) | (28) | (30) |
| Other, net | 1 | 1 | 1 | 1 | 1 |
| EBT | 98 | 96 | 102 | 108 | 115 |
| Income tax expense | 38 | 37 | 39 | 42 | 44 |
| **Net income** | **$ 60** | **$ 59** | **$ 63** | **$ 67** | **$ 71** |
| Weighted avg diluted shares outstanding | 39 | 37 | 37 | 37 | 37 |
| **Diluted EPS** | **$1.56** | **$1.62** | **$1.72** | **$1.82** | **$1.94** |
| | | | | | |
| **Cash Flow Statement** | | | | | |
| Net income | 60 | 59 | 63 | 67 | 71 |
| Adjustments to reconcile non-cash charges | 58 | 57 | 60 | 62 | 65 |
| Changes in assets and liabilities | (23) | (23) | (23) | (23) | (23) |
| **CFO** | **95** | **94** | **99** | **106** | **113** |
| Capital expenditures | (87) | (110) | (90) | (90) | (90) |
| Other | (3) | 0 | 0 | 0 | 0 |
| **CFI** | **(90)** | **(110)** | **(90)** | **(90)** | **(90)** |
| Issuance/repurchase of common stock | (72) | 1 | 1 | 1 | 1 |
| Long-term debt issued/repaid | (0) | 50 | 41 | 41 | 1 |
| Short-term debt issued/repaid | 28 | 49 | 25 | 20 | 55 |
| Dividends paid | (33) | (34) | (36) | (38) | (40) |
| Other | (0) | (0) | (0) | (0) | (0) |
| **CFF** | **(77)** | **66** | **30** | **24** | **17** |
| Net change in cash and cash equivalents | (72) | 49 | 40 | 2 | 40 |
| Cash and cash equivalents, end of period | 4 | 53 | 93 | 133 | 173 |
| | | | | | |
| **Balance Sheet** | | | | | |
| Current assets | $ 133 | $ 181 | $ 220 | $ 259 | $ 298 |
| P,P&E | 1,081 | 1,166 | 1,243 | 1,306 | 1,403 |
| Regulatory and other assets | 135 | 135 | 135 | 135 | 135 |
| **Total assets** | **1,349** | **1,482** | **1,598** | **1,700** | **1,836** |
| Current liabilities | 124 | 173 | 179 | 185 | 191 |
| Long-term debt | 326 | 375 | 416 | 456 | 457 |
| Other liabilities (including construction) | 434 | 434 | 434 | 434 | 434 |
| Total liabilities | 883 | 981 | 1,028 | 1,075 | 1,081 |
| **Total Shareholders' Equity** | **466** | **501** | **570** | **625** | **755** |
| **Liabilities and Shareholders' Equity** | **$ 1,349** | **$ 1,482** | **$ 1,598** | **$ 1,700** | **$ 1,836** |

Source: Company data, Macquarie Capital (USA), January 2017

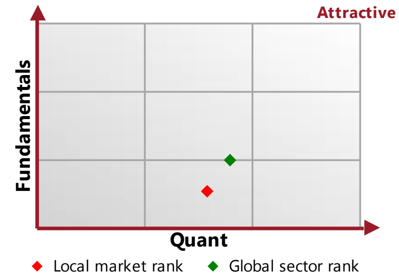
# Macquarie Quant View

The quant model currently holds a marginally positive view on American States Water. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Valuations, indicating this stock is over-priced in the market relative to its peers.

**175/433**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 0% (0/5) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 0 |

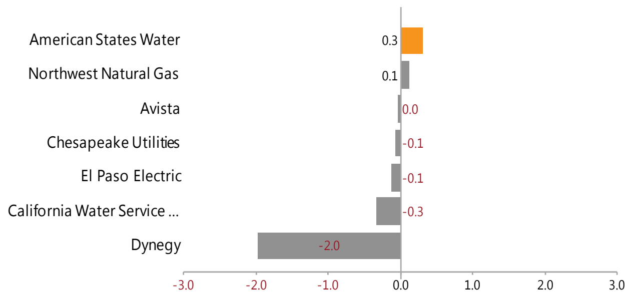



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

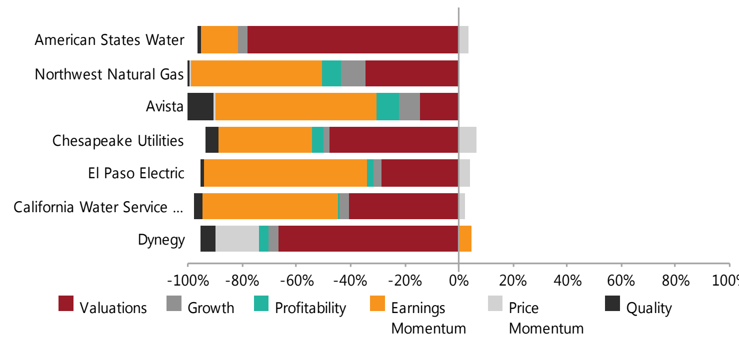
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



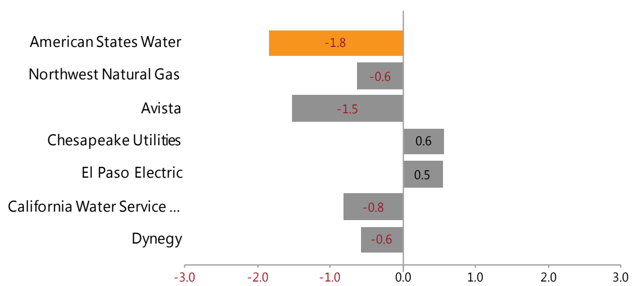

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



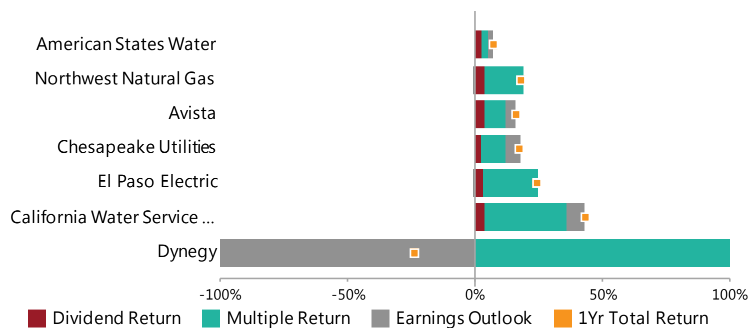

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



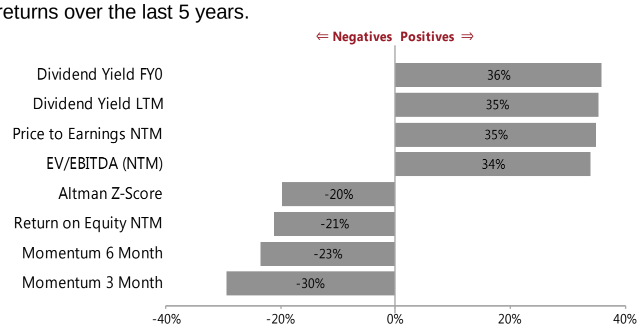

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



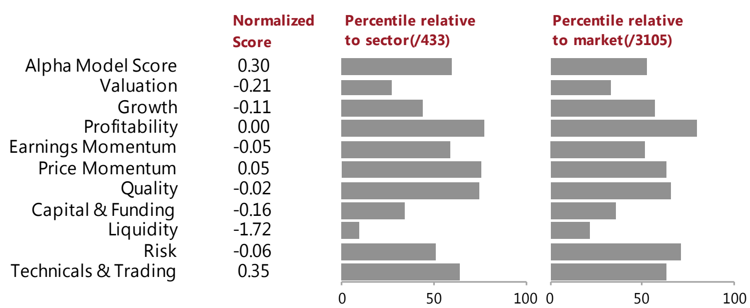

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## UNITED STATES


| CWT US | | Neutral |
|---|---|---|
| **Price** (at 04:26, 14 Jan 2017 GMT) | | US$33.00 |
| **Valuation** - PER | **US$** | **32.00** |
| **12-month target** | **US$** | **32.00** |
| **12-month TSR** | **%** | **-0.9** |
| **GICS sector** | | **Utilities** |
| **Market cap** | **US$m** | **1,583** |
| **30-day avg turnover** | **US$m** | **6.4** |
| **Number shares on issue** | **m** | **47.97** |

**Investment fundamentals**

| Year end 31 Dec | | 2015A | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|
| EPS adj | US$ | 0.95 | 0.95 | 1.29 | 1.40 |
| EPS adj growth | % | -20.6 | 0.8 | 35.7 | 8.1 |
| PER adj | x | 34.9 | 34.6 | 25.5 | 23.6 |
| Total DPS | US$ | 0.67 | 0.69 | 0.71 | 0.73 |
| Total DPS growth | % | 3.1 | 3.0 | 3.0 | 3.0 |
| Total div yield | % | 2.0 | 2.1 | 2.2 | 2.2 |

Source: FactSet, Macquarie Capital (USA), January 2017
(all figures in USD unless noted)

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17 January 2017
Macquarie Capital (USA) Inc.

# California Water Service Group

## Welcome to the Hotel California

### Initiating with Neutral, US$32 target price

Rate base growth of ~6% appears well supported by extensive capital investment needs within existing service territories, which should provide matching EPS/DPS growth over the longer term. An upcoming cost of capital proceeding is likely to result in a reduction to the 9.43% ROE which Cal Water has been earning since ’13, and so EPS growth should trail rate base growth in the near term, we believe. We like the pure play regulated water business in general and regard California as an average regulatory jurisdiction with some unique but offsetting features. Although allowed ROEs are lower than throughout most of the rest of the country, triennial rate cases and revenue decoupling provides some balance to the less favourable upfront economics. CWT has benefitted considerably from revenue decoupling in CA, allowing it to promote conservation and withstand significant volume declines while still eventually collecting its revenue requirements. CWT offers water utility investors ~5-6%/3% EPS/DPS CAGRs for ’17-’19, in line with its peer averages of ~5-6%, but isn’t reliant on acquisitions or non-regulated operations, affording it higher than average visibility in a space which already offers plenty to begin with. Using a Water sector FY3 P/E multiple of 22.4x (40% premium to regulated electrics), we initiate coverage of CWT with a US$32 TP and Neutral rating.

### Single jurisdiction concentration more a blessing than a curse

Despite operating in four states, CWT’s business is 98% regulated and 94% CA-focused, making the company for all intents and purposes a completely regulated California water utility. While this leads to high regulatory visibility, it also means that the operations in HI, NM, and WA are not sizable enough to cause the weighted authorized ROE to differ from the 9.43% adopted in CA. With Cal Water’s most recent rate case (covering ’17-’19) just completed in Dec ’16, ‘18/’19 earnings are heavily dependent on the outcome of what appears to be a likely fully litigated upcoming cost of capital proceeding for ’18-‘20, due to commence in late March.

### Like many of its customers, CWT prefers organic

Cal Water has just advanced from a 300yr water main replacement cycle down to 200 years (with a ~50% increase in annual capex), and yet it still lags other CA water utilities who are replacing mains at nearly double that rate. While we see an attractive opportunity for many water utilities to grow their rate base via acquisitions of municipal systems, Cal Water stands out as having a particularly significant level of capital investment needed, with the rate base per customer being significantly below average for investor-owned water utilities in the US. We agree with management’s assessment that focusing on its existing footprint is best.

### Valuation

Our US$32 TP is based on our ’19 EPS estimate of US$1.45 and a P/E multiple of 22.4x (a 40% premium to our FY3 regulated electric multiple of 16.0x). We like the fundamentals, but struggle with paying up for the stock when it is trading at ~90% of its highest P/E in 10 years, even after selling off somewhat in recent days. We encourage investors considering water utilities to wait for a more attractive entry point. We initiate coverage with a Neutral rating.

## Inside

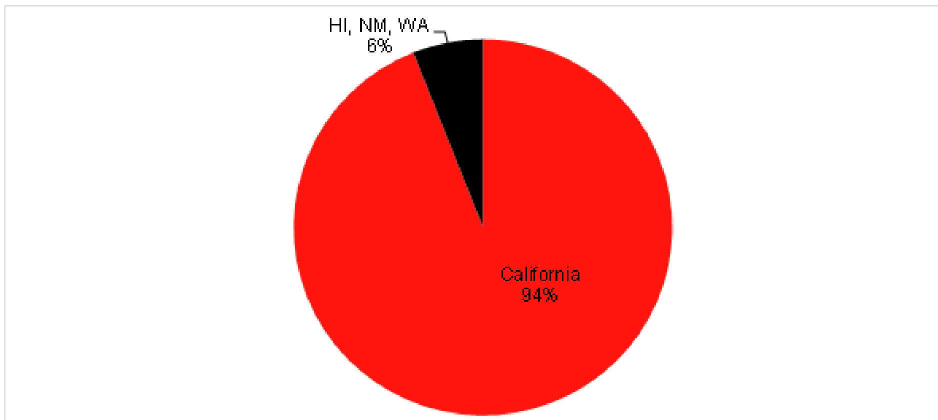


# California Water Service Group

## Company profile

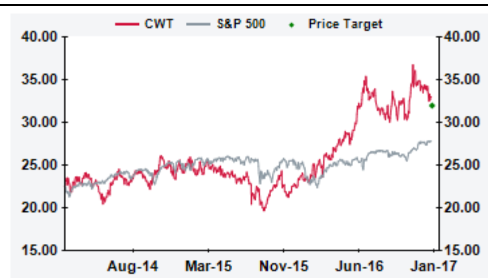
- California Water Service Group (CWT US) provides water and wastewater services on a regulated basis in CA, HI, NM, and WA, as well as non-regulated utility services businesses in CA and HI.
- Third-largest publicly traded water utility (after AWK and WTR).
- >2m customers, >6,000mi of mains, 1,130 wells, 662 storage tanks, 6 surface water treatment plants, 10 wastewater treatment plants.
- General corporate rating of A+ stable from S&P.

**Fig 1 CWT's business3yr trailing revenues are 98% regulated, and despite operating in four states, highly concentrated, with 94% in California**




Source: Company data, Macquarie Capital (USA), January 2017

**Fig 2 CWT US vs S&P 500, & rec history**




Note: Recommendation timeline - if not a continuous line, then there was no Macquarie coverage at the time or there was an embargo period.

Source: FactSet, Macquarie Capital (USA), January 2017

(all figures in USD unless noted)

# Welcome to the Hotel California

## Initiating with Neutral, US$32 target price

***CA is a somewhat favourable jurisdiction to be a water utility at the moment. We continue to prefer a healthy level of acquisition-driven growth to augment organic capex.***

We like the pure play regulated water business in general and regard California as currently one of the friendliest jurisdictions for water utilities, although an upcoming cost of capital proceeding may test that view. CWT benefits from revenue decoupling in CA, allowing it to promote conservation and withstand significant volume declines while still eventually collecting its revenue requirements. CWT offers water utility investors 15%/3% EPS/DPS CAGRs for ’16-’19, due to a large step-up in ’17 following the conclusion of its latest rate case. After accounting for that jump, EPS growth is more in line with peers’ average of ~5-6%. Following several years of drought, CWT has shown the effectiveness of its WRAM mechanism and stands to benefit from significant investment needs in the state in order to improve the existing infrastructure’s efficiency and to prevent water from being wasted. The trade-offs however, are a lack of interest in pursuing municipal acquisitions at a time when its peers are doing so, very capable and potentially aggressive consumer advocates, and pushback from Californians (although the CPUC is not subject to Prop 218) about tiered rates, particularly during the next drought.

CWT stands to benefit from significant investment needs in the state in order to improve the existing infrastructure’s efficiency and to prevent water from being wasted. So long as there continue to be ample opportunities to expand the existing footprint’s rate base, we understand management’s preference for internal growth instead of municipal acquisitions. We expect Cal Water’s 9.43% allowed ROE to fall as a result of the impending cost of capital proceeding, which is due to commence following the company’s required filing in March.

We note the significant run-up and then partial reversal in Water utilities since the Nov ’16 election, where investing in water infrastructure was mentioned in the President-elect’s speech. While we like CWT’s fundamentals, we believe sentiment is overly optimistic at the moment, and therefore encourage investors to wait for a more attractive entry point.

**Fig 3 CWT: Financial metrics (Note: the ‘18/’19 cost of capital and equity ratio are dependent on the CPUC review)**

| | 2015A | 2016 | 2017 | 2018 | 2019 | 3yr CAGR |
|---|---|---|---|---|---|---|
| EPS | 0.94 | 0.95 | 1.29 | 1.40 | 1.45 | 15.0% |
| EPS growth | -20.8% | 1.3% | 35.7% | 8.1% | 3.6% | |
| DPS | 0.67 | 0.69 | 0.71 | 0.73 | 0.75 | 3.0% |
| DPS growth | 3.1% | 3.0% | 3.0% | 3.0% | 3.0% | |
| Payout ratio | 71% | 72% | 55% | 52% | 52% | |
| Diluted shares outstanding | 48 | 48 | 48 | 52 | 51 | |
| Capex (US$m) | 177 | 195 | 215 | 225 | 235 | |
| Regulatory rate base (US$m) | 1,004 | 1,067 | 1,140 | 1,249 | 1,399 | 9.5% |
| Equity ratio | 53.4% | 53.4% | 53.4% | 53.4% | 53.4% | |
| EV/Rate base | 2.07x | 2.04x | 1.98x | 1.98x | 1.76x | |
| Authorized ROE (Cal Water) | 9.43% | 9.43% | 9.43% | 9.43% | 9.43% | |

Source: FactSet, Macquarie Capital (USA), as of January 13, 2017

# Valuation, recommendation, risks

***Wait for water utilities to re-price before buying.***

## Water utilities tend to be pricey, but its best to hold back right now

Our US$32 TP is based on a ’19 EPS estimate of US$1.45 and a P/E multiple of 22.4x (a 40% premium to our FY3 regulated electric multiple of 16.0x). We like the company’s fundamentals, but struggle with paying up for the stock when it is trading at ~90% of its highest P/E in 10 years, even after selling off somewhat in recent days. We encourage investors considering water utilities to wait for a more attractive entry point. We initiate coverage with a Neutral rating. We note the significant run up and then partial reversal in Water utilities following President-elect Trump’s acceptance speech during the Nov ’16 election. Specific mention was made of investing in water infrastructure, with a nod towards avoiding another Flint-like incident.

**Fig 4 CWT: FY3 P/E valuation**

| | |
|---|---|
| 2019 Earnings Per Share | $1.45 |
| FY3 (2019) sector P/E multiple for Regulated Electrics | 16.0x |
| Premium for Regulated Water Utilities | 40% |
| FY3 (2019) sector P/E multiple for Regulated Water | 22.4x |
| **CWT Target Price** | **$32.00** |
| Stock Price | $33.00 |
| **TSR Upside/Downside** | **-1% (including ’17 dividend yield)** |

Source: FactSet, Macquarie Capital (USA) , as of January 13, 2017

**Fig 5 10-year statistics for FY2 P/E ratios show that the group is trading very close to its highest levels in a decade**

| FY2 P/E | SPX | XLU | Water Utilities | AWK | WTR | CWT | AWR | SJW | CTWS | YORW |
|---|---|---|---|---|---|---|---|---|---|---|
| Max | 17.6x | 18.5x | 27.2x | 27.8x | 30.6x | 27.0x | 27.5x | 28.9x | 25.8x | 38.3x |
| Median | 13.9x | 15.0x | 19.2x | 16.6x | 20.7x | 17.9x | 19.0x | 19.7x | 19.8x | 22.1x |
| Mean | 13.9x | 14.6x | 19.8x | 17.2x | 21.1x | 18.4x | 19.4x | 20.1x | 19.8x | 22.7x |
| Min | 8.4x | 10.6x | 15.5x | 11.6x | 17.0x | 14.7x | 14.1x | 13.3x | 15.0x | 15.9x |
| Current | 17.5x | 17.0x | 25.5x | 23.5x | 21.6x | 24.7x | 25.0x | 24.9x | 23.9x | 34.7x |
| % of Max | 100% | 92% | 94% | 85% | 71% | 92% | 91% | 86% | 93% | 91% |
| Premium to median | 26% | 13% | 33% | 42% | 5% | 38% | 32% | 26% | 21% | 57% |

Source: FactSet, Macquarie Capital (USA), as of January 10, 2017

***We view CA as an average regulatory jurisdiction for water utilities at the moment***

# California dreaming for water utilities

## Single jurisdiction concentration more a blessing than a curse

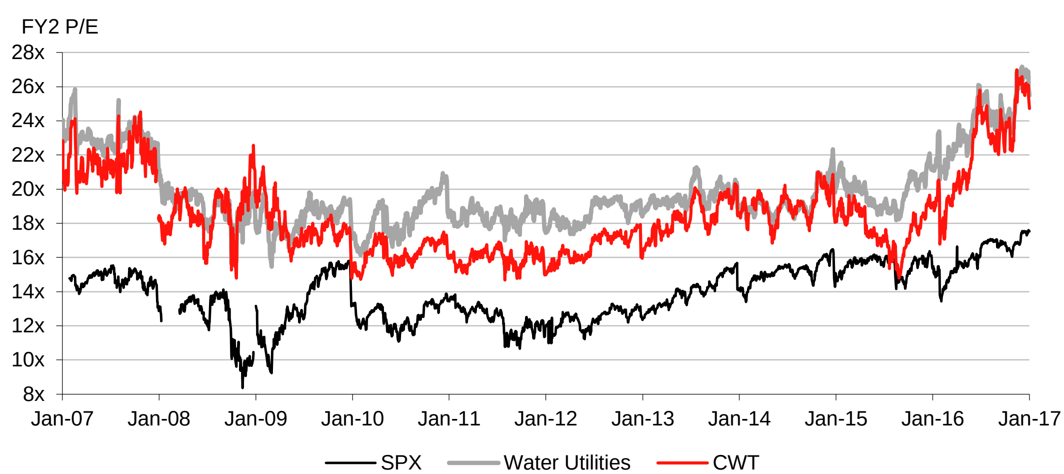
Despite operating in four states, CWT's business is 98% regulated and 94% CA-focused, making the company essentially a completely regulated California water utility. This results in a high level of regulatory visibility, and at least as far as decoupling and Tier 1 Advice Letters are concerned, an at least average regulatory backdrop when compared to other jurisdictions in the US, albeit with among the lowest authorized ROEs for water utilities. Pennsylvania still remains our favourite jurisdiction due to its pro-consolidation legislation.

The Water Revenue Adjustment Mechanism (WRAM) created a formal separation between sales volumes and revenues, and has proven its value during the most recent heavy drought. Revenue decoupling was authorized by the CPUC in 2008 to further promote water conservation. Forward-looking test years for highly transparent three-year general rate cases and a multitude of tracking mechanisms are slightly offset however, by active interveners and aggressive consumer advocates in the form of the CPUC's Office of Ratepayer Advocates (ORA), and The Utility Reform Network (TURN).

Although the company has operations in Hawaii, New Mexico, and Washington state, even when aggregated they are not sizable enough to cause CWT's consolidated, weighted authorized ROE to differ from the 9.43% assigned to Cal Water by the CPUC effective 2013. This is important because after three annual extensions, Cal Water is due for another Cost of Capital review by March 31, 2017. In Dec '16, Cal Water and three other large CA water utilities jointly filed a request with the CPUC for another extension. The Office of Ratepayer Advocates (ORA) was quite pointed in its reply, suggesting that the recently concluded triennial General Rate Case process already addressed the issues and proceedings which the joint parties cited as the reasons for requesting another extension.

We expect the 2017 cost of capital proceeding to occur as scheduled, and are hopeful that the decline in allowed the ROE will not be significant, although we a reduction of some sort is fairly certain, we believe. While the cost of debt is the most straightforward element in the cost of capital, we note that the ORA mentioned equity market returns and how they might tie in to an appropriate ROE. While we offer no comment on general market valuations, we note that water utilities have recently touched their highest valuations in the last 10 years.

**Fig 6 Water utilities have recently hit their highest valuation in a decade**




Source: FactSet, Macquarie Capital (USA), January 2017

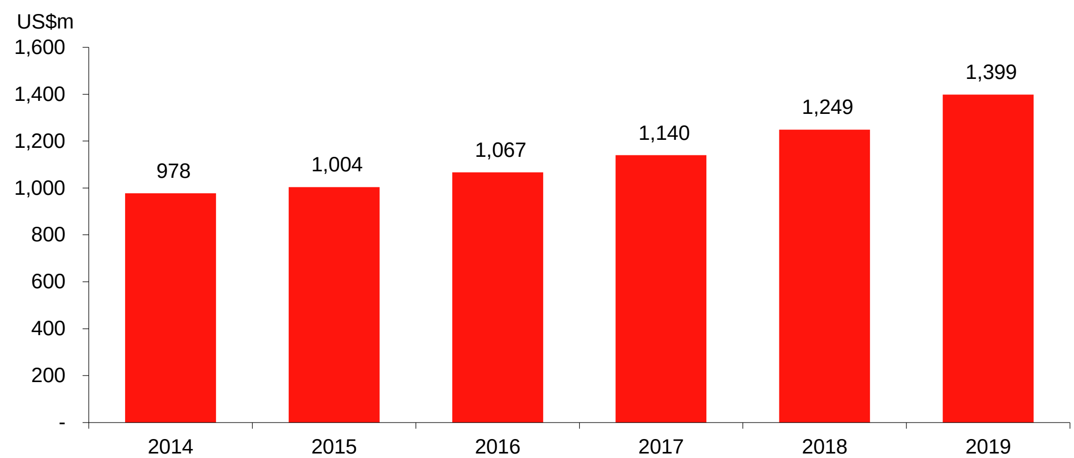
# Like its customers, CWT prefers organic

## Investing in its existing footprint is the primary growth strategy

For most water utilities, we are most excited about the opportunities for industry consolidation, as <20% of water systems are investor owned vs. nearly ~70% of electric utilities, by customer base. However, Cal Water has just advanced from a 300yr water main replacement cycle down to 200 years, and yet it still lags other CA water utilities who are replacing mains at nearly double that rate. The company has significant capital spending opportunities available, and therefore is unlikely to participate in these municipal acquisitions or other M&A in a meaningful way, we believe.

We certainly do not disagree that Cal Water has plenty of investment opportunities available to it, but we hope that CWT remains open to expanding into higher earning jurisdictions, should the reduction to its allowed ROE put it at a disadvantage to peers in terms of EPS growth. If acquisitions were pursued, we would be more supportive of non-CA growth to help offset the current effectively single jurisdiction exposure. Triennial rate cases with forward test years are nice to have, but the appeal can quickly fade if a subsequent ROE review, like the imminent 2017 Cost of Capital proceeding, were to change the return profile of that hard sought rate base growth.

**Fig 7 Cal Water's Rate Base could grow at a high single digit CAGR (7-9%) through 2019, depending on the outcome of its anticipated Advice Letter filings**




Source: Company data, Macquarie Capital (USA), January 2017

# Financial Summary

**Fig 8 CWT: all figures in US$m unless noted**

| | 2015A | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| **Income Statement** | | | | | |
| Operating revenue | $ 588 | $ 610 | $ 649 | $ 676 | $ 694 |
| Water production costs | 208 | 222 | 218 | 216 | 218 |
| Administrative and general | 113 | 103 | 104 | 107 | 105 |
| Other operations | 67 | 70 | 73 | 77 | 79 |
| Maintenance | 21 | 22 | 25 | 27 | 29 |
| Depreciation and amortization | 61 | 69 | 74 | 80 | 87 |
| Income tax benefit/expense | 25 | 24 | 32 | 35 | 36 |
| Property and other taxes | 22 | 24 | 26 | 28 | 31 |
| **Net operating income** | **71** | **76** | **96** | **106** | **109** |
| EBIT | 96 | 101 | 130 | 143 | 147 |
| EBITDA | 159 | 170 | 204 | 223 | 235 |
| Net other income / loss | 1 | 1 | 1 | 1 | 1 |
| Net interest expense | 27 | 31 | 35 | 40 | 41 |
| Net income | 45 | 45 | 62 | 67 | 69 |
| **Earnings per share - diluted** | **$0.94** | **$0.95** | **$1.29** | **$1.40** | **$1.45** |
| **Dividends per share** | **$0.67** | **$0.69** | **$0.71** | **$0.73** | **$0.75** |
| Payout ratio | 71% | 72% | 55% | 52% | 52% |
| | **2015** | **2016** | **2017** | **2018** | **2019** |
| **Cash Flow Statement** | | | | | |
| **CFO** | **$ 145** | **$ 115** | **$ 136** | **$ 147** | **$ 156** |
| Utility plant expenditures | (177) | (195) | (215) | (225) | (236) |
| Other | (1) | - | - | - | - |
| **CFI** | **(178)** | **(195)** | **(215)** | **(225)** | **(236)** |
| Issuance of common stock | - | - | - | 110 | - |
| Issuance of debt | 46 | 105 | 104 | 92 | 15 |
| Dividends | (32) | (33) | (34) | (38) | (39) |
| Other | 9 | 9 | 9 | 9 | 9 |
| **CFF** | **23** | **82** | **79** | **173** | **(14)** |
| Change in cash and cash equivalents | (11) | 1 | - | 95 | (95) |
| Cash and cash equivalents at beginning of period | 20 | 9 | 10 | 10 | 105 |
| Cash and cash equivalents at end of period | $ 9 | $ 10 | $ 10 | $ 105 | $ 10 |
| | **2015** | **2016** | **2017** | **2018** | **2019** |
| **Balance Sheet** | | | | | |
| Total utility plant | $ 2,507 | $ 2,702 | $ 2,917 | $ 3,142 | $ 3,378 |
| Accumulated depreciation and amortization | (805) | (874) | (949) | (1,029) | (1,116) |
| Net utility plant | 1,702 | 1,828 | 1,968 | 2,113 | 2,262 |
| Cash and cash equivalents | 9 | 10 | 10 | 105 | 10 |
| Other current assets | 119 | 119 | 119 | 119 | 119 |
| Total current assets | 128 | 129 | 129 | 223 | 129 |
| Regulatory assets | 362 | 362 | 362 | 362 | 362 |
| Goodwill | 3 | 3 | 3 | 3 | 3 |
| Other assets | 52 | 52 | 52 | 52 | 52 |
| **Total assets** | **$ 2,246** | **$ 2,373** | **$ 2,514** | **$ 2,753** | **$ 2,808** |
| Total common stockholders' equity | $ 642 | $ 654 | $ 682 | $ 820 | $ 851 |
| Long-term debt, less current maturities | 512 | 596 | 676 | 768 | 777 |
| **Total capitalization** | **1,154** | **1,251** | **1,358** | **1,588** | **1,628** |
| Total current liabilities | 148 | 170 | 194 | 194 | 199 |
| Deferred income taxes | 265 | 265 | 265 | 265 | 265 |
| Pension and postretirement benefits | 236 | 236 | 236 | 236 | 236 |
| Other long-term liabilities | 82 | 82 | 82 | 82 | 82 |
| Advances for construction | 180 | 180 | 180 | 180 | 180 |
| Contributions in aid of construction | 178 | 187 | 196 | 205 | 215 |
| **Total capitalization and liabilities** | **$ 2,246** | **$ 2,373** | **$ 2,514** | **$ 2,753** | **$ 2,808** |

Source: Macquarie Capital (USA), January 2017

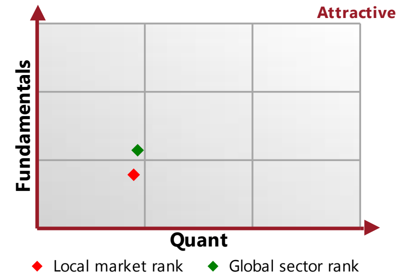
# Macquarie Quant View

The quant model currently holds a marginally negative view on California Water Service Group. The strongest style exposure is Price Momentum, indicating this stock has had strong medium to long term returns which often persist into the future. The weakest style exposure is Earnings Momentum, indicating this stock has received earnings downgrades and is not well liked by sell side analysts.

**299/433**

Global rank in Utilities

| | |
|---|---|
| **% of BUY recommendations** | 0% (0/7) |
| **Number of Price Target downgrades** | 0 |
| **Number of Price Target upgrades** | 0 |

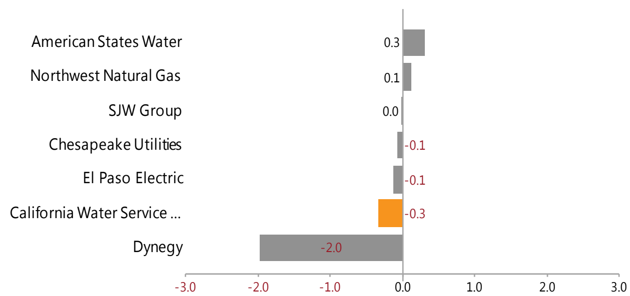



Displays where the company's ranked based on the fundamental consensus Price Target and Macquarie's Quantitative Alpha model.

Two rankings: Local market (United States) and Global sector (Utilities)

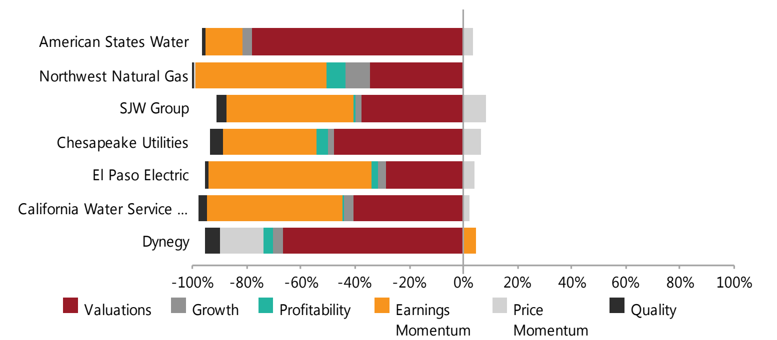
## Macquarie Alpha Model ranking

A list of comparable companies and their Macquarie Alpha model score (higher is better).



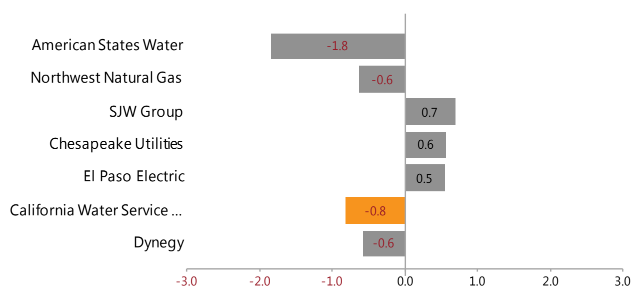

## Factors driving the Alpha Model

For the comparable firms this chart shows the key underlying styles and their contribution to the current overall Alpha score.



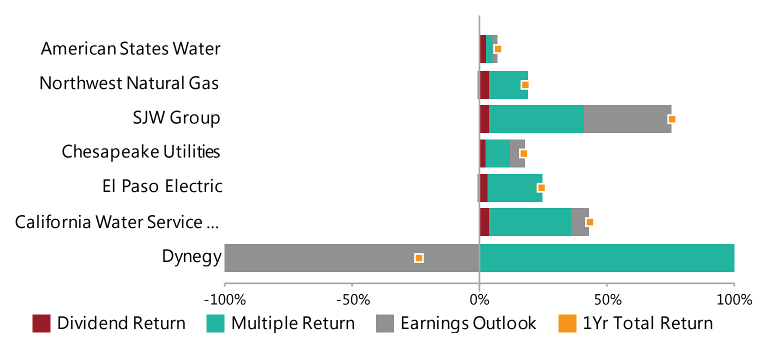

## Macquarie Earnings Sentiment Indicator

The Macquarie Sentiment Indicator is an enhanced earnings revisions signal that favours analysts who have more timely and higher conviction revisions. Current score shown below.



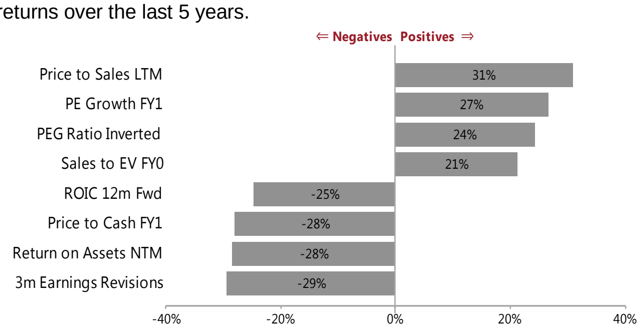

## Drivers of Stock Return

Breakdown of 1 year total return (local currency) into returns from dividends, changes in forward earnings estimates and the resulting change in earnings multiple.



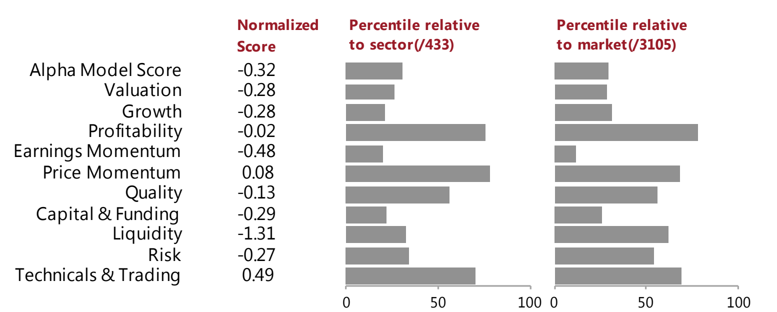

## What drove this Company in the last 5 years

Which factor score has had the greatest correlation with the company's returns over the last 5 years.




## How it looks on the Alpha model

A more granular view of the underlying style scores that drive the alpha (higher is better) and the percentile rank relative to the sector and market.




Source (all charts): FactSet, Thomson Reuters, and Macquarie Research. For more details on the Macquarie Alpha model or for more customised analysis and screens, please contact the Macquarie Global Quantitative/Custom Products Group (cpg@macquarie.com)

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 December 2016

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 57.53% | 50.72% | 45.57% | 42.28% | 60.58% | 52.79% | (for global coverage by Macquarie, 8.71% of stocks followed are investment banking clients) |
| Neutral | 33.90% | 33.97% | 43.04% | 50.11% | 37.23% | 35.62% | (for global coverage by Macquarie, 8.05% of stocks followed are investment banking clients) |
| Underperform | 8.56% | 15.30% | 11.39% | 7.61% | 2.19% | 11.59% | (for global coverage by Macquarie, 4.63% of stocks followed are investment banking clients) |

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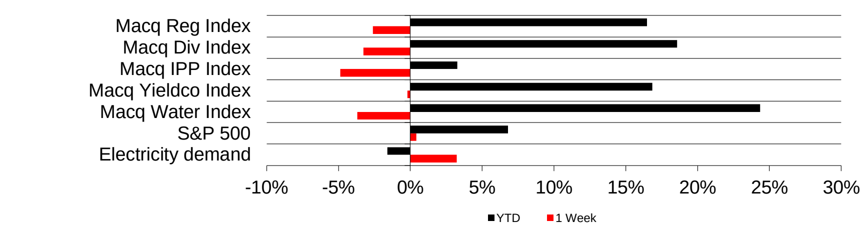
UNITED STATES

# US Utilities

## Weekly snapshot

- 2016 on-peak spark spreads in New England and PJM have sharply compressed since the beginning of the year and scheduled major maintenance has capped run times of **DYN**'s combined cycle gas plants. That together with limited hedges and restructuring of coal contracts should weigh on **DYN**'s 2016 earnings. Without hedges, no power plant is protected from lower power prices, not even a gas plant. We have lowered our estimates for **DYN** to reflect lower spark spreads implied from forward power and gas curves, but we reiterate our Outperform rating driven by **DYN**'s strong FCF yields.
- **BEP** is in its element right now as a deep value buyer of renewable assets, with many potential acquisitions and the financial backing to execute. **TERP** offers **BEP** asset diversification via solar PV, but also improves **BEP**'s perceived riskiness by increasing the proportion of US domiciled assets. We reiterate our Outperform rating on **BEP** and have raised our TP to US$33 from US$30.
- We provide a monthly update to Macquarie's quant team's multi-factor stock selection model for US utilities (link to Feb 16 report for details/background). The current ranking of Alpha scores has slightly shifted from mid-sized electric utilities to larger-cap stocks, generally preferring those with cheap PE multiples, strong growth, improving analyst sentiment, and high quality scores. The lowest-ranked stocks have expensive valuations, negative momentum, low quality scores, and high risks. YTD, the model has shifted its tilt toward the capital and momentum factors, and away from valuation. Nevertheless, the model's combined weight of value and growth is still staggering at 41%. Fundamentally, we strongly prefer growth (of DPS in particular) over high current yields (link to fundamental report).
- **ABY**, **AES**, **AWK**, **BEP**, **CNP**, **D**, **DUK**, **DYN**, **ENOC**, **ETR**, **GPP**, **HE**, **HIFR**, **LNT**, **PEGI**, **POR**, **TLN**, **WTR**, and **XEL** reported earnings last week. Details and updated estimates starting on page 4.
- The S&P 500 rose 0.4% last week, while utilities underperformed. YieldCos slipped (-0.2%), followed by Regulateds (-2.6%), Diversifieds (-3.3%), Water names (-3.7%), and finally IPPs (-4.9%). The 10yrT yield finished the week at 1.59% (+13bps). Electricity demand rose 3.2% YoY last week (down 1.6% YTD).

**Performance for the week ended August 5, 2016**




Source: FactSet, Macquarie Capital (USA), August 2016

**Upcoming Utilities Events**

| | |
|---|---|
| Aug 18 | **Breakfast with NY PSC Chair Audrey Zibelman** Location: New York |

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8 August 2016
Macquarie Capital (USA) Inc.

## Fig 1 Stocks under coverage – Comp sheet (1 of 2)

| Regulated utilities | Ticker | Rating | Price (US$) | | TSR | Mkt cap | DPS | Dividend | EPS - 2016E | | EPS - 2017E | | EPS - 2018E | | PE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 05-Aug-16 | Target | 12m | US$m | 2016E | Yield | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2016E | 2017E | 2018E |
| **Alliant Energy** | **LNT** | **Outperform** | **39.39** | **42.00** | **9.6%** | **8,955** | **1.18** | **3.0%** | **1.90** | **1.90** | **2.00** | **2.00** | **2.14** | **2.13** | **20.7** | **19.7** | **18.4** |
| American Electric Power | AEP | Neutral | 67.85 | 72.00 | 9.4% | 33,362 | 2.25 | 3.3% | 3.70 | 3.69 | 3.67 | 3.83 | 4.00 | 4.07 | 18.3 | 18.5 | 17.0 |
| **AVANGRID** | **AGR** | **Outperform** | **44.46** | **50.00** | **16.3%** | **13,742** | **1.73** | **3.9%** | **2.16** | **2.12** | **2.35** | **2.32** | **2.58** | **2.54** | **20.6** | **18.9** | **17.2** |
| CenterPoint Energy | CNP | Neutral | 22.67 | 24.00 | 10.4% | 9,762 | 103 | 4.5% | 115 | 115 | 120 | 121 | 128 | 129 | 19.7 | 18.8 | 17.7 |
| CMS Energy | CMS | Neutral | 43.69 | 46.00 | 8.1% | 12,226 | 124 | 2.8% | 2.02 | 2.02 | 2.18 | 2.18 | 2.35 | 2.34 | 21.6 | 20.0 | 18.6 |
| **Dominion Resources** | **D** | **Outperform** | **75.37** | **84.00** | **15.2%** | **45,147** | **2.80** | **3.7%** | **3.77** | **3.79** | **3.73** | **3.87** | **4.35** | **4.27** | **20.0** | **20.2** | **17.3** |
| **DTE Energy** | **DTE** | **Outperform** | **95.10** | **105.00** | **13.6%** | **17,064** | **3.00** | **3.2%** | **5.12** | **5.06** | **5.35** | **5.27** | **5.68** | **5.64** | **18.6** | **17.8** | **16.7** |
| Duke Energy | DUK | Neutral | 84.23 | 87.00 | 7.3% | 58,026 | 3.36 | 4.0% | 4.56 | 4.60 | 4.63 | 4.73 | 4.86 | 4.97 | 18.5 | 18.2 | 17.3 |
| **Edison International** | **EIX** | **Outperform** | **74.99** | **84.00** | **14.6%** | **24,522** | **1.92** | **2.6%** | **4.00** | **3.90** | **4.05** | **4.14** | **4.26** | **4.32** | **18.7** | **18.5** | **17.6** |
| Eversource Energy | ES | Neutral | 56.74 | 59.00 | 7.2% | 17,998 | 180 | 3.2% | 2.97 | 2.97 | 3.11 | 3.17 | 3.32 | 3.34 | 19.1 | 18.3 | 17.1 |
| Hawaiian Electric Industries | HE | Neutral | 30.80 | 30.00 | 14% | 3,323 | 124 | 4.0% | 165 | 169 | 186 | 178 | 2.02 | 191 | 18.7 | 16.5 | 15.2 |
| **Pacific Gas & Electric** | **PCG** | **Outperform** | **63.90** | **68.00** | **9.4%** | **31,855** | **1.89** | **3.0%** | **3.73** | **3.71** | **3.65** | **3.68** | **3.78** | **3.84** | **17.1** | **17.5** | **16.9** |
| Portland General Electric | POR | Neutral | 43.18 | 43.00 | 2.5% | 3,840 | 126 | 2.9% | 2.12 | 2.13 | 2.43 | 2.38 | 2.48 | 2.47 | 20.4 | 17.8 | 17.4 |
| PPL Corp | PPL | Neutral | 36.76 | 37.00 | 4.8% | 24,884 | 152 | 4.1% | 2.36 | 2.34 | 2.43 | 2.43 | 2.38 | 2.42 | 15.6 | 15.1 | 15.5 |
| **SCANA Corp.** | **SCG** | **Outperform** | **72.94** | **80.00** | **12.8%** | **10,424** | **2.30** | **3.2%** | **3.96** | **3.97** | **4.18** | **4.16** | **4.44** | **4.46** | **18.4** | **17.4** | **16.4** |
| Southern Company | SO | Neutral | 52.64 | 55.00 | 8.7% | 49,587 | 2.22 | 4.2% | 2.86 | 2.86 | 2.96 | 2.98 | 3.10 | 3.10 | 18.4 | 17.8 | 17.0 |
| Xcel Energy | XEL | Neutral | 42.67 | 44.00 | 6.3% | 21,674 | 136 | 3.2% | 2.20 | 2.19 | 2.32 | 2.31 | 2.43 | 2.43 | 19.4 | 18.4 | 17.6 |
| *Average* | | | | | | | | *3.5%* | | | | | | | *19.1* | *18.2* | *17.1* |
| **American Water Works** | **AWK** | **Outperform** | **78.48** | **88.00** | **14.0%** | **13,962** | **1.50** | **1.9%** | **2.84** | **2.83** | **3.05** | **3.04** | **3.31** | **3.26** | **27.7** | **25.7** | **23.7** |
| Aqua America | WTR | Neutral | 33.12 | 35.00 | 7.9% | 5,873 | 0.74 | 2.2% | 133 | 133 | 138 | 140 | 145 | 149 | 24.9 | 24.0 | 22.8 |

| Diversified utilities | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AES Corp** | **AES** | **Outperform** | **12.23** | **14.00** | **18.1%** | **8,060** | **0.44** | **3.6%** | **1.00** | **0.99** | **1.14** | **1.12** | **1.30** | **1.27** | **12.2** | **10.7** | **9.4** |
| Entergy | ETR | Neutral | 79.59 | 85.00 | 11.1% | 14,226 | 3.42 | 4.3% | 6.96 | 6.34 | 5.04 | 5.19 | 5.24 | 5.18 | 11.4 | 15.8 | 15.2 |
| **Exelon** | **EXC** | **Outperform** | **36.14** | **40.00** | **14.2%** | **32,068** | **1.26** | **3.5%** | **2.59** | **2.54** | **2.63** | **2.65** | **2.73** | **2.80** | **13.9** | **13.8** | **13.2** |
| **FirstEnergy** | **FE** | **Outperform** | **32.43** | **40.00** | **27.8%** | **13,789** | **1.44** | **4.4%** | **2.49** | **2.56** | **2.56** | **2.50** | **2.53** | **2.43** | **13.0** | **12.7** | **12.8** |
| NextEra Energy | NEE | Neutral | 125.99 | 130.00 | 6.0% | 58,204 | 3.50 | 2.8% | 6.20 | 6.20 | 6.50 | 6.56 | 7.04 | 6.99 | 20.3 | 19.4 | 17.9 |
| Public Service Enterprise | PEG | Neutral | 43.96 | 49.00 | 15.2% | 22,240 | 164 | 3.7% | 2.83 | 2.87 | 2.93 | 2.88 | 2.98 | 2.93 | 15.5 | 15.0 | 14.8 |
| *Average (ex-AES)* | | | | | | | | *3.7%* | | | | | | | *14.9* | *15.3* | *14.8* |

| Independent power | Ticker | Rating | Price (US$) | | TSR | Mkt cap | Net debt | EV | EBITDA - 2016E | | EBITDA - 2017E | | EBITDA - 2018E | | EV/EBITDA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| producers | | | 05-Aug-16 | Target | 12m | US$m | '17 US$m | US$m | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2016E | 2017E | 2018E |
| **Calpine** | **CPN** | **Outperform** | **13.01** | **20.00** | **53.7%** | **6,323** | **11,480** | **17,803** | **1,851** | **1,863** | **1,976** | **1,991** | **2,192** | **2,165** | **9.6** | **9.0** | **8.1** |
| **Dynegy** | **DYN** | **Outperform** | **13.96** | **30.00** | **114.9%** | **1,637** | **8,075** | **9,712** | **1,010** | **1,067** | **1,589** | **1,516** | **1,770** | **1,705** | **9.6** | **6.1** | **5.5** |
| **NRG Energy** | **NRG** | **Outperform** | **13.62** | **25.00** | **83.6%** | **4,289** | **13,239** | **17,528** | **3,050** | **3,067** | **2,816** | **2,831** | **2,960** | **2,967** | **5.7** | **6.2** | **5.9** |
| Talen Energy | TLN | Neutral | 13.71 | 14.00 | 2.1% | 1,762 | 2,866 | 4,628 | 767 | 758 | 763 | 703 | 684 | 661 | 6.0 | 6.1 | 6.8 |
| *Average* | | | | | | | | | | | | | | | *8.3* | *7.1* | *6.5* |

Source: FactSet, Macquarie Capital (USA), August 2016; prices as of close on August 5, 2016

## Fig 2 Stocks under coverage – Comp sheet (2 of 2)

| Yieldcos, MLPs, and REITs | Ticker | Rating | Price (US$) | | TSR | Mkt cap | Net debt | EV | DPS - 2016E | | DPS - 2017E | | DPS - 2018E | | Dividend Yield | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 05-Aug-16 | Target | 12m | US$m | '17 US$m | US$m | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2016E | 2017E | 2018E |
| Atlantica Yield | ABY | Neutral | 20.39 | 19.00 | -2.7% | 2,043 | 7,483 | 9,526 | 0.85 | 162 | 180 | 2.04 | 180 | 2.06 | 4.1% | 8.8% | 8.8% |
| **Brookfield Renewable Energy** | **BEP** | **Outperform** | **30.17** | **33.00** | **15.3%** | **4,691** | **9,567** | **14,258** | **1.78** | **1.78** | **1.90** | **1.87** | **2.04** | **1.99** | **5.9%** | **6.3%** | **6.8%** |
| **TerraForm Global** | **GLBL** | **Outperform** | **3.42** | **4.00** | **35.3%** | **399** | **833** | **1,232** | **0.63** | **0.53** | **0.63** | **0.44** | **0.63** | **0.61** | **18.3%** | **18.4%** | **18.5%** |
| Green Plains Partners LP | GPP | Neutral | 17.65 | 17.00 | 5.6% | 561 | 45 | 606 | 163 | 163 | 176 | 170 | 190 | 178 | 9.2% | 10.0% | 10.8% |
| InfraREIT | HIFR | Neutral | 17.46 | 16.00 | -2.6% | 764 | 1,323 | 2,087 | 100 | 0.99 | 0.85 | 0.98 | 0.98 | 107 | 5.7% | 4.9% | 5.6% |
| **NextEra Energy Partners** | **NEP** | **Outperform** | **30.48** | **35.00** | **19.1%** | **1,289** | **4,178** | **5,467** | **1.30** | **1.34** | **1.48** | **1.58** | **1.69** | **1.83** | **4.3%** | **4.9%** | **5.5%** |
| **NRG Yield** | **NYLD** | **Outperform** | **18.08** | **20.00** | **15.8%** | **625** | **5,022** | **5,647** | **0.94** | **0.96** | **1.09** | **1.11** | **1.25** | **1.27** | **5.2%** | **6.0%** | **6.9%** |
| **Pattern Energy Group** | **PEGI** | **Outperform** | **24.51** | **26.00** | **12.6%** | **1,837** | **1,668** | **3,505** | **1.59** | **1.58** | **1.76** | **1.72** | **1.93** | **1.88** | **6.5%** | **7.2%** | **7.9%** |
| **TerraForm Power** | **TERP** | **Outperform** | **12.02** | **15.50** | **29.0%** | **1,098** | **3,506** | **4,604** | **0.00** | **0.77** | **1.40** | **1.18** | **1.40** | | **0.0%** | **11.7%** | **11.6%** |
| *Average (ex-GPP and HIFR)* | | | | | | | | | | | | | | | *4.3%* | *7.5%* | *7.9%* |

| Alternative energy and smart grid | Ticker | Rating | Price (US$) | | TSR | Mkt cap | Net debt | EV | EBITDA - 2016E | | EBITDA - 2017E | | EBITDA - 2018E | | EV/EBITDA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 05-Aug-16 | Target | 12m | US$m | '16 US$m | US$m | Macq | Cons. | Macq | Cons. | Macq | Cons. | 2016E | 2017E | 2018E |
| Broadwind Energy | BWEN | Neutral | 4.26 | 4.50 | 5.6% | 64 | -5 | 59 | 9 | 9 | 9 | 9 | 10 | 10 | 6.8 | 6.4 | 5.9 |
| Covanta | CVA | Neutral | 15.15 | 18.00 | 25.4% | 1,976 | 2,769 | 4,745 | 413 | 413 | 427 | 422 | 494 | 475 | 11.5 | 11.1 | 9.6 |
| EnerNOC | ENOC | Neutral | 5.59 | 9.00 | 61.0% | 171 | 3 | 173 | -35 | -39 | -36 | -42 | 32 | 12 | -5.0 | -4.9 | 5.4 |
| Energy Recovery | ERII | Neutral | 11.98 | 12.00 | 0.2% | 627 | -117 | 510 | 48 | 51 | 35 | 26 | 37 | 42 | 10.7 | 14.4 | 13.9 |
| Itron | ITRI | Neutral | 43.26 | 31.00 | -28.3% | 1,654 | 80 | 1,735 | 208 | 198 | 231 | 218 | 251 | 232 | 8.3 | 7.5 | 6.9 |
| Ormat | ORA | Neutral | 47.83 | 40.00 | -16.4% | 2,371 | 997 | 3,368 | 300 | 311 | 319 | 318 | 361 | 356 | 11.2 | 10.6 | 9.3 |

Source: FactSet, Macquarie Capital (USA), August 2016; prices as of close on August 5, 2016

*Companies mentioned:*

# The week in review: 1 Aug – 5 Aug 2016

***US utilities***

## US utilities – Graphing is where we draw the line

We provide a monthly update to Macquarie's quant team's multi-factor stock selection model for US utilities (link to Feb 16 report for details/background).

The current ranking of Alpha scores has slightly shifted from mid-sized electric utilities to larger-cap stocks, generally preferring those with cheap PE multiples, strong growth, improving analyst sentiment, and high quality scores. The lowest-ranked stocks have expensive valuations, negative momentum, low quality scores, and high risks. YTD, the model has shifted its tilt toward the capital and momentum factors, and away from valuation. Nevertheless, the model's combined weight of value and growth is still staggering at 41%. Fundamentally, we strongly prefer growth (of DPS in particular) over high current yields (link to our fundamental report).

Please see our flyer, Graphing is where we draw the line (5 Aug)

***ABY***

## Atlantica Yield (Neutral) – Dividend is (sort of) back, raising TP

ABY has reinstated a partial quarterly dividend of US$0.145, representing an unencumbered portion of CAFD, which its board of directors deems to be prudent in light of ongoing negotiations for waivers related to cross default and change of ownership provisions. While Mojave has been performing relatively in line with expectations, ongoing difficulties with Solana are not expected to be resolved until 2017, and even then we are not yet convinced. We lower our '16/'17/'18 adj EBITDA estimates to US$736m/691m/701m from US$780m/770m/774m, while leaving our '17/'18 DPS estimates steady at US$2.10. With the reinstatement of the dividend, we resume a terminal growth forecast for ABY and increase our TP to US$19 from US$16.

ABY reported 2Q16 EBITDA of US$217m, slightly ahead of the consensus estimate of US$214m, but below our estimate of US$226m.

Weekly snapshot only (8 Aug)

***AES***

## AES Corp (Outperform) – No surprises, for once

With the recent announcement of the Sul divestiture in Brazil. AES has already exceeded its 2016 annual goal to sell up to US$200-300m of assets. Management now expects more than US$540m in asset sale proceeds this year. AES prepaid US$300m in parent debt, ahead of its prior 2016 target of US$200m. The Maritza plant in Bulgaria continues to receive timely payments from its power offtaker. In OH, AES is encouraged by the PUCO support for the credit standing of the parent of other OH regulated utilities, FirstEnergy, and hopes its pending ESP results in a constructive resolution.

The recent improvement in FX and the economy in Brazil has not had a material effect on AES's businesses in the country. The recent weakening of the British pound has been mitigated by FX hedges.

AES reported 2Q16 adjusted EPS of US$1.17, beating consensus of US$1.16 and our estimate of US$1.14. Management reiterated the US$0.95-1.05 2016 EPS guidance and indicated that the EPS CAGR in '17 and '18 should be close to the high end of the 12-16% range thanks to new generation assets and cost cutting measures. Management also reaffirmed its expectations of a 10%+ CAGR in AES's FCF for 2017 and 2018.

We have increased our EPS expectations for AES to reflect additional cost efficiencies and a lower parent-level drag due to the debt paydown. Our new '17/'18/'19 EPS estimates are US$1.14/1.30/1.38 up from US$1.10/1.27/1.37, respectively. Our US$14 TP remains unchanged and we reiterate our Outperform rating.

Weekly snapshot only (8 Aug)

## *AWK* American Water Works (Outperform) – Expensive, but worth it

AWK's current regulated capex spend is at a 125 year asset replacement rate. While the capex could be accelerated (to reach at least a 100 year rate), the company does not want to see annual increases in its water bills in excess of ~2.5% unless specifically agreed to with state regulators. Unlike its peers, AWK sees no need to diversify away from water-driven businesses for growth. Management seems to understand that AWK's high market valuation is at least partly driven by a scarcity premium associated with few sizeable public water utilities in the US.

AWK reported 2Q16 EPS of US$0.77, ahead of our/consensus estimates of US$0.72/US$0.73, and reaffirmed '16 EPS guidance of US$2.75-2.85.

Weekly snapshot only (8 Aug)

## *BEP* Brookfield Renewable (Outperform) – Deals as far as the eye can see

BEP is in its element at the moment as a deep value buyer of renewable power assets looking out at a world of potential acquisitions at arguably dirt cheap prices, so long as power prices rebound from current levels. The company sees prices in some markets as being low enough that it can forgo the safety of a PPA and purchase merchant assets where power prices are already at or near a floor. We hesitate to get excited about chasing merchant assets given current power market conditions, however, we recognize BE P's successful track record of doing exactly that. We agree with management's views of short-term wholesale prices being too low, traditional power supply in developed markets being under policy pressure, and supply in developing markets being tight due to economic growth.

BEP reported adjusted EBITDA of US$377m, well below consensus/us at US$463m/491m, respectively.

Please see our flyer, *Deals as far as the eye can see* (8 Aug)

## *CNP* CenterPoint Energy (Neutral) – One review down, one to go

We've always been skeptical of CNP's ability to create value by converting some or all of its utilities to a REIT/up-REIT, and now that option is officially out of the picture. A potential sale or spinoff of CNP's stake in ENBL is increasingly in focus, with the company disclosing on Friday that it had sent OGE a 30-day ROFO in late July. CNP again promised to provide an update on its plans for ENBL by the end of '16. While a sale is certainly possible, cash proceeds would likely be modest given a cash tax liability that we estimate at ~US$1.5bn vs the US$3bn market value of CNP's 55% stake. Still, management (and many investors) would prefer to eliminate the commodity exposure and its impact on the volatility of earnings/cashflows. On valuation, CNP is beginning to look more attractive as we calculate that utilities + parent (75-80% of '16 EPS) trade at a ~7% PE discount vs peers on '18 EPS compared to a modest premium historically. We do see a modest discount as appropriate given that LT EPS/DPS growth guidance lags peers (4-6% vs ~6%).

CNP reported 2Q16 adjusted EPS of US$0.17, below both us/consensus at US$0.22/US$0.20, but reaffirmed '16 guidance of US$1.12-1.20.

Weekly snapshot only (8 Aug)

## *CPN* Calpine Corp (Outperform) – Disappointing power prices this summer

Every conventional power generator, regardless of the fuel source, generates most of its earnings during summer peak hours. Calpine is no different, even if its plants benefit from low natural gas prices. While CPN's updated 2016 EBITDA/FCF guidance is in line with our expectations, we are concerned about dismal cash power prices this summer in light of strong power demand in ERCOT and PJM. While wind is often blamed for weak power prices in TX, even during days when wind power accounted for less than 2% of total supply, spot power prices have been clearing at very low levels. In PJM, unplanned outages of power plants seem sharply down, likely thanks to capacity performance requirements, and even during very high loads, power prices have not been responding. We recognize CPN's strong and consistent FCFs even in this challenging power price environment, but we are struggling to see what could lift CPN's profitability in the near term, besides natural gas prices.

CPN reported 2Q16 adjusted EBITDA of US$452m vs. consensus of US$408m, however, its 2016 EBITDA guidance came down to US$1,800-1,900m down from US$1,800-1,950m.

Please see our flyer, *Disappointing power prices this summer* (1 Aug)

## *D* Dominion Resources (Outperform) – Weak power prices in New England vs. incremental solar investments

D's merchant nuclear plant in CT, Millstone, remains almost fully unhedged beyond 2017 as D awaits an improvement in regional gas prices and thus power prices. Any legislative support for the nuclear plant in CT could support its results, though only in 2018 or beyond as the latest legislative session in the state has recently concluded. Management expects a recovery in power prices in New England following this summer as the excess gas storage should get absorbed, which in turn could boost the New England gas basis. Then again, the basis is likely to recover only by the winter, we believe, and by then D will likely be hedged. Therefore our estimates reflect currently observable forward power prices in New England. That in turn means, however, no growth in EPS between 2016 and 2017 even if D is successful at adding an additional US$0.10-0.15 in EPS from investments in new solar farms.

The weakness in 2017 earnings for D seems well understood by investors at this point, even if sell-side consensus estimates still need to come down a bit. We were disappointed that management does not plan to provide its 2017 and 2018 EPS guidance at the same time (in 1Q17). Our bullish stance on the story is predicated on a sharp earnings and cash flow pick up 2018 and 2019 driven by the Cove Point expansion and the Atlantic Coast pipeline. We are willing to overlook the weakness in 2017 results, but would prefer to get some quantification of the upside 2018 and 2019 should offer.

D reported 2Q16 adjusted EPS of US$0.71, ahead of consensus of US$0.70 and our estimate of US$0.69, despite mild weather and higher storm restoration costs being partly offset by lower operating expenses. We have updated our earnings estimates to reflect lower forward power prices in New England and no power hedges, a higher share count, and earnings offset from more solar investments. Our new '16/'17/'18/'19 EPS estimates are US$3.77/3.73/4.35/4.65 down from US$3.78/3.75/4.39/4.69, respectively. Our TP and rating remain unchanged.

Weekly snapshot only (8 Aug)

## *DUK* Duke Energy (Neutral) – Awaiting sale of Latin American Generation and closing of Piedmont Gas acquisitions

DUK's sale of its merchant power plants in Latin America is progressing and the company expects the transaction to conclude by the end of the year. Thanks to DUK's NOL position, a likely taxable gain on the deal should not result in a tax leakage, at least not at this point. DUK's acquisition of Piedmont Gas is also advancing, and management hopes to close both transactions by the end of the year.

DUK reported 2Q16 adjusted EPS of US$1.07, easily beating consensus of US$1.02 and us at US$0.99. The beat came on cost cutting initiatives and higher than expected regulated rates and riders. Management reiterated its 2016 EPS guidance of US$4.50-4.70 and 4-6% EPS growth. Our estimates, TP and our Neutral rating on DUK remain unchanged.

Weekly snapshot only (8 Aug)

## *DYN* Dynegy (Outperform) - Gas plants are not immune from low power prices

2016 on-peak spark spreads in New England and PJM have sharply compressed since the beginning of the year and scheduled major maintenance has capped run times of DYN's combined cycle gas plants. That together with limited hedges and restructuring of coal contracts should weigh on DYN's 2016 earnings. Without hedges, no power plant is protected from lower power prices, not even a gas plant. We have lowered our estimates for DYN to reflect lower spark spreads implied from forward power and gas curves, but we reiterate our Outperform rating driven by DYN's strong FCF yields.

Please see our flyer, *Gas plants are not immune from low power prices* (8 Aug)

## *ENOC* EnerNOC (Neutral) – Careful what you wish for

Over the past few years, ENOC has been rebranding itself as a software company rather than one offering an alternative to power plants – a wise strategy given a major valuation disparity and uncertainty around the outlook for the demand response market. However, stocks of software companies are extremely volatile, and investors can be unforgiving of a challenging quarter, as ENOC saw last week after posting 2Q16 results that beat expectations but saw softness in the Software segment (ENOC fell 25% vs a flat S&P 500).

The next couple of years will be bumpy for DR, and while ENOC should do better than its competition and gain market share, it will be doing so in a market which is shrinking overall. The Software segment is now focused only on enterprise customers, a move which management hopes will increase software subscription ARR. All eyes are focused on 2H16 as investors look to see how the strategy shift is progressing and whether ENOC will need to tweak it by scaling back investment. With higher PJM revenues in ’16, followed by a drop in ’17, our revised ‘16/’17/’18 EPS estimates are US$-2.80/-2.44/-0.87 vs US$-3.03/-1.68/-0.90 previously. We reiterate Neutral.

ENOC reported 2Q16 of US$0.00, ahead of our/consensus estimates of US$-0.16/US$-0.28, and raised ’16 guidance at both the low and high end by $0.30, with a new midpoint of US$-2.78 vs. US$-3.08 previously.

Weekly snapshot only (8 Aug)

## *ETR* Entergy (Neutral) – Strong industrial sales, large 2Q16 tax benefit, pending negotitiations for Pilgrim nuke

ETR’s industrial electric sales were up 7.2% YoY, governmental up 1.8%, but residential and commercial volumes were down 0.6% on a weather-adjusted basis. Management does not expect the pace of the industrial sales growth to be sustainable in 2H16 due to seasonality of some industries, refining in particular. On the EWC side, by the end of August, management hopes to conclude the pending sale negotiations with Exelon for the Fitzpatrick nuclear plant in upstate NY.

ETR plans to provide an update on its nuclear sustainability plan focused on its rate based nuclear units and potential mitigation mechanisms. We’d expect the plan to initially weigh on ETR’s regulated utility results, though future regulatory recovery of the capex and/or expenses seems likely.

ETR reported 2Q16 operating EPS of US$3.11 which included $2.01 of tax benefits from past tax audits. Excluding the tax benefit, ETR’s operating EPS was US$1.10 vs. our/consensus estimates of US$1.20/1.35, respectively. Management raised its 2016 operating EPS guidance range to reflect YTD tax benefits, the weather, an extended outage at Indian Point and lower power prices in the Northeast. The new EPS guidance range is US$6.60-7.40 vs. US$4.95-5.75, previously. The guidance for utilities, parent and other remains unchanged at US$4.20-4.50, but the guidance for EWC has clearly come down, to US$0.39-0.89 from US$0.75-1.25, respectively.

We have updated our earnings estimates to reflect the high tax benefit for 2016, most recent forward power curves and power hedges for 2017-2019 plus some cost efficiencies at EWC. Our new ‘16/’17/’18/’19 EPS estimates are US$6.96/5.06/5.37/5.48 vs. US$5.04/5.07/5.16/5.36, respectively. Our US$85 TP remains unchanged and we reiterate our Neutral rating.

Weekly snapshot only (8 Aug)

## *GPP* Green Plains Partners (Neutral) – Improving story, but not a-maize-ing

We’re impressed with GPP’s strong coverage ratio and accelerated DPS growth, and management seems more upbeat about NT industry consolidation. We admit we missed the recent rally, and that GPP still looks attractively priced vs MLP peers with comparable growth rates. Still, with relatively low visibility into medium- or long-term growth, we remain on the sidelines.

GPP reported 2Q16 EBITDA of US$16m (Macq US$14m/Street US$15m).

Please see our flyer, Improving story, but not a-maize-ing (4 Aug)

## *FE* FirstEnergy (Outperform) – We share management's frustration

FE's story is all about regulatory and financial clarity, but those seem elusive as regulatory timelines keep getting extended. Management wants to provide an update on FE's T&D growth aspirations and funding needs during the EEI conference in early November. We hope our updated earnings projections adequately reflect the earnings downside while not accounting for potential upside from higher T&D capex or higher regulatory support from OH. We reiterate our Outperform rating on FE though this waiting game has been very frustrating.

FE reported 2Q16 adjusted EPS of US$0.56, just ahead of our estimate of US$0.55. Management initiated 2016 EPS guidance of US$2.40-2.60, in line with our expectations even though the company plans to infuse US$500m of equity into its pension fund during 2H16 and the parent level drag came ~US$0.08 higher than we had expected.

Please see our flyer, *We share management's frustration* (1 Aug)

## *HE* Hawaiian Electric (Neutral) – Where do we go from here?

We worry about HE's future as a standalone company, which we now see as a near certainty. As we strongly disagree with the PUC's questioning of NEE's financial and social commitments and bankruptcy risk, we don't expect another potential bidder to be gutsy enough to try given what we perceive to be a clear aversion to an outside/mainland owner of HECO. As a standalone, we believe HE has the least certain outlook in the industry. We see potential rate base growth of 10%+ to reach HI's aggressive goals for energy independence, but visibility is low as regulators may prefer third parties (possibly including munis/coops) to own/operate some or much of the infrastructure. As such, we assign a 10% PE discount to peers to reach our US$29 TP. We have lowered our '16 EPS estimate to US$1.65 from US$1.71 given higher O&Ms than we (or management) expected. For background, please see our flyer MahaNO! (July 18).

HE reported 2Q16 EPS of US$0.43, ahead of both us/consensus at US$0.40, and maintained '16 guidance of US$1.62-1.75.

Weekly snapshot only (8 Aug)

## *HIFR* InfraREIT (Neutral) – Visibility may not arrive until '17

We believe that it's time to move on from the once-promising REIT structure in light of a lack of opportunities to put it to use at scale (eg Oncor), not to mention the likelihood of a significant reduction of the originally anticipated tax benefits due to forced sharing after the pending rate case. Moreover, the organic growth outlook continues to worsen as a result of the oil and nat gas pullback impacting TX, as evidenced by HIFR's lowering of the bottom end of its capex guidance (again). We continue to value HIFR at US$16 based on a scenario analysis (US$13-18), but see an asymmetric risk/reward with the stock looking overvalued in its current form but only fairly valued if it were a plain vanilla regulated utility. Regardless, the company will be stuck in limbo until the rate case is resolved and tax sharing is ironed out, likely delaying any restructuring decision or DPS guidance beyond '18 until early '17. For background, please see our flyer *Hunt should give up on this failed experiment* (July 25).

HIFR widened its capex guidance for '17/'18 by lowering the bottom ends to US$235m/US$135m from US$250m/$170m previously. With slightly reduced midpoint capex assumptions, our '18/'19 adjusted EBITDA estimates dip to US$221m/268m from US$222m/270m. We reiterate our Neutral rating.

HIFR reported 2Q16 adjusted EBITDA of US$38m, ahead of our/consensus estimates of US$30m/US$32m, and reaffirmed '16 guidance.

Weekly snapshot only (8 Aug)

## *LNT* Alliant Energy (Outperform) – They know which way the wind blows

We continue to see LNT as a core utility holding and reiterate our Outperform rating. We see strong visibility into above-average EPS growth of ~6-7%, with DPS growth ~1% faster (we forecast). The company has many levers to pull within its robust capex backlog, giving us confidence that rate base and thus earnings growth is unlikely to disappoint. We recognize that the stock is far from cheap, trading at a ~7% PE premium vs peers in an extremely expensive sector. Still, we now focus on total shareholder returns for regulated utilities as a sum of their '16-'19 DPS CAGR and NTM dividend yields, in addition to the traditional PE valuations (link). On this dividend-linked TSR basis, LNT offers an attractive ~10% return with low risks.

LNT reported 2Q16 of US$0.37, shy of consensus at US$0.38 and our estimate of US$0.39, and reiterated '16 guidance of US$1.80-1.95 (Macq/Street US$1.90).

Please see our flyer, *They know which way the wind blows* (2 Aug)

***PEGI***

## Pattern Energy (Outperform) – Everything's bigger in Texas, except power revenues…

TX played a bigger role in PEGI's 2Q16 generation than we had expected, a disappointing result given that PEGI's wind projects in ERCOT receive energy prices which are "one third to one half" of the fleet's average price, according to the company. We are hopeful that PEGI will play a role in seeing Southern Cross get developed, providing much needed relief to both PEGI and other generators in the region.

With US ROFO updates expected in addition to ongoing international additions, we lower our assigned risk premium to 6.5% from 7.0%, subject to review if the pace of international growth outstrips domestic growth, and depending on the outcome of ongoing discussions of merging Pattern Development into Pattern Energy. We have lowered our '16 adjusted EBITDA estimate, and our new '16/'17/'18 adj EBITDA estimates are US$307m/380m/447m vs. US$325m/380m/447m previously. With unchanged DPS estimates but a lower risk premium, we raise our TP to US$26 from US$25.

PEGI reported 2Q16 adjusted EBITDA of US$79m, roughly in line with consensus of US$80m, but below our estimate of US$86m, which had underweighted TX in terms of percentage of overall generation and therefore overestimated revenue per MWh.

Weekly snapshot only (8 Aug)

***POR***

## Portland General Electric (Neutral) – Rolling with the punches

We see recent updates as mixed for POR. Though we credit management for completing Carty construction before the deadline and for finding incremental capital projects for the bridge years between IRP-driven capacity additions, they aren't getting any help from the outside. Courts may take years to resolve recovery of funds from sureties, driving a nickel drag on annual EPS until then. We're also disappointed with regulators' decision to not accelerate the renewable RFP to maximize PTCs; this hurts ratepayers and adds to our concern that the next round of IRP RFPs might be challenging, as was the last round a few years ago. Despite management's best efforts, POR can't seem to catch a break.

POR reported 2Q16 EPS of US$0.42 vs consensus of US$0.43. Management affirmed '16 EPS guidance of US$2.05-2.20 (Macq US$2.12/Street US$2.11).

Please see our flyer, *Rolling with the punches* (2 Aug)

***WTR***

## Aqua America (Neutral) – Management still open to non-water utility growth, despite strong water muni growth potential

We struggle to understand Aqua's interest in potentially adding electric transmission or gas distribution utilities, especially in light of a seemingly growing interest of municipalities in privatizing their water and waste water systems. We believe that a large portion of the ~40-50% PE premium for water vs. electric and gas utilities is driven by the scarcity of large public water utilities in the US, especially given a growing number of investment funds with strict sustainability requirements. We believe that an addition of a non-water utility would result in a significant erosion of WTR's PE multiple in exchange for likely a small pick up in the EPS growth rate for the combined company. Sum of the parts valuations are rarely fully reflected in market valuations of more complex businesses; instead they tend to trade at a conglomerate discount.

We recognize that electric and gas distribution utilities are regulated by the same regulatory bodies as water utilities, and thus Aqua could stretch its operating expertise to these businesses. The same would not be true, however, for electric transmission which tends to be regulated on a federal level by FERC. Yet, water utilities tend to be most capital intensive and thus growthy among all types of utilities, with stable and not lumpy capex, as well as below average regulatory risks.

WTR reported 2Q16 adjusted EPS of US$0.33, in line with consensus expectations, but short of our US$0.34 estimate. Our 2016-2019 EPS estimates remain unchanged, but we have marginally trimmed our DPS growth expectations to reflect the latest DPS increase of 7.5%.

Weekly snapshot only (8 Aug)

***XEL***

## Xcel Energy (Neutral) – Weak sales weigh on 1H16 results, but progress on regulatory fronts, upside from rate basing of renewables

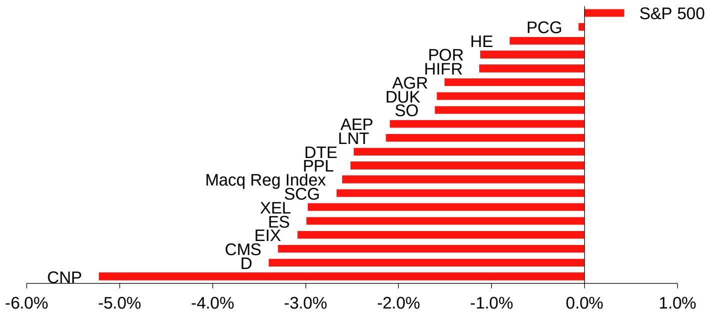
XEL has reached a settlement with several interveners in its pending multi-year electric rate case in MN. At this point it is unclear if the settlement would result in a three- or a five-year deal, though the latter seems unlikely. What seems clear, however, is that the ROE is coming down in MN and other jurisdictions. XEL could still manage to slightly boost its realized ROE, by ~25 bps from the current ~9%, even if the allowed ROE were to come down to ~9.5-9.6%, we estimate.

Faced with weak sales volumes, XEL has pushed for decoupling, first in MN and now in CO. Management sees meaningful incremental opportunities in all of its jurisdictions to boost its renewable growth capex, wind in particular. In MN and CO, XEL can recover its renewable investments through riders, though a certificate of need for such projects would still be required.

XEL reported 2Q16 adjusted EPS of US$0.39, just shy of our/consensus expectations of US$0.40. Management pointed out that 1H16 results came slightly below their expectations due to mild weather and weak weather-normalized sales volumes per customer, but the company should offset the negative impact on its 2016 EPS guidance range through cost efficiencies and strong weather in July. Our earnings estimates remain unchanged as we await an update on the MN electric rate case settlement.

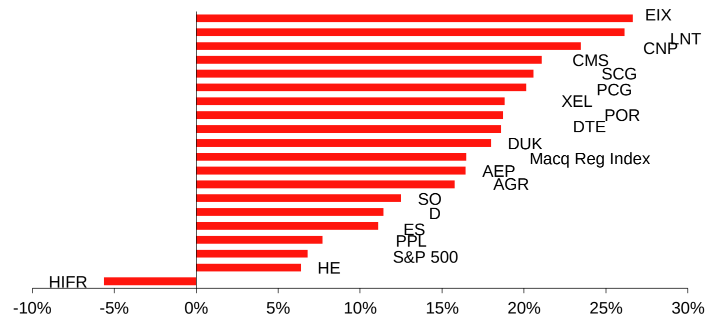
Weekly snapshot only (8 Aug)

**Fig 3 Weekly performance – regulated electric utilities**



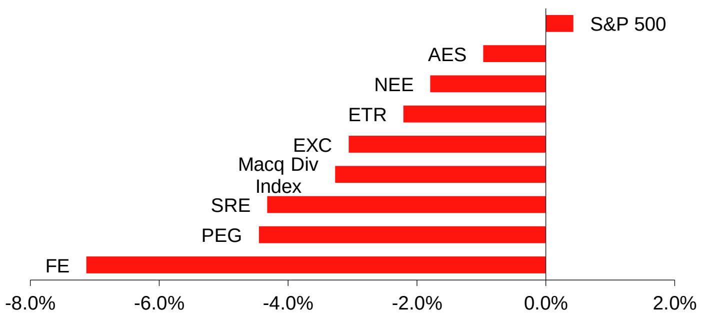

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 4 YTD performance – regulated electric utilities**



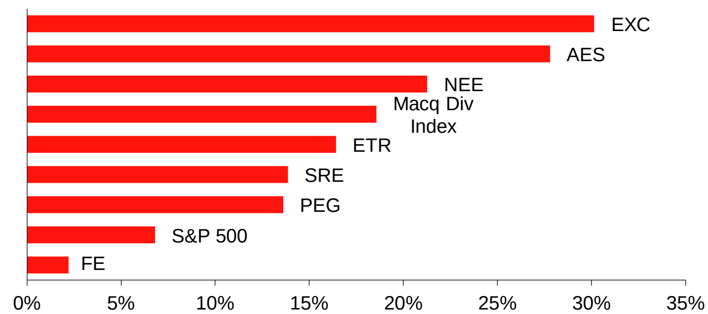

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 5 Weekly performance – diversified utilities**



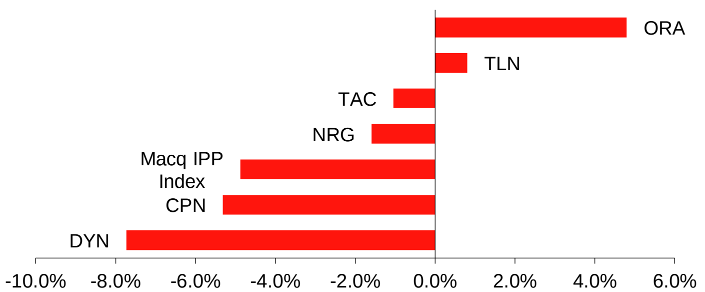

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 6 YTD performance – diversified utilities**



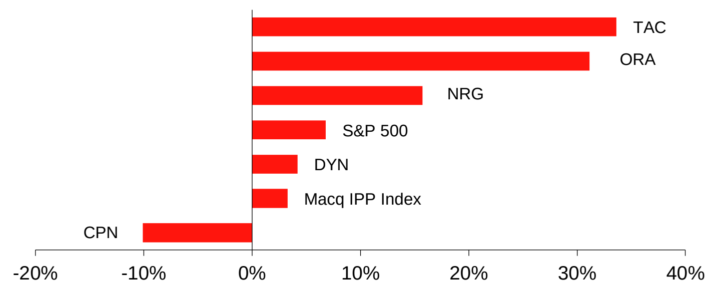

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 7 Weekly performance – IPPs**



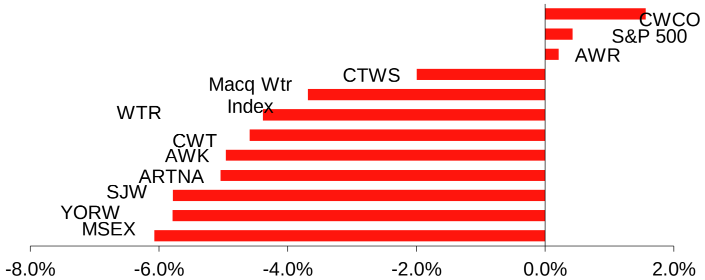

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 8 YTD performance – IPPs**



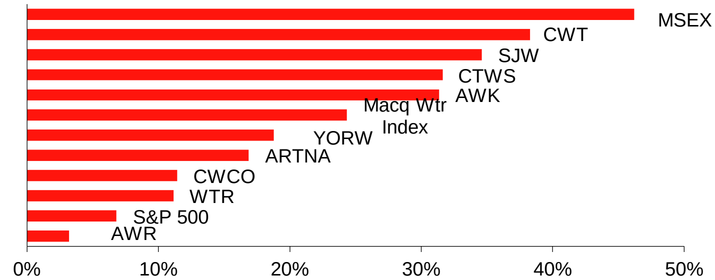

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 9 Weekly performance – water utilities**



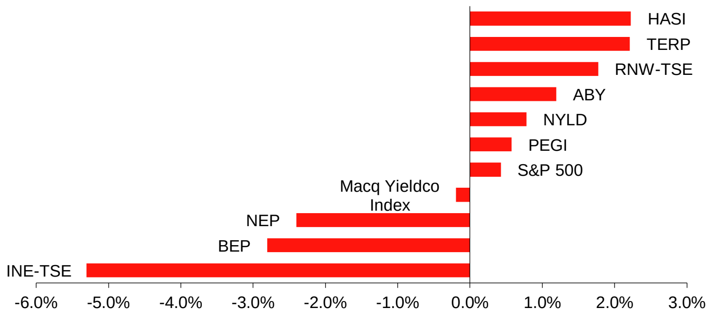

Source: FactSet, Macquarie Capital (USA), August 2016

**Fig 10 YTD performance – water utilities**



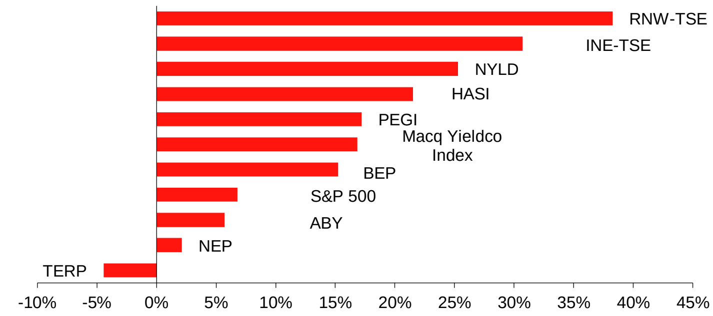

Source: FactSet, Macquarie Capital (USA), August 2016

## Fig 11 Weekly performance – yieldcos



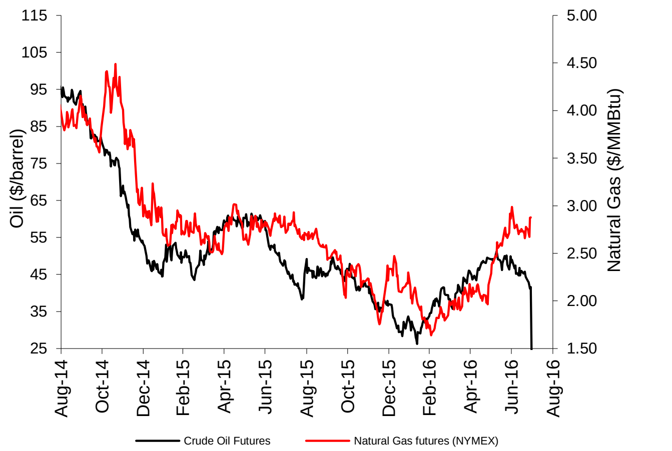

Source: FactSet, Macquarie Capital (USA), August 2016

## Fig 12 YTD performance – yieldcos



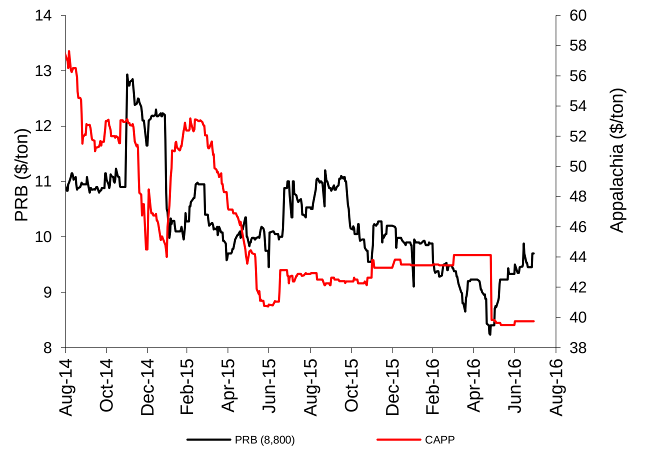

Source: Macquarie Capital (USA), August 2016

## Fig 13 Oil and gas futures (Prompt) (US$)



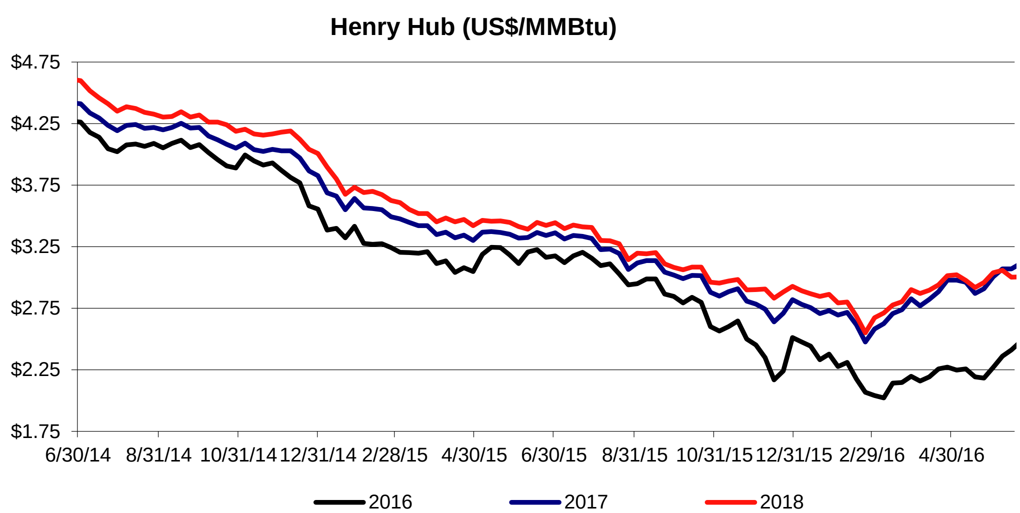

Source: FactSet, Macquarie Capital (USA), August 2016

## Fig 14 Coal forward prices (Prompt) (US$)



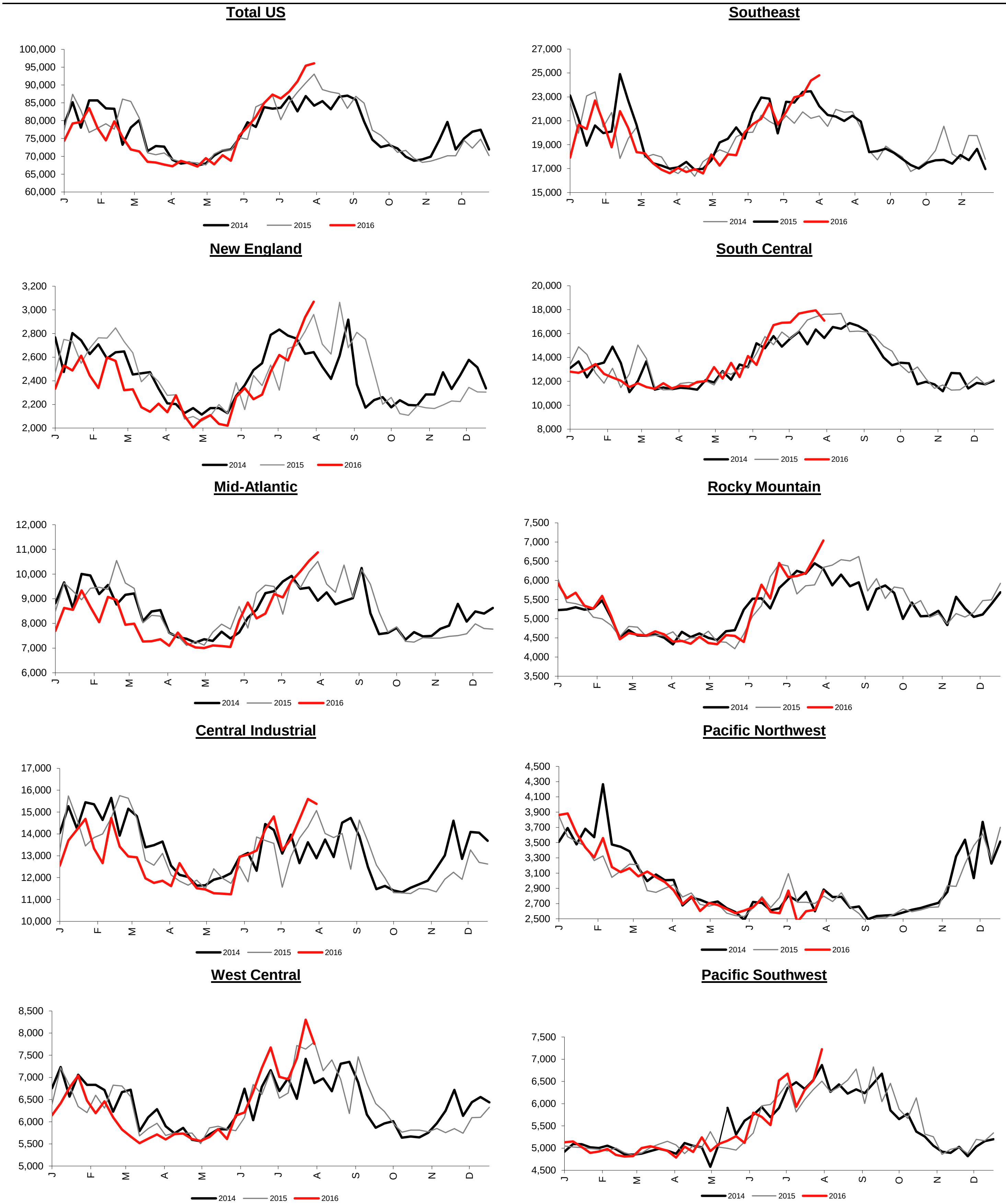

Source: Macquarie Capital (USA), August 2016

## Fig 15 Macquarie Henry Hub natural gas forward curve




Source: FactSet, Macquarie Capital (USA), August 2016

## Fig 16 EEI weekly electric output – total US and regions (GWh)




Source: EEI, Macquarie Capital (USA), August 2016

## Macquarie's utility coverage universe (alphabetical)

*Neutral* **ABY:** ABY has a large and growing geographical exposure, backed by Abengoa S.A., an international E&C company turned owner of power projects. ABY's assets are backed by long-term contracts with an average life of ~26 years (vs. ~18 years for peers) and are primarily US dollar denominated, but the visibility into longer term growth is limited. ABY's sponsor offers plenty of growth opportunities through eventual drop downs of operating assets, however, the elevated risk profile of these assets due to their exposure to emerging markets limits the appeal. Hence our Neutral rating despite ABY's premium dividend yield and an impressive pipeline of Abengoa's projects eligible for drop downs.

*Neutral* **AEP:** Between ongoing cost controls, growing transmission capex, negotiating PPAs for some of its OH power plants and potentially spinning off the rest of the OH power plants, AEP has many balls in the air. Thanks to the relatively late start of AEP's cost-cutting initiatives, the lack of nuclear costs and some hard work of management consultants, the company should be able to keep its O&M expenses relatively flat between '12 and '17 (if not longer) net of costs recoverable through pass-throughs.

*Outperform* **AES:** AES' management continues to deliver on earnings expectations while executing its previously stated strategy. Since 2011, AES has shrunk its geographical spread from 28 to 20 counties with plans to shed up to eight more counties. Although most of the recent divestitures have been earnings-dilutive (prior to accounting for lower parent-level costs), they aim to simplify AES's business and reduce its risk profile. We believe the business complexity, earnings lumpiness and emerging market risks do warrant a valuation discount to US utilities.

*Outperform* **AGR:** We're impressed with the merger of Iberdrola USA and UIL, as the NewCo should offer 8-10% EPS growth with attractive dividend increases starting in '17. The mix of high-growth utilities and a large renewable portfolio reminds us of NEE, while the low leverage could support additional M&A or creation of a yieldco.

*Outperform* **AWK:** We expect AWK to grow its EPS (and dividends) at a 9–10% CAGR through '16 as management continues to bridge the gap between the allowed and realized ROEs through infrastructure riders and cost efficiencies while deploying water capex. AWK's new management has lately started to expand its focus to wastewater with additional latent acquisitions down the road. Other growth potential opportunities include its market-based operations' growing contribution to EPS, incremental water service contracts for military tenders, homeowners' warranty business, and shale-driven growth, which could be the biggest earnings booster. AWK is our top pick for regulated electric and water utilities.

*Outperform* **BEP:** BEP's growth comes from acquisitions, made easier by its ongoing support from its parent company. While BEP's asset growth is likely to be slower than that of yieldcos with large drop down portfolios provided by a sponsor/developer, much of BEP's appeal is instead derived from the combination of the growth and its current high dividend yield. While yieldcos tend to pay out 80-90% of their cash available for distribution, BEP pays out only 60-70%.

*Neutral* **BWEN:** Despite the expiration of the PTC for new orders, projects begun by the end of '14 will still qualify, boosting tower orders for '15/'16, though we are concerned about an order cliff in '16 from the wind sector and we are not convinced that industrial orders will be enough to offset the wind decline.

*Neutral* **CMS:** We see the stock's PE premium vs peers as fully justified by CMS's above-average EPS/DPS of 7-8% per year, unmatched track record of consistency, top-notch management team, and strong regulatory/political relationships in MI. However, following strong 2016 YTD outperformance for regulated utility stocks, we have become more selective. We prefer DTE, with the same favorable regulatory/political setup in MI and nearly as fast growth but a much more attractive valuation.

*Neutral* **CNP:** We remain bearish on CNP as we see downside risks to below-average utility EPS/DPS growth, due to shrinking capex needs in TX and weak (though improving) cashflows from Enable. We're skeptical about efforts to exit Enable in a tax-efficient manner and to convert some or all of the utilities into REITs given Hunt's struggles with Oncor.

| | |
|---|---|
| ***Outperform*** | **CPN:** We are positive on CPN despite its efficient gas-fired plants not being shielded from lower power prices in TX. We hope for more coal-to-gas switching and higher capacity payments in PJM, and in the meantime CPN's 15% '16 FCF yield is enough to keep us excited about the stock. |
| ***Neutral*** | **CVA:** Despite not increasing the dividend in Dec '15 when we initially anticipated the company to have sufficient cash to support at least a moderate increase, we are hopeful that CVA will use this period of weak commodity prices to reduce costs, operate existing facilities smoothly, and prove its ability to execute on growth projects. However, the cards seem stacked against them when it comes to weak commodity prices. |
| ***Outperform*** | **D:** We remain bullish on D, as it offers a 5–6% EPS CAGR through '17, and 7-9% from '17 through '20, supported by highly diversified and already-identified capex projects being developed in a supportive regulatory environment. We recognize that it may take a while for investors/us to assign full value to D's LP/GP MLP distributions, but in the meantime with D's management's strong track record and the company's 8% dividend CAGR, and we find it hard not to like the stock. |
| ***Outperform*** | **DTE:** We expect our favorite SMID cap regulated utility to be well positioned to deliver ~6%+ EPS/DPS growth for many years to come, with limited risk, thanks to diversified earnings drivers and a constructive Michigan regulatory setup. Management is extremely confident about '16/LT guidance, midstream progress, and the balance sheet. Utility spending is driven primarily by state mandates, most notably around replacing coal capacity with new nat gas and renewable generation. We see concerns around the potential for shrinking midstream earnings as overblown, and seem to be weighing too much on the stock's multiple. Midstream M&A could help assuage these concerns. |
| ***Neutral*** | **DUK:** DUK has evolved from a company with earnings growth being driven predominantly by merger-related cost efficiencies and wholesale power contracts, to a utility with an impressive capex program accelerating in 2017 and encompassing contracted renewables, gas pipelines and conventional generation assets. However, the decision to keep the international business means it will weigh on DUK's near-term earnings due to unfavorable FX, weak hydro conditions in Brazil, and low oil prices. |
| ***Outperform*** | **DYN:** We are not bullish on natural gas prices in the Midwest or capacity prices in MISO, and we remain skeptical about the value of DYN's coal plants in IL given the growth in wind power installations and gas deliveries into the state. We do however see plenty of upside for capacity prices in PJM, and believe that this is not yet priced into the stock. Following DYN's acquisition of DUK and Energy Capital Partners' non-regulated assets, we recognize aggressive cost cutting initiatives and large economies of scale DYN could extract from incremental M&A. |
| ***Outperform*** | **EIX:** We believe Southern California Edison's 7.0–7.5% EPS growth together with 10% dividend growth are more than enough for us to offset regulatory and headline risks surrounding the prematurely retired San Onofre nuclear plant and see a slight PE discount on '17 and '18 earnings as unjustified. |
| ***Neutral*** | **ENOC:** : We give ENOC credit for delivering in recent quarters, with the immature EIS business consistently growing at a fast clip and the DR business surprising to the upside in 1Q16. With regulatory/legal overhangs largely behind ENOC, we see a clear path for growth, though execution risks remain (particularly around cost management). We remain on the sidelines given negative EBITDA/FCF forecasts through '17/'18, and see ENOC as one of the relative losers in the recent 2019/2020 PJM capacity auction. |
| ***Neutral*** | **ERII:** We are significantly more positive on ERII's revenue prospects going forward, pending the successful completion of their VorTeq product's integration period with SLB in 2016. In the meantime, we await announcements of major desalination project wins and updates on oil & gas contracts. |
| ***Neutral*** | **ES:** We worry that 2016 will be a year of waiting for regulatory approvals for ES's two major projects. While we're optimistic about both Northern Pass (NP) and Access Northeast (AN), projects which both the buy and sell side see as unlikely, clarity on either won't come until at least 4Q16. |

***Neutral*** **ETR:** 90%+ of ETR's EPS comes from fully regulated operations. The profitability of ETR's merchant nuclear plants in NY and New England (Indian Point and Pilgrim) has risen along with rising capacity prices, even though the earnings uplift is tough to estimate. While ETR's regulatory relationships remain challenged, 3.5%+ annual load growth should make regulatory interactions much less frequent.

***Outperform*** **EXC:** EXC now projects that the POM merger will be marginally dilutive in '16 and should deliver US$0.15-0.20 EPS accretion only in '19, a year later than originally expected. We are not surprised by this update although we wonder if EXC's stock would not be better off if the company bought back shares using its balance sheet cash instead of pursuing the merger which should be marginally accretive only by '18.

***Outperform*** **FE:** The stock remains a cheap regulated utility with a turnaround on the distribution side and a ongoing growth on the transmission side. We await an update on FE's merchant power strategy now that OH regulators are close to approving above market PPAs. FE's new CEO has so far exceeded our expectations, but the bar was set low.

***Outperform*** **GLBL:** We believe GLBL is unlikely to suffer from a lack of growth projects (even in a sustainably low oil price environment) given the size of its target markets and their renewable mandates, although FX, country and regulatory risks, coupled with interest rate risks, will be of vital importance to its long-term value creation. None of these risks are likely to manifest themselves over the next 12 to 24 months, we believe, and GLBL can deliver on its 20% YoY DPS increase in '16 without tapping debt or equity markets, giving it time to wait for financial market conditions to normalize.

***Neutral*** **GPP:** Visibility into GPP's growth is very limited, with no backlog of dropdowns. Instead, mid- to long-term growth will be driven almost entirely by M&A. Management has a proven track record of being a consolidator, having completed eight acquisitions since '08, tripling production capacity. We forecast 100 mmgy from acquisitions annually, starting in '17, but see GPP's visibility as low compared to MLPs growing through organic capex and/or dropdowns.

***Neutral*** **HE:** With every passing day, we're increasingly concerned that the sale to NEE will fail as we approach the merger expiration in early June. We assume a 30% probability, suggesting downside vs the market-implied ~40%. Without NEE, capex needs and thus rate base growth could be huge given the state's goal to transition to 100% renewable. However, visibility is extremely low while regulators review HE's LT strategic plans (PSIPs) and evaluate the role of the utility vs third party developers.

***Neutral*** **HIFR:** We can no longer recommend HIFR, as we believe that downside risks might not be fully priced in, growth may continue to slow, LT visibility is limited, and while the high yield is attractive, it's hard to call it a floor for the stock.

***Neutral*** **ITRI:** We see Itron's stock as expensive given negative or flattish near-term trends and the shrinking backlog. We believe it's too soon to get excited about large-scale European smart meter deployments or a re-acceleration in the US, although credit the company for a few high profile contract wins recently.

***Outperform*** **LNT:** We expect LNT to deliver above-average EPS growth of ~6-7% pa, with DPS growth ~1% faster, driven mostly by a large and growing capex backlog. Visibility is strong and risks are low thanks to 10 years of capex guidance, strong regulatory relationships in two supportive states, and a history of settlements.

***Neutral*** **NEE:** While we see upside to our estimates for NEE's renewable power business, we worry that over time this faster growth would change NEE's earnings mix to less regulated, and that together with high parent leverage, could have negative credit implications. Therefore NEE may have little choice but to acquire a large regulated utility, we believe. We recognize NEE's strong M&A track record, but given FPL's large pending rate case and the exceptional performance of NEE's stock over the last five years, we have stepped to the sidelines.

***Outperform*** **NEP:** NEP is our favorite public yieldco in North America, despite its rich valuation, given the visibility and longevity of its growth. A wind and solar yieldco supported by its sponsor and majority shareholder (NEE), the largest renewable power developer in North America. NEP targets a 12-15% DPS CAGR through '20 driven solely by NEE's existing and current development of renewable power projects. NEP's growth trajectory is likely to be extended past '20, we believe, as NEE continues to develop new projects and renegotiate tax equity structures for some of its existing wind farms in the US.

***Outperform*** **NRG:** Though forward power/gas curves have pulled back, management reiterated its 2015 EBITDA guidance (close to the top of the range) as NRG has hedged at levels in excess of its projected generation volume. We appreciate that management attempts to get the company ready for the future with stricter emissions and more distributed generation though we hope for a more gradual transition from the current business model into the one focused on rooftop solar. NRG remains our favorite power company.

***Outperform*** **NYLD:** The pioneer among public US yieldcos, NYLD's 15-18% DPS CAGR is fully supported by asset drop downs from its sponsor (NRG) through 2020. This large pipeline of existing contracted power projects (renewable and conventional) together with NRG's gas-fired project developments allow NYLD to be nimble at third-party acquisitions to extend its growth past 2020. We recognize NYLD's strong performance since its IPO (July '13) and its low dividend yield, but the high pace, low risk and longevity of NYLD's growth seems exceptional, even if its gas-fired plants lessen the tax shield for distributions.

***Neutral*** **ORA:** We are impressed with the revenue breakdown goals and business plan that ORA has put in place for 2020, seeing it as a sign that the new management appears to be starting to deliver on promises of greater transparency. At the same time, we acknowledge that the company is positioning itself as one in a long and growing list of players chasing after contracted renewables in emerging markets. While investors seem to assign premium multiples to more of ORA's geothermal assets as if they were slated for private or public yieldcos, we are unconvinced.

***Outperform*** **PCG:** Investors now have clarity on the size and nature of the San Bruno penalty of US$1.6bn. However, with CPUC comments ranging from concerns over the company's size, eligibility for tax disallowances related to the penalty, its corporate governance, still spotty track record on gas pipeline safety, and OII related to the previously disclosed inappropriate communications with the CPUC, PCG seems to remain in the penalty box with its regulators.

***Neutral*** **PEG:** Growing capex and strong regulatory relationships should drive a low-teen rate base CAGR and ~9% utility EPS CAGR through '17, we estimate. We think PSEG Power's locational and operational advantages are undeniable even if constantly evolving. Add a 5%+ DPS growth and improving FCF allowing for opportunistic acquisitions, and it's tough to find a stronger power-heavy diversified utility. However, PEG's leverage to PJM's capacity performance product is lower than that for power producers in PJM West.

***Outperform*** **PEGI:** A primarily wind yieldco. PEGI's sponsor and largest shareholder, Pattern Development, has a strong track record in wind power project development in the Americas, and we struggle to reconcile PEGI's high dividend yield with its strong and growing project pipeline and conservative management. While the company has been expanding outside of the US, we find Japan, Chile and Mexico as attractive regimes for contracted renewable power projects.

***Neutral*** **POR:** We remain bearish on POR due to the lack of growth through ~'19. We see construction and regulatory risks as manageable for POR, although negative headlines may bring investor angst. Longer-term, we expect a meaningful slowdown in earnings growth after '16 as the company works through its next round of RFPs. We remind investors that POR traded at a 15% PE discount during the last round.

***Neutral*** **PPL:** Once PPL Supply, the merchant power business of PPL, is spun off, WPD, its UK electric distribution and transmission utilities, will account for ~60% of consolidated earnings. We believe that questions around the appropriate valuation of WPD could challenge PPL's valuation overall.

***Outperform*** **SCG:** We remain positive on SCG, though admit that after strong outperformance since the nuclear contract amendment and our upgrade in late October, relative upside seems limited. We're impressed with the 5.5% dividend increase for '16 and guidance for annual increases in line with EPS growth, ~5% pa. We like that SCG has exercised its option to fix the cost of its nuclear projects in order to shrink the risk of cost overruns, and expect regulatory approval later this year. In light of the recent de-risking, coupled with the SC BLRA, no NT rate cases in SC, and solid fundamentals, we see the mid-single digit PE discount as unjustified.

***Neutral*** **SO:** SO's earnings grow at a below average 3% CAGR through '18, its IGCC plant in Mississippi has experienced major cost overruns and its two new nuclear reactors in Georgia are getting delayed by ~18 months. However, the stock yields an impressive 4.3% (and the DPS keeps growing), the IGCC plant seems almost done, and SO's shareholders seem protected from nuclear cost overruns through a firm EPC contract guaranteed by Toshiba.

***Outperform*** **TERP:** A solar and wind yieldco, in need of new sponsorship given the bankruptcy of the renewable development company which launched it. With a compelling portfolio of operating assets, TERP should not have trouble finding interested bidders.

***Neutral*** **TLN:** We are underwhelmed by TLN's existing power plants, especially those contributed by Riverstone, given their low FCF generation. However, it's hard to deny TLN's high leverage to rising PJM capacity prices and natural gas prices, and economies of scale from incremental M&A supported by TLN's under-levered balance sheet. We are bullish on PJM capacity prices and natural gas prices (especially TET M3 and Dominion South), on-peak power prices in TX, as well as additional consolidation in the US power sector, but we think it's too early to get constructive on TLN.

***Neutral*** **WTR:** WTR's retail ownership and strong regulatory relationships are not enough for us to fully justify its large '17E PE premium over US water peers.

***Neutral*** **XEL:** XEL's regulatory rodeos are likely to continue, with a major multi-year rate case pending in MN and a new case to be filed soon in TX. We recognize XEL's strong earnings track record helped by aggressive cost controls, but we see it as fully priced into the stock at this point.

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie – South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 30 June 2016

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 45.17% | 56.00% | 36.36% | 43.16% | 63.39% | 45.91% | (for global coverage by Macquarie, 6.27% of stocks followed are investment banking clients) |
| Neutral | 36.21% | 28.59% | 40.26% | 50.38% | 29.46% | 36.96% | (for global coverage by Macquarie, 6.33% of stocks followed are investment banking clients) |
| Underperform | 18.62% | 15.41% | 23.38% | 6.46% | 7.14% | 17.12% | (for global coverage by Macquarie, 5.38% of stocks followed are investment banking clients) |

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LADENBURG THALMANN
ESTABLISHED 1876

Water Utilities
Company Update
August 23, 2016
**NEUTRAL**
Richard A. Verdi; rverdi@ladenburg.com
212.409.2060

# AQUA AMERICA INC.

## Solid Q2, but Valuation Keeps Us on the Sidelines; Maintain Neutral

WTR (NYSE)

| **Company & Market Data** | |
|---|---|
| Closing Price (as of 08/22/2016): | $31.61 |
| Rating: | NEUTRAL |
| Price Target: | $30.00 |
| 52 Week Range: | $24.45 - $35.83 |
| Shares Outstanding (MM): | 177.3 |
| Market Capitalization (MM): | $5,605 |
| Avg Daily Volume (M): | 711.5 |
| Enterprise Value (MM): | $7,441 |
| Current Dividend Yield: | 2.2% |
| Annual Dividend/Share: | $0.69 |
| Fiscal Year End: | Dec |

**Estimates**

| **EPS** | **2015A** | **2016E** | **2017E** |
|---|---|---|---|
| **1Q** | $0.27 | $0.29A | $0.29 |
| **2Q** | $0.32 | $0.33A | $0.35 |
| **3Q** | $0.38 | $0.40 | $0.42 |
| ***Prior*** | | *$0.41* | *$0.44* |
| **4Q** | $0.28 | $0.31 | $0.34 |
| ***Prior*** | | *$0.29* | *$0.32* |
| **Full Year** | $1.26 | $1.33 | $1.40 |
| **Revenue (MM)** | $814.2 | $820.8 | $853.8 |
| ***Prior*** | | *$818.9* | *$851.8* |
| **EBITDA (MM)** | $449.8 | $463.8 | $494.0 |
| ***Prior*** | | *$461.8* | *$491.8* |

**Ratios**

| | | | |
|---|---|---|---|
| **P/E** | 25.1x | 23.8x | 22.6x |
| **EV/EBITDA** | 16.5x | 16.0x | 15.1x |

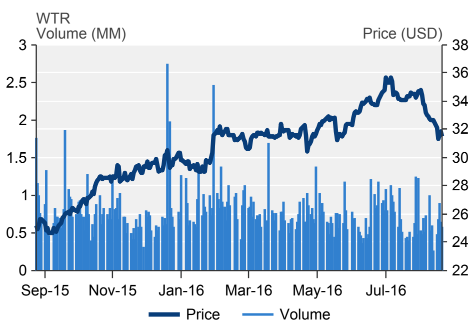



*Chart Data: Bloomberg*

- **Maintain Neutral Rating.** Aqua recently reported a solid Q2, broadly in line with our estimates. Despite a top-line miss, the company beat our total OpEx estimate as management continued to diligently focus on reducing O&M expense, which allowed WTR to meet our diluted EPS estimate of $0.33. On the call, management reiterated 2016 guidance of EPS in the range of $1.30 to $1.35 and continued concentration on the three-pronged growth strategy focused on municipal acquisitions, strategic M&A, and market-based activity growth avenues. While we continue to be optimistic about Aqua's growth potential, we refrain from reflecting this view in our rating since our estimates and price target remain unchanged. With the stock currently trading about 5.1% above our $30 PT, we maintain our Neutral rating.
- **OpEx beat fuels in-line diluted EPS.** WTR reported diluted EPS of $0.33, consistent with our estimate and consensus. Aqua reported operating income of $83.5mm compared to our estimate of $83mm, on lower-than-expected OpEx of $120.4mm that was below our estimate of $125.9mm. The lower OpEx offset the softer-than-expected revenue of $203.9mm compared to our estimate of $208.8mm. Sales fell short of our forecast primarily as a result of reduced consumption due to unfavorable weather conditions. With pending rate cases in New Jersey, Indiana and Ohio, WTR now has $10.5mm in outstanding rate cases, up from $4.5mm in 1Q16.
- **The stock remains fully valued, as we see it.** Under the leadership of CEO Chris Franklin, now supported by an even stronger organizational structure following various changes in management roles discussed on the call, the company (and its stock) continues to perform well, with the strength of management being fully recognized by the market, in our view. Year to date, WTR has added 5.4m connections from acquisitions and experienced growth of 0.6% in the customer base owing to acquisitions. We continue to see the decision to divest the market-base business as having upside to shareholder value as Mr. Franklin focuses on growing the regulated side of the company while also concentrating on fine-tuning the non-regulated division of Aqua. That said, while we remain bullish on Aqua's position as a high-quality water investment, we believe the share price reflects the strength of management's leadership and a strong fundamental business. Accordingly, we recommend investors wait for a more attractive entry point based on current valuation.

**Aqua America, Inc.**
**Income Statement**
*(in millions except per share data)*

***Ladenburg Thalmann***
***Richard Verdi; 212.409.2060***

| December Fiscal Year | FY 2013 | FY 2014 | | | | | FY 2015 | | | | | FY 2016E | | | | | FY 2017E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Non-GAAP* | **Year** | **1Q14** | **2Q14** | **3Q14** | **4Q14** | **Year** | **1Q15** | **2Q15** | **3Q15** | **4Q15** | **Year** | **1Q16** | **2Q16** | **3Q16E** | **4Q16E** | **Year** | **Year** |
| **Revenue** | **$763.6** | **$182.7** | **$195.3** | **$210.5** | **$191.4** | **$779.9** | **$190.3** | **$205.8** | **$221.1** | **$197.1** | **$814.2** | **$192.6** | **$203.9** | **$223.3** | **$201.0** | **$820.8** | **$853.8** |
| Operating & Maintenance | 285.3 | 71.7 | 70.4 | 72.4 | 74.1 | 288.6 | 73.2 | 79.7 | 78.5 | 77.9 | 309.3 | 73.5 | 74.0 | 78.1 | 75.4 | 301.1 | 302.6 |
| Depreciation | 119.3 | 31.0 | 31.2 | 29.5 | 31.4 | 123.1 | 30.5 | 31.0 | 32.0 | 31.8 | 125.3 | 32.1 | 31.6 | 32.3 | 31.4 | 127.5 | 132.6 |
| Amortization | 5.5 | 1.1 | 0.7 | 0.8 | 0.8 | 3.5 | 0.8 | 0.9 | 0.8 | 0.9 | 3.4 | 0.5 | 0.5 | 0.8 | 0.9 | 2.7 | 2.7 |
| Non-Income Taxes | 53.3 | 12.1 | 13.0 | 12.8 | 12.5 | 50.5 | 14.6 | 13.8 | 14.7 | 12.0 | 55.1 | 14.1 | 14.2 | 15.4 | 12.1 | 55.9 | 57.2 |
| **Operating Income** | **300.2** | **66.8** | **79.9** | **95.1** | **72.6** | **314.4** | **71.2** | **80.2** | **95.1** | **74.6** | **321.1** | **72.3** | **83.5** | **96.6** | **81.3** | **333.7** | **358.8** |
| Interest Expense, Net | (77.3) | (19.3) | (19.1) | (19.0) | (19.0) | (76.4) | (18.7) | (18.9) | (19.2) | (19.7) | (76.5) | (19.9) | (20.1) | (20.0) | (19.5) | (79.5) | (76.3) |
| Allow. for Funds for Construction | 2.3 | 1.2 | 0.9 | 1.2 | 1.8 | 5.1 | 1.2 | 1.0 | 1.7 | 2.3 | 6.2 | 2.3 | 1.9 | 1.9 | 1.9 | 7.9 | 7.5 |
| Gain on Sale of Other Assets | 0.1 | (0.3) | 0.1 | 0.1 | 0.1 | (0.0) | 0.2 | (0.0) | 0.2 | 0.8 | 1.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.6 | 0.5 |
| Equity Earnings in JV | (2.7) | (0.7) | (1.3) | (0.7) | (1.3) | (4.0) | (0.7) | (0.1) | (0.7) | (12.2) | (13.7) | (0.2) | (0.2) | (0.3) | (0.2) | (1.0) | (0.7) |
| Income Before Taxes | 222.7 | 47.6 | 60.7 | 76.6 | 54.2 | 239.1 | 53.1 | 62.3 | 77.0 | 45.7 | 238.2 | 54.7 | 65.1 | 78.3 | 63.5 | 261.7 | 289.8 |
| Income Taxes | 22.7 | 5.2 | 5.8 | 8.9 | 5.3 | 25.2 | 4.6 | 4.9 | 9.6 | (4.1) | 15.0 | 3.0 | 5.5 | 7.8 | 7.6 | 24.0 | 40.3 |
| **Net Income (Continuing Operations)** | **200.0** | **42.4** | **54.8** | **67.7** | **49.0** | **213.9** | **48.5** | **57.4** | **67.4** | **49.9** | **223.2** | **51.7** | **59.6** | **70.5** | **55.9** | **237.8** | **249.5** |
| **Diluted EPS** | **$1.15** | **$0.24** | **$0.31** | **$0.38** | **$0.28** | **$1.20** | **$0.27** | **$0.32** | **$0.38** | **$0.28** | **$1.26** | **$0.29** | **$0.33** | **$0.40** | **$0.31** | **$1.33** | **$1.40** |
| Diluted Shares Outstanding | 176.8 | 177.8 | 178.0 | 177.9 | 177.7 | 177.8 | 177.8 | 177.9 | 177.5 | 177.3 | 177.5 | 177.8 | 178.1 | 178.4 | 178.7 | 178.3 | 179.5 |
| ***Margin Analysis*** | | | | | | | | | | | | | | | | | |
| Operating & Maintenance | 37.4% | 39.2% | 36.0% | 34.4% | 38.7% | 37.0% | 38.5% | 38.8% | 35.5% | 39.5% | 38.0% | 38.2% | 36.3% | 35.0% | 37.5% | 36.7% | 35.4% |
| Depreciation | 15.6% | 17.0% | 16.0% | 14.0% | 16.4% | 15.8% | 16.0% | 15.1% | 14.5% | 16.1% | 15.4% | 16.7% | 15.5% | 14.5% | 15.6% | 15.5% | 15.5% |
| Amortization | 0.7% | 0.6% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% | 0.2% | 0.3% | 0.4% | 0.4% | 0.3% | 0.3% |
| Non-Income Taxes | 7.0% | 6.6% | 6.7% | 6.1% | 6.5% | 6.5% | 7.7% | 6.7% | 6.6% | 6.1% | 6.8% | 7.3% | 7.0% | 6.9% | 6.0% | 6.8% | 6.7% |
| Operating Income | 39.3% | 36.6% | 40.9% | 45.2% | 37.9% | 40.3% | 37.4% | 39.0% | 43.0% | 37.9% | 39.4% | 37.6% | 41.0% | 43.3% | 40.4% | 40.7% | 42.0% |
| Income Before Taxes | 29.2% | 26.1% | 31.1% | 36.4% | 28.3% | 30.7% | 27.9% | 30.3% | 34.8% | 23.2% | 29.3% | 28.4% | 32.0% | 35.1% | 31.6% | 31.9% | 33.9% |
| Income Taxes | 10.2% | 10.9% | 9.6% | 11.6% | 9.7% | 10.5% | 8.6% | 7.9% | 12.4% | -9.0% | 6.3% | 5.5% | 8.5% | 10.0% | 12.0% | 9.2% | 13.9% |
| Net Income | 26.2% | 23.2% | 28.1% | 32.2% | 25.6% | 27.4% | 25.5% | 27.9% | 30.5% | 25.3% | 27.4% | 26.9% | 29.2% | 31.6% | 27.8% | 29.0% | 29.2% |
| ***Growth Rates yr/yr*** | | | | | | | | | | | | | | | | | |
| Revenue | 0.8% | 1.5% | 2.4% | 3.0% | 1.5% | 2.1% | 4.2% | 5.4% | 5.0% | 3.0% | 4.4% | 1.2% | -0.9% | 1.0% | 2.0% | 0.8% | 4.0% |
| Operating Income | -6.6% | -1.2% | 5.6% | 8.8% | 4.3% | 4.7% | 6.6% | 0.4% | 0.0% | 2.8% | 2.1% | 1.6% | 4.0% | 1.6% | 8.9% | 3.9% | 7.5% |
| Income Before Taxes | -11.3% | -1.4% | 9.0% | 11.5% | 8.4% | 7.4% | 11.7% | 2.7% | 0.5% | -15.7% | -0.4% | 3.0% | 4.6% | 1.7% | 38.9% | 9.9% | 10.7% |
| Net Income | 8.6% | 2.8% | 12.9% | 6.7% | 4.8% | 6.9% | 14.5% | 4.7% | -0.4% | 1.9% | 4.4% | 6.6% | 3.9% | 4.5% | 12.1% | 6.5% | 5.0% |
| Diluted EPS | 9.3% | 2.1% | 12.3% | 6.5% | 4.8% | 4.6% | 14.5% | 4.7% | -0.2% | 2.1% | 4.8% | 6.6% | 3.8% | 4.0% | 11.2% | 5.8% | 5.0% |

*Source: Company Reports, Ladenburg Thalmann Equity Research Estimates*

**Exhibit 1: Valuation**

| P/E Multiple | 2017E EPS | Implied Share Price |
|---|---|---|
| 22.0x | $1.40 | $31 |

| EV/EBITDA Multiple | 2017E EBITDA | Enterprise Value | Net Debt | Market Capitalization | Shares Outstanding | Implied Share Price |
|---|---|---|---|---|---|---|
| 14.8x | $494 | $7,287 | $1,856 | $5,430 | 179 | $30 |

| EV/R Multiple | 2017E Revenue | Enterprise Value | Net Debt | Market Capitalization | Shares Outstanding | Implied Share Price |
|---|---|---|---|---|---|---|
| 8.5x | $854 | $7,257 | $1,856 | $5,401 | 179 | $30 |

| Dividend Discount Model | 2016E | 2017E | 2018E |
|---|---|---|---|
| Dividends | $0.80 | $0.83 | $0.87 |
| Average Required Return | 7% | 7% | 7% |
| Terminal Value | - | - | $32 |
| **Implied Share Price** | **-** | **-** | **$29** |

*Source: Ladenburg Thalmann Equity Research Estimates*

# Risks

In addition to normal economic and market risk factors that impact most all equities, Aqua America (WTR) is uniquely at risk to:

- The outcome of regulatory filings: We expect the company will be among the fastest growing in the water utility peer group in coming years, as WTR's subsidiaries continue to file requests with state Commissions for rate increases in order to achieve rates of return on water assets commensurate with peers. If state Commissions deny these rate requests in whole or in part, it would likely have a negative impact on earnings.

- Product safety: Water is the only utility that is ingested. Though the company has a strong track record with respect to water contaminants, a breakdown in safety procedures could have a markedly negative effect on the company.

- Financial Risk: Aqua America is a particularly capital intensive water utility. Though the company has traditionally accessed the credit markets at some of the lowest rates in this industry, this may not be the case going forward.

- Aqua requires significant capital expenditures that are dependent on the company's ability to secure appropriate funding. If Aqua is unable to obtain sufficient capital or if the cost of borrowing increases, it may materially and adversely affect the company's financial condition and results of operations.

- Federal and state environmental laws and regulations impose substantial compliance requirements on Aqua's operations. The company's operating costs could be significantly increased in order to comply with new or stricter regulatory standards imposed by federal and state environmental agencies.

- Aqua's business is impacted by weather conditions and is subject to seasonal fluctuations which could adversely affect demand for its water service and its revenues.

- Drought conditions and government imposed water use restrictions may impact Aqua's ability to serve current and future customers. This may adversely affect the company's financial condition and results of operations.

- An important element of Aqua's growth strategy is the acquisition of water and wastewater systems. Any future acquisitions may involve risks.

- Freshly appointed CEO: Mr. DeBenedictis' role as CEO was the prime driver of Aqua's strong growth performance over the past two and a half decades. Given his impending retirement, the newly appointed CEO may not be as successful as Mr. DeBenedictis in carrying out the Aqua growth story.

# APPENDIX A: IMPORTANT RESEARCH DISCLOSURES

## ANALYST CERTIFICATION

I, Richard A. Verdi, attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report, provided, however, that:

The research analyst primarily responsible for the preparation of this research report has or will receive compensation based upon various factors, including the volume of trading at the firm in the subject security, as well as the firm's total revenues, a portion of which is generated by investment banking activities.

Additional information regarding the contents of this publication will be furnished upon request. Please contact Ladenburg Thalmann, Compliance Department, 570 Lexington Avenue, 11th floor, New York, New York 10022 (or call 212-409-2000) for any information regarding current disclosures, and where applicable, relevant price charts, in regard to companies that are the subject of this research report.

## COMPANY BACKGROUND

Aqua America, through its subsidiaries, operates regulated utilities providing water or wastewater services in the U.S. It serves residential, commercial, fire protection, industrial, and other water and wastewater customers in Pennsylvania, Ohio, Texas, Illinois, North Carolina, as well as other states. As of December 31, 2012, the company served nearly three million customers.

## VALUATION METHODOLOGY

Our price target objective assumes the stock trades at 22.0x our 2017 diluted EPS estimate by the end of 2016. This target multiple is predicated on WTR's mean five-year forward P/E. We support this price target with DDM, EV/EBITDA and EV/R valuation analysis.

## RISKS

In addition to normal economic and market risk factors that impact most all equities, Aqua America (WTR) is uniquely at risk to: the outcome of regulatory filings, extreme weather conditions, product safety, and financial risk.

## STOCK RATING DEFINITIONS

Buy: The stock's return is expected to exceed 12.5% over the next twelve months.

Neutral: The stock's return is expected to be plus or minus 12.5% over the next twelve months.

Sell: The stock's return is expected to be negative 12.5% or more over the next twelve months.

Investment Ratings are determined by the ranges described above at the time of initiation of coverage, a change in risk, or a change in target price. At other times, the expected returns may fall outside of these ranges because of price movement and/or volatility. Such interim deviations from specified ranges will be permitted but will become subject to review.

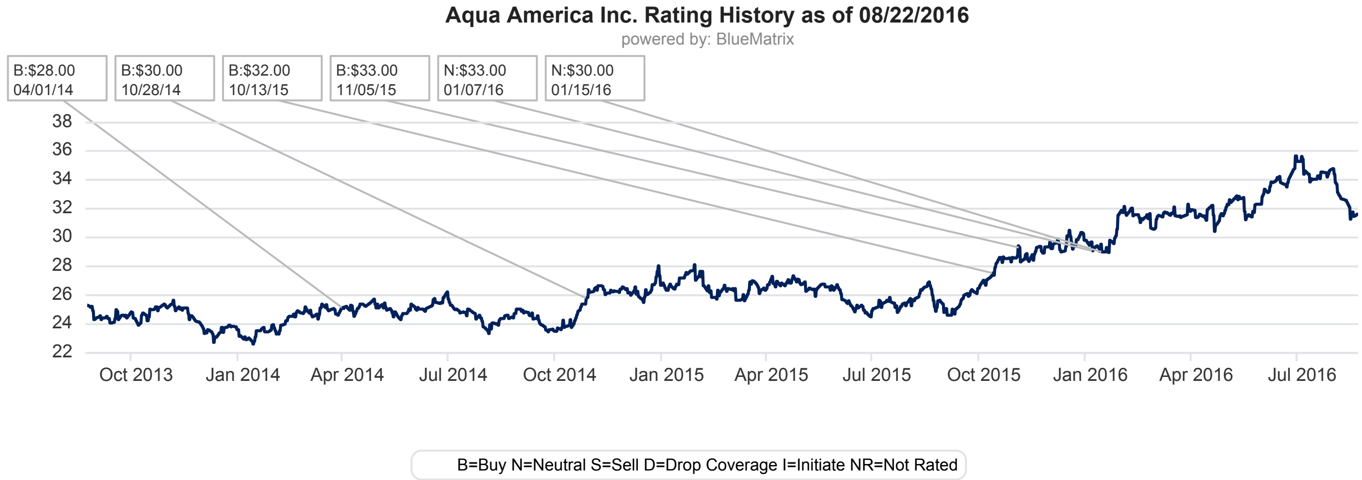
## RATINGS DISPERSION AND BANKING RELATIONSHIPS AS OF (August 23, 2016)

| **Rating** | **%** | **IB %** |
|---|---|---|
| **BUY** | 58.6 | 63.6 |
| **NEUTRAL** | 38.5 | 54.4 |
| **SELL** | 2.9 | 14.3 |

## COMPANIES UNDER RICHARD'S COVERAGE

American Water Works Co. Inc. (AWK)
Badger Meter, Inc. (BMI)
Aqua America Inc. (WTR)
American States Water Co. Inc. (AWR)
Franklin Electric Co., Inc. (FELE)

### INVESTMENT RATING AND PRICE TARGET HISTORY

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UBS

Global Research

8 March 2018

# Initiation of Coverage

# North America Water Utilities

## Wading into Water Utilities

Equities

Americas

Water Utilities


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### Why Invest in Water Utilities?

Three reasons: (1) total return potential of approximately 9% with roughly half the beta of the S&P; (2) visible long-term earnings growth supported by capital investment and industry consolidation; and (3) a business profile and asset mix that skews favourably for the growing ESG investment class.

### Investment Theme: Infrastructure

By all accounts, significant long-term investment in the U.S. water system is needed. Estimates range from approximately $385 billion to $1 trillion. Infrastructure needs range from replacement of aging pipes, to technological modernization, to cyber and physical security measures. Annual capital spending budgets are back at peak levels in 2018, after a brief respite in 2017. We see room for the investment trend to continue through 2022, helped by the headroom in customer rates created by tax reform.

### Investment Theme: Consolidation

We expect the investor-owned water utilities to continue to roll-up smaller municipal water systems. The U.S. water industry is highly fragmented, with 84% of water systems and 98% of wastewater systems owned by municipalities and cooperatives. Furthermore, roughly 85% of U.S. community water systems serve fewer than 3,300 people. Aging infrastructure, greater scrutiny post-Flint on drinking water health and safety concerns, and other calls on fixed municipal budgets, are contributing factors to consolidation in the industry. We are more likely to see consolidation in states that have enacted fair value legislation.

### Recommendations

We rate AWK as a Buy, AWR and CWT as Sells, and WTR and CTWS as Neutral. Market valuations are currently skewed to the small cap, single or limited jurisdiction water companies, a phenomenon we view as unsupported by fundamentals. We favour AWK for its earnings growth profiles, geographic diversity, and acquisition strategy. We see total return potential of approximately 13% for AWK. In contrast, we see the shares of AWR and CWT with downside of 16% and 3%, respectively, to our price targets. AWR and CWT are both highly concentrated in California, a jurisdiction where, in our view, the regulatory climate has declined over the past twelve months.

**Figure 1: UBS Water Utility Coverage Universe**

| Rating | Ticker | Company | Current Price | UBS Price Target | Total Return inc. Div. Yld | UBS 2018 EPS | UBS 2019 EPS | UBS 2020 EPS | 2020 P/E Ratio | 2020 Prem/ Disc | Current Dividend Yield | 5 Yr EPS Growth | 5 Yr DPS Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buy | AWK | American Water Works Company | $79.69 | $89 | 13.2% | $3.26 | $3.52 | $3.78 | 21.1x | (1%) | 2.1% | 7.7% | 10.0% |
| Neutral | CTWS | Connecticut Water Service | $49.11 | $53 | 10.9% | $2.30 | $2.41 | $2.55 | 19.2x | (10%) | 2.4% | 5.3% | 5.0% |
| Neutral | WTR | Aqua America | $33.20 | $36 | 10.8% | $1.40 | $1.48 | $1.59 | 20.8x | (2%) | 2.5% | 6.2% | 7.0% |
| Sell | CWT | California Water Service Group | $35.40 | $34 | (3.2%) | $1.44 | $1.54 | $1.64 | 21.5x | 1% | 1.9% | 5.8% | 5.0% |
| Sell | AWR | American States Water Company | $50.44 | $42 | (15.6%) | $1.88 | $1.98 | $2.03 | 24.8x | 16% | 2.0% | 4.2% | 5.0% |
| AVERAGE | | | | | | | | | 21.3x | | | | |

Source: FactSet, UBS Equity Research

| UBS Research THESIS MAP | MOST FAVORED | LEAST FAVORED |
|---|---|---|
| | **American Water Works** | **American States Water Company**<br>**California Water Services Group** |

PIVOTAL QUESTIONS

**Q: What is the investment potential of the water sector and can that translate into favorable total return to shareholders?**

Industry sources put the investment opportunity between $385MM and more than $1 trillion over 20-25 years. Many states offer rate mechanisms that reduce regulatory lag and incentivize infrastructure investment. We forecast approximately 7% earnings growth for water utilities, supported primarily by the infrastructure investment.

**Q: Will consolidation remain a theme in the water sector?**

Yes. There are eight publicly traded water utilities, totaling approximately $26 billion in market capitalization. Meanwhile, approximately 85% of the water systems in the U.S. are municipally owned. As communities evaluate options to ensure safe drinking water while minimizing cost and risk to local budgets, we expect consolidation will be a solution that many communities choose.

**Q: Will we see horizontal integration of water utilities with electric or gas utilities?**

No. In our view, the Eversource Energy (ES) acquisition of Aquarion Water Company in 2017 reflected a unique opportunity in both timing and asset profile. We consider that transaction the exception, not the rule.

WHAT'S PRICED IN?

**Premiums skewed toward smaller cap stocks.** On average, water utilities are trading right in line with the historical average premium of 40% going back to 2008. Within the group, however, we see valuation discrepancies. Although infrastructure investment and consolidation are widely known sector themes, the market is pricing the companies best positioned to capitalize on those themes (AWK and WTR) at below average multiples, while it is pricing AWR and CWT, which have risk concentrated in California, at premium multiples. We view this discrepancy as unsustainable over the long-term.

UBS VIEW

**Bellwether water not getting the due it deserves.** We see opportunity for investment in AWK, which we view as the best positioned to capitalize on the infrastructure investment and consolidation themes in the sector. Furthermore, in our opinion, the market is underestimating the California Cost of Capital risk of AWR and CWT. We think future consolidation in the industry is far more likely to result in roll-ups of municipal systems by investor-owned utilities, rather than a reduction in the number of publicly-traded water stocks.

EVIDENCE

**On average, waters are fairly-valued to the S&P. Within the group, valuations are contrary to fundamentals.** On average, at current multiples water utilities are fairly valued relative to the S&P 500. Within the group, however, valuation discrepancies persist. AWK has a capital spending budget of $7.2–8.4 billion ear-marked for infrastructure investment and regulated acquisitions. AWK also operate in all six of the fair value legislation states. Meanwhile, AWR and CWT have risk concentrated in California. Over the past twelve months, the regulatory environment in CA has declined, beginning with procedural difficulties in the electric utilities' Cost of Capital case, followed by the Sempra Energy wildfire ruling, and capped off by the recent unfavorable Proposed Decision in the CA water utilities' Cost of Capital case.

# Contents

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## Stock Recommendations for Investors

We are initiating coverage on five water utilities today. We rate American Water Works at Buy; American States Water and California Water Service Group at Sell; and Aqua America and Connecticut Water Service at Neutral.

**American Water Works (AWK–Buy)** is the largest of the water utilities and generally considered the bellwether of the industry based on its earnings growth rate and the scale of its asset portfolio. The company has total rate base of approximately $11 billion and operates water systems in 16 states. AWK targets earnings growth of 7-10% with dividend growth at the high end of that range.

**American States Water (AWR–Sell)** operates water systems throughout California as well as a small electric service territory in the state. AWR's rate base is $700 million. We estimate AWR's five-year earnings and dividend growth to be approximately 4–5% per year.

**California Water Service Group (CWT–Sell)** also operates principally in California, although it has small water systems in Hawaii and New Mexico as well. CWT has rate base of $1.1 billion. We estimate CWT's five-year earnings growth to be approximately 6% per year, with dividend growth slightly lower at 5%.

**Aqua America (WTR–Neutral)** is the second largest of the water utilities and is also considered an industry leader. WTR is also geographically diversified, with water systems in eight states and approximately $4 billion rate base. We estimate WTR's five-year earnings and dividend growth to be approximately 6%. This summer, WTR intends to file a widely anticipated rate case in PA, its largest jurisdiction. We expect that upside in the shares of WTR will be limited leading up to the filing and the final outcome.

**Connecticut Water Service (CTWS–Neutral)** operates water systems in Connecticut and Maine. CTWS has rate base of approximately $500 million. We estimate CTWS's five-year earnings growth to be approximately 6% per year and dividend growth to be 5%.

In our view, AWK should garner the highest premium reflective of its geographic diversity, economies of scale, and industry leadership. Furthermore, we see risk increasing in California, as the regulatory environment becomes less favourable, putting AWR and CWT at greater risk due to their concentration in the state. Our valuation methodology is discussed in detail later in this report.

**Figure 2: Water Utilities Comparative Statistics**

| | Large Cap | | Mid Cap | | Small Cap |
|---|---|---|---|---|---|
| $ Millions | AWK | WTR | AWR | CWT | CTWS |
| Market Capitalization | $14,318 | $5,967 | $1,911 | $1,761 | $607 |
| # of customers | 3,353,000 | 982,849 | 258,949 | 514,300 | 135,000 |
| Total Rate Base | $11,600 | $4,000 | $700 | $1,120 | $500 |
| States in which company operates | CA GA HI IL IN IA KY MD MI MO NJ NY PA TN VA WR | IL IN NJ NC OH PA TX VA | CA | CA HE NM WA | CT ME |
| State with the largest rate base concentration | PA | PA | CA | CA | CT |
| % rate base in largest state concentration | 27% | 69% | 100% | 94% | 88% |

Source: FactSet, company filings, UBS Equity Research

## Thematic Opportunity, but Slim Pickin's

There are eight publicly-traded investor-owned water utilities in the U.S. Combined they total approximately $26 billion in market capitalization, with about 75% concentrated in AWK and WTR. Market cap drops off precipitously below those two stocks.

**Figure 3: Public Investor Owned Water Utilities**

| Company | Ticker | Market Capitalization $ Millions | # Customers |
|---|---|---|---|
| American Water Works | AWK | $14,318 | 3,353,000 |
| Aqua America | WTR | $5,967 | 982,849 |
| American States Water Company | AWR | $1,911 | 258,949 |
| California Water Service Group | CWT | $1,761 | 514,300 |
| SJW Corp | SJW | $1,085 | 246,600 |
| Connecticut Water Service | CTWS | $607 | 135,000 |
| Middlesex Water Company | MSEX | $569 | 116,700 |
| York Water Company | YORW | $363 | 66,000 |

Source: FactSet, company filings, UBS Equity Research

Approximately 85% of U.S. water systems are municipally-owned and only 1% of water systems in the U.S. have greater than 100,000 customers. As a result, the basket of publicly-traded water utilities is unlikely to have new entrants for some time. Furthermore, due to the fragmented nature of the industry, small tuck-in acquisitions are likely to continue contributing modest growth over time, while transformative combinations are less likely to occur. We consider the acquisition of Aquarion Water Company by Eversource Energy (ES) to be a transformative transaction, and we discuss this later in the report.

Importantly, water utilities satisfy the thematic profiles of the growing number of infrastructure and ESG (Environmental–Social–Governance) funds. The significant capital spending need has long-term visibility in an industry that meets many of the ESG thresholds.

**Figure 4: Select ESG Metrics**

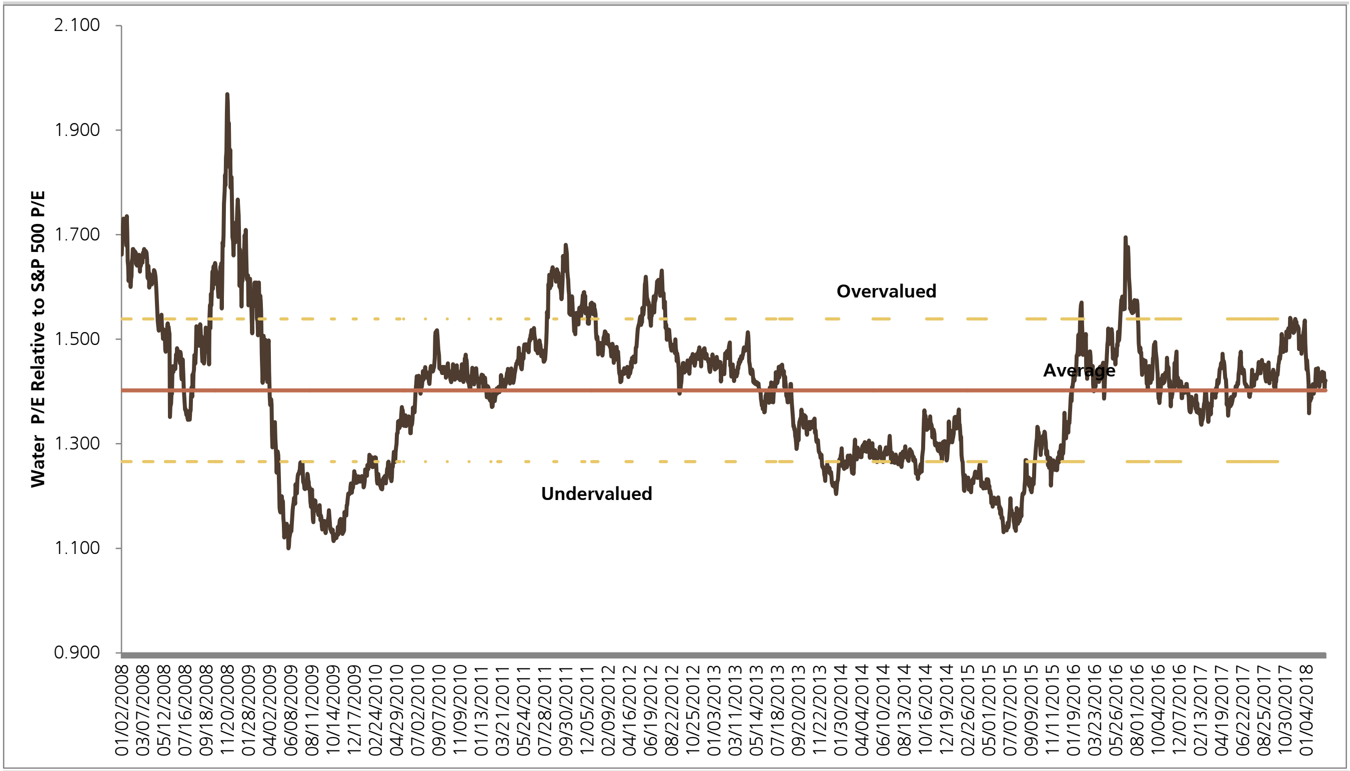
| Company | Publish Corporate Responsibility Report | # Women on BoD | % Women on BoD | Non-executive Chairman of the Board |
|---|---|---|---|---|
| American States Water Company | ✓ | 4 | 44% | ✓ |
| American Water Works | ✓ | 5 | 63% | ✓ |
| Aqua America | ✓ | 2 | 25% | ✓ |
| California Water Services Group | ✓ | 1 | 11% | ✓ |
| Connecticut Water Service, Inc. | ✓ | 5 | 71% | ✓ |

Source: S&P Global Market Intelligence, company filings, UBS Equity Research

## Relative Value in Neutral Territory

On average, from 2008 to present, water utilities have historically traded at a 40% premium to the S&P 500. The waters currently trade at a 40% premium to the S&P 500, suggesting the group is fairly valued.

**Figure 5: Waters Relative to S&P 500 P/E, 2008-Present, FY1**

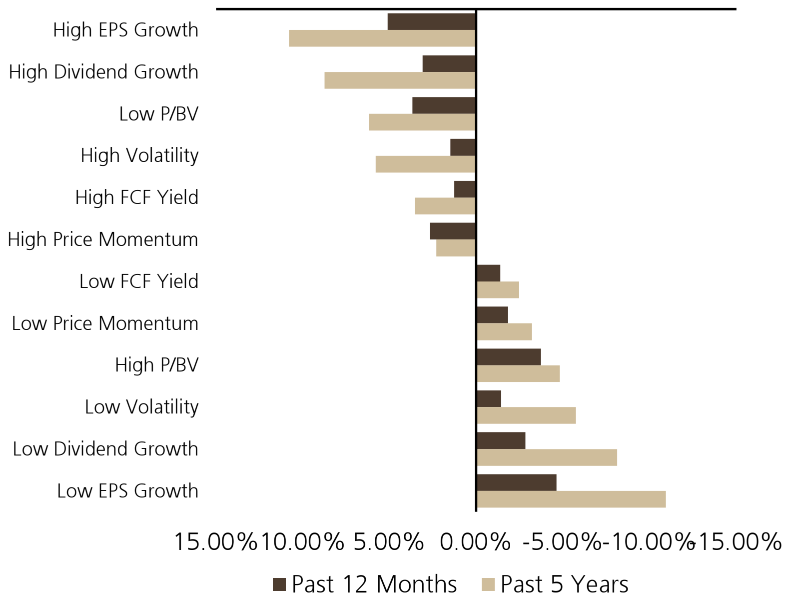



Source: FactSet, UBS Equity Research

Rising interest rates pose similar risk for water utilities as we see for electric utilities. In our electric utility initiation report, [Wait for It](#) (2/1/18), we discussed the performance of regulated utilities during Fed tightening cycles. Our analysis shows that on average, RUs underperformed the S&P 500 by 12.5% in the twelve months prior to action, performed in line (-0.33%) with the S&P 500 during the hikes, and outperformed by 6.7% for the twelve months following the last hike. Furthermore, over the period from 1980 until now, benchmark rates in general have declined. The result has been a significant lengthening of the equity duration of the RU group to almost 20 years from 7-8 years in 1980. All things equal, the shape of the Treasury curve should matter more to RU performance than short-term rates today.

As we discussed in Wait for It, the UBS Quantitative Research group determined that regulated utility price performance is most closely aligned with dividend and earnings growth over time. Therefore, our valuation methodology favours companies with high ranks on these measures.

**Figure 6: Performance by Style for RUs (electric and water), LTM and Last Five Years**




Source: UBS Quantitative Research, UBS Equity Research

## Capital Investment Opportunity

By all accounts, significant investment in water infrastructure is required over the next quarter century. Industry sources put the investment requirement between $385MM (U.S. Environmental Protection Agency) and more than $1 trillion (American Water Works Association). The 2015 AWWA State of Water Industry Report ranked (1) renewal and replacement of aging water and wastewater infrastructure, and (2) financing for capital improvements as the top two issues facing the water industry based on a survey of respondents. The American Society of Civil Engineers estimates it will take approximately 200 years to replace the main water pipe system in the U.S. at the current rate of 0.5% per year. This means that there is a long-term capital investment opportunity in the industry, with customer rates as the gating factor.

Reflecting the industry needs, the capital spending budgets of our five covered companies have been trending up over the past few years. UBS estimates that capital spending will remain at recent elevated levels for the next few years.

**Figure 7: Capital Spending Trend**

| | | 2015 | 2016 | 2017 | 2018E | 2018-2020E |
|---|---|---|---|---|---|---|
| American States Water Company | AWR | $86 | $121 | $110 - $120 | $110 - $120 | |
| American Water Works | AWK | $1,200 | $1,300 | $1,200 | $1,400 - $1,500 | $4,000 - $4,500 |
| Aqua America | WTR | $325 | $383 | $478 | $518 | $1,400 |
| California Water Services Group | CWT | $177 | $229 | $259 | $200-220 | |
| Connecticut Water Service, Inc. | CTWS | $48 | $66 | $55 | $66 | |

Source: Company filings, UBS Equity Research

**State Rate Mechanisms:** The significant upgrades to the system cause water utilities to be frequent rate case filers. However, many states have implemented mechanisms, such as infrastructure recovery riders, rate consolidation, decoupling, and CWIP, which reduce regulatory lag and incentivize infrastructure investment. These mechanisms allow the utilities to avoid filing general rate cases for longer periods of time.

## Figure 8: Rate Mechanisms by State

| State | Test Year | CWIP | Rate Consolidation | Decoupling/ Declining Usage Rider | DSIC | Non-DSIC Riders |
|---|---|---|---|---|---|---|
| Alabama | Historical | | | | | ✓ |
| Alaska | Historical | | | | | |
| Arizona | Historical | ✓ | ✓ | | | ✓ |
| Arkansas | Hybrid | ✓ | | | | ✓ |
| California | Hybrid | ✓ | ✓ | ✓ | ✓ | ✓ |
| Colorado | Hybrid | ✓ | ✓ | | | ✓ |
| Conecticut | Historical | ✓ | ✓ | | ✓ | ✓ |
| Delaware | Historical | ✓ | ✓ | | ✓ | |
| Distric of Columbia | Hybrid | | | | | |
| Florida | Hybrid | ✓ | ✓ | | | ✓ |
| Georgia | N/A | | | | | |
| Hawaii | Hybrid | ✓ | | | | ✓ |
| Idaho | Historical | | ✓ | | | |
| Illinois | Hybrid | ✓ | ✓ | | ✓ | ✓ |
| Indiana | Historical | | ✓ | | ✓ | ✓ |
| Iowa | Historical | ✓ | | | | |
| Kansas | Hybrid | | ✓ | | | |
| Kentucky | Hybrid | ✓ | ✓ | | | ✓ |
| Louisiana | Historical | | ✓ | | | ✓ |
| Maine | Historical | ✓ | | | ✓ | ✓ |
| Maryland | Historical | ✓ | | | | ✓ |
| Massachusetts | Historical | | ✓ | | | ✓ |
| Michigan | N/A | | | | | |
| Minnesota | N/A | | | | | |
| Mississippi | Hybrid | ✓ | | | | ✓ |
| Missouri | Historical | | ✓ | | ✓ | ✓ |
| Montana | Historical | | ✓ | | | ✓ |
| Nebraska | Hybrid | | | | | |
| Nevada | Historical | | | | | ✓ |
| New Hampshire | Historical | | ✓ | | ✓ | ✓ |
| New Jersey | Historical | | ✓ | | ✓ | ✓ |
| New Mexico | Hybrid | ✓ | ✓ | | | ✓ |
| New York | Hybrid | ✓ | ✓ | ✓ | ✓ | ✓ |
| North Carolina | Historical | ✓ | ✓ | | | ✓ |
| North Dakota | N/A | | | | | |
| Ohio | Hybrid | ✓ | ✓ | | ✓ | ✓ |
| Oklahoma | Historical | ✓ | | | | ✓ |
| Oregon | Historical | ✓ | ✓ | | | ✓ |
| Pennsylvania | Hybrid | ✓ | ✓ | | ✓ | ✓ |
| Rhode Island | Historical | | | | | |
| South Carolina | Historical | ✓ | ✓ | | | ✓ |
| South Dakota | N/A | | | | | |
| Tennesee | Hybrid | ✓ | | | | ✓ |
| Texas | Historical | ✓ | ✓ | | | ✓ |
| Utah | Hybrid | ✓ | | | | ✓ |
| Vermont | Historical | ✓ | | | | ✓ |
| Virginia | Hybrid | ✓ | | | | ✓ |
| Washington | Historical | ✓ | ✓ | | | ✓ |
| West Virginia | Historical | ✓ | ✓ | | ✓ | ✓ |
| Wisconsin | Hybrid | ✓ | | | | ✓ |
| Wyoming | Historical | ✓ | | | | ✓ |

Source: S&P Global Market Intelligence, UBS Equity Research

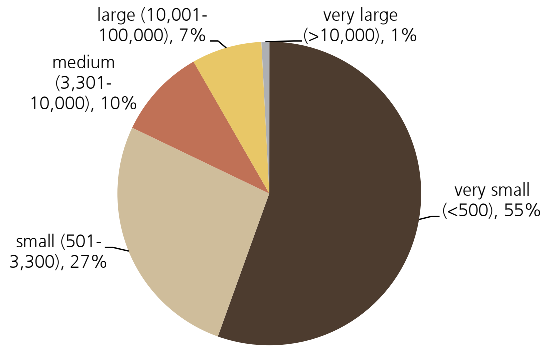
## The Case for Consolidation

IOUs operate on a regulated return on rate base model. New investment is incentivized, while customer rates act as the gating factor. The IOU model is contrary to the municipal model in which water systems must vie for funding from a fixed budget against other community resources such as police, fire, and education. Oftentimes, municipalities must postpone necessary capital investment in water systems based on other financial priorities of the community.

Historically, towns and cities have been reluctant to sell their water systems to outside owners, preferring to maintain local control over access to safe drinking water. However, as the risk-reward of providing safe drinking water has become more challenging, localities are seeing the value in monetizing water systems to external owners that have greater financial, technical, and managerial capabilities. Furthermore, municipalities don't have the attachment to wastewater systems that they've had with drinking water systems. As a result, we are also seeing sales of wastewater systems. We expect the trend of tuck-in acquisitions by the IOUs to continue.

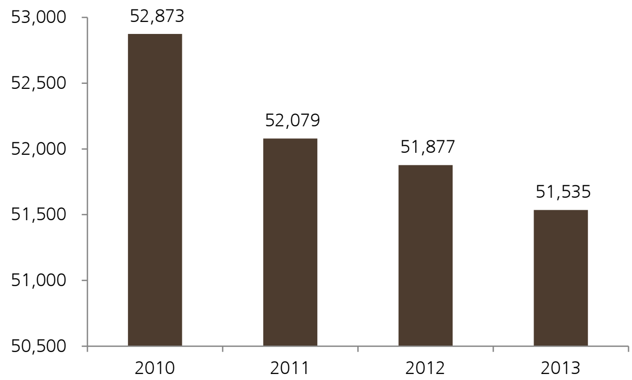
Consolidation should remain a theme in the water sector. The total number of water systems in the U.S. has been steadily declining from 52,873 in 2010 to 51,535 in 2013 (the most recent figures published in 2015 by the EPA). At the latest count, only 1% serve greater than 100,000 customers. We expect the pace of transactions to remain steady or even tick up over time as states implement more stringent water quality standards following the Flint, Michigan lead poisoning tragedy.

**Figure 9: Water Systems by Customer Count**




Source: American Water Works Association, Environmental Protection Agency, UBS Equity Research

**Figure 10: Number of Community Water Systems**




Source: American Water Works Association, Environmental Protection Agency, UBS Equity Research

Fair value legislation has been a material enabling factor toward consolidation. The legislation, which uniquely benefits water utilities, allows acquired rate base to be set at an appraised value rather than book value, thereby sidestepping the creation of goodwill, which isn't recoverable. This is critical as many older systems may have little book value. Six states currently have fair value legislation. The legislation facilitates sales of water systems by municipalities: a win–win for both sides. Municipalities benefit from a source of funds as well as off-load risk, while IOUs grow their rate base. Here again, AWK and WTR are the biggest beneficiaries due to their geographic diversity. AWK operates in all six of the states with fair value legislation and WTR operates in four of them.

**Figure 11: Fair Value Legislation by State and Company**

| State | IOUs Operating in the State |
|---|---|
| California | AWK, AWR, CWT |
| Illinois | AWK, WTR |
| Indiana | AWK, WR |
| Missouri | AWK |
| New Jersey | AWK, WTR |
| Pennsylvania | AWK, WTR |

Source: S&P Global Market Intelligence, company filings, UBS Equity Research

In our view, water quality requirements in the form of legislative mandates or other adoptions may provide the next catalyst for consolidation. The New Jersey Water Quality Accountability Act enacted in 2017 may become the standard that other states emulate. The legislation requires water providers to design an asset management plan to inspect, maintain, repair, and renew its infrastructure consistent with industry standards. It also requires a senior officer or official, such as a mayor of a municipality, to certify in writing annually that the water system complies with all federal and state drinking water regulations. The legislation also requires submission of a mitigation plan if the water system receives multiple EPA violations. The legislation applies to public water systems with more than 500 service connections, or approximately 300 water systems in the state. As such, the legislation holds the water systems to the same standards, regardless of whether they are municipal, private, or investor-owned. Pennsylvania may be the next state to pursue similar legislation. Notably, AWK and WTR are significant water system operators in NJ and PA and would be well-positioned to benefit from acquisition roll-ups in those states.

## Electric, Gas and Water: The Exception, Not the Rule

We don't foresee other electric utilities stepping into the water arena. The acquisition of Aquarion Water Company by Eversource Energy in 2017 reflected a unique opportunity created by the confluence of timing, geography, and asset profile. The sale of Aquarion by a consortium of private equity investors led by Macquarie, lined up almost perfectly with the timing and value of ES' sale of its fossil generation portfolio. The company anticipated receiving approximately $700MM cash proceeds that it needed to reinvest. ES purchased Aquarion for an enterprise value of $1.675 billion comprised of $880MM cash plus the assumption of $795MM debt. Aquarion's service territories in Connecticut, Massachusetts, and New Hampshire complement ES' electric and gas territories in those same states. Furthermore, the addition of water distribution assets to ES' electric and gas transmission and distribution portfolio rounds out the company's asset profile and enhances its marketability as an ESG-friendly investment vehicle.

The sale of Aquarion was widely anticipated and reflected an unusual opportunity for a sizable transaction in the water sector. Aquarion is the largest investor-owned water utility in New England and among the ten largest water utilities in the U.S. Given the fragmented nature of the water industry, roll-up acquisitions will likely continue to represent the norm, while larger transformative transactions, the exception. We think there is simply no motivation for electric utilities to embark on a water roll-up strategy, since it would take a material commitment of time to create meaningful scale in water assets. (Even Aquarion, already one of the largest water utilities in the U.S, represents only 4% of ES' forecast net income.) Furthermore, in our view, the combination of water with pure T&D assets creates greater value than if combined with a vertically integrated electric utility. This is because T&D assets are generally considered lower-risk than generation assets and therefore trade at a higher multiple. There are only a small handful of pure T&D electric utilities, including ES, Consolidated Edison (ED), and CenterPoint Energy (CNP).

## State Jurisdictional Rankings

State commissions are charged with regulating water utilities, but not all jurisdictions treat their utilities the same. The differences between jurisdictional regulatory practices are a primary factor in determining relative value between companies, their growth rates and allowed and earned returns. We rank each jurisdiction using six equally weighted criteria, as follows:

1) **Elected vs Appointed Commissions:** Elected commissioners tend to focus more closely on managing customer affordability which can dampen investment vs appointed commissions that tend to be more policy driven, all else equal.

2) **Allowed Return Spread:** We measure the return spread over 10-year Treasury note of the ordered rate cases since 2010 by jurisdiction. As rate of return setting policies and practices are grounded in decades of case law, jurisdictions that allow high and low return spreads tend to continue with that practice.

3) **Mechanisms that Reduce Regulatory Lag:** Regulatory lag is the difference between authorized returns on equity and earned returns resulting from time lag between dollars invested in rate base and authorized revenues reflecting that spending. With the advent of computing power, several techniques to reduce rate lag have been incorporated into regulation, including tracking mechanisms, forward test years, formula rate plans and performance based regulation. Adoption has been uneven, so it is in the interest of investors to favour places that minimize lag.

4) **Rate and Customer Bill Levels:** Utilities' prices are often a material factor in state economic development. States with high prices vs their surroundings tend to scrutinize utility investment more closely than states with low bills.

5) **Tendency to Settle vs Litigate Rate Cases:** Settlements have the advantage of being quicker, less risky and less prone to legal appeal than fully litigated rate proceedings. States that regularly settle are preferred by investors.

6) **UBS subjective Investor Friendliness Factor:** Based on our knowledge of current commission actions, we skew the results by up to 1/6$^{th}$.

The results of our rankings are presented as a bell curve in Figure 12. Overall, we find most regulation in the US to be fair. Outliers on the positive side present a lower cost of capital business environment and encourage investment in infrastructure. By contrast, higher cost of capital states discourage investment.

**Figure 12: UBS Regulatory Jurisdiction Rankings**

| TIER 1 | TIER 2 | TIER 3 | TIER 4 | TIER 5 |
|---|---|---|---|---|
| | | Idaho | | |
| **FERC** | | Oregon | | |
| | | Louisiana | | |
| | | Kentucky | | |
| | | South Carolina | | |
| | | Washington | | |
| | | Texas | | |
| | | Rhode Island | | |
| | | Tennessee | | |
| | Pennsylvania | Wyoming | Delaware | |
| | Utah | New Hampshire | Nebraska | |
| | Georgia | New York | Oklahoma | |
| | Illinois | California | West Virginia | |
| Florida | Arkansas | Minnesota | Alaska | Montana |
| Michigan | Indiana | Kansas | Missouri | Hawaii |
| Wisconsin | Ohio | Nevada | Connecticut | Maryland |
| North Carolina | Virginia | New Jersey | South Dakota | New Mexico |
| Colorado | Iowa | Arizona | Maine | Vermont |
| Alabama | North Dakota | Massachusetts | Mississippi | District of Columbia |
| JD Power Average Customer Service Scores | | | | |
| 726 | 725 | 706 | 702 | 695 |

Source: S&P Global Market Intelligence, FactSet, JD Power, UBS Equity Research

# Valuation Methodology

We value water utilities on a price-to-earnings basis on our 2020 estimates. Our valuation methodology is premised upon a group valuation bias, forecast 2018-2022 earnings growth, our proprietary analysis of regulatory jurisdictional rankings, exposure to states with fair value legislation, and in some cases a company-specific adjustment.

1. Group Valuation Bias: Derived from our relative P/E analysis, we incorporate a positive or negative adjustment to our group multiple representing the gap we calculate to the nearest 5%. At current valuations, we see the group as fairly valued relative to the S&P 500, therefore, there is currently no group valuation bias assigned.

2. Growth Adjustment: Five-year earnings growth rates are largely clustered in the 5–6% range. AWK is the distinction, with the highest growth rate of 7–10% and the greatest visibility in achieving it. Therefore, we assign a 2% premium for AWK and no premium or discount for the other waters.

3. Regulatory Adjustment: Our proprietary regulatory rankings correlate with price-to-book ratios over time. Price-to-book is the third most significant performance factor behind earnings and dividend growth (Figure 6). Here, WTR benefits the most (5% premium) for its asset concentration in PA, a constructive regulatory environment. AWK is awarded a 2% premium due to its geographic diversity and limited reliance on any particular state regulatory environment. AWR, CWT and CTWS are each assigned a 2% discount based on our regulatory rankings.

4. Fair Value State Adjustments: We assign one percentage point premium for each fair value state in which a company operates. The incremental premium reflects the favourable environment for consolidation.

5. Company-specific Risk Adjustment: We assign an incremental 3% discount to AWR and CWT for CA Cost of Capital risk exposure. Once a final decision for Cost of Capital is reached, we will update our earnings estimates and remove this discount. We also assign an incremental 3% discount to WTR for the overhang of the PA rate case. Similarly, when the rate case is resolved, this discount will be removed from our valuation.

**Figure 13: Valuation Methodology Matrix**

| Investment Opinion | Ticker | Water Relative Premium/ Discount | Regulatory Quartile Premium/ Discount | Fair Value State Adjustments | Regulated EPS Growth Premium/ Discount | Company Specific Adjustments | Net Premium/ Discount for Valuation |
|---|---|---|---|---|---|---|---|
| **Sell** | **AWR** | 0% | (2%) | 1% | 0% | (3%) | (4%) |
| **Buy** | **AWK** | 0% | 2% | 6% | 2% | | 10% |
| **Neutral** | **WTR** | 0% | 5% | 4% | 0% | (3%) | 6% |
| **Sell** | **CWT** | 0% | (2%) | 1% | 0% | (3%) | (4%) |
| **Neutral** | **CTWS** | 0% | (2%) | 0% | 0% | | (2%) |

Source: FactSet, S&P Global Market Intelligence, company filings, UBS Equity Research

# Company Coverage

# American States Water Co
## Initiating Sell: Premium Inconsistent with Risk

**Equities**

Americas
Water Utilities

| | |
|---|---|
| **12-month rating** | **Sell** |
| | *Prior: Not Rated* |
| **12m price target** | **US$42.00** |
| | *Prior: -* |
| **Price** | **US$51.51** |

**RIC:** AWR.N **BBG:** AWR US

**Trading data and key metrics**

| | |
|---|---|
| **52-wk range** | US$59.45-41.22 |
| **Market cap.** | US$1.88bn |
| **Shares o/s** | 36.5m (COM) |
| **Free float** | 99% |
| **Avg. daily volume ('000)** | 122 |
| **Avg. daily value (m)** | US$6.7 |
| **Common s/h equity (12/18E)** | US$0.56bn |
| **P/BV (12/18E)** | 3.4x |
| **Net debt / EBITDA (12/18E)** | 2.6x |

**EPS (UBS, diluted) (US$)**

| | 12/18E | | | |
|---|---|---|---|---|
| | From | To | % ch | Cons. |
| **Q1E** | - | 0.34 | - | 0.35 |
| **Q2E** | - | 0.53 | - | 0.47 |
| **Q3E** | - | 0.61 | - | 0.57 |
| **Q4E** | - | 0.40 | - | 0.40 |
| **12/18E** | - | 1.88 | - | 1.79 |
| **12/19E** | - | 1.98 | - | 1.89 |
| **12/20E** | - | 2.03 | - | 1.99 |

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### Sell at Current Valuation

We are initiating on AWR with a Sell rating as part of our sector launch on water utilities. Our $42 price target suggests 17% downside in the shares. AWR trades at a lofty 21% premium to the 2019 average UBS water P/E. For context, AWR trades at the highest multiple among our five water utilities under coverage, and nearly double the premium of the second highest multiple water utility (which happens to be CWT, also a Sell). The risk profile of AWR as a single-state (CA) water utility operating in a degrading regulatory landscape does not support a premium valuation. Also, to the extent the shares may incorporate a small cap takeout premium, we think this assumption is unfounded. Our analysis demonstrates a compelling 1:2 downside skew.

### California Water Utilities' Cost of Capital at Risk

The CPUC decision (on March 22 at the earliest) in the water utilities' Cost of Capital case may present a downward catalyst for the shares if the order adopts the ALJ Proposed Decision. The ALJ recommended that AWR be awarded an ROE of 8.23%, significantly lower than requested (11%), currently authorized (9.43%), and the 2017 national average authorized ROE for water utilities (9.56%). We estimate roughly $0.02 of earnings risk for every 20 basis point change in ROE. Our EPS estimates for AWR are predicated on the current 9.43% ROE.

### It Takes Two to Tango

In the interest of improving water quality, CA regulatory policies and fair value legislation are designed to encourage the state's large water utilities (of which, AWR is considered one) to be consolidators of smaller systems. On AWR's recent year-end conference call, management indicated that it would be interested in purchasing smaller systems, but they are not seeing many come up for sale.

### Valuation:

Our $42 price target is based on a 4% discount to the 2020 average P/E of our water universe. Our EPS estimates are $1.88 in 2018, $1.98 in 2019, and $2.03 in 2020. We assume that AWR retains $0.08 tax savings on its military contracts in 2018, and returns those savings to the government through price redetermination ratably over five years. Our estimates may turn out to be too high if AWR returns the tax benefit more quickly.

| Highlights (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| **Revenues** | 459 | 436 | 437 | 447 | 458 | 467 | 476 | 488 |
| **EBIT (UBS)** | 118 | 115 | 117 | 123 | 129 | 133 | 137 | 145 |
| **Net earnings (UBS)** | 60 | 60 | 65 | 69 | 73 | 75 | 76 | 80 |
| **EPS (UBS, diluted) (US$)** | 1.61 | 1.63 | 1.76 | 1.88 | 1.98 | 2.03 | 2.07 | 2.17 |
| **DPS (US$)** | 0.87 | 0.91 | 0.97 | 1.02 | 1.07 | 1.12 | 1.18 | 1.24 |
| **Net (debt) / cash** | (345) | (411) | (380) | (428) | (474) | (518) | (561) | (603) |
| **Profitability/valuation** | **12/15** | **12/16** | **12/17** | **12/18E** | **12/19E** | **12/20E** | **12/21E** | **12/22E** |
| **EBIT margin %** | 25.8 | 26.3 | 26.8 | 27.5 | 28.2 | 28.6 | 28.9 | 29.6 |
| **ROIC (EBIT) %** | - | 13.4 | 12.9 | 13.0 | 12.6 | 12.0 | 11.6 | 11.5 |
| **EV/EBITDA (core) x** | 11.4 | 12.3 | 13.9 | 14.0 | 13.7 | 13.5 | 13.4 | 13.0 |
| **P/E (UBS, diluted) x** | 24.6 | 25.5 | 27.5 | 27.4 | 26.0 | 25.3 | 24.9 | 23.8 |
| **Equity FCF (UBS) yield %** | 0.5 | (2.2) | 1.8 | (0.6) | (0.3) | (0.2) | (.0) | 0.2 |
| **Net dividend yield %** | 2.2 | 2.2 | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.4 |

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$51.51 on 07 Mar 2018 17:12 EST

**UBS Research THESIS MAP** a guide to our thinking and what's where in this report

PIVOTAL QUESTIONS

**Q: Has the quality of California regulation changed?**

Yes. The California regulatory environment has declined materially over the past twelve months. If the California Public Utilities Commission (CPUC) adopts the ALJ Proposed Decision in the water utilities' Cost of Capital case, we will view that as the culmination of a trend of adverse orders by the CPUC.

more→

**Q: Does the industry consolidation theme support a premium valuation for AWR and CWT?**

Unlikely. To the contrary, California's long-term water quality planning objectives would prefer to utilize the state's large Class A utilities (e.g. AWR and CWT) to take over smaller systems.

more→

**Q: Will AWR's unregulated utility services business (ASUS) benefit from tax reform?**

We estimate that ASUS will Initially benefit from tax reform by up to $0.08 in 2018. Over time, however, we expect AWR to give up those gains through the price redetermination process or through renegotiation. Our model assumes that the benefit of the lower corporate tax rate erodes ratably over the five-year forecast period.

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UBS VIEW

AWR's premium to the 2019 average UBS water P/E is unsupported by fundamentals. AWR is operating in a challenging regulatory environment with near-term risk of a materially lower allowed ROE. Further, AWR appears to have less opportunity to participate in the industry consolidation theme. AWR's military services business is a material contributor to net income and growth, albeit with limited visibility into new contracts.

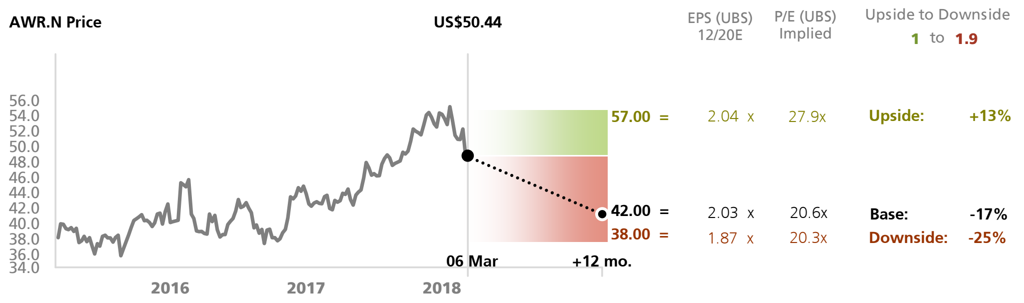
EVIDENCE

Recent regulatory processes and final orders by the CPUC have demonstrated a less constructive regulatory environment. Small water systems in CA are not demonstrating a willingness to sell, which limits AWR's ability to take advantage of growth through acquisition.

WHAT'S PRICED IN?

At a 21% premium to the 2019 average UBS water P/E, AWR is the highest valued water utility in our universe and trades at a premium nearly double the second highest valued stock in the universe. The shares appear to incorporate approximately 15% likelihood of AWR being acquired (based on our multiples derived from our work on electric utility mergers). If we assume that there is no merger or small cap premium in the shares, then the share price implies 2019 EPS of roughly $2.30-2.40 (depending on the multiple), well above consensus expectations.

UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Avg peer P/E multiple | premium/ discount to avg peer multiple | Allowed CA ROE |
|---|---|---|---|
| $57 upside | 28.0x | 0.0% | 9.43% |
| $42 base | 21.3x | -4.0% | 9.43% |
| $38 downside | 21.3x | -4.0% | 8.23% |

Source: UBS

COMPANY DESCRIPTION

American States Water Company is the parent of Golden State Water Company and American States Utility Services, Inc. (ASUS). AWR provides service to approximately 260,000 water...

PIVOTAL QUESTIONS

# Q: Has the quality of California regulation changed?

## UBS VIEW

Yes. Recent regulatory processes and final orders by the CPUC have demonstrated a less constructive regulatory environment. If the California Public Utilities Commission (CPUC) adopts the ALJ Proposed Decision in the water utilities' Cost of Capital case, we will view that as the culmination of a trend of adverse orders by the CPUC.

## EVIDENCE

A recent trend of adverse orders and commission processes has led to a degradation of the regulatory landscape in California. We rank California in the third quartile of regulatory jurisdictional rankings. (See **Figure X: State Jurisdictional Rankings** in our sector launch.) We update the rankings annually and as necessary throughout the year.

**Electric utilities' Cost of Capital proceeding: 2017**

The electric utilities Cost of Capital proceeding in 2017 was marred by an adverse Proposed Decision by the ALJ. The PD did not support the settlement the three CA electric utilities had reached with ORA (Office of Ratepayer Advocates) and TURN (The Utility Reform Network) for a two-year extension to the Cost of Capital with modest adjustments to ROE and debt cost true-up. The commission ultimately supported the settlement agreement, but not without grousing from the commissioners on the process. Although the outcome was constructive, the process created uncertainty for the stocks and adversely impacted investors' views of regulation in the state.

**Sempra Energy Wildfire recovery final order: November 30, 2017**

The CPUC ruled against SRE regarding recovery of expenses associated with past wildfires (A.15-09-010). SRE took a $351MM pre-tax write-off and is seeking reconsideration. The order has materially greater implications for PG&E Energy and Edison International, both of which experienced unprecedented wildfires in their service territories in late 2017 and early 2018. PCG suspended its dividend on December 20, 2017 due to the uncertainty of financial obligations related to wildfires. The CPUC has not made a decision on SRE's reconsideration request.

**Water utilities' Cost of Capital proceeding: final order expected March/April 2018**

The ALJ Proposed Order (PD) in the water utilities' Cost of Capital proceeding adopted ORA's recommendation in whole. ORA recommended ROEs of 8.22%-8.30% for the four CA water utilities – significantly lower than the 2017 national average ROE of 9.56% authorized for water utilities.

## WHAT'S PRICED IN?

So far, we have not seen a demonstrable reaction in the market to the ALJ recommendation; however, if the CPUC does not improve upon the PD, we would expect the share prices to adjust down ~$3 for AWR and ~$2 for CWT, to reflect the lower earnings potential at those companies. We do not anticipate a material impact to AWK's share price due to the comparatively lower earnings exposure. If the PD is adopted, we estimate earnings at risk of $0.16 at AWR, $0.12 at CWT, and $0.02 at AWK. The earnings sensitivity is $0.03 at AWR and $0.02 at CWT for every 20 basis points change in ROE.

**Figure 14: California Cost of Capital Proceeding**

| | AWR | AWK | CWT | SJW |
|---|---|---|---|---|
| Docket # | A.17-04-002 | A.17-04-003 | A.17-04-006 | A.17-04-001 |
| | | | | |
| *Proposed Decision:* | | | | |
| ROE | 8.23% | 8.23% | 8.22% | 8.30% |
| Equity Ratio | 54.13% | 54.18% | 54.44% | 52.58% |
| Cost of Debt | 6.40% | 5.22% | 5.51% | 5.96% |
| Debt Ratio | 45.87% | 45.82% | 45.46% | 47.42% |
| **Earnings at risk if ROE is adopted** | **($0.16)** | **($0.02)** | **($0.12)** | **NR** |
| **Earnings sensitivity to 20bps change in ROE** | **($0.03)** | **$0.00** | **($0.02)** | **NR** |
| | | | | |
| *Requested:* | | | | |
| ROE | 11.00% | 10.80% | 10.75% | 10.75% |
| Equity Ratio | 57.00% | 55.40% | 53.40% | 53.28% |
| Cost of Debt | 6.60% | 5.63% | 5.50% | 6.21% |
| Debt Ratio | 43.00% | 44.60% | 46.60% | 46.72% |
| | | | | |
| *Currently Authorized:* | | | | |
| ROE | 9.43% | 9.99% | 9.43% | 9.43% |
| Equity Ratio | 55.00% | 53.00% | 53.00% | 51.35% |
| Cost of Debt | 7.00% | 6.63% | 6.24% | 6.68% |
| Debt Ratio | 45.00% | 47.00% | 47.00% | 48.65% |

NR: Not Rated

Source: California Public Utilities Commission, company filings, UBS Equity Research

PIVOTAL QUESTIONS

## Q: Does the industry consolidation theme support a premium valuation for AWR and CWT?

UBS VIEW

Unlikely. To the contrary, California's long-term water quality planning objectives would prefer to utilize the state's large Class A utilities (e.g. AWR and CWT) to take over smaller systems.

EVIDENCE

Taking the CPUC Water Action Plan into consideration alongside the CA Public Water System Investment and Consolidation Act of 1997 (CA's fair value legislation) leads us to conclude that state policies and legislative mandates are intended to encourage Class A utilities (e.g. AWR and CWT) to be acquirers, not targets. The CPUC categorizes the state's water utilities by size as Class A: 10,001+ customers; Class B: 2,001–10,000; Class C: 501–2,000; and Class D: 1–500. There are seven Class A utilities in CA including AWR, CWT and AWK. As part of the Plan, the CPUC would consider offering incentives to promote acquisitions by large utilities to take over smaller systems. The CPUC continues to encourage water system consolidation and as recently as November indicated that small systems are "ripe for acquisition." (CPUC, State Water Resources Control Board presentation, November 13, 2017)

WHAT'S PRICED IN?

There are no definitive valuation metrics that are particularly useful in water sector consolidations. This is because water roll-ups reflect varying numbers of customers, future capital investment, and geographic diversity even within acquired water systems. If we look to our work on electric utility merger premiums, we see trailing EBIDTA multiples of 10.2x–12.5x and price/book multiples of 2.1x–3.0x. Based on the high end of the electric utility merger multiples, we estimate AWR share price incorporates approximately 15% chance of acquisition and CWT incorporates 6% likelihood.

**Figure 2: Implied Merger Premiums**

| | AWR | CWT |
|---|---|---|
| Current Price | $50.44 | $35.40 |
| Price target @ 23.3x trailing P/E | $39.38 | $30.99 |
| Price target @ 12.5x trailing EBITDA | $57.34 | $52.86 |
| Price target @ 3.0x Price/Book | $40.56 | $41.25 |
| UBS price target | $42.00 | $32.00 |
| Implied likelihood of acquisition reflected in stock price | 15% | 6% |

Source: FactSet, UBS Equity Research, company filings

### Historical Perspective

In 1997, the CPUC regulated approximately 200 water utilities. By the end of 2006, that figures had declined to 135 and by year-end 2017 it was 101, with 3 additional acquisitions pending. The CPUC categorizes the state's water utilities by size as Class A: 10,001+ customers; Class B: 2,001–10,000; Class C: 501–2,000; and Class D: 1–500. Of the 34 water utilities acquired from 2007 to 2017, 33 were Class C and D (i.e. less than 2,000 connections); only one of the acquired companies was a Class A utility with 30,000 connections.

The California Public Water System Investment and Consolidation Act of 1997 intended to encourage consolidation of water utilities by providing incentives to large utilities to take over smaller systems. This type of legislation is generically referred to in the industry as fair value legislation. California was the first state to implement fair value legislation, but now there are six state that offer it: CA, IL, IN, MO, NJ, and PA. The enabling principle of fair value legislation is that it allows the rate base of acquired assets to be set at the lower of purchase price or fair market value. The fair market value is typically established through an appraisal process. This rate base valuation methodology is critical as many older systems may have little book value. The legislation benefits water utilities because valuation at appraisal value avoids goodwill, which isn't recoverable on acquisitions.

In 2005, the CPUC implemented a Water Action Plan in response to the ongoing concerns about water quality and supply and in recognition of the potential economies of scale in operating water systems. At the time there were approximately 140 companies under CPUC jurisdiction providing potable and irrigation water service to 20% of CA residents. As part of the Plan, the CPUC would consider offering incentives, such as surcharges for capital improvements and an adjustment to the allowed return on equity, to promote acquisitions by large utilities to take over smaller systems. The 2005 Water Action Plan actually went so far as to state: "The Department of Health Services requests Class A utilities to report on an annual basis which smaller utilities (i.e. Class B, C, & D) they might consider purchasing" although it doesn't seem as though that practice ever took hold.

SB 623 may be the next leg in the stool promoting water quality in CA. The bill would establish the Safe and Affordable Drinking Water Fund. The purpose of the fund would be to provide support for operation and maintenance costs to supply, treat, and distribute safe drinking water. We don't anticipate action on this bill in 2018 as there is considerable opposition from municipalities.

## PIVOTAL QUESTIONS

# Q: Will AWR's unregulated utility services business (ASUS) benefit from tax reform?

### UBS VIEW

We estimate that ASUS will Initially benefit from tax reform by approximately $0.08 in 2018. Over time, however, we expect AWR to give up those gains through contract renegotiation. Our model assumes that the benefit of the lower corporate tax rate erodes ratably over the five-year forecast period.

### EVIDENCE

AWR's unregulated utility services business, ASUS, provides water and wastewater services at eleven U.S. military bases. AWR indicated that its military contracts do not specifically address changes in tax law; however, management expects the U.S, government to request an adjustment to reflect the lower tax rate. The adjustments will have to be renegotiated at the request of the government contracting agent on a contract-by-contract basis; and therefore are not likely to re-set all at once or right away. American Water Works (AWK), which also operates a military services group, expects the lower tax rate to true-up over time as well. Interestingly, despite the likely lag in true-up, neither company has included the benefit of tax reform in their earnings guidance, presenting the opportunity for upside to near-term estimates.

### WHAT'S PRICED IN?

AWR earnings guidance for ASUS of $0.38–0.42 in 2018 excludes the benefit of tax reform. We calculate an $0.08 benefit from tax reform; however, we also calculate $0.16 adverse earnings impact if the CPUC adopts the 8.23% ROE as proposed by the ALJ in the Cost of Capital case. It is possible that the positive bottom-line impact of tax reform at the nonregulated business is offset by a negative bottom-line impact at the regulated business, thereby eliminating any upside earning potential, while providing a cushion in the event of an adverse Cost of Capital ruling. The consensus mean of $1.79 is relatively unchanged since AWR's year-end conference call and may not incorporate either of these potential earnings impacts. Our estimates include the benefit of the lower corporate tax rate, ratably declining over the five-year forecast period. We make no adjustment for Cost of Capital prior to the final ruling.

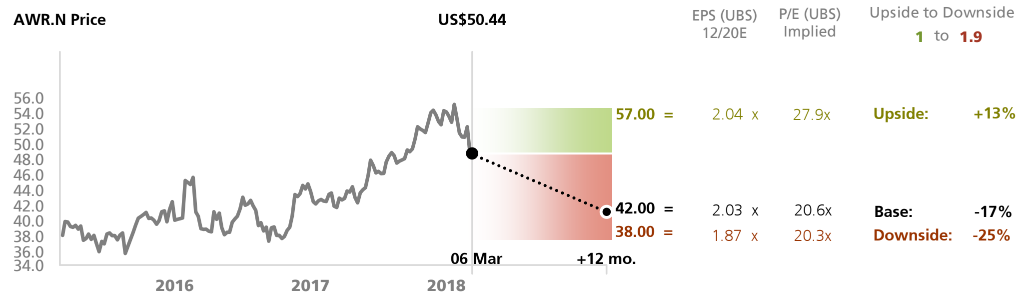
American States Utility Services (ASUS) operates, maintains and performs construction activities on water and wastewater systems at 11 U.S. military bases under 50-year firm, fixed price contracts. The contract prices are reviewed annually under an economic price adjustment. Contracts are also subject to equitable price adjustments for changes in laws and regulations.

**Figure 15: American States Utility Services Military Base Contracts**

| Military Base | Type of System | State |
|---|---|---|
| Fort Bliss | Water and Wastewater | Texas, New Mexico |
| Joint Base Andrews | Water and Wastewater | Maryland |
| Fort Lee | Water | Virginia |
| Joint-Base Langley Eustis | Water and Wastewater | Virginia |
| Joint Expeditionary Base Little Creek-Fort Story | Water and Wastewater | Virginia |
| Fort Jackson | Water and Wastewater | South Carolina |
| Fort Bragg | Water and Wastewater | North Carolina |
| Pope Army Airfield | Water and Wastewater | North Carolina |
| Camp Mackall | Water and Wastewater | North Carolina |
| Eglin Air Force Base | Water and Wastewater | Florida |
| Fort Riley | Water and Wastewater | Kansas |

Source: company filings, UBS Equity Research

## UPSIDE / DOWNSIDE SPECTRUM

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|---|---|---|---|
| $57 upside | 28.0x | 0.0% | 9.43% |
| $42 base | 21.3x | -4.0% | 9.43% |
| $38 downside | 21.3x | -4.0% | 8.23% |

Source: UBS

**Upside (US$57):** Our upside scenario is predicated upon the absolute high group average P/E experienced since 1/1/16 applied to our 2020e EPS.

**Base (US$42):** Our base case is predicated upon a 4% discount to the average water P/E multiple in 2020. The multiple reflects a 2% discount for AWR's regulatory jurisdiction profile, a 1% premium for operating in a state with fair value legislation, and a 3% discount for risk associated with the CA Cost of Capital proceeding.

**Downside (US$38):** Our downside scenario is predicated upon the CA ALJ Proposed Decision being adopted. If so, AWR's CA ROE would decline to 8.23% from 9.43%. We calculate the net effect of the reduction in ROE, slightly offset by a modest increase in equity ratio, would reduce EPS by approximately $0.16 to $1.87 in 2020e. We apply a 4% discount to the average water P/E multiple.

## COMPANY DESCRIPTION

American States Water Company is the parent of Golden State Water Company and American States Utility Services, Inc. (ASUS). AWR provides service to approximately 260,000 water customers and 24,000 electric customers in California. Through its non-regulated subsidiary, ASUS operates, maintains and performs construction activities on water and wastewater systems at U.S. military bases under 50-year firm, fixed-price contracts.

### Industry outlook

Infrastructure spending and consolidation will continue to be the underlying drivers of industry growth for the next 5-10 years. Capital spending should remain at or near peak levels for the next 12 months, and is forecast to remain elevated through at least 2020. We would expect water utilities to follow the pattern of electric utilities with a bias toward upward revision in the spending forecast. Factors that could increase the pace of consolidation include broader adoption of fair value legislation, enhanced focus on water quality and accountability standards, or macro trends that instigate budgetary pressures or risk-off strategies at the municipal level. We expect conservation and efficiency to continue to reduce the trend of water usage nationally, and drought could be a disruptive event regionally.

## American States Water Co (AWR.N)

| **Income statement (US$m)** | **12/15** | **12/16** | **12/17** | **12/18E** | *% ch* | **12/19E** | *% ch* | **12/20E** | **12/21E** | **12/22E** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **459** | **436** | **437** | **447** | *2.4* | **458** | *2.4* | **467** | **476** | **488** |
| Gross profit | 355 | 350 | 349 | 359 | *3.0* | 370 | *2.9* | 379 | 388 | 400 |
| **EBITDA (UBS)** | **161** | **154** | **156** | **163** | *4.5* | **170** | *4.5* | **176** | **181** | **189** |
| Depreciation & amortisation | (42) | (39) | (39) | (40) | *2.7* | (41) | *2.6* | (42) | (43) | (44) |
| **EBIT (UBS)** | **118** | **115** | **117** | **123** | *5.1* | **129** | *5.1* | **133** | **137** | **145** |
| Associates & investment income | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other non-operating income | 0 | 1 | 2 | 0 | - | 0 | - | 0 | 0 | 0 |
| Net interest | (21) | (21) | (21) | (21) | *0.2* | (21) | *-2.2* | (22) | (24) | (26) |
| Exceptionals (incl goodwill) | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Profit before tax** | **98** | **94** | **98** | **102** | *4.0* | **108** | *5.7* | **111** | **113** | **119** |
| Tax | (38) | (35) | (33) | (33) | *0.9* | (35) | *-5.9* | (36) | (37) | (39) |
| **Profit after tax** | **60** | **60** | **65** | **69** | *6.6* | **73** | *5.5* | **75** | **76** | **80** |
| Preference dividends | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Minorities | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Extraordinary items | 0 | 0 | 4 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Net earnings (local GAAP)** | **60** | **60** | **69** | **69** | *-0.2* | **73** | *5.5* | **75** | **76** | **80** |
| **Net earnings (UBS)** | **60** | **60** | **65** | **69** | *6.6* | **73** | *5.5* | **75** | **76** | **80** |
| Tax rate (%) | 38.4 | 36.8 | 34.0 | 32.4 | *-4.7* | 32.5 | *0.3* | 32.5 | 32.7 | 33.0 |

| **Per share (US$)** | **12/15** | **12/16** | **12/17** | **12/18E** | *% ch* | **12/19E** | *% ch* | **12/20E** | **12/21E** | **12/22E** |
|---|---|---|---|---|---|---|---|---|---|---|
| EPS (UBS, diluted) | 1.61 | 1.63 | 1.76 | 1.88 | *6.6* | 1.98 | *5.5* | 2.03 | 2.07 | 2.17 |
| EPS (local GAAP, diluted) | 1.61 | 1.63 | 1.88 | 1.88 | *-0.2* | 1.98 | *5.5* | 2.03 | 2.07 | 2.17 |
| EPS (UBS, basic) | 1.62 | 1.63 | 1.77 | 1.89 | *6.6* | 1.99 | *5.5* | 2.05 | 2.08 | 2.18 |
| Net DPS (US$) | 0.87 | 0.91 | 0.97 | 1.02 | *5.0* | 1.07 | *5.0* | 1.12 | 1.18 | 1.24 |
| Cash EPS (UBS, diluted)[1] | 2.73 | 2.68 | 2.82 | 2.96 | *5.1* | 3.10 | *4.5* | 3.18 | 3.25 | 3.37 |
| Book value per share | 12.51 | 13.53 | 14.51 | 15.33 | *5.6* | 16.25 | *6.0* | 17.17 | 18.07 | 19.00 |
| Average shares (diluted) | 37.61 | 36.75 | 36.84 | 36.84 | *0.0* | 36.84 | *0.0* | 36.84 | 36.84 | 36.84 |

| **Balance sheet (US$m)** | **12/15** | **12/16** | **12/17** | **12/18E** | *% ch* | **12/19E** | *% ch* | **12/20E** | **12/21E** | **12/22E** |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash and equivalents | 4 | 0 | 0 | 7 | *NM* | 6 | *-6.1* | 2 | 1 | 2 |
| Other current assets | 128 | 166 | 155 | 155 | *0.0* | 155 | *0.0* | 155 | 155 | 155 |
| **Total current assets** | **133** | **167** | **155** | **162** | *4.1* | **161** | *-0.2* | **157** | **156** | **158** |
| Net tangible fixed assets | 1,061 | 1,151 | 1,205 | 1,285 | *6.6* | 1,364 | *6.1* | 1,442 | 1,518 | 1,594 |
| Net intangible fixed assets | 1 | 1 | 1 | 1 | *0.0* | 1 | *0.0* | 1 | 1 | 1 |
| Investments / other assets | 149 | 152 | 55 | 55 | *0.0* | 55 | *0.0* | 55 | 55 | 55 |
| **Total assets** | **1,344** | **1,470** | **1,417** | **1,503** | *6.1* | **1,581** | *5.2* | **1,655** | **1,731** | **1,808** |
| Trade payables & other ST liabilities | 95 | 88 | 97 | 97 | *0.0* | 97 | *0.0* | 97 | 97 | 97 |
| Short term debt | 28 | 90 | 59 | 99 | *67.42* | 59 | *-40.25* | 59 | 59 | 59 |
| **Total current liabilities** | **124** | **178** | **157** | **197** | *25.5* | **157** | *-20.3* | **157** | **157** | **157** |
| Long term debt | 321 | 321 | 321 | 336 | *4.5* | 420 | *25.3* | 460 | 503 | 546 |
| Other long term liabilities | 434 | 477 | 409 | 409 | *0.0* | 409 | *0.0* | 409 | 409 | 409 |
| Preferred shares | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities (incl pref shares)** | **878** | **976** | **887** | **941** | *6.1* | **986** | *4.8* | **1,026** | **1,069** | **1,112** |
| Common s/h equity | 466 | 494 | 530 | 562 | *6.0* | 595 | *6.0* | 629 | 662 | 696 |
| Minority interests | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities & equity** | **1,344** | **1,470** | **1,417** | **1,503** | *6.1* | **1,581** | *5.2* | **1,655** | **1,731** | **1,808** |

| **Cash flow (US$m)** | **12/15** | **12/16** | **12/17** | **12/18E** | *% ch* | **12/19E** | *% ch* | **12/20E** | **12/21E** | **12/22E** |
|---|---|---|---|---|---|---|---|---|---|---|
| Net income (before pref divs) | 60 | 60 | 69 | 69 | *-0.2* | 73 | *5.5* | 75 | 76 | 80 |
| Depreciation & amortisation | 42 | 39 | 39 | 40 | *2.7* | 41 | *2.6* | 42 | 43 | 44 |
| Net change in working capital | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other operating | (7) | (2) | 36 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Operating cash flow** | **95** | **97** | **145** | **109** | *-24.4* | **114** | *4.5* | **117** | **120** | **124** |
| Tangible capital expenditure | (87) | (130) | (113) | (120) | *-6.1* | (120) | *0.0* | (120) | (120) | (120) |
| Intangible capital expenditure | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Net (acquisitions) / disposals | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other investing | (3) | (1) | 33 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Investing cash flow** | **(90)** | **(131)** | **(80)** | **(120)** | *-49.9* | **(120)** | *0.0* | **(120)** | **(120)** | **(120)** |
| Equity dividends paid | (33) | (33) | (36) | (37) | *-2.8* | (39) | *-5.0* | (41) | (43) | (46) |
| Share issues / (buybacks) | (72) | 0 | 1 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other financing | 0 | 2 | 2 | 0 | - | 0 | - | 0 | 0 | 0 |
| Change in debt & pref shares | 28 | 62 | (31) | 55 | - | 45 | *-17.78* | 40 | 43 | 43 |
| **Financing cash flow** | **(77)** | **30** | **(65)** | **17** | - | **5** | *-67.8* | **(1)** | **(1)** | **(3)** |
| **Cash flow inc/(dec) in cash** | **(72)** | **(4)** | **0** | **6** | - | **0** | - | **(4)** | **(1)** | **1** |
| FX / non cash items | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Balance sheet inc/(dec) in cash** | **-** | **(4)** | **0** | **6** | - | **0** | - | **(4)** | **(1)** | **1** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1]Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

## American States Water Co (AWR.N)

| Valuation (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| P/E (local GAAP, diluted) | 24.6 | 25.5 | 25.8 | 27.4 | 26.0 | 25.3 | 24.9 | 23.8 |
| P/E (UBS, diluted) | 24.6 | 25.5 | 27.5 | 27.4 | 26.0 | 25.3 | 24.9 | 23.8 |
| P/CEPS | 14.4 | 15.4 | 17.1 | 17.3 | 16.5 | 16.1 | 15.8 | 15.2 |
| Equity FCF (UBS) yield % | 0.5 | (2.2) | 1.8 | (0.6) | (0.3) | (0.2) | (.0) | 0.2 |
| Net dividend yield (%) | 2.2 | 2.2 | 2.0 | 2.0 | 2.1 | 2.2 | 2.3 | 2.4 |
| P/BV x | 3.2 | 3.1 | 3.3 | 3.4 | 3.2 | 3.0 | 2.9 | 2.7 |
| EV/revenues (core) | 4.0 | 4.3 | 5.0 | 5.1 | 5.1 | 5.1 | 5.1 | 5.0 |
| EV/EBITDA (core) | 11.4 | 12.3 | 13.9 | 14.0 | 13.7 | 13.5 | 13.4 | 13.0 |
| EV/EBIT (core) | 15.5 | 16.5 | 18.5 | 18.6 | 18.0 | 17.8 | 17.6 | 17.0 |
| EV/OpFCF (core) | - | - | - | - | - | - | - | - |
| EV/op. invested capital | - | 2.2 | 2.4 | 2.4 | 2.3 | 2.1 | 2.0 | 2.0 |

| Enterprise value (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Market cap. | 1,492 | 1,517 | 1,771 | 1,881 | 1,881 | 1,881 | 1,881 | 1,881 |
| Net debt (cash) | 345 | 378 | 396 | 404 | 451 | 496 | 540 | 582 |
| Buy out of minorities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pension provisions/other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total enterprise value** | **1,837** | **1,895** | **2,166** | **2,285** | **2,332** | **2,377** | **2,421** | **2,463** |
| Non core assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Core enterprise value** | **1,837** | **1,895** | **2,166** | **2,285** | **2,332** | **2,377** | **2,421** | **2,463** |

| Growth (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Revenue | - | -4.9 | 0.2 | 2.4 | 2.4 | 2.0 | 1.9 | 2.6 |
| EBITDA (UBS) | - | -4.3 | 1.7 | 4.5 | 4.5 | 3.1 | 2.8 | 4.7 |
| EBIT (UBS) | - | -3.2 | 2.1 | 5.1 | 5.1 | 3.2 | 2.9 | 5.4 |
| EPS (UBS, diluted) | - | 1.1 | 8.4 | 6.6 | 5.5 | 2.7 | 1.8 | 4.6 |
| Net DPS | - | 4.6 | 5.9 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |

| Margins & Profitability (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Gross profit margin | NM | NM | NM | NM | NM | NM | NM | NM |
| EBITDA margin | 35.0 | 35.2 | 35.7 | 36.5 | 37.2 | 37.6 | 38.0 | 38.7 |
| EBIT margin | 25.8 | 26.3 | 26.8 | 27.5 | 28.2 | 28.6 | 28.9 | 29.6 |
| Net earnings (UBS) margin | 13.2 | 13.7 | 14.8 | 15.5 | 15.9 | 16.1 | 16.0 | 16.3 |
| ROIC (EBIT) | - | 13.4 | 12.9 | 13.0 | 12.6 | 12.0 | 11.6 | 11.5 |
| ROIC post tax | 9.0 | 8.5 | 8.5 | 8.8 | 8.5 | 8.1 | 7.8 | 7.7 |
| ROE (UBS) | 13.0 | 12.4 | 12.7 | 12.7 | 12.6 | 12.2 | 11.8 | 11.8 |

| Capital structure & Coverage (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Net debt / EBITDA | 2.1 | 2.7 | 2.4 | 2.6 | 2.8 | 2.9 | 3.1 | 3.2 |
| Net debt / total equity % | 74.0 | 83.1 | 71.7 | 76.3 | 79.6 | 82.3 | 84.8 | 86.6 |
| Net debt / (net debt + total equity) % | 42.5 | 45.4 | 41.8 | 43.3 | 44.3 | 45.1 | 45.9 | 46.4 |
| Net debt/EV % | 18.8 | 21.7 | 17.6 | 18.7 | 20.3 | 21.8 | 23.2 | 24.5 |
| Capex / depreciation % | NM | NM | NM | NM | NM | NM | NM | NM |
| Capex / revenue % | 19.0 | 29.8 | 25.9 | 26.8 | 26.2 | 25.7 | 25.2 | 24.6 |
| EBIT / net interest | 5.7 | 5.4 | 5.6 | 5.9 | 6.1 | 6.0 | 5.7 | 5.6 |
| Dividend cover (UBS) | 1.9 | 1.8 | 1.8 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 |
| Div. payout ratio (UBS) % | 54.0 | 55.9 | 54.6 | 53.8 | 53.6 | 54.8 | 56.5 | 56.7 |

| Revenues by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 459 | 436 | 437 | 447 | 458 | 467 | 476 | 488 |
| **Total** | **459** | **436** | **437** | **447** | **458** | **467** | **476** | **488** |

| EBIT (UBS) by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 118 | 115 | 117 | 123 | 129 | 133 | 137 | 145 |
| **Total** | **118** | **115** | **117** | **123** | **129** | **133** | **137** | **145** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

# American Water Works Co

## Initiating Buy: Undervalued Core Water Utility

Equities

Americas
Water Utilities

| | |
|---|---|
| 12-month rating | Buy |
| | *Prior: Not Rated* |
| 12m price target | US$89.00 |
| | *Prior: -* |
| Price | US$80.18 |
| RIC: AWK.N BBG: AWK US | |

**Trading data and key metrics**

| | |
|---|---|
| 52-wk range | US$92.25-75.25 |
| Market cap. | US$14.3bn |
| Shares o/s | 178m (COM) |
| Free float | 100% |
| Avg. daily volume ('000) | 370 |
| Avg. daily value (m) | US$31.0 |
| Common s/h equity (12/18E) | US$5.67bn |
| P/BV (12/18E) | 2.5x |
| Net debt / EBITDA (12/18E) | 4.6x |

**EPS (UBS, diluted) (US$)**

| | 12/18E | | | |
|---|---|---|---|---|
| | From | To | % ch | Cons. |
| Q1E | - | 0.56 | - | 0.54 |
| Q2E | - | 0.79 | - | 0.83 |
| Q3E | - | 1.17 | - | 1.18 |
| Q4E | - | 0.75 | - | 0.72 |
| 12/18E | - | 3.26 | - | 3.27 |
| 12/19E | - | 3.52 | - | 3.54 |
| 12/20E | - | 3.78 | - | 3.81 |

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### The bellwether of the group

We are initiating on AWK with a Buy rating as part of our sector launch on water utilities. AWK offers investors exposure to a relative low-risk regulated business, above-average 7–10% earnings growth rate, and good visibility in capital spending. In our view, AWK is the best positioned water utility to capitalize on the industry themes of infrastructure investment and consolidation. We see total return potential of 13%.

### Industry leader through and through

AWK warrants the role of industry leader for a variety of reasons. With a broad geographic footprint, AWK is uniquely placed to provide feedback to regulators and to represent the industry in the political process. The company's exposure in 16 states also provides a springboard for growth through consolidation. AWK posts the highest earnings and dividend growth in our universe, forecasting earnings growth of 7–10% and dividend growth at the top of that range. Finally, AWK is the most liquid of the water utilities at approximately $14 billion market cap, over 2x larger than Aqua America.

### Opportunities outweigh the risks – positive upside skew

Our outlook for AWK skews 3:1 to the upside. Our upside case is predicated upon an earnings growth rate of 10% at the high end of AWK's target. AWK targets rate base growth of 5–7% and new regulated acquisitions are targeted to add another 1–2%. Additionally, AWK's Market-based Businesses are expected to contribute 1% growth. Increased rig activity in the Marcellus shale could benefit AWK's Keystone business. In the near-term, earnings may modestly benefit from the lower tax rate through its military base contracts. We assume the government will seek to renegotiate these contracts and the tax benefit will erode over time. We estimate approximately $0.02 of annualized earnings risk in California if the commission adopts the ALJ Proposed Decision.

### Valuation:

Our $89 price target is predicated upon a 10% premium to the 2020 average water utility P/E multiple. Our estimates are $3.26 in 2018, $3.52 in 2019, and $3.78 in 2020. The 10% premium reflects AWK's broad geographic footprint, consolidation potential, and above-average earnings and dividend growth.

| Highlights (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Revenues | 3,159 | 3,302 | 3,357 | 3,583 | 3,798 | 3,986 | 4,183 | 4,387 |
| EBIT (UBS) | 1,075 | 1,145 | 1,222 | 1,304 | 1,411 | 1,520 | 1,635 | 1,757 |
| Net earnings (UBS) | 476 | 507 | 543 | 585 | 632 | 681 | 734 | 792 |
| EPS (UBS, diluted) (US$) | 2.64 | 2.83 | 3.03 | 3.26 | 3.52 | 3.78 | 4.07 | 4.39 |
| DPS (US$) | 1.36 | 1.50 | 1.66 | 1.83 | 2.01 | 0.00 | 0.00 | 0.00 |
| Net (debt) / cash | (6,490) | (7,087) | (7,643) | (8,492) | (9,216) | (9,959) | (10,661) | (11,321) |

| Profitability/valuation | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| EBIT margin % | 34.0 | 34.7 | 36.4 | 36.4 | 37.2 | 38.1 | 39.1 | 40.0 |
| ROIC (EBIT) % | - | 9.6 | 9.6 | 9.6 | 9.6 | 9.7 | 9.8 | 9.9 |
| EV/EBITDA (core) x | 10.7 | 12.2 | 12.7 | 12.2 | 11.7 | 11.3 | 10.9 | 10.5 |
| P/E (UBS, diluted) x | 20.5 | 25.6 | 26.6 | 24.6 | 22.8 | 21.2 | 19.7 | 18.3 |
| Equity FCF (UBS) yield % | 0.4 | (0.2) | 0.1 | (3.8) | (2.7) | (2.6) | (2.0) | (1.4) |
| Net dividend yield % | 2.5 | 2.1 | 2.1 | 2.3 | 2.5 | 0.0 | 0.0 | 0.0 |

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$80.18 on 07 Mar 2018 17:12 EST

**UBS Research THESIS MAP** a guide to our thinking and what's where in this report

PIVOTAL QUESTIONS

**Q: Will AWK continue to benefit from ongoing sector consolidation?**

Yes. Consolidation is a logical outgrowth of the increased spending required to replace aging infrastructure and ensure water quality. As the industry leader, we believe AWK is well placed to benefit from ongoing consolidation in the sector. Indeed, AWK already exemplifies what a successful roll-up strategy looks like.

more→

**Q: Is AWK's geographic diversity a competitive advantage?**

Yes. Geographic diversity provides AWK a broader footprint to pursue acquisitions, and also reduces reliance and exposure to any one state's regulations and policies.

more→

UBS VIEW

In our view, AWK warrants the highest premium among the regulated water utilities due to its above-average earnings and dividend growth, geographic diversity, economies of scale, and industry leadership.

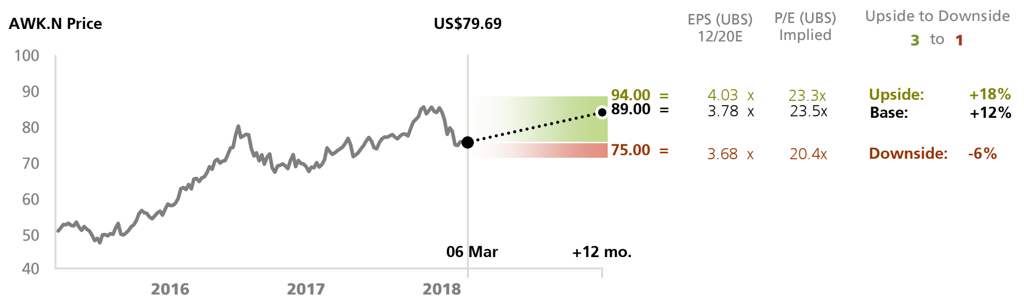
EVIDENCE

We model earnings growth of 7.7% for AWK, with upside potential to as high as 10% if AWK finds incremental infrastructure investment or consolidation opportunities. This is the highest earnings growth rate in our universe. We also expect AWK to continue raising the dividend at or near 10% per year for the five-year forecast, without compromising the company's 50–60% target payout ratio. AWK currently has 16 acquisitions pending in six states (five of which have implemented fair value legislation). We model a steady diet of tuck-in acquisitions in our forecast.

WHAT'S PRICED IN?

AWK's valuation does not reflect the above-average growth prospects of the company, in our view. The stock trades at a 1% discount to the 2020e average water utility P/E, compared to our view that the shares should trade at a 10% premium to the group average multiple.

UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Avg P/E multiple | Premium/ discount | EPS growth rate |
|---|---|---|---|
| $94 upside | 21.3x | 10.0% | 10% |
| $89 base | 21.3x | 10.0% | 7.7% |
| $75 downside | 21.0x | -2.4% | 6.7% |

Source: UBS

COMPANY DESCRIPTION

American Water Works  is the largest and most geographically diverse, publicly-traded water and wastewater utility in the U.S. AWK provides water and wastewater services to...

PIVOTAL QUESTIONS

# Q: Will AWK continue to benefit from ongoing sector consolidation?

## UBS VIEW

Yes. Consolidation is a logical outgrowth of the increased spending required to replace aging infrastructure and ensure water quality. As the industry leader, we believe AWK is well placed to benefit from ongoing consolidation in the sector. Indeed, AWK already exemplifies what a successful roll-up strategy looks like.

## EVIDENCE

As the industry leader, AWK has a voice to promote the benefits of fair value legislation in states that have not yet adopted it. California was the first state to adopt fair value legislation in 1997. Since that time, AWK has argued publicly for the adoption of similar legislation in other states. Only six states have enacted fair value legislation, so in our view there is improvement that can be made across the nation. AWK operates in all six states with fair value legislation and is likely to continue to argue for its adoption elsewhere.

In addition, the New Jersey Water Quality Accountability Act enacted in 2017 is another legislative template that may become a standard that other states seek to emulate. The legislation would help level the playing field between investor-owned water utilities and municipal water utilities by holding municipal officers or senior officials to the same accountability standards that IOU senior managers are held. We expect AWK and WTR to be involved in discussions with policymakers in other states that may consider implementing similar legislation.

## WHAT'S PRICED IN?

AWK's discount multiple does not appear properly suited to AWK's leadership role in the industry, consolidation potential or overall growth objectives, in our view. AWK expects regulated acquisitions to contribute 1–2% of AWK's 7–10% total earnings growth. AWK's geographic footprint, with water and wastewater operations in 16 states, gives the company a competitive advantage and a broad base on which to grow through consolidation.

PIVOTAL QUESTIONS

# Q: Is AWK's geographic diversity a competitive advantage?

UBS VIEW

Yes. Geographic diversity provides AWK a broader footprint to pursue acquisitions, and also reduces reliance and exposure to any one state's regulations and policies.

EVIDENCE

AWK operates in 16 states, with AWK's largest concentration of rate base (27%) in PA. As a result of the company's footprint, the earnings and growth trajectory aren't tied to one specific state. For example, in California, where the ALJ recommended an 8.23% Cost of Capital for the water utilities, if adopted, we estimate approximately $0.02 of earnings exposure for AWK, compared to $0.16 at AWR and $0.12 at CWT (which each have nearly 100% of their rate base in CA).

We typically see a discount imputed to stocks involved in significant rate cases. AWK often has rate cases pending in multiple states at any given time; however, because of its geographic diversity, AWK has limited exposure to any particular rate case thereby avoiding the rate case overhang discount.

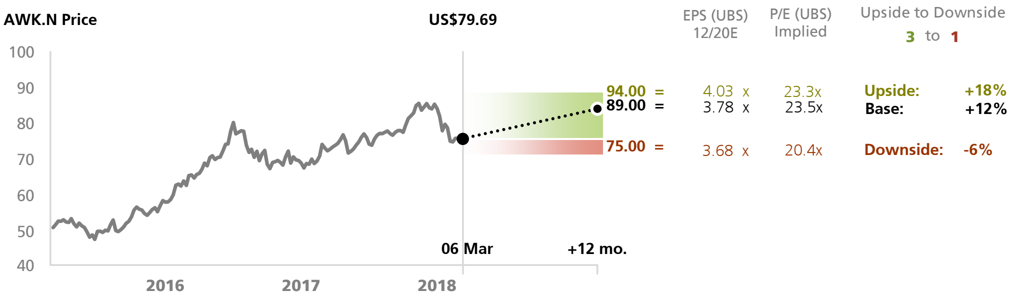
Through its exposure in 16 states, AWK is also able to take advantage of a number of mechanisms to reduce regulatory lag, such as infrastructure surcharges, consolidated tariffs, and revenue stabilization mechanisms (see Figure 8 of our sector launch). A narrower footprint would reduce AWK's opportunity for timely expense recovery, in our view.

Finally, six states currently have fair value legislation (see Figure 11 of our sector launch), which allows the rate base of acquired assets to be set at the lower of purchase price or fair market value. AWK operates in all six of the states. Fair value legislation has been a material enabling factor toward consolidation. In 2017, AWK closed 19 acquisitions totalling almost 40,000 customer connections in nine states. AWK currently has 16 acquisitions pending, totalling approximately 23,000 customer connections in six states.

WHAT'S PRICED IN?

We don't think AWK gets the credit it deserves for this important competitive advantage. AWK trades at a discount to the 2019 average water utility P/E. We think AWK's geographic footprint, combined with its size, scale, and industry leadership warrant the highest premium in the group.

## UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Avg P/E multiple | Premium/ discount | EPS growth rate |
|---|---|---|---|
| $94 upside | 21.3x | 10.0% | 10% |
| $89 base | 21.3x | 10.0% | 7.7% |
| $75 downside | 21.0x | -2.4% | 6.7% |

Source: UBS

**Upside (US$94):** Our upside scenario assumes AWK achieves the high end of the targeted 7–10% earnings growth rate. We apply a 10% premium to a 21.3x P/E multiple.

**Base (US$89):** Our base case is predicated upon a 10% premium applied to the 2020 average water utility P/E multiple.

**Downside (US$75):** Our downside scenario is predicated upon the trough absolute average water utility P/E experienced since 1/1/16. We apply a 2% discount the multiple which reflects a historical low relative discount for AWK. We also assume the 2018–2020 earnings growth rate is 100 basis points lower than our base case estimates.

# COMPANY DESCRIPTION

American Water Works is the largest and most geographically diverse, publicly-traded water and wastewater utility in the U.S. AWK provides water and wastewater services to approximately 3.4MM customers in 16 states through its Regulated Businesses. Additionally, AWK provides complementary water and wastewater services through its nonregulated Market-based Businesses. The Regulated Businesses contribute approximately 88% of revenues and 95% of net income (allocating Parent & Other losses 50/50 to the Regulated and Market-based Businesses).

**Industry outlook**

Infrastructure spending and consolidation will continue to be the underlying drivers of industry growth for the next 5-10 years. Capital spending should remain at or near peak levels for the next 12 months, and is forecast to remain elevated through at least 2020. We would expect water utilities to follow the pattern of electric utilities with a bias toward upward revision in the spending forecast. Factors that could increase the pace of consolidation include broader adoption of fair value legislation, enhanced focus on water quality and accountability standards, or macro trends that instigate budgetary pressures or risk-off strategies at the municipal level. We expect conservation and efficiency to continue to reduce the trend of water usage nationally, and drought could be a disruptive event regionally.

## American Water Works Co (AWK.N)

| Income statement (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **3,159** | **3,302** | **3,357** | **3,583** | 6.7 | **3,798** | 6.0 | **3,986** | **4,183** | **4,387** |
| Gross profit | 1,755 | 1,863 | 1,957 | 2,118 | 8.3 | 2,269 | 7.1 | 2,415 | 2,568 | 2,726 |
| **EBITDA (UBS)** | **1,515** | **1,615** | **1,714** | **1,832** | 6.9 | **1,975** | 7.8 | **2,112** | **2,256** | **2,406** |
| Depreciation & amortisation | (440) | (470) | (492) | (527) | 7.2 | (564) | 6.9 | (592) | (621) | (649) |
| **EBIT (UBS)** | **1,075** | **1,145** | **1,222** | **1,304** | 6.8 | **1,411** | 8.2 | **1,520** | **1,635** | **1,757** |
| Associates & investment income | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other non-operating income | 15 | 15 | 17 | 17 | 0.0 | 17 | 0.0 | 17 | 17 | 17 |
| Net interest | (308) | (325) | (342) | (362) | -6.0 | (393) | -8.4 | (422) | (451) | (478) |
| Exceptionals (incl goodwill) | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Profit before tax** | **782** | **835** | **897** | **959** | 6.9 | **1,035** | 7.9 | **1,115** | **1,201** | **1,296** |
| Tax | (306) | (328) | (354) | (374) | -5.5 | (403) | -7.9 | (434) | (467) | (503) |
| **Profit after tax** | **476** | **507** | **543** | **585** | 7.8 | **632** | 8.0 | **681** | **734** | **792** |
| Preference dividends | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Minorities | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Extraordinary items | 0 | (39) | (116) | 0 | - | 0 | - | 0 | 0 | 0 |
| **Net earnings (local GAAP)** | **476** | **468** | **427** | **585** | 37.2 | **632** | 8.0 | **681** | **734** | **792** |
| **Net earnings (UBS)** | **476** | **507** | **543** | **585** | 7.8 | **632** | 8.0 | **681** | **734** | **792** |
| Tax rate (%) | 39.1 | 39.3 | 39.5 | 39.0 | -1.3 | 39.0 | 0.0 | 38.9 | 38.9 | 38.9 |

| Per share (US$) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| EPS (UBS, diluted) | 2.64 | 2.83 | 3.03 | 3.26 | 7.6 | 3.52 | 7.8 | 3.78 | 4.07 | 4.39 |
| EPS (local GAAP, diluted) | 2.64 | 2.61 | 2.38 | 3.26 | 36.9 | 3.52 | 7.8 | 3.78 | 4.07 | 4.39 |
| EPS (UBS, basic) | 2.66 | 2.85 | 3.05 | 3.28 | 7.6 | 3.54 | 7.8 | 3.80 | 4.10 | 4.41 |
| Net DPS (US$) | 1.36 | 1.50 | 1.66 | 1.83 | 10.0 | 2.01 | 10.0 | 0.00 | 0.00 | 0.00 |
| Cash EPS (UBS, diluted)[1] | 5.09 | 5.46 | 5.78 | 6.20 | 7.3 | 6.65 | 7.3 | 7.07 | 7.52 | 7.99 |
| Book value per share | 28.08 | 29.31 | 30.25 | 31.79 | 5.1 | 33.40 | 5.1 | 35.07 | 36.81 | 38.63 |
| Average shares (diluted) | 180.00 | 179.00 | 179.00 | 179.33 | 0.2 | 179.66 | 0.2 | 179.96 | 180.24 | 180.50 |

| Balance sheet (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash and equivalents | 66 | 95 | 82 | 24 | -70.5 | 16 | -32.9 | 13 | 36 | 1 |
| Other current assets | 591 | 689 | 638 | 638 | 0.0 | 638 | 0.0 | 638 | 638 | 638 |
| **Total current assets** | **657** | **784** | **720** | **662** | -8.0 | **654** | -1.2 | **651** | **674** | **639** |
| Net tangible fixed assets | 13,933 | 14,992 | 16,246 | 17,379 | 7.0 | 18,400 | 5.9 | 19,453 | 20,477 | 21,473 |
| Net intangible fixed assets | 1,302 | 1,345 | 1,379 | 1,379 | 0.0 | 1,379 | 0.0 | 1,379 | 1,379 | 1,379 |
| Investments / other assets | 1,349 | 1,361 | 1,137 | 1,137 | 0.0 | 1,137 | 0.0 | 1,137 | 1,137 | 1,137 |
| **Total assets** | **17,241** | **18,482** | **19,482** | **20,557** | 5.5 | **21,570** | 4.9 | **22,620** | **23,667** | **24,628** |
| Trade payables & other ST liabilities | 851 | 969 | 1,098 | 1,098 | 0.0 | 1,098 | 0.0 | 1,098 | 1,098 | 1,098 |
| Short term debt | 682 | 1,423 | 1,227 | 1,075 | -12.39 | 956 | -11.07 | 1,204 | 1,028 | 905 |
| **Total current liabilities** | **1,533** | **2,392** | **2,325** | **2,173** | -6.5 | **2,054** | -5.5 | **2,302** | **2,126** | **2,003** |
| Long term debt | 5,874 | 5,759 | 6,498 | 7,441 | 14.5 | 8,276 | 11.2 | 8,768 | 9,669 | 10,417 |
| Other long term liabilities | 4,785 | 5,113 | 5,274 | 5,274 | 0.0 | 5,274 | 0.0 | 5,274 | 5,274 | 5,274 |
| Preferred shares | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities (incl pref shares)** | **12,192** | **13,264** | **14,097** | **14,888** | 5.6 | **15,604** | 4.8 | **16,344** | **17,069** | **17,694** |
| Common s/h equity | 5,049 | 5,218 | 5,385 | 5,669 | 5.3 | 5,966 | 5.2 | 6,276 | 6,598 | 6,934 |
| Minority interests | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities & equity** | **17,241** | **18,482** | **19,482** | **20,557** | 5.5 | **21,570** | 4.9 | **22,620** | **23,667** | **24,628** |

| Cash flow (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| Net income (before pref divs) | 476 | 468 | 427 | 585 | 37.2 | 632 | 8.0 | 681 | 734 | 792 |
| Depreciation & amortisation | 440 | 470 | 492 | 527 | 7.2 | 564 | 6.9 | 592 | 621 | 649 |
| Net change in working capital | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other operating | 279 | 351 | 530 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Operating cash flow** | **1,195** | **1,289** | **1,449** | **1,112** | -23.2 | **1,196** | 7.5 | **1,273** | **1,355** | **1,442** |
| Tangible capital expenditure | (1,160) | (1,311) | (1,434) | (1,660) | -15.8 | (1,585) | 4.5 | (1,645) | (1,645) | (1,645) |
| Intangible capital expenditure | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Net (acquisitions) / disposals | (192) | (195) | (162) | 0 | - | 0 | - | 0 | 0 | 0 |
| Other investing | (107) | (84) | (76) | 0 | - | 0 | - | 0 | 0 | 0 |
| **Investing cash flow** | **(1,459)** | **(1,590)** | **(1,672)** | **(1,660)** | 0.7 | **(1,585)** | 4.5 | **(1,645)** | **(1,645)** | **(1,645)** |
| Equity dividends paid | (239) | (261) | (289) | (327) | -13.2 | (361) | -10.2 | (397) | (438) | (482) |
| Share issues / (buybacks) | (87) | (39) | (28) | 26 | - | 26 | 0.0 | 26 | 26 | 26 |
| Other financing | 3 | (2) | (30) | (1) | 96.67 | 0 | - | 0 | 0 | 0 |
| Change in debt & pref shares | 613 | 630 | 554 | 791 | 42.78 | 716 | -9.48 | 740 | 725 | 625 |
| **Financing cash flow** | **290** | **328** | **207** | **489** | 136.2 | **381** | -22.0 | **369** | **313** | **169** |
| **Cash flow inc/(dec) in cash** | **26** | **27** | **(16)** | **(59)** | -267.6 | **(8)** | 86.5 | **(3)** | **23** | **(35)** |
| FX / non cash items | - | 2 | 3 | 1 | -66.7 | 0 | - | 0 | 0 | 0 |
| **Balance sheet inc/(dec) in cash** | **-** | **29** | **(13)** | **(58)** | -344.7 | **(8)** | 86.2 | **(3)** | **23** | **(35)** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1]Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

## American Water Works Co (AWK.N)

| Valuation (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| P/E (local GAAP, diluted) | 20.5 | 27.8 | 33.8 | 24.6 | 22.8 | 21.2 | 19.7 | 18.3 |
| P/E (UBS, diluted) | 20.5 | 25.6 | 26.6 | 24.6 | 22.8 | 21.2 | 19.7 | 18.3 |
| P/CEPS | 10.6 | 13.2 | 13.9 | 12.9 | 12.0 | 11.3 | 10.6 | 10.0 |
| Equity FCF (UBS) yield % | 0.4 | (0.2) | 0.1 | (3.8) | (2.7) | (2.6) | (2.0) | (1.4) |
| Net dividend yield (%) | 2.5 | 2.1 | 2.1 | 2.3 | 2.5 | 0.0 | 0.0 | 0.0 |
| P/BV x | 1.9 | 2.5 | 2.7 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 |
| EV/revenues (core) | 5.1 | 6.0 | 6.5 | 6.2 | 6.1 | 6.0 | 5.9 | 5.8 |
| EV/EBITDA (core) | 10.7 | 12.2 | 12.7 | 12.2 | 11.7 | 11.3 | 10.9 | 10.5 |
| EV/EBIT (core) | 15.1 | 17.2 | 17.8 | 17.1 | 16.4 | 15.7 | 15.0 | 14.4 |
| EV/OpFCF (core) | - | - | - | - | - | - | - | - |
| EV/op. invested capital | - | 1.7 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 |

| Enterprise value (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Market cap. | 9,743 | 12,936 | 14,342 | 14,273 | 14,273 | 14,273 | 14,273 | 14,273 |
| Net debt (cash) | 6,490 | 6,789 | 7,365 | 8,067 | 8,854 | 9,587 | 10,310 | 10,991 |
| Buy out of minorities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pension provisions/other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total enterprise value** | **16,233** | **19,724** | **21,707** | **22,340** | **23,127** | **23,860** | **24,583** | **25,264** |
| Non core assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Core enterprise value** | **16,233** | **19,724** | **21,707** | **22,340** | **23,127** | **23,860** | **24,583** | **25,264** |

| Growth (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Revenue | - | 4.5 | 1.7 | 6.7 | 6.0 | 5.0 | 4.9 | 4.9 |
| EBITDA (UBS) | - | 6.6 | 6.1 | 6.9 | 7.8 | 7.0 | 6.8 | 6.6 |
| EBIT (UBS) | - | 6.5 | 6.7 | 6.8 | 8.2 | 7.7 | 7.6 | 7.4 |
| EPS (UBS, diluted) | - | 7.1 | 7.0 | 7.6 | 7.8 | 7.6 | 7.6 | 7.8 |
| Net DPS | - | 10.3 | 10.7 | 10.0 | 10.0 | - | - | - |

| Margins & Profitability (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Gross profit margin | 55.6 | 56.4 | 58.3 | 59.1 | 59.8 | 60.6 | 61.4 | 62.1 |
| EBITDA margin | 48.0 | 48.9 | 51.1 | 51.1 | 52.0 | 53.0 | 53.9 | 54.8 |
| EBIT margin | 34.0 | 34.7 | 36.4 | 36.4 | 37.2 | 38.1 | 39.1 | 40.0 |
| Net earnings (UBS) margin | 15.1 | 15.4 | 16.2 | 16.3 | 16.6 | 17.1 | 17.5 | 18.1 |
| ROIC (EBIT) | - | 9.6 | 9.6 | 9.6 | 9.6 | 9.7 | 9.8 | 9.9 |
| ROIC post tax | 5.7 | 5.8 | 5.8 | 5.9 | 5.9 | 5.9 | 6.0 | 6.1 |
| ROE (UBS) | 9.4 | 9.9 | 10.2 | 10.6 | 10.9 | 11.1 | 11.4 | 11.7 |

| Capital structure & Coverage (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Net debt / EBITDA | 4.3 | 4.4 | 4.5 | 4.6 | 4.7 | 4.7 | 4.7 | 4.7 |
| Net debt / total equity % | 128.5 | 135.8 | 141.9 | 149.8 | 154.5 | 158.7 | 161.6 | 163.3 |
| Net debt / (net debt + total equity) % | 56.2 | 57.6 | 58.7 | 60.0 | 60.7 | 61.3 | 61.8 | 62.0 |
| Net debt/EV % | 40.0 | 35.9 | 35.2 | 38.0 | 39.8 | 41.7 | 43.4 | 44.8 |
| Capex / depreciation % | NM | NM | NM | NM | NM | NM | NM | NM |
| Capex / revenue % | NM | NM | NM | NM | NM | NM | NM | NM |
| EBIT / net interest | 3.5 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.7 |
| Dividend cover (UBS) | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 | - | - | - |
| Div. payout ratio (UBS) % | 51.1 | 52.7 | 54.5 | 55.7 | 56.8 | - | - | - |

| Revenues by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 3,159 | 3,302 | 3,357 | 3,583 | 3,798 | 3,986 | 4,183 | 4,387 |
| **Total** | **3,159** | **3,302** | **3,357** | **3,583** | **3,798** | **3,986** | **4,183** | **4,387** |

| EBIT (UBS) by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 1,075 | 1,145 | 1,222 | 1,304 | 1,411 | 1,520 | 1,635 | 1,757 |
| **Total** | **1,075** | **1,145** | **1,222** | **1,304** | **1,411** | **1,520** | **1,635** | **1,757** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

# Aqua America Inc

## Initiating Neutral: PA Rate Case and M&A Limit Upside

### Rate Case and Strategic M&A Present Uncertainty

We are initiating on WTR with a Neutral rating as part of our sector launch on water utilities. The shares appear fairly valued here. We expect WTR earnings growth to increase to 7% once it completes a widely anticipated rate case in PA in 2019. Until that time, we expect upside in the shares to be limited by the rate case overhang. Additionally, management's willingness to consider strategic acquisitions of other utilities or infrastructure businesses, beyond just water and wastewater assets, may have given some investors pause.

### PA Rate Case Limits Upside

Pennsylvania is WTR's largest jurisdiction, accounting for approximately 69% of rate base. This summer, the company intends to file its first rate case in PA since 2011. In the intervening years, WTR has invested over $2B of capital and closed over 20 acquisitions. Also noteworthy, this rate case will be WTR's first filing using a fully projected future test year (2019).

### Growth Strategy

WTR's primary focus is growing the water/wastewater business through acquisitions of municipal systems. Last week, the company also expressed interest in opportunistic acquisitions of large, regulated utility or infrastructure assets, rekindling investors' previous fears that WTR could seek to add electric or gas utility assets. WTR also indicated that it would consider adding market-based assets that complement WTR's regulated business. We would not look for significant growth in market-based assets.

### Valuation:

Our $36 price target is predicated upon a 6% premium to the 2020 average P/E of our water universe. Our estimates are $1.40 in 2018, $1.48 in 2019, and $1.59 in 2020. The 6% premium that we assign to the shares reflects WTR's concentration in a quality regulatory jurisdiction, as well as geographic diversity in four fair value states, somewhat offset by the risk of the PA rate case.

**Equities**

Americas
Water Utilities

| | |
|---|---|
| **12-month rating** | **Neutral** |
| | *Prior: Not Rated* |
| **12m price target** | **US$36.00** |
| | *Prior: -* |
| **Price** | **US$33.43** |

**RIC:** WTR.N **BBG:** WTR US

| Trading data and key metrics | |
|---|---|
| **52-wk range** | US$39.33-30.45 |
| **Market cap.** | US$5.93bn |
| **Shares o/s** | 177m (COM) |
| **Free float** | 100% |
| **Avg. daily volume ('000)** | 226 |
| **Avg. daily value (m)** | US$8.1 |
| **Common s/h equity (12/18E)** | US$2.05bn |
| **P/BV (12/18E)** | 2.9x |
| **Net debt / EBITDA (12/18E)** | 4.9x |

EPS (UBS, diluted) (US$)

| | 12/18E | | | |
|---|---|---|---|---|
| | From | To | % ch | Cons. |
| **Q1E** | - | 0.29 | - | 0.29 |
| **Q2E** | - | 0.36 | - | 0.36 |
| **Q3E** | - | 0.45 | - | 0.43 |
| **Q4E** | - | 0.31 | - | 0.32 |
| **12/18E** | - | 1.40 | - | 1.40 |
| **12/19E** | - | 1.48 | - | 1.51 |
| **12/20E** | - | 1.59 | - | 1.60 |

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| Highlights (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| **Revenues** | 814 | 820 | 810 | 838 | 874 | 913 | 952 | 991 |
| **EBIT (UBS)** | 321 | 326 | 329 | 347 | 373 | 402 | 431 | 461 |
| **Net earnings (UBS)** | 202 | 234 | 240 | 250 | 264 | 284 | 304 | 324 |
| **EPS (UBS, diluted) (US$)** | 1.14 | 1.32 | 1.35 | 1.40 | 1.48 | 1.59 | 1.70 | 1.82 |
| **DPS (US$)** | 0.69 | 0.74 | 0.79 | 0.88 | 0.94 | 1.00 | 1.07 | 1.15 |
| **Net (debt) / cash** | (1,770) | (1,891) | (2,121) | (2,403) | (2,599) | (2,780) | (2,949) | (3,105) |

| Profitability/valuation | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| **EBIT margin %** | 39.4 | 39.7 | 40.6 | 41.4 | 42.7 | 44.1 | 45.3 | 46.5 |
| **ROIC (EBIT) %** | - | 9.0 | 8.4 | 8.1 | 8.1 | 8.2 | 8.3 | 8.5 |
| **EV/EBITDA (core) x** | 14.6 | 16.2 | 17.0 | 16.7 | 16.1 | 15.5 | 14.9 | 14.3 |
| **P/E (UBS, diluted) x** | 23.6 | 23.9 | 24.8 | 23.9 | 22.6 | 21.0 | 19.6 | 18.4 |
| **Equity FCF (UBS) yield %** | 0.1 | 0.2 | (1.6) | (2.1) | (0.5) | (.0) | 0.4 | 0.8 |
| **Net dividend yield %** | 2.6 | 2.3 | 2.4 | 2.6 | 2.8 | 3.0 | 3.2 | 3.4 |

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$33.43 on 07 Mar 2018 17:13 EST

**UBS Research THESIS MAP** a guide to our thinking and what's where in this report

## PIVOTAL QUESTIONS

**Q: What is WTR's earnings growth outlook 2018–2022?**

We model 6.2% earnings CAGR for WTR through 2022. The trajectory of earnings reflects lower growth in 2018 and 2019, ahead of and during the PA rate case filing. Post resolution of the rate case in mid-2019, we expect that WTR should be able to grow earnings in line with rate base growth of 7%.

more→

**Q: Would it be value-enhancing if WTR's strategic M&A strategy targeted gas or electric assets?**

Although the end result may be the same, we don't have the same optimism for water companies acquiring gas or electric assets that we would have for electric/gas companies acquiring water assets. This is due to the differences in risk profile and growth outlook for each asset class. Water companies tend to be lower risk and higher growth than either electric or gas utilities. Therefore, electric/gas utilities that purchase water assets may be viewed as incrementally lowering their asset risk and potentially increasing their growth. Alternatively, water companies purchasing electric/gas assets may be viewed as increasing their risk profile and potentially reducing growth.

more→

## UBS VIEW

There is much to like about WTR. The company is geographically diverse, with water and wastewater systems in eight states. Although the majority of rate base is concentrated in PA, we view that state as having constructive regulatory treatment. Four of the states in which WTR operates, have fair value legislation, enabling greater opportunities for growth through acquisition. WTR has a demonstrated track record of closing acquisitions, adding, on average, 8,600 new customers annually through tuck-ins.

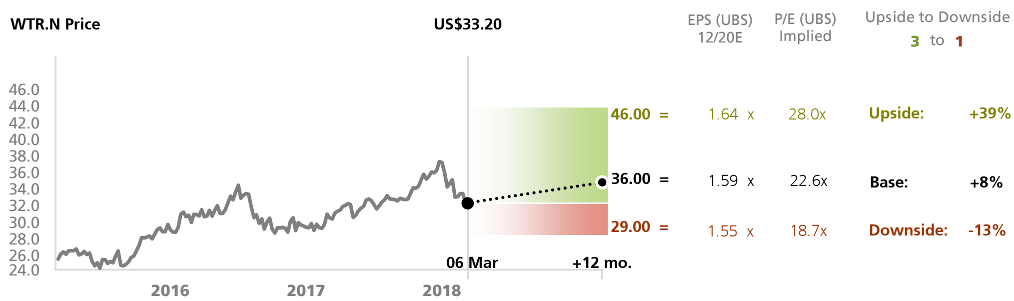
## EVIDENCE

WTR expects file a rate case in PA in summer 2018 for rates effective mid-2019. Resolution of that case should allow WTR's earnings growth rate to increase in 2020+ to approximate its 7% rate base growth. WTR has six pending acquisitions that are expected to close in 2018. WTR's operations are predominantly in states with fair value legislation, supporting the likelihood of a continuing stream of tuck-ins.

## WHAT'S PRICED IN?

We think WTR's stock price reflects the company's growth outlook, while also taking into consideration the normal risks associated with a rate case proceeding. It is possible that WTR's strategic acquisition aspirations may have heightened investors' concerns regarding WTR's potential to step outside the water/wastewater asset profile.

## UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Peer Avg P/E mulitple | Premium/ discount | EPS growth rate |
|---|---|---|---|
| $46 upside | 28.0x | 0% | 6.8% |
| $36 base | 21.3x | 6% | 5.8% |
| $29 downside | 21.0x | -11% | 4.8% |

Source: UBS

more→

## COMPANY DESCRIPTION

Aqua America, Inc. provides regulated utility water and wastewater services to approximately 972,000 customers in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey,...

more →

## PIVOTAL QUESTIONS

# Q: What is WTR's earnings growth outlook 2018–2022?

### UBS VIEW

We model 6.2% earnings CAGR for WTR through 2022. The trajectory of earnings reflects lower growth in 2018 and 2019, ahead of and during the PA rate case filing. Post resolution of the rate case in mid-2019, we expect that WTR should be able to grow earnings in line with rate base growth of 7%.

### EVIDENCE

Pennsylvania is WTR's largest jurisdiction, accounting for approximately 69% of total rate base; therefore, the growth outlook in PA tends to be indicative for the company overall. WTR has not filed a rate case in PA since 2011. Since that time, WTR will have invested over $2B of new capital in the state. The long delay in filing the rate base is attributed to flow through of the repair tax deduction which Aqua PA implemented in 4Q 2012. The company filed for a DSIC surcharge in PA in October 2017 and again in January 2018. The company expects to file for a third DSIC surcharge increase in April 2018 and then file the PA rate case in the summer (we estimate July). We view PA as a constructive regulatory jurisdiction and rank the state in Tier 2 of our Regulatory Jurisdiction Rankings (see Figure 12 of our sector launch). Additional sources of growth for WTR include organic customer growth and a steady diet of tuck-in acquisitions. In 2018, WTR estimates adding approximately 16,000 new customers from six signed acquisition agreements, the vast majority of which will be wastewater customers. WTR targets acquisitions of water and wastewater systems with 2,500–25,000 customers.

### WHAT'S PRICED IN?

The consensus mean growth rate is approximately 50 basis points higher than ours, suggesting somewhat higher expectations for the stock.

PIVOTAL QUESTIONS

# Q: Would it be value-enhancing if WTR's strategic M&A strategy targeted gas or electric assets?

## UBS VIEW

We don't have the same optimism for water companies acquiring gas or electric assets that we would have for electric/gas companies acquiring water assets. This is due to the differences in risk profile and growth outlook for each asset class. Water companies tend to be lower risk and higher growth than either electric or gas utilities. Therefore, electric/gas utilities that purchase water assets may be viewed as incrementally lowering their asset risk and potentially increasing their growth. Alternatively, water companies purchasing electric/gas assets may be viewed as increasing their risk profile and potentially reducing growth.

## EVIDENCE

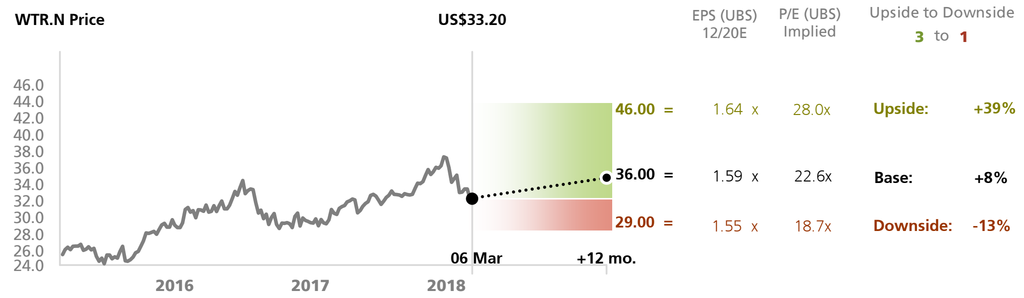
WTR's growth strategy includes strategic M&A, which the company defines as "opportunistic pursuit of large, regulated utility/infrastructure targets" (WTR analyst day presentation, 2/26/18). While the strategy does not explicitly target electric or gas assets, it appears to indicate a willingness to consider acquisitions of those assets.

Water utilities typically enjoy higher total returns than their electric and gas utility counterparts, while offering a comparably low beta. The average annual EPS growth of the group is approximately 7%, with a current average yield of 2%. This results in projected annual total shareholder return of 9%. Further, water utilities are generally attractive to ESG funds due in part to their high scores on Environmental metrics (i.e., no exposure to fossil fuels). Adding electric or gas exposure would reduce a water company's relative attractiveness from an ESG perspective.

## WHAT'S PRICED IN?

WTR discussed its growth strategy on February 28 at its annual analyst day. Historically, the market has been wary of WTR's potential interest in electric or gas assets. Investor scepticism toward the benefits of branching across the regulated assets classes could keep a lid on the stock's valuation relative to the group average.

## UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Peer Avg P/E mulitple | Premium/ discount | EPS growth rate |
|---|---|---|---|
| $46 upside | 28.0x | 0% | 6.8% |
| $36 base | 21.3x | 6% | 5.8% |
| $29 downside | 21.0x | -11% | 4.8% |

Source: UBS

**Upside (US$46):** Our upside scenario is predicated upon a 0% premium applied to a 28.0x P/E multiple, which reflects the peak absolute average water utility P/E experienced since 1/1/16. We also assume the 2018–2020 earnings growth rate is 100 basis points higher than our base case estimates.

**Base (US$36):** Our base case is predicated upon a 6% premium applied to the 2020 average water utility P/E multiple.

**Downside (US$29):** Our downside scenario is predicated upon the trough absolute average water utility P/E experienced since 1/1/16. We apply an 11% discount to the multiple, reflecting WTR's historical low relative multiple discount. We also assume the 2018–2020 earnings growth rate is 100 basis points lower than our base case estimates.

## COMPANY DESCRIPTION

Aqua America, Inc. provides regulated utility water and wastewater services to approximately 972,000 customers in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, and Virginia. Operations in Pennsylvania account for approximately 52% of revenues and 74% of net income. Aqua Resources provides unregulated services such as operating and maintenance contracts with municipal authorities and other parties, as well as water and wastewater line repair service, Aqua Infrastructure provides unregulated raw water supply services for firms in the natural gas drilling industry.

**Industry outlook**

Infrastructure spending and consolidation will continue to be the underlying drivers of industry growth for the next 5-10 years. Capital spending should remain at or near peak levels for the next 12 months, and is forecast to remain elevated through at least 2020. We would expect water utilities to follow the pattern of electric utilities with a bias toward upward revision in the spending forecast. Factors that could increase the pace of consolidation include broader adoption of fair value legislation, enhanced focus on water quality and accountability standards, or macro trends that instigate budgetary pressures or risk-off strategies at the municipal level. We expect conservation and efficiency to continue to reduce the trend of water usage nationally, and drought could be a disruptive event regionally.

# Aqua America Inc (WTR.N)

| Income statement (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **814** | **820** | **810** | **838** | *3.5* | **874** | *4.4* | **913** | **952** | **991** |
| Gross profit | 505 | 515 | 522 | 548 | *4.8* | 581 | *6.2* | 617 | 653 | 689 |
| **EBITDA (UBS)** | **446** | **457** | **465** | **489** | *5.2* | **522** | *6.6* | **556** | **591** | **626** |
| Depreciation & amortisation | (125) | (131) | (136) | (143) | *4.6* | (149) | *4.2* | (154) | (160) | (165) |
| **EBIT (UBS)** | **321** | **326** | **329** | **347** | *5.5* | **373** | *7.7* | **402** | **431** | **461** |
| Associates & investment income | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other non-operating income | (28) | 10 | 16 | 16 | *1.8* | 14 | *-14.9* | 14 | 14 | 14 |
| Net interest | (77) | (81) | (88) | (96) | *-8.6* | (105) | *-9.3* | (112) | (120) | (128) |
| Exceptionals (incl goodwill) | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Profit before tax** | **217** | **255** | **257** | **267** | *4.1* | **282** | *5.7* | **304** | **325** | **347** |
| Tax | (15) | (21) | (17) | (18) | *-4.1* | (19) | *-5.7* | (20) | (21) | (23) |
| **Profit after tax** | **202** | **234** | **240** | **250** | *4.1* | **264** | *5.7* | **284** | **304** | **324** |
| Preference dividends | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Minorities | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Extraordinary items | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Net earnings (local GAAP)** | **202** | **234** | **240** | **250** | *4.1* | **264** | *5.7* | **284** | **304** | **324** |
| **Net earnings (UBS)** | **202** | **234** | **240** | **250** | *4.1* | **264** | *5.7* | **284** | **304** | **324** |
| Tax rate (%) | 6.9 | 8.2 | 6.6 | 6.6 | *0.0* | 6.6 | *0.0* | 6.6 | 6.6 | 6.6 |

| Per share (US$) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| EPS (UBS, diluted) | 1.14 | 1.32 | 1.35 | 1.40 | *4.1* | 1.48 | *5.7* | 1.59 | 1.70 | 1.82 |
| EPS (local GAAP, diluted) | 1.14 | 1.32 | 1.35 | 1.40 | *4.1* | 1.48 | *5.7* | 1.59 | 1.70 | 1.82 |
| EPS (UBS, basic) | 1.14 | 1.32 | 1.35 | 1.41 | *4.1* | 1.49 | *5.7* | 1.60 | 1.71 | 1.83 |
| Net DPS (US$) | 0.69 | 0.74 | 0.79 | 0.88 | *10.6* | 0.94 | *7.0* | 1.00 | 1.07 | 1.15 |
| Cash EPS (UBS, diluted)[1] | 1.84 | 2.05 | 2.11 | 2.20 | *4.3* | 2.31 | *5.1* | 2.46 | 2.60 | 2.75 |
| Book value per share | 9.78 | 10.43 | 11.04 | 11.55 | *4.6* | 12.09 | *4.7* | 12.69 | 13.32 | 13.99 |
| Average shares (diluted) | 177.52 | 177.85 | 178.18 | 178.18 | *0.0* | 178.18 | *0.0* | 178.18 | 178.18 | 178.18 |

| Balance sheet (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash and equivalents | 3 | 4 | 4 | 9 | *115.9* | 6 | *-38.6* | 7 | 8 | 3 |
| Other current assets | 125 | 125 | 127 | 127 | *0.0* | 127 | *0.0* | 127 | 127 | 127 |
| **Total current assets** | **128** | **129** | **131** | **136** | *3.7* | **133** | *-2.6* | **135** | **135** | **130** |
| Net tangible fixed assets | 4,689 | 5,002 | 5,400 | 5,775 | *7.0* | 6,068 | *5.1* | 6,355 | 6,636 | 6,912 |
| Net intangible fixed assets | 34 | 42 | 42 | 42 | *0.0* | 42 | *0.0* | 42 | 42 | 42 |
| Investments / other assets | 867 | 987 | 759 | 759 | *0.0* | 759 | *0.0* | 759 | 759 | 759 |
| **Total assets** | **5,718** | **6,159** | **6,332** | **6,713** | *6.0* | **7,002** | *4.3* | **7,291** | **7,573** | **7,843** |
| Trade payables & other ST liabilities | 141 | 144 | 167 | 167 | *0.0* | 167 | *0.0* | 167 | 167 | 167 |
| Short term debt | 52 | 157 | 117 | 148 | *26.28* | 48 | *-67.59* | 40 | 29 | 4 |
| **Total current liabilities** | **193** | **302** | **284** | **315** | *10.8* | **215** | *-31.8* | **208** | **196** | **171** |
| Long term debt | 1,720 | 1,738 | 2,008 | 2,264 | *12.7* | 2,556 | *12.9* | 2,747 | 2,928 | 3,104 |
| Other long term liabilities | 2,078 | 2,270 | 2,083 | 2,083 | *0.0* | 2,083 | *0.0* | 2,083 | 2,083 | 2,083 |
| Preferred shares | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities (incl pref shares)** | **3,992** | **4,309** | **4,375** | **4,662** | *6.6* | **4,854** | *4.1* | **5,037** | **5,207** | **5,358** |
| Common s/h equity | 1,726 | 1,850 | 1,958 | 2,051 | *4.8* | 2,148 | *4.7* | 2,253 | 2,366 | 2,485 |
| Minority interests | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities & equity** | **5,718** | **6,159** | **6,332** | **6,713** | *6.0* | **7,002** | *4.3* | **7,291** | **7,573** | **7,843** |

| Cash flow (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| Net income (before pref divs) | 202 | 234 | 240 | 250 | *4.1* | 264 | *5.7* | 284 | 304 | 324 |
| Depreciation & amortisation | 125 | 131 | 136 | 143 | *4.6* | 149 | *4.2* | 154 | 160 | 165 |
| Net change in working capital | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other operating | 44 | 31 | 5 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Operating cash flow** | **371** | **396** | **381** | **392** | *2.8* | **412** | *5.1* | **438** | **463** | **489** |
| Tangible capital expenditure | (365) | (383) | (478) | (518) | *-8.3* | (441) | *14.9* | (441) | (441) | (441) |
| Intangible capital expenditure | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Net (acquisitions) / disposals | (28) | (2) | (5) | 0 | - | 0 | - | 0 | 0 | 0 |
| Other investing | (1) | 1 | 2 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Investing cash flow** | **(394)** | **(383)** | **(480)** | **(518)** | *-7.8* | **(441)** | *14.9* | **(441)** | **(441)** | **(441)** |
| Equity dividends paid | (121) | (131) | (141) | (156) | *-11.0* | (167) | *-7.0* | (179) | (191) | (205) |
| Share issues / (buybacks) | (25) | (2) | (1) | 0 | - | 0 | - | 0 | 0 | 0 |
| Other financing | 10 | 0 | 12 | 0 | - | 0 | - | 0 | 0 | 0 |
| Change in debt & pref shares | 158 | 120 | 229 | 287 | *25.20* | 192 | *-32.99* | 183 | 170 | 151 |
| **Financing cash flow** | **22** | **(12)** | **100** | **131** | *31.3* | **25** | *-80.8* | **5** | **(22)** | **(54)** |
| **Cash flow inc/(dec) in cash** | **(1)** | **1** | **0** | **5** | *NM* | **(4)** | - | **2** | **1** | **(5)** |
| FX / non cash items | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Balance sheet inc/(dec) in cash** | **-** | **1** | **0** | **5** | *NM* | **(4)** | - | **2** | **1** | **(5)** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1]Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

# Aqua America Inc (WTR.N)

| Valuation (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| P/E (local GAAP, diluted) | 23.6 | 23.9 | 24.8 | 23.9 | 22.6 | 21.0 | 19.6 | 18.4 |
| P/E (UBS, diluted) | 23.6 | 23.9 | 24.8 | 23.9 | 22.6 | 21.0 | 19.6 | 18.4 |
| P/CEPS | 14.5 | 15.3 | 15.8 | 15.1 | 14.4 | 13.6 | 12.8 | 12.1 |
| Equity FCF (UBS) yield % | 0.1 | 0.2 | (1.6) | (2.1) | (0.5) | (.0) | 0.4 | 0.8 |
| Net dividend yield (%) | 2.6 | 2.3 | 2.4 | 2.6 | 2.8 | 3.0 | 3.2 | 3.4 |
| P/BV x | 2.7 | 3.0 | 3.0 | 2.9 | 2.8 | 2.6 | 2.5 | 2.4 |
| EV/revenues (core) | 8.0 | 9.0 | 9.8 | 9.8 | 9.6 | 9.4 | 9.2 | 9.0 |
| EV/EBITDA (core) | 14.6 | 16.2 | 17.0 | 16.7 | 16.1 | 15.5 | 14.9 | 14.3 |
| EV/EBIT (core) | 20.2 | 22.7 | 24.1 | 23.6 | 22.6 | 21.4 | 20.4 | 19.4 |
| EV/OpFCF (core) | - | - | - | - | - | - | - | - |
| EV/op. invested capital | - | 2.0 | 2.0 | 1.9 | 1.8 | 1.8 | 1.7 | 1.6 |

| Enterprise value (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Market cap. | 4,731 | 5,555 | 5,920 | 5,929 | 5,929 | 5,929 | 5,929 | 5,929 |
| Net debt (cash) | 1,770 | 1,830 | 2,006 | 2,262 | 2,501 | 2,689 | 2,865 | 3,027 |
| Buy out of minorities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pension provisions/other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total enterprise value** | **6,501** | **7,385** | **7,926** | **8,191** | **8,430** | **8,619** | **8,794** | **8,956** |
| Non core assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Core enterprise value** | **6,501** | **7,385** | **7,926** | **8,191** | **8,430** | **8,619** | **8,794** | **8,956** |

| Growth (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Revenue | - | 0.7 | -1.3 | 3.5 | 4.4 | 4.4 | 4.2 | 4.1 |
| EBITDA (UBS) | - | 2.3 | 1.9 | 5.2 | 6.6 | 6.6 | 6.2 | 5.9 |
| EBIT (UBS) | - | 1.4 | 1.0 | 5.5 | 7.7 | 7.8 | 7.2 | 6.8 |
| EPS (UBS, diluted) | - | 15.8 | 2.2 | 4.1 | 5.7 | 7.7 | 6.9 | 6.8 |
| Net DPS | - | 7.7 | 7.2 | 10.6 | 7.0 | 7.0 | 7.0 | 7.0 |

| Margins & Profitability (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Gross profit margin | 62.0 | 62.8 | 64.5 | 65.4 | 66.5 | 67.6 | 68.6 | 69.5 |
| EBITDA margin | 54.8 | 55.7 | 57.5 | 58.4 | 59.7 | 61.0 | 62.1 | 63.2 |
| EBIT margin | 39.4 | 39.7 | 40.6 | 41.4 | 42.7 | 44.1 | 45.3 | 46.5 |
| Net earnings (UBS) margin | 24.8 | 28.6 | 29.6 | 29.8 | 30.2 | 31.1 | 31.9 | 32.7 |
| ROIC (EBIT) | - | 9.0 | 8.4 | 8.1 | 8.1 | 8.2 | 8.3 | 8.5 |
| ROIC post tax | 8.6 | 8.3 | 7.9 | 7.6 | 7.6 | 7.7 | 7.8 | 7.9 |
| ROE (UBS) | 11.7 | 13.1 | 12.6 | 12.5 | 12.6 | 12.9 | 13.1 | 13.4 |

| Capital structure & Coverage (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Net debt / EBITDA | 4.0 | 4.1 | 4.6 | 4.9 | 5.0 | 5.0 | 5.0 | 5.0 |
| Net debt / total equity % | 102.5 | 102.2 | 108.3 | 117.1 | 121.0 | 123.4 | 124.7 | 124.9 |
| Net debt / (net debt + total equity) % | 50.6 | 50.5 | 52.0 | 53.9 | 54.7 | 55.2 | 55.5 | 55.5 |
| Net debt/EV % | 27.2 | 25.6 | 26.8 | 29.3 | 30.8 | 32.3 | 33.5 | 34.7 |
| Capex / depreciation % | NM | NM | NM | NM | NM | NM | NM | NM |
| Capex / revenue % | NM | NM | NM | NM | NM | NM | NM | NM |
| EBIT / net interest | 4.2 | 4.0 | 3.7 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| Dividend cover (UBS) | 1.7 | 1.8 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| Div. payout ratio (UBS) % | 60.1 | 55.9 | 58.7 | 62.3 | 63.1 | 62.7 | 62.8 | 62.9 |

| Revenues by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 814 | 820 | 810 | 838 | 874 | 913 | 952 | 991 |
| **Total** | **814** | **820** | **810** | **838** | **874** | **913** | **952** | **991** |

| EBIT (UBS) by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 321 | 326 | 329 | 347 | 373 | 402 | 431 | 461 |
| **Total** | **321** | **326** | **329** | **347** | **373** | **402** | **431** | **461** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

# California Water Service Group

## Initiating Sell: Premium Inconsistent with Risk

Equities

Americas
Water Utilities

| | |
|---|---|
| **12-month rating** | **Sell** |
| | *Prior: Not Rated* |
| **12m price target** | **US$34.00** |
| | *Prior: -* |
| **Price** | **US$37.30** |

**RIC:** CWT.N **BBG:** CWT US

**Trading data and key metrics**

| | |
|---|---|
| **52-wk range** | US$45.60-33.25 |
| **Market cap.** | US$1.79bn |
| **Shares o/s** | 48.0m (ORD) |
| **Free float** | 99% |
| **Avg. daily volume ('000)** | 105 |
| **Avg. daily value (m)** | US$4.3 |
| **Common s/h equity (12/18E)** | US$0.78bn |
| **P/BV (12/18E)** | 2.4x |
| **Net debt / EBITDA (12/18E)** | 3.6x |

**EPS (UBS, diluted) (US$)**

| | 12/18E | | | |
|---|---|---|---|---|
| | From | To | % ch | Cons. |
| **Q1E** | - | 0.02 | - | 0.05 |
| **Q2E** | - | 0.40 | - | 0.36 |
| **Q3E** | - | 0.73 | - | 0.71 |
| **Q4E** | - | 0.29 | - | 0.28 |
| **12/18E** | - | 1.44 | - | 1.43 |
| **12/19E** | - | 1.54 | - | 1.51 |
| **12/20E** | - | 1.64 | - | 1.63 |

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### A Little Pricey for the Risk Profile

We are initiating on CWT with a Sell rating as part of our sector launch on water utilities. Our $34 price target suggests 4% downside in the shares. CWT shares are trading at a 1% premium to the 2020 average UBS water P/E, a valuation that in our opinion is modestly overvalued relative to the current risk profile of the company. We expect CWT to participate in and benefit from the infrastructure spending and consolidation themes in the industry; however, at current valuations we prefer CWT's lower cost and more geographically diverse peers.

### California Water Utilities' Cost of Capital at Risk

The CPUC decision (on March 22 at the earliest) in the water utilities' Cost of Capital case may present a downward catalyst for the shares if the order adopts the ALJ Proposed Decision. The ALJ recommended that CWT be awarded an ROE of 8.22%, significantly lower than requested (10.75%), currently authorized (9.43%), and the 2017 national average authorized ROE for water utilities (9.56%). We estimate roughly $0.02 of earnings risk for every 20 basis point change in ROE. Our EPS estimates for CWT are predicated on the current 9.43% ROE.

### Infrastructure Spending is the Bright Spot

CWT invested $259MM in capital projects in 2017, a record level of investment for the company: 13% higher than 2016 and 23% higher than budgeted. CWT forecasts spending $200–220MM in 2018. CWT expects to request higher capex spending in 2019–2021 when it files its general rate case in July.

### Valuation:

Our $34 price target is based on a 4% discount to the 2020 average P/E of our water universe. Our EPS estimates are $1.44 in 2018, $1.54 in 2019 and $1.64 in 2020. Our estimates are predicated on CWT retaining the current 9.43% ROE in CA.

| Highlights (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| **Revenues** | 588 | 609 | 667 | 682 | 703 | 726 | 749 | 772 |
| **EBIT (UBS)** | 96 | 101 | 124 | 127 | 135 | 145 | 156 | 166 |
| **Net earnings (UBS)** | 45 | 49 | 67 | 71 | 78 | 84 | 90 | 95 |
| **EPS (UBS, diluted) (US$)** | 0.94 | 1.01 | 1.40 | 1.44 | 1.54 | 1.64 | 1.75 | 1.86 |
| **DPS (US$)** | 0.67 | 0.69 | 0.72 | 0.75 | 0.78 | 0.81 | 0.85 | 0.88 |
| **Net (debt) / cash** | (539) | (630) | (712) | (753) | (802) | (890) | (966) | (1,031) |

| Profitability/valuation | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| **EBIT margin %** | 16.3 | 16.6 | 18.5 | 18.6 | 19.2 | 20.0 | 20.8 | 21.5 |
| **ROIC (EBIT) %** | - | 8.2 | 9.2 | 8.6 | 8.4 | 8.4 | 8.4 | 8.4 |
| **EV/EBITDA (core) x** | 10.5 | 12.3 | 12.4 | 11.9 | 11.3 | 10.8 | 10.3 | 9.9 |
| **P/E (UBS, diluted) x** | 24.8 | 29.5 | 27.0 | 25.9 | 24.3 | 22.7 | 21.3 | 20.1 |
| **Equity FCF (UBS) yield %** | (2.9) | (4.8) | (6.1) | (3.0) | (3.4) | (2.6) | (1.8) | (1.1) |
| **Net dividend yield %** | 2.9 | 2.3 | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 | 2.4 |

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$37.30 on 07 Mar 2018 17:12 EST

**UBS Research THESIS MAP** a guide to our thinking and what's where in this report

## PIVOTAL QUESTIONS

**Q: Has the quality of California regulation changed?**

Yes. Recent regulatory processes and final orders by the CPUC have demonstrated a less constructive regulatory environment, in our view. If the California Public Utilities Commission (CPUC) adopts the ALJ Proposed Decision in the water utilities' Cost of Capital case, we will view that as the culmination of a trend of adverse orders by the CPUC.

more→

**Q: Does the industry consolidation theme support a premium valuation for AWR and CWT?**

Unlikely. To the contrary, California's long-term water quality planning objectives would prefer to utilize the state's large Class A utilities (e.g. AWR and CWT) to take over smaller systems.

more→

## UBS VIEW

We expect CWT to participate in the infrastructure spending theme in the industry and we forecast 5% earnings growth for the company. The outcome of CWT's next general rate case will inform our growth rate forecast in 2020–2022. Tax reform should create some headroom in customer bills, as well as contribute to higher rate base growth. However, CWT is operating in a challenging regulatory environment with near-term risk of a materially lower allowed ROE.

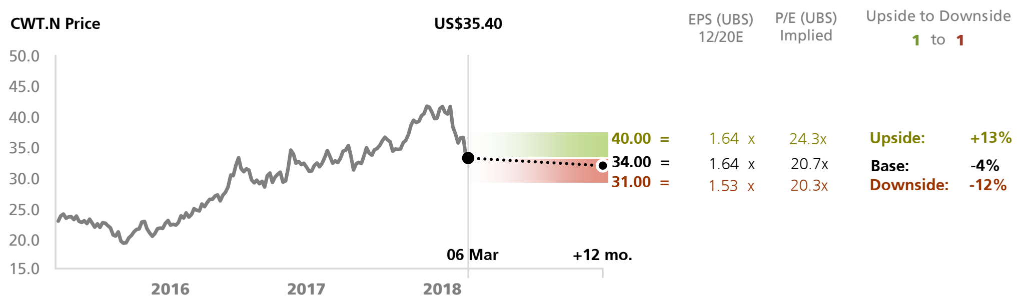
## EVIDENCE

Recent regulatory processes and final orders by the CPUC have demonstrated a less constructive regulatory environment. We estimate approximately $0.12 earnings risk if the Cost of Capital Proposed Decision is adopted. Separately, although CA policies and fair value legislation are intended to encourage CWT to purchase smaller water systems, small systems in CA are not demonstrating a willingness to sell. This limits CWT's ability to take advantage of one of the primary industry themes of growth through acquisition.

## WHAT'S PRICED IN?

CWT trades at a higher premium than AWK, which has higher earnings and dividend growth forecasts. Therefore, CWT's 1% premium to the average UBS water P/E in 2020 could be imputing a higher growth profile than we foresee.

## UPSIDE / DOWNSIDE SPECTRUM




| **Value drivers** | premium/ discount to avg peer multiple | Allowed ROE |
|---|---|---|
| $40 upside | 14.0% | 9.43% |
| $34 base | -4.0% | 9.43% |
| $31 downside | -4.0% | 8.22% |

Source: UBS

## COMPANY DESCRIPTION

California Water Service Group operates four regulated public utilities: California Water Service Company, New Mexico Water Service Company, Washington Water Service Company, and...

## PIVOTAL QUESTIONS

# Q: Has the quality of California regulation changed?

### UBS VIEW

Yes. Recent regulatory processes and final orders by the CPUC have demonstrated a less constructive regulatory environment. If the California Public Utilities Commission (CPUC) adopts the ALJ Proposed Decision in the water utilities' Cost of Capital case, we will view that as the culmination of a trend of adverse orders by the CPUC.

### EVIDENCE

A recent trend of adverse orders and commission processes has led to a degradation of the regulatory landscape in California. We rank California in the third quartile of regulatory jurisdictional rankings. (See Figure 12: State Jurisdictional Rankings in our sector launch**.**) We update the rankings annually and as necessary throughout the year.

**Electric utilities' Cost of Capital proceeding: 2017**
The electric utilities Cost of Capital proceeding in 2017 was marred by a faulty process. The ALJ Proposed Decision did not support the settlement the three CA electric utilities had reached with ORA (Office of Ratepayer Advocates) and TURN (The Utility Reform Network) for a two-year extension to the Cost of Capital with modest adjustments to ROE and debt cost true-up. The commission ultimately supported the settlement agreement, but not without grousing from the commissioners on the process. Although the outcome was constructive, the process created uncertainty for the stocks and adversely impacted investors' views of regulation in the state.

**Sempra Energy Wildfire recovery final order: November 30, 2017**
The CPUC ruled against SRE regarding recovery of expenses associated with past wildfires (A.15-09-010). SRE took a $351MM pre-tax write-off and is seeking reconsideration. The order has materially greater implications for PG&E Energy (PCG) and Edison International (EIX), both of which experienced unprecedented wildfires in their service territories in late 2017 and early 2018. PCG suspended its dividend on December 20, 2017 due to the uncertainty of financial obligations related to wildfires. The CPUC has not made a decision on SRE's reconsideration request.

**Water utilities' Cost of Capital proceeding: final order expected March/April 2018**
The ALJ Proposed Order (PD) in the water utilities' Cost of Capital proceeding adopted ORA's recommendation in whole. ORA recommended ROEs of 8.22%-8.30% for the four CA water utilities – significantly lower than the 2017 national average ROE of 9.56% authorized for water utilities.

### WHAT'S PRICED IN?

So far, we have not seen a demonstrable reaction in the market to the ALJ recommendation; however, if the CPUC does not improve upon the PD, we would expect the share prices to adjust down ~$3 for AWR and ~$2 for CWT, to reflect the lower earnings potential at those companies. We do not anticipate a material impact to AWK's share price due to the comparatively lower earnings exposure. If the PD is adopted, we estimate earnings at risk of $0.16 at AWR, $0.12 at CWT, and $0.02 at AWK. The earnings sensitivity is $0.03 at AWR and $0.02 at CWT for every 20 basis points change in ROE.

**Figure 16: California Cost of Capital Proceeding**

| | AWR | AWK | CWT | SJW |
|---|---|---|---|---|
| Docket # | A.17-04-002 | A.17-04-003 | A.17-04-006 | A.17-04-001 |
| | | | | |
| *Proposed Decision:* | | | | |
| ROE | 8.23% | 8.23% | 8.22% | 8.30% |
| Equity Ratio | 54.13% | 54.18% | 54.44% | 52.58% |
| Cost of Debt | 6.40% | 5.22% | 5.51% | 5.96% |
| Debt Ratio | 45.87% | 45.82% | 45.46% | 47.42% |
| **Earnings at risk if ROE is adopted** | **($0.16)** | **($0.02)** | **($0.12)** | **NR** |
| **Earnings sensitivity to 20bps change in ROE** | **($0.03)** | **$0.00** | **($0.02)** | **NR** |
| | | | | |
| *Requested:* | | | | |
| ROE | 11.00% | 10.80% | 10.75% | 10.75% |
| Equity Ratio | 57.00% | 55.40% | 53.40% | 53.28% |
| Cost of Debt | 6.60% | 5.63% | 5.50% | 6.21% |
| Debt Ratio | 43.00% | 44.60% | 46.60% | 46.72% |
| | | | | |
| *Currently Authorized:* | | | | |
| ROE | 9.43% | 9.99% | 9.43% | 9.43% |
| Equity Ratio | 55.00% | 53.00% | 53.00% | 51.35% |
| Cost of Debt | 7.00% | 6.63% | 6.24% | 6.68% |
| Debt Ratio | 45.00% | 47.00% | 47.00% | 48.65% |

NR: Not Rated

Source: California Public Utilities Commission, company filings, UBS Equity Research

PIVOTAL QUESTIONS

# Q: Does the industry consolidation theme support a premium valuation for AWR and CWT?

UBS VIEW

Unlikely. To the contrary, California's long-term water quality planning objectives would prefer to utilize the state's large Class A utilities (e.g. AWR and CWT) to take over smaller systems.

EVIDENCE

Taking the CPUC Water Action Plan into consideration alongside the CA Public Water System Investment and Consolidation Act of 1997 (CA's fair value legislation) leads us to conclude that state policies and legislative mandates are intended to encourage Class A utilities (e.g. AWR and CWT) to be acquirers, not targets. The CPUC categorizes the state's water utilities by size as Class A: 10,001+ customers; Class B: 2,001–10,000; Class C: 501–2,000; and Class D: 1–500. There are seven Class A utilities in CA including AWR, CWT and AWK. As part of the Plan, the CPUC would consider offering incentives to promote acquisitions by large utilities to take over smaller systems. The CPUC continues to encourage water system consolidation and as recently as November indicated that small systems are "ripe for acquisition." (CPUC, State Water Resources Control Board presentation, November 13, 2017)

WHAT'S PRICED IN?

There are no definitive valuation metrics that are particularly useful in water sector consolidations. This is because water roll-ups reflect varying numbers of customers, future capital investment, and geographic diversity even within acquired water systems. If we look to our work on electric utility merger premiums, we see trailing EBIDTA multiples of 10.2x–12.5x and price/book multiples of 2.1x–3.0x. Based on the high end of the electric utility merger multiples, we estimate AWR share price incorporates approximately 15% chance of acquisition and CWT incorporates 6% likelihood.

**Figure 17: Implied Merger Premium**

| | AWR | CWT |
|---|---|---|
| Current Price | $50.44 | $35.40 |
| Price target @ 23.3x trailing P/E | $39.38 | $30.99 |
| Price target @ 12.5x trailing EBITDA | $57.34 | $52.86 |
| Price target @ 3.0x Price/Book | $40.56 | $41.25 |
| UBS price target | $42.00 | $32.00 |
| Implied likelihood of acquisition reflected in stock price | 15% | 6% |

Source: FactSet, UBS Equity Research, company filings

### Historical Perspective

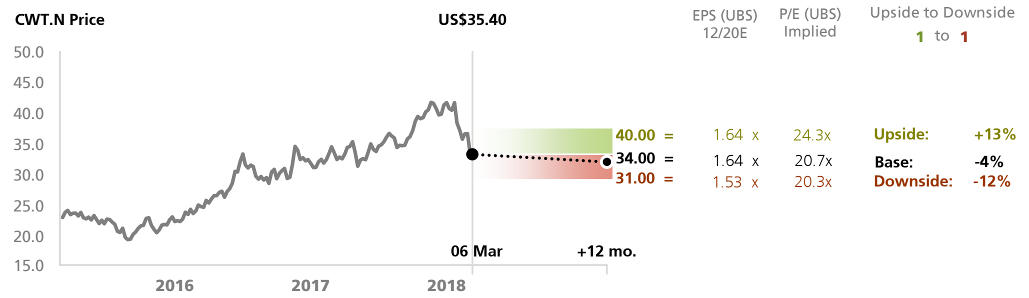
In 1997, the CPUC regulated approximately 200 water utilities. By the end of 2006, that figures had declined to 135 and by year-end 2017 it was 101, with 3 additional acquisitions pending. The CPUC categorizes the state's water utilities by size as Class A: 10,001+ customers; Class B: 2,001–10,000; Class C: 501–2,000; and Class D: 1–500. Of the 34 water utilities acquired from 2007 to 2017, 33 were Class C and D (i.e. less than 2,000 connections); only one of the acquired companies was a Class A utility with 30,000 connections.

The California Public Water System Investment and Consolidation Act of 1997 intended to encourage consolidation of water utilities by providing incentives to large utilities to take over smaller systems. This type of legislation is generically referred to in the industry as fair value legislation. California was the first state to implement fair value legislation, but now there are six state that offer it: CA, IL, IN, MO, NJ, and PA. The enabling principle of fair value legislation is that it allows the rate base of acquired assets to be set at the lower of purchase price or fair market value. The fair market value is typically established through an appraisal process. This rate base valuation methodology is critical as many older systems may have little book value. The legislation benefits water utilities because valuation at appraisal value avoids goodwill, which isn't recoverable on acquisitions.

In 2005, the CPUC implemented a Water Action Plan in response to the ongoing concerns about water quality and supply and in recognition of the potential economies of scale in operating water systems. At the time there were approximately 140 companies under CPUC jurisdiction providing potable and irrigation water service to 20% of CA residents. As part of the Plan, the CPUC would consider offering incentives, such as surcharges for capital improvements and an adjustment to the allowed return on equity, to promote acquisitions by large utilities to take over smaller systems. The 2005 Water Action Plan actually went so far as to state: "The Department of Health Services requests Class A utilities to report on an annual basis which smaller utilities (i.e. Class B, C, & D) they might consider purchasing" although it doesn't seem as though that practice ever took hold.

SB 623 may be the next leg in the stool promoting water quality in CA. The bill would establish the Safe and Affordable Drinking Water Fund. The purpose of the fund would be to provide support for operation and maintenance costs to supply, treat, and distribute safe drinking water. We don't anticipate action on this bill in 2018 as there is considerable opposition from municipalities.

# UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | premium/ discount to avg peer multiple | Allowed ROE |
|---|---|---|
| $40 upside | 14.0% | 9.43% |
| $34 base | -4.0% | 9.43% |
| $31 downside | -4.0% | 8.22% |

Source: UBS

**Upside (US$40):** Our upside scenario is predicated upon CWT's relative premium to the 2020 average water P/E multiple increasing to 14%. This is the historical high premium that CWT has traded since January 2016.

**Base (US$34):** Our base case is predicated upon a 4% discount to the average water P/E multiple in 2020. The multiple reflects a 2% discount for CWT's regulatory jurisdiction profile, a 1% premium for operating in a state with fair value legislation, and a 3% discount for risk associated with the CA Cost of Capital proceeding.

**Downside (US$31):** Our downside scenario is predicated upon the CA ALJ Proposed Decision being adopted. If so, CWT's CA ROE would decline to 8.22% from 9.43%. We calculate the net effect of the reduction in ROE, slightly offset by a modest increase in equity ratio, would reduce EPS by approximately $0.12 to $1.53 in 2020e. We apply a 4% discount to the average water P/E multiple.

# COMPANY DESCRIPTION

California Water Service Group operates four regulated public utilities: California Water Service Company, New Mexico Water Service Company, Washington Water Service Company, and Hawaii Water Service Company. Together, the regulated utilities provide service to approximately 512,000 customers. CWT also operates an unregulated business referred to as Utility Services, which provides water-related services, such as operations, billing and meter reading to municipalities and other private companies.

**Industry outlook**

Infrastructure spending and consolidation will continue to be the underlying drivers of industry growth for the next 5-10 years. Capital spending should remain at or near peak levels for the next 12 months, and is forecast to remain elevated through at least 2020. We would expect water utilities to follow the pattern of electric utilities with a bias toward upward revision in the spending forecast. Factors that could increase the pace of consolidation include broader adoption of fair value legislation, enhanced focus on water quality and accountability standards, or macro trends that instigate budgetary pressures or risk-off strategies at the municipal level. We expect conservation and efficiency to continue to reduce the trend of water usage nationally, and drought could be a disruptive event regionally.

## California Water Service Group (CWT.N)

| Income statement (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **588** | **609** | **667** | **682** | 2.3 | **703** | 3.0 | **726** | **749** | **772** |
| Gross profit | 380 | 389 | 425 | 441 | 3.7 | 461 | 4.7 | 484 | 507 | 530 |
| **EBITDA (UBS)** | **157** | **165** | **200** | **211** | 5.4 | **227** | 7.5 | **245** | **263** | **281** |
| Depreciation & amortisation | (61) | (64) | (77) | (85) | 10.2 | (92) | 8.7 | (100) | (107) | (115) |
| **EBIT (UBS)** | **96** | **101** | **124** | **127** | 2.5 | **135** | 6.7 | **145** | **156** | **166** |
| Associates & investment income | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other non-operating income | 2 | 5 | 11 | 11 | 0.3 | 11 | 3.9 | 11 | 11 | 11 |
| Net interest | (27) | (31) | (34) | (34) | -0.3 | (34) | -0.1 | (35) | (38) | (40) |
| Exceptionals (incl goodwill) | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Profit before tax** | **70** | **75** | **101** | **104** | 3.0 | **112** | 8.5 | **121** | **129** | **137** |
| Tax | (25) | (27) | (33) | (33) | 2.6 | (35) | -6.4 | (37) | (39) | (42) |
| **Profit after tax** | **45** | **49** | **67** | **71** | 5.8 | **78** | 9.5 | **84** | **90** | **95** |
| Preference dividends | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Minorities | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Extraordinary items | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Net earnings (local GAAP)** | **45** | **49** | **67** | **71** | 5.8 | **78** | 9.5 | **84** | **90** | **95** |
| **Net earnings (UBS)** | **45** | **49** | **67** | **71** | 5.8 | **78** | 9.5 | **84** | **90** | **95** |
| Tax rate (%) | 36.0 | 35.5 | 33.2 | 31.4 | -5.4 | 30.8 | -1.9 | 30.5 | 30.5 | 30.5 |

| Per share (US$) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| EPS (UBS, diluted) | 0.94 | 1.01 | 1.40 | 1.44 | 3.0 | 1.54 | 6.7 | 1.64 | 1.75 | 1.86 |
| EPS (local GAAP, diluted) | 0.94 | 1.01 | 1.40 | 1.44 | 3.0 | 1.54 | 6.7 | 1.64 | 1.75 | 1.86 |
| EPS (UBS, basic) | 0.94 | 1.02 | 1.40 | 1.44 | 3.0 | 1.54 | 6.7 | 1.64 | 1.75 | 1.86 |
| Net DPS (US$) | 0.67 | 0.69 | 0.72 | 0.75 | 4.2 | 0.78 | 4.2 | 0.81 | 0.85 | 0.88 |
| Cash EPS (UBS, diluted)[1] | 2.22 | 2.34 | 3.00 | 3.16 | 5.3 | 3.35 | 6.3 | 3.59 | 3.85 | 4.10 |
| Book value per share | 13.45 | 13.75 | 14.46 | 15.77 | 9.1 | 17.13 | 8.6 | 17.75 | 18.66 | 19.63 |
| Average shares (diluted) | 47.88 | 47.96 | 48.01 | 49.32 | 2.7 | 50.61 | 2.6 | 51.24 | 51.24 | 51.24 |

| Balance sheet (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash and equivalents | 9 | 25 | 95 | 68 | -28.2 | 69 | 1.0 | 64 | 58 | 55 |
| Other current assets | 119 | 117 | 133 | 133 | 0.0 | 133 | 0.0 | 133 | 133 | 133 |
| **Total current assets** | **128** | **142** | **228** | **201** | -11.7 | **202** | 0.3 | **197** | **191** | **188** |
| Net tangible fixed assets | 1,702 | 1,859 | 2,048 | 2,173 | 6.1 | 2,311 | 6.4 | 2,442 | 2,565 | 2,680 |
| Net intangible fixed assets | 3 | 3 | 3 | 3 | 0.0 | 3 | 0.0 | 3 | 3 | 3 |
| Investments / other assets | 409 | 408 | 462 | 462 | 0.0 | 462 | 0.0 | 462 | 462 | 462 |
| **Total assets** | **2,241** | **2,412** | **2,740** | **2,839** | 3.6 | **2,978** | 4.9 | **3,104** | **3,220** | **3,332** |
| Trade payables & other ST liabilities | 108 | 127 | 200 | 200 | 0.0 | 200 | 0.0 | 200 | 200 | 200 |
| Short term debt | 40 | 123 | 291 | 375 | 28.89 | 292 | -22.15 | 275 | 293 | 281 |
| **Total current liabilities** | **148** | **250** | **491** | **575** | 17.1 | **492** | -14.5 | **475** | **493** | **480** |
| Long term debt | 508 | 532 | 516 | 446 | -13.6 | 579 | 29.9 | 679 | 731 | 805 |
| Other long term liabilities | 943 | 970 | 1,040 | 1,040 | 0.0 | 1,040 | 0.0 | 1,040 | 1,040 | 1,040 |
| Preferred shares | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities (incl pref shares)** | **1,599** | **1,752** | **2,047** | **2,061** | 0.7 | **2,111** | 2.4 | **2,194** | **2,264** | **2,326** |
| Common s/h equity | 642 | 659 | 693 | 778 | 12.2 | 867 | 11.4 | 910 | 956 | 1,006 |
| Minority interests | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities & equity** | **2,241** | **2,412** | **2,740** | **2,839** | 3.6 | **2,978** | 4.9 | **3,104** | **3,220** | **3,332** |

| Cash flow (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | % ch | 12/19E | % ch | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|---|---|
| Net income (before pref divs) | 45 | 49 | 67 | 71 | 5.8 | 78 | 9.5 | 84 | 90 | 95 |
| Depreciation & amortisation | 61 | 64 | 77 | 85 | 10.2 | 92 | 8.7 | 100 | 107 | 115 |
| Net change in working capital | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other operating | 38 | 47 | 4 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Operating cash flow** | **145** | **160** | **148** | **156** | 5.3 | **170** | 9.0 | **184** | **197** | **210** |
| Tangible capital expenditure | (177) | (229) | (259) | (210) | 19.0 | (230) | -9.5 | (230) | (230) | (230) |
| Intangible capital expenditure | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Net (acquisitions) / disposals | 0 | 0 | 1 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other investing | (2) | (2) | 52 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Investing cash flow** | **(178)** | **(231)** | **(207)** | **(210)** | -1.6 | **(230)** | -9.5 | **(230)** | **(230)** | **(230)** |
| Equity dividends paid | (32) | (33) | (35) | (37) | -5.6 | (39) | -6.9 | (41) | (43) | (45) |
| Share issues / (buybacks) | 0 | 0 | 0 | 50 | - | 50 | 0.0 | 0 | 0 | 0 |
| Other financing | 9 | 15 | 11 | 0 | - | 0 | - | 0 | 0 | 0 |
| Change in debt & pref shares | 46 | 106 | 151 | 14 | -90.68 | 50 | 254.84 | 83 | 70 | 62 |
| **Financing cash flow** | **23** | **88** | **128** | **28** | -78.5 | **61** | 121.0 | **42** | **27** | **17** |
| **Cash flow inc/(dec) in cash** | **(11)** | **17** | **69** | **(27)** | - | **1** | - | **(5)** | **(6)** | **(3)** |
| FX / non cash items | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Balance sheet inc/(dec) in cash** | **-** | **17** | **69** | **(27)** | - | **1** | - | **(5)** | **(6)** | **(3)** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1]Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

# California Water Service Group (CWT.N)

| Valuation (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| P/E (local GAAP, diluted) | 24.8 | 29.5 | 27.0 | 25.9 | 24.3 | 22.7 | 21.3 | 20.1 |
| P/E (UBS, diluted) | 24.8 | 29.5 | 27.0 | 25.9 | 24.3 | 22.7 | 21.3 | 20.1 |
| P/CEPS | 10.5 | 12.8 | 12.6 | 11.8 | 11.1 | 10.4 | 9.7 | 9.1 |
| Equity FCF (UBS) yield % | (2.9) | (4.8) | (6.1) | (3.0) | (3.4) | (2.6) | (1.8) | (1.1) |
| Net dividend yield (%) | 2.9 | 2.3 | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 | 2.4 |
| P/BV x | 1.7 | 2.2 | 2.6 | 2.4 | 2.2 | 2.1 | 2.0 | 1.9 |
| EV/revenues (core) | 2.8 | 3.3 | 3.7 | 3.7 | 3.7 | 3.6 | 3.6 | 3.6 |
| EV/EBITDA (core) | 10.5 | 12.3 | 12.4 | 11.9 | 11.3 | 10.8 | 10.3 | 9.9 |
| EV/EBIT (core) | 17.3 | 20.0 | 20.1 | 19.9 | 19.0 | 18.2 | 17.4 | 16.8 |
| EV/OpFCF (core) | - | - | - | - | - | - | - | - |
| EV/op. invested capital | - | 1.6 | 1.8 | 1.7 | 1.6 | 1.5 | 1.5 | 1.4 |

| Enterprise value (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Market cap. | 1,112 | 1,435 | 1,814 | 1,789 | 1,789 | 1,789 | 1,789 | 1,789 |
| Net debt (cash) | 539 | 584 | 671 | 732 | 778 | 846 | 928 | 999 |
| Buy out of minorities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pension provisions/other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total enterprise value** | **1,651** | **2,020** | **2,485** | **2,522** | **2,567** | **2,635** | **2,717** | **2,788** |
| Non core assets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Core enterprise value** | **1,651** | **2,020** | **2,485** | **2,522** | **2,567** | **2,635** | **2,717** | **2,788** |

| Growth (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Revenue | - | 3.6 | 9.4 | 2.3 | 3.0 | 3.2 | 3.2 | 3.1 |
| EBITDA (UBS) | - | 4.8 | 21.7 | 5.4 | 7.5 | 7.8 | 7.5 | 6.7 |
| EBIT (UBS) | - | 5.6 | 22.3 | 2.5 | 6.7 | 7.4 | 7.4 | 6.5 |
| EPS (UBS, diluted) | - | 8.0 | 37.9 | 3.0 | 6.7 | 6.9 | 6.7 | 5.8 |
| Net DPS | - | 3.0 | 4.3 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 |

| Margins & Profitability (%) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Gross profit margin | 64.7 | 63.9 | 63.7 | 64.6 | 65.6 | 66.7 | 67.7 | 68.7 |
| EBITDA margin | 26.7 | 27.0 | 30.0 | 31.0 | 32.3 | 33.7 | 35.1 | 36.4 |
| EBIT margin | 16.3 | 16.6 | 18.5 | 18.6 | 19.2 | 20.0 | 20.8 | 21.5 |
| Net earnings (UBS) margin | 7.7 | 8.0 | 10.1 | 10.4 | 11.1 | 11.6 | 12.0 | 12.3 |
| ROIC (EBIT) | - | 8.2 | 9.2 | 8.6 | 8.4 | 8.4 | 8.4 | 8.4 |
| ROIC post tax | 5.2 | 5.3 | 6.1 | 5.9 | 5.8 | 5.8 | 5.8 | 5.8 |
| ROE (UBS) | 7.0 | 7.5 | 9.9 | 9.7 | 9.5 | 9.5 | 9.6 | 9.7 |

| Capital structure & Coverage (x) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Net debt / EBITDA | 3.4 | 3.8 | 3.6 | 3.6 | 3.5 | 3.6 | 3.7 | 3.7 |
| Net debt / total equity % | 83.9 | 95.5 | 102.7 | 96.8 | 92.5 | 97.8 | 101.0 | 102.5 |
| Net debt / (net debt + total equity) % | 45.6 | 48.8 | 50.7 | 49.2 | 48.1 | 49.4 | 50.3 | 50.6 |
| Net debt/EV % | 32.6 | 31.2 | 28.7 | 29.9 | 31.3 | 33.8 | 35.6 | 37.0 |
| Capex / depreciation % | NM | NM | NM | NM | NM | NM | NM | NM |
| Capex / revenue % | NM | NM | NM | NM | NM | NM | NM | 29.8 |
| EBIT / net interest | 3.5 | 3.3 | 3.6 | 3.7 | 4.0 | 4.1 | 4.1 | 4.1 |
| Dividend cover (UBS) | 1.4 | 1.5 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 |
| Div. payout ratio (UBS) % | 71.2 | 68.0 | 51.5 | 52.0 | 50.8 | 49.5 | 48.3 | 47.6 |

| Revenues by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 588 | 609 | 667 | 682 | 703 | 726 | 749 | 772 |
| **Total** | **588** | **609** | **667** | **682** | **703** | **726** | **749** | **772** |

| EBIT (UBS) by division (US$m) | 12/15 | 12/16 | 12/17 | 12/18E | 12/19E | 12/20E | 12/21E | 12/22E |
|---|---|---|---|---|---|---|---|---|
| Others | 96 | 101 | 124 | 127 | 135 | 145 | 156 | 166 |
| **Total** | **96** | **101** | **124** | **127** | **135** | **145** | **156** | **166** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

# Connecticut Water Service Inc

## Initiating Neutral: Small-cap in New England

**Equities**

Americas
Water Utilities

| | |
|---|---|
| **12-month rating** | **Neutral** |
| | *Prior: Not Rated* |
| **12m price target** | **US$53.00** |
| | *Prior: -* |
| **Price** | **US$50.34** |

**RIC:** CTWS.O **BBG:** CTWS US

**Trading data and key metrics**

| | |
|---|---|
| **52-wk range** | US$63.55-49.11 |
| **Market cap.** | US$0.61bn |
| **Shares o/s** | 12.1m (COM) |
| **Free float** | 98% |
| **Avg. daily volume ('000)** | 51 |
| **Avg. daily value (m)** | US$2.8 |
| **Common s/h equity (12/17E)** | US$0.25bn |
| **P/BV (12/17E)** | 2.3x |
| **Net debt / EBITDA (12/17E)** | 5.6x |

**EPS (UBS, diluted) (US$)**

| | 12/17E | | | |
|---|---|---|---|---|
| | From | To | % ch | Cons. |
| **Q1** | - | 0.36 | - | 0.36 |
| **Q2** | - | 0.73 | - | 0.73 |
| **Q3** | - | 0.89 | - | 0.90 |
| **Q4E** | - | 0.18 | - | 0.14 |
| **12/17E** | - | 2.16 | - | 2.13 |
| **12/18E** | - | 2.30 | - | 2.20 |
| **12/19E** | - | 2.41 | - | 2.32 |

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### A Quality Small Cap Water Utility

We are initiating coverage on CTWS with a Neutral rating as part of our sector launch on water utilities. The shares appear fairly valued here, trading roughly in line with our $53 price target. CTWS's market capitalization of approximately $600MM makes it the smallest capitalization in our coverage universe. Management has expressed interest in growing the company and has been an active acquirer of tuck-in acquisitions, adding two to its system in 2017.

### Connecticut Rate Settlement Resets the Infrastructure Surcharge to Zero

CTWS owns water and wastewater systems in Connecticut (88% of rate base) and water systems in Maine (12% of rate base). CTWS has favorable investment surcharge mechanisms in both states, which allow for timely recovery of infrastructure spending in CT and virtually all capital investment is eligible in ME. In CT, CTWS recently filed a settlement that would roll the surcharge recovery into base rates and reset the mechanism to zero. The settlement would allow a $5.5MM rate increase and CTWS has agreed not to seek another increase for rates effective prior to 1/1/20.

### Growth Aspirations

We think CTWS will continue to seek a transaction that could move the company into the mid-cap space, but those opportunities are rare in the highly fragmented water industry. We also think CTWS is open to moving outside the two states in which it currently operates. The question is whether a decent-sized acquisition will come along to propel it forward (these types of transformational opportunities tend to be rare in the water industry), or whether its growth strategy will progress slowly through a series of smaller transactions.

### Valuation:

Our $53 price target reflects a 4% discount to the 2020E average P/E of our water universe. Our EPS estimates are $2.16 in 2017, $2.30 in 2018, $2.41 in 2019 and $2.55 in 2020. The 4% discount that we assign to the shares reflects CTWS's 5% earnings growth outlook and concentrated regulatory jurisdictional exposure.

| Highlights (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| **Revenues** | - | 96 | 99 | 105 | 115 | 119 | 125 | 131 |
| **EBIT (UBS)** | - | 26 | 31 | 31 | 38 | 40 | 42 | 45 |
| **Net earnings (UBS)** | - | 23 | 23 | 25 | 28 | 29 | 31 | 32 |
| **EPS (UBS, diluted) (US$)** | - | 2.04 | 2.08 | 2.16 | 2.30 | 2.41 | 2.55 | 2.64 |
| **DPS (US$)** | - | 1.07 | 1.13 | 1.19 | 1.25 | 1.32 | 1.39 | 1.46 |
| **Net (debt) / cash** | - | (191) | (234) | (262) | (296) | (327) | (355) | (376) |

| Profitability/valuation | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| **EBIT margin %** | - | 26.9 | 31.2 | 29.4 | 33.4 | 33.2 | 33.9 | 34.4 |
| **ROIC (EBIT) %** | - | - | 7.3 | 6.6 | 7.5 | 7.1 | 7.1 | 7.0 |
| **EV/EBITDA (core) x** | - | 15.1 | 16.7 | 18.0 | 15.5 | 15.1 | 14.4 | 13.8 |
| **P/E (UBS, diluted) x** | - | 17.6 | 23.3 | 23.3 | 21.8 | 20.9 | 19.7 | 19.1 |
| **Equity FCF (UBS) yield %** | - | (1.7) | (6.1) | (2.3) | (3.3) | (2.5) | (1.9) | (0.5) |
| **Net dividend yield %** | - | 3.0 | 2.3 | 2.4 | 2.5 | 2.6 | 2.8 | 2.9 |

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$50.34 on 07 Mar 2018 17:10 EST

**UBS Research THESIS MAP** a guide to our thinking and what's where in this report

PIVOTAL QUESTIONS

**Q: Is bigger better?**

Yes. Generally speaking, the larger water infrastructure companies benefit from economies of scale, cost of capital advantages, and geographic diversity relative to their smaller peers. In the highly fragmented water industry, with material capital investment requirements, size matters.

more→

**Q: What is CTWS's growth outlook without a transformative transaction?**

We estimate approximately 5% earnings CAGR 2018-2022 excluding the benefit of new acquisitions. Tuck-in acquisitions are consistent with CTWS's past business strategy and likely in the future; we think any tuck-ins would be modestly incremental to expectations.

more→

UBS VIEW

We view CTWS as a good quality small cap water utility. The company operates in CT and ME, which have constructive recovery mechanisms that reduce regulatory lag. We forecast approximately 5% organic growth for CTWS and anticipate that the company will continue to pursue tuck-in acquisitions as complementary water and wastewater systems become available. We think CTWS will continue to seek a larger scale transaction that moves the company into the mid-cap space, but those opportunities are rare in the highly fragmented water industry.

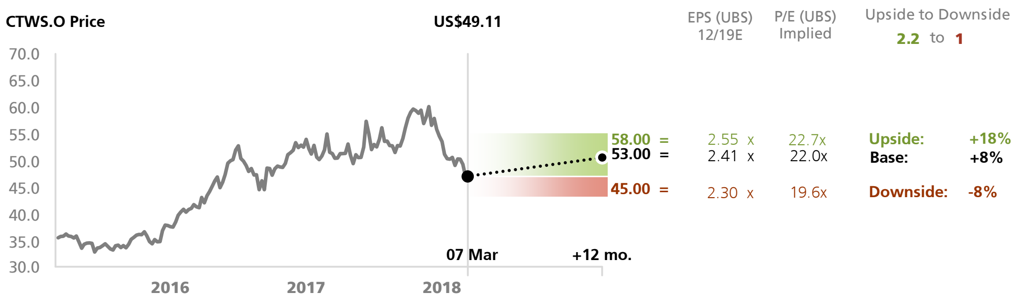
EVIDENCE

CTWS, like the other water companies, has visibility into a deep backlog of capital spending opportunities, supporting our 5% earnings growth outlook. As a result, we model capex at or near peak levels for the five-year forecast. CTWS has a strategy of pursuing tuck-in acquisitions, as demonstrated by the two transactions that closed in 2017.

WHAT'S PRICED IN?

CTWS is trading in-line with our $53 price target. The market appears to agree with our assessment of growth prospects and risk. The stock is relatively under-covered with just a few analysts comprising the consensus.

UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Premium/ discount | EPS growth |
|---|---|---|
| $58 upside | 6.5% | 6% |
| $53 base | -2% | 6% |
| $45 downside | -9% | 0% |

Source: UBS

COMPANY DESCRIPTION

Connecticut Water Service, Inc. provides water and wastewater services to customers in Connecticut and Maine. Its principal operating subsidiaries are Connecticut Water and The...

PIVOTAL QUESTIONS

# Q: Is bigger better?

## UBS VIEW

Yes. Generally speaking, the larger water infrastructure companies benefit from economies of scale, cost of capital advantages, and geographic diversity relative to their smaller peers. In the highly fragmented water industry, with material capital investment requirements, size matters. We think CTWS will continue to seek a larger scale transaction that moves the company into the mid-cap space, but those opportunities are rare in the highly fragmented water industry. We also think CTWS is open to moving outside the two states in which it currently operates. This may be beneficial, as it could introduce CTWS to new growth markets, but ultimately it would depend on the state's regulatory and policy agendas, as not all states are created equal.

## EVIDENCE

The geographic diversity of the large market cap water companies (AWK and WTR) provides a broader pool of acquisition opportunities for future growth, as well as reduces risk to any one regulatory jurisdiction. Alternatively, single-jurisdiction companies are beholden to one regulatory body. We see the risk of that now in California, as the quality of regulation in that state is trending down.

## WHAT'S PRICED IN?

Transformative acquisitions are rare opportunities in the highly fragmented water sector. Instead, investors look for smaller acquisitions to add modestly to organic growth. Investors expect CTWS to continue to add customers through tuck-ins acquisitions, but tuck-ins are unlikely to move CTWS to the mid-cap group of water stocks.

**Figure 18: Water Utilities Comparative Statistics**

| | Large Cap | | Mid Cap | | Small Cap |
|---|---|---|---|---|---|
| $ Millions | AWK | WTR | AWR | CWT | CTWS |
| Market Capitalization | $14,318 | $5,967 | $1,911 | $1,761 | $607 |
| # of customers | 3,353,000 | 982,849 | 258,949 | 514,300 | 135,000 |
| Total Rate Base | $11,600 | $4,000 | $700 | $1,120 | $500 |
| States in which company operates | CA GA HI IL IN IA KY MD MI MO NJ NY PA TN VA WR | IL IN NJ NC OH PA TX VA | CA | CA HE NM WA | CT ME |
| State with the largest rate base concentration | PA | PA | CA | CA | CT |
| % rate base in largest state concentration | 27% | 69% | 100% | 94% | 88% |

Source: FactSet, company filings, UBS

PIVOTAL QUESTIONS

# Q: What is CTWS's growth outlook without a transformative transaction?

## UBS VIEW

We estimate approximately 5% earnings CAGR 2017-2022 excluding the benefit of new acquisitions. Tuck-in acquisitions are consistent with CTWS's past business strategy and likely to continue in the future as opportunities arise; we think any tuck-ins would be modestly incremental to expectations.

## EVIDENCE

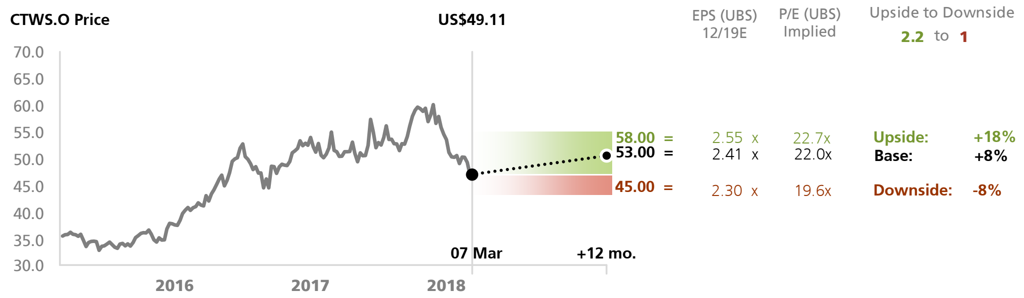
CTWS has visibility into a deep backlog of capital spending opportunities, supporting our 5% earnings growth outlook. As a result, we model capex at or near peak levels for the five-year forecast. CTWS invested approximately $66MM in 2016. Spending dropped down to $55MM in 2017, but is expected to return to $66MM in 2018. We model spending of approximately $60–65MM per year in 2019 through 2022.

In 2017, CTWS closed two acquisitions: Heritage Village Water Company (HVWC) and Avon Water Company. HVWC marked the company's entrance into serving wastewater customers, and opens the door to future wastewater acquisitions. Combined, the two transactions added approximately 12,500 customers to CTWS, or roughly 9% of the total customers the company now serves.

## WHAT'S PRICED IN?

CTWS's multiple appropriately reflects the organic growth rate of the company and in our view, does not impute value for incremental growth from roll-up acquisitions, nor does it assume a transformative transaction.

## UPSIDE / DOWNSIDE SPECTRUM




| Value drivers | Premium/ discount | EPS growth |
|---|---|---|
| $58 upside | 6.5% | 6% |
| $53 base | -2% | 6% |
| $45 downside | -9% | 0% |

Source: UBS

**Upside (US$58):** Our upside scenario is predicated on a 6.5% premium to the group average multiple in 2020E, which is the peak premium CTWS has traded since 1/1/16.

**Base (US$53):** Our base case scenario is predicated upon a 2% discount to the 2020E average water utility P/E multiple. The discount reflects CTWS's 6% EPS growth outlook, regulatory jurisdictional profile, and operations in none of the six fair value states.

**Downside (US$45):** Our downside scenario is predicated upon a 9% discount to the 2020E average water utility P/E multiple and assumes flat earnings growth in 2020 vs. 2018, hence the lower multiple.

# COMPANY DESCRIPTION

Connecticut Water Service, Inc. provides water and wastewater services to customers in Connecticut and Maine. Its principal operating subsidiaries are Connecticut Water and The Maine Water Company. Together, these companies serve approximately 125,000 customers. CTWS also operates two unregulated companies in the business of real estate and providing contract water and sewer operations and other water related services. The Regulated companies contribute approximately 95% of net income.

**Industry outlook**

Infrastructure spending and consolidation will continue to be the underlying drivers of industry growth for the next 5-10 years. Capital spending should remain at or near peak levels for the next 12 months, and is forecast to remain elevated through at least 2020. We would expect water utilities to follow the pattern of electric utilities with a bias toward upward revision in the spending forecast. Factors that could increase the pace of consolidation include broader adoption of fair value legislation, enhanced focus on water quality and accountability standards, or macro trends that instigate budgetary pressures or risk-off strategies at the municipal level. We expect conservation and efficiency to continue to reduce the trend of water usage nationally, and drought could be a disruptive event regionally.

## Connecticut Water Service Inc (CTWS.O)

| Income statement (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | % ch | 12/18E | % ch | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | - | **96** | **99** | **105** | 6.0 | **115** | 9.5 | **119** | **125** | **131** |
| Gross profit | - | 48 | 54 | 58 | 5.9 | 68 | 17.0 | 71 | 76 | 81 |
| **EBITDA (UBS)** | - | **39** | **45** | **47** | 5.0 | **57** | 20.7 | **60** | **65** | **70** |
| Depreciation & amortisation | - | (13) | (14) | (16) | 16.8 | (18) | 13.6 | (21) | (23) | (25) |
| **EBIT (UBS)** | - | **26** | **31** | **31** | -0.3 | **38** | 24.5 | **40** | **42** | **45** |
| Associates & investment income | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other non-operating income | - | 3 | 2 | 2 | 5.7 | 3 | 20.1 | 3 | 3 | 3 |
| Net interest | - | (7) | (7) | (9) | -23.4 | (10) | -15.6 | (11) | (12) | (13) |
| Exceptionals (incl goodwill) | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Profit before tax** | - | **22** | **26** | **24** | -6.1 | **31** | 27.2 | **32** | **33** | **35** |
| Tax | - | 1 | (3) | 1 | - | (3) | - | (2) | (3) | (3) |
| **Profit after tax** | - | **23** | **23** | **25** | 8.5 | **28** | 10.0 | **29** | **31** | **32** |
| Preference dividends | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Minorities | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Extraordinary items | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Net earnings (local GAAP)** | - | **23** | **23** | **25** | 8.5 | **28** | 10.0 | **29** | **31** | **32** |
| **Net earnings (UBS)** | - | **23** | **23** | **25** | 8.5 | **28** | 10.0 | **29** | **31** | **32** |
| Tax rate (%) | - | 0.0 | 9.9 | 0.0 | - | 10.0 | - | 7.5 | 7.5 | 7.5 |

| Per share (US$) | 12/14 | 12/15 | 12/16 | 12/17E | % ch | 12/18E | % ch | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|---|---|
| EPS (UBS, diluted) | - | 2.04 | 2.08 | 2.16 | 4.1 | 2.30 | 6.5 | 2.41 | 2.55 | 2.64 |
| EPS (local GAAP, diluted) | - | 2.04 | 2.08 | 2.16 | 4.1 | 2.30 | 6.5 | 2.41 | 2.55 | 2.64 |
| EPS (UBS, basic) | - | 2.07 | 2.12 | 2.21 | 4.0 | 2.35 | 6.4 | 2.46 | 2.60 | 2.69 |
| Net DPS (US$) | - | 1.07 | 1.13 | 1.19 | 5.3 | 1.25 | 5.3 | 1.32 | 1.39 | 1.46 |
| Cash EPS (UBS, diluted)[1] | - | 3.19 | 3.32 | 3.55 | 7.1 | 3.83 | 7.8 | 4.12 | 4.44 | 4.69 |
| Book value per share | - | 20.09 | 21.06 | 21.57 | 2.5 | 21.95 | 1.7 | 23.06 | 24.25 | 25.44 |
| Average shares (diluted) | - | 11.16 | 11.23 | 11.70 | 4.2 | 12.10 | 3.4 | 12.10 | 12.10 | 12.10 |

| Balance sheet (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | % ch | 12/18E | % ch | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|---|---|
| Cash and equivalents | - | 1 | 2 | 28 | NM | 6 | -77.8 | 3 | 3 | 3 |
| Other current assets | - | 26 | 28 | 28 | 0.0 | 28 | 0.0 | 28 | 28 | 28 |
| **Total current assets** | - | **27** | **29** | **56** | 89.4 | **34** | -38.9 | **31** | **30** | **30** |
| Net tangible fixed assets | - | 546 | 601 | 641 | 6.5 | 688 | 7.5 | 733 | 775 | 810 |
| Net intangible fixed assets | - | 30 | 30 | 30 | 0.0 | 30 | 0.0 | 30 | 30 | 30 |
| Investments / other assets | 0 | 107 | 123 | 123 | 0.0 | 123 | 0.0 | 123 | 123 | 123 |
| **Total assets** | - | **711** | **785** | **850** | 8.3 | **876** | 3.1 | **918** | **959** | **994** |
| Trade payables & other ST liabilities | - | 18 | 17 | 17 | 0.0 | 17 | 0.0 | 17 | 17 | 17 |
| Short term debt | - | 19 | 38 | 33 | -12.85 | 33 | 0.00 | 33 | 33 | 33 |
| **Total current liabilities** | - | **37** | **55** | **50** | -8.8 | **50** | 0.0 | **50** | **50** | **50** |
| Long term debt | - | 172 | 197 | 256 | 29.7 | 269 | 5.1 | 297 | 324 | 345 |
| Other long term liabilities | - | 277 | 296 | 296 | 0.0 | 296 | 0.0 | 296 | 296 | 296 |
| Preferred shares | - | 1 | 1 | 1 | 0.00 | 1 | 0.00 | 1 | 1 | 1 |
| **Total liabilities (incl pref shares)** | - | **487** | **548** | **602** | 9.8 | **615** | 2.2 | **644** | **671** | **692** |
| Common s/h equity | - | 224 | 236 | 248 | 5.0 | 261 | 5.2 | 274 | 288 | 302 |
| Minority interests | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Total liabilities & equity** | - | **711** | **785** | **850** | 8.3 | **876** | 3.1 | **918** | **959** | **994** |

| Cash flow (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | % ch | 12/18E | % ch | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|---|---|
| Net income (before pref divs) | - | 23 | 23 | 25 | 8.5 | 28 | 10.0 | 29 | 31 | 32 |
| Depreciation & amortisation | - | 13 | 14 | 16 | 16.8 | 18 | 13.6 | 21 | 23 | 25 |
| Net change in working capital | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other operating | - | 6 | (4) | 0 | - | 0 | - | 0 | 0 | 0 |
| **Operating cash flow** | - | **41** | **33** | **42** | 24.9 | **46** | 11.4 | **50** | **54** | **57** |
| Tangible capital expenditure | - | (48) | (67) | (55) | 16.9 | (66) | -19.5 | (65) | (65) | (60) |
| Intangible capital expenditure | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Net (acquisitions) / disposals | - | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other investing | - | (1) | 1 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Investing cash flow** | - | **(49)** | **(66)** | **(55)** | 15.8 | **(66)** | -19.5 | **(65)** | **(65)** | **(60)** |
| Equity dividends paid | - | (12) | (13) | (14) | -8.7 | (15) | -9.3 | (16) | (17) | (18) |
| Share issues / (buybacks) | - | 2 | 2 | 0 | - | 0 | - | 0 | 0 | 0 |
| Other financing | - | 0 | 0 | 0 | - | 0 | 0.00 | 0 | 0 | 0 |
| Change in debt & pref shares | - | 16 | 44 | 54 | 21.93 | 13 | -75.58 | 28 | 27 | 21 |
| **Financing cash flow** | - | **6** | **33** | **40** | 20.1 | **(2)** | - | **12** | **10** | **3** |
| **Cash flow inc/(dec) in cash** | - | **(2)** | **1** | **26** | NM | **(22)** | - | **(3)** | **(1)** | **0** |
| FX / non cash items | - | - | 0 | 0 | - | 0 | - | 0 | 0 | 0 |
| **Balance sheet inc/(dec) in cash** | - | - | **1** | **26** | NM | **(22)** | - | **(3)** | **(1)** | **0** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1]Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

## Connecticut Water Service Inc (CTWS.O)

| Valuation (x) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| P/E (local GAAP, diluted) | - | 17.6 | 23.3 | 23.3 | 21.8 | 20.9 | 19.7 | 19.1 |
| P/E (UBS, diluted) | - | 17.6 | 23.3 | 23.3 | 21.8 | 20.9 | 19.7 | 19.1 |
| P/CEPS | - | 11.1 | 14.3 | 13.9 | 12.9 | 12.0 | 11.1 | 10.5 |
| Equity FCF (UBS) yield % | - | (1.7) | (6.1) | (2.3) | (3.3) | (2.5) | (1.9) | (0.5) |
| Net dividend yield (%) | - | 3.0 | 2.3 | 2.4 | 2.5 | 2.6 | 2.8 | 2.9 |
| P/BV x | - | 1.8 | 2.3 | 2.3 | 2.3 | 2.2 | 2.1 | 2.0 |
| EV/revenues (core) | - | 6.1 | 7.6 | 8.1 | 7.7 | 7.6 | 7.5 | 7.4 |
| EV/EBITDA (core) | - | 15.1 | 16.7 | 18.0 | 15.5 | 15.1 | 14.4 | 13.8 |
| EV/EBIT (core) | - | 22.6 | 24.3 | 27.6 | 23.0 | 23.0 | 22.1 | 21.5 |
| EV/OpFCF (core) | - | - | - | - | - | - | - | - |
| EV/op. invested capital | - | - | 1.8 | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 |

| Enterprise value (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| Market cap. | 371 | 400 | 544 | 608 | 608 | 608 | 608 | 608 |
| Net debt (cash) | - | 191 | 212 | 248 | 279 | 312 | 341 | 366 |
| Buy out of minorities | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pension provisions/other | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total enterprise value** | **-** | **591** | **756** | **855** | **886** | **919** | **949** | **974** |
| Non core assets | - | (8) | (9) | (9) | (9) | (9) | (9) | (9) |
| **Core enterprise value** | **-** | **583** | **747** | **846** | **877** | **910** | **940** | **964** |

| Growth (%) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| Revenue | - | - | 2.7 | 6.0 | 9.5 | 4.0 | 5.2 | 4.4 |
| EBITDA (UBS) | - | - | 15.5 | 5.0 | 20.7 | 6.2 | 8.5 | 6.8 |
| EBIT (UBS) | - | - | 19.2 | -0.3 | 24.5 | 3.5 | 7.5 | 5.8 |
| EPS (UBS, diluted) | - | - | 2.2 | 4.1 | 6.5 | 4.8 | 5.8 | 3.3 |
| Net DPS | - | - | 5.6 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 |

| Margins & Profitability (%) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| Gross profit margin | - | 50.0 | 55.2 | 55.2 | 59.0 | 59.8 | 61.0 | 61.9 |
| EBITDA margin | - | 40.3 | 45.3 | 44.9 | 49.5 | 50.5 | 52.1 | 53.3 |
| EBIT margin | - | 26.9 | 31.2 | 29.4 | 33.4 | 33.2 | 33.9 | 34.4 |
| Net earnings (UBS) margin | - | 23.7 | 23.7 | 24.2 | 24.3 | 24.5 | 24.7 | 24.4 |
| ROIC (EBIT) | - | - | 7.3 | 6.6 | 7.5 | 7.1 | 7.1 | 7.0 |
| ROIC post tax | - | 6.5 | 6.6 | 6.6 | 6.7 | 6.6 | 6.5 | 6.5 |
| ROE (UBS) | - | 10.1 | 10.2 | 10.5 | 11.0 | 10.9 | 11.0 | 10.8 |

| Capital structure & Coverage (x) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| Net debt / EBITDA | - | 4.9 | 5.2 | 5.6 | 5.2 | 5.4 | 5.4 | 5.4 |
| Net debt / total equity % | - | 85.2 | 99.2 | 105.6 | 113.6 | 119.5 | 123.4 | 124.6 |
| Net debt / (net debt + total equity) % | - | 46.0 | 49.8 | 51.4 | 53.2 | 54.4 | 55.2 | 55.5 |
| Net debt/EV % | - | 32.8 | 31.3 | 30.9 | 33.8 | 36.0 | 37.8 | 39.0 |
| Capex / depreciation % | - | NM | NM | NM | NM | NM | NM | NM |
| Capex / revenue % | - | NM | NM | NM | NM | NM | NM | NM |
| EBIT / net interest | - | 3.8 | 4.4 | 3.6 | 3.9 | 3.7 | 3.6 | 3.5 |
| Dividend cover (UBS) | - | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 |
| Div. payout ratio (UBS) % | - | 51.6 | 53.3 | 53.9 | 53.4 | 53.7 | 53.4 | 54.5 |

| Revenues by division (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| Others | 0 | 96 | 99 | 105 | 115 | 119 | 125 | 131 |
| **Total** | **0** | **96** | **99** | **105** | **115** | **119** | **125** | **131** |

| EBIT (UBS) by division (US$m) | 12/14 | 12/15 | 12/16 | 12/17E | 12/18E | 12/19E | 12/20E | 12/21E |
|---|---|---|---|---|---|---|---|---|
| Others | 0 | 26 | 31 | 31 | 38 | 40 | 42 | 45 |
| **Total** | **0** | **26** | **31** | **31** | **38** | **40** | **42** | **45** |

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

**American States Water Co Investment case**

AWR's premium to the 2019 average UBS water P/E is unsupported by fundamentals. AWR is operating in a challenging regulatory environment with near-term risk of a materially lower allowed ROE. Further, AWR appears to have less opportunity to participate in the industry consolidation theme. AWR's military services business is a material contributor to net income and growth, albeit with limited visibility into new contracts.

**American Water Works Co Investment case**

In our view, AWK warrants the highest premium among the regulated water utilities due to its above-average earnings and dividend growth, geographic diversity, economies of scale, and industry leadership.

**Aqua America Inc Investment case**

There is much to like about WTR. The company is geographically diverse, with water and wastewater systems in eight states. Although the majority of rate base is concentrated in PA, we view that state as having constructive regulatory treatment. Four of the states in which WTR operates, have fair value legislation, enabling greater opportunities for growth through acquisition. WTR has a demonstrated track record of closing acquisitions, adding, on average, 8,600 new customers annually through tuck-ins.

**California Water Service Group Investment case**

We expect CWT to participate in the infrastructure spending theme in the industry and we forecast 5% earnings growth for the company. The outcome of CWT's next general rate case will inform our growth rate forecast in 2020–2022. Tax reform should create some headroom in customer bills, as well as contribute to higher rate base growth. However, CWT is operating in a challenging regulatory environment with near-term risk of a materially lower allowed ROE.

**Connecticut Water Service Inc Investment case**

We view CTWS as a good quality small cap water utility. The company operates in CT and ME, which have constructive recovery mechanisms that reduce regulatory lag. We forecast approximately 5% organic growth for CTWS and anticipate that the company will continue to pursue tuck-in acquisitions as complementary water and wastewater systems become available. We think CTWS will continue to seek a larger scale transaction that moves the company into the mid-cap space, but those opportunities are rare in the highly fragmented water industry.

## Valuation Method and Risk Statement

AWR risks include, but are not limited to:  rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events. As a small market cap water stock in a consolidating industry, AWR shares appear to incorporate a merger premium in the valuation. We think this premium is unsupported by the fundamentals of the industry as we discuss in this report; however, persistence of that premium could prevent the shares from attaining our price target. Also, if AWR's contracted services business grows at a faster pace than forecast, the higher growth could support a higher valuation. Our price target is predicated upon a 4% discount to the average water P/E multiple in 2020. The multiple reflects a 2% discount for AWR's regulatory jurisdiction profile, a 1% premium for operating in a state with fair value legislation, and a 3% discount for risk associated with the CA Cost of Capital proceeding.  Our price target is premised upon a 4% discount to the 2020 average UBS water P/E multiple.

AWK Risks include, but are not limited to:  rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events. Our price target is premised upon a 10% premium to the 2020 average UBS water P/E multiple.

WTR risks include, but are not limited to:  rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events. Our price target is premised upon a 6% premium/discount to the 2020 average UBS water P/E multiple

CWT risks include, but are not limited to:  rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events. As a small market cap water stock in a consolidating industry, CWT shares appear to incorporate a merger premium in the valuation. We think this premium is unsupported by the fundamentals of the industry as we discuss in this report; however, persistence of that premium could prevent the shares from attaining our price target. Our price target is premised upon a 4% discount to the 2020 average UBS water P/E multiple. The multiple reflects a 2% discount for CWT's regulatory jurisdiction profile, a 1% premium for operating in a state with fair value legislation, and a 3% discount for risk associated with the CA Cost of Capital proceeding.

CTWS risks include, but are not limited to: rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events. Our price target is premised upon a 2% discount to the 2020E average UBS water P/E

Risks include, but are not limited to:  rising interest rate; regulatory and policy risks; operational risks; construction risks; water quality, safety and contamination risk; physical risk to the water sources, treatment or delivery systems; cybersecurity risk; drought and extreme weather events.
We value water utilities on a price-to-earnings basis on our 2020 estimates. Our valuation methodology is premised upon a group valuation bias, forecast 2018-2022 earnings growth, our proprietary analysis of regulatory jurisdictional rankings, exposure to states with fair value legislation, and in some cases a company-specific adjustment.

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| **12-Month Rating** | **Definition** | **Coverage[1]** | **IB Services[2]** |
|---|---|---|---|
| **Buy** | FSR is > 6% above the MRA. | 46% | 27% |
| **Neutral** | FSR is between -6% and 6% of the MRA. | 39% | 24% |
| **Sell** | FSR is > 6% below the MRA. | 16% | 13% |
| **Short-Term Rating** | **Definition** | **Coverage[3]** | **IB Services[4]** |
| **Buy** | Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event. | <1% | <1% |
| **Sell** | Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event. | <1% | <1% |

Source: UBS. Rating allocations are as of 31 December 2017.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category.
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**UBS Securities LLC:** Daniel Ford; Rose-Lynn Armstrong.

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| Company Name | Reuters | 12-month rating | Short-term rating | Price | Price date |
|---|---|---|---|---|---|
| **American States Water Co**[16] | AWR.N | Not Rated | N/A | US$50.44 | 06 Mar 2018 |
| **American Water Works Co**[16] | AWK.N | Not Rated | N/A | US$79.69 | 06 Mar 2018 |
| **Aqua America Inc**[16] | WTR.N | Not Rated | N/A | US$33.20 | 06 Mar 2018 |
| **California Water Service Group**[16] | CWT.N | Not Rated | N/A | US$35.40 | 06 Mar 2018 |
| **Connecticut Water Service Inc**[16] | CTWS.O | Not Rated | N/A | US$49.11 | 06 Mar 2018 |

Source: UBS. All prices as of local market close.
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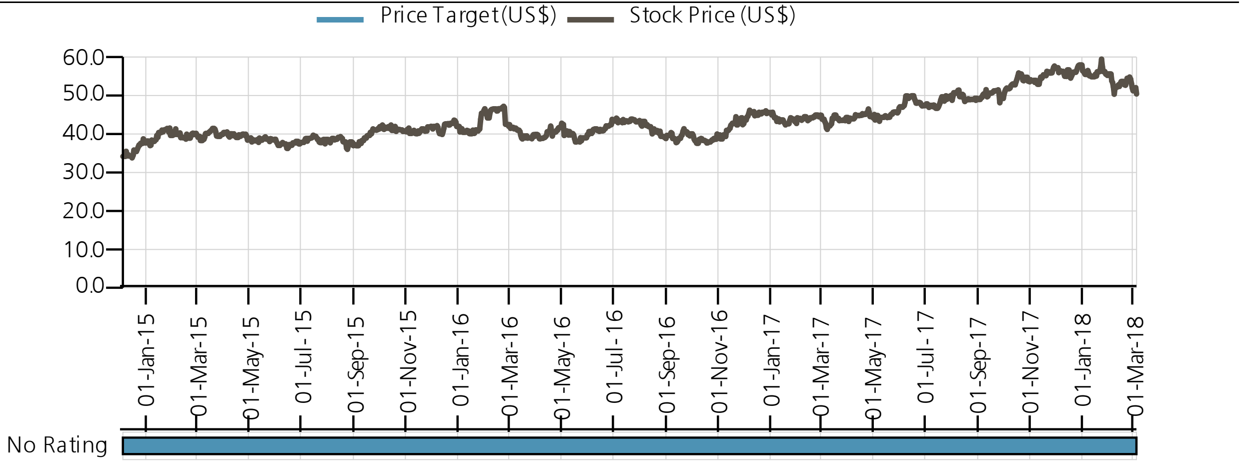
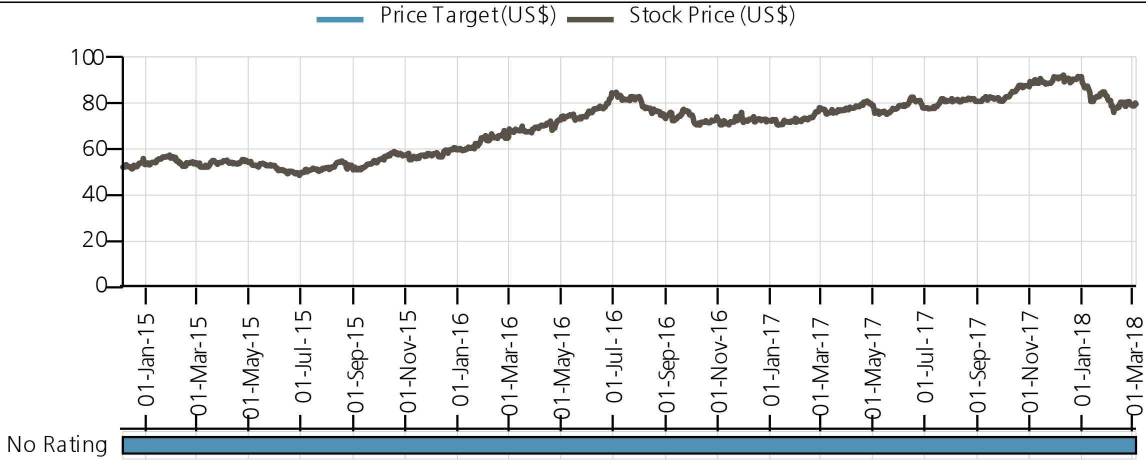
**American States Water Co (US$)**




| Date | Stock Price (US$) | Price Target (US$) | Rating |
|---|---|---|---|
| 2014-12-05 | 34.18 | - | No Rating |

Source: UBS; as of 06 Mar 2018

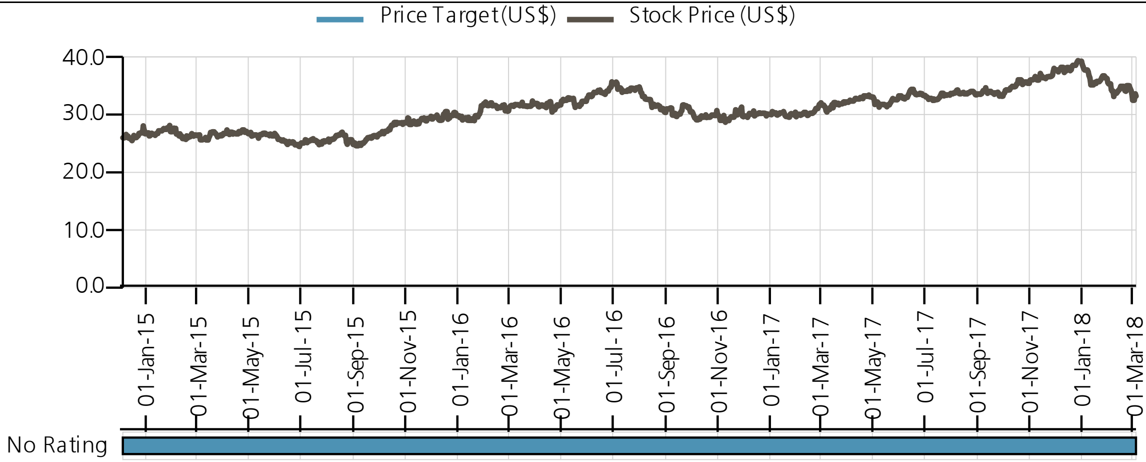
**American Water Works Co (US$)**




| Date | Stock Price (US$) | Price Target (US$) | Rating |
|---|---|---|---|
| 2014-12-05 | 52.14 | - | No Rating |

Source: UBS; as of 06 Mar 2018

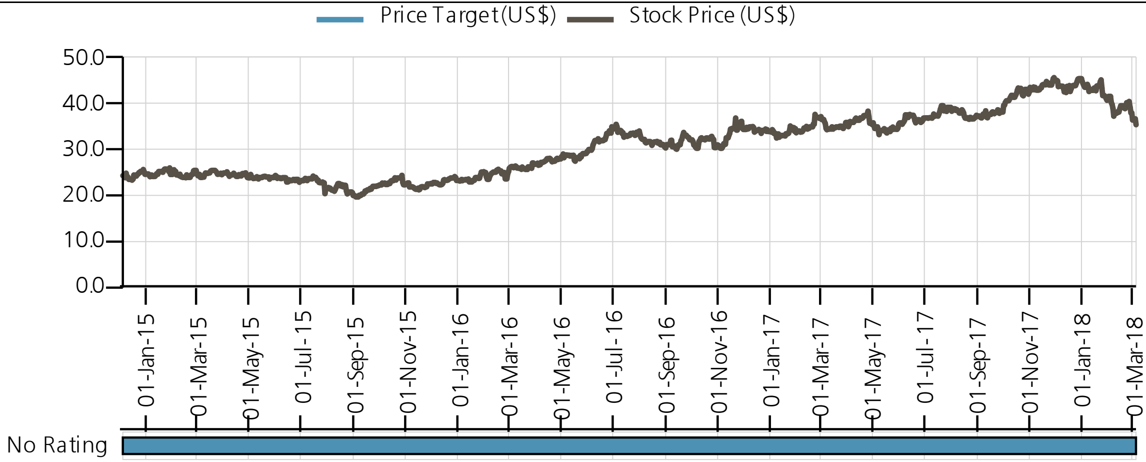
**Aqua America Inc (US$)**




| Date | Stock Price (US$) | Price Target (US$) | Rating |
|---|---|---|---|
| 2014-12-05 | 25.99 | - | No Rating |

Source: UBS; as of 06 Mar 2018

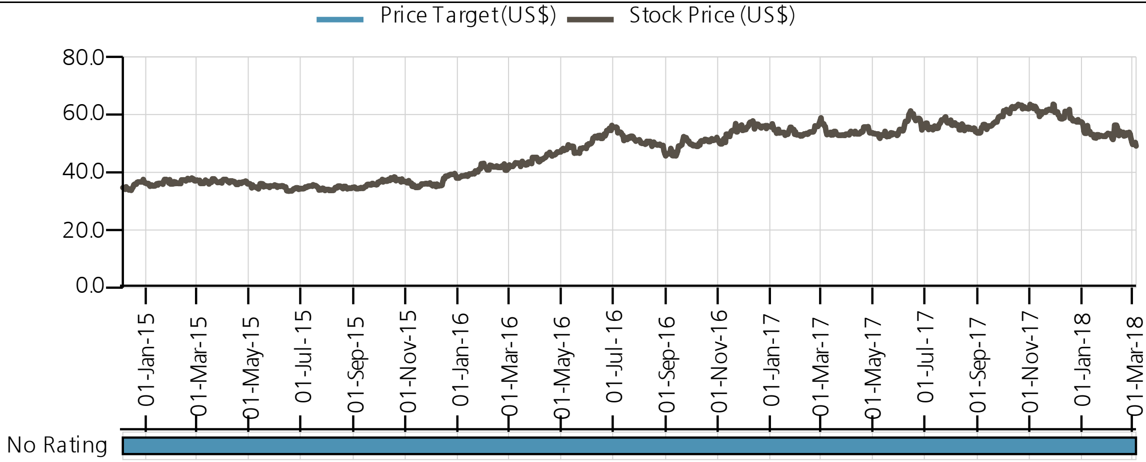
**California Water Service Group (US$)**




| Date | Stock Price (US$) | Price Target (US$) | Rating |
|---|---|---|---|
| 2014-12-05 | 24.3 | - | No Rating |

Source: UBS; as of 06 Mar 2018

**Connecticut Water Service Inc (US$)**




| Date | Stock Price (US$) | Price Target (US$) | Rating |
|---|---|---|---|
| 2014-12-05 | 34.66 | - | No Rating |

Source: UBS; as of 06 Mar 2018

Additional Prices: Sempra Energy, US$109.36 (06 Mar 2018); PG&E Corp, US$42.42 (06 Mar 2018); Edison International, US$60.07 (06 Mar 2018); Source: UBS. All prices as of local market close.

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UBS

# US Water Utilities

## Taking a Dip into The Deep End [Incl. Transcript]

Equities

Americas

Electric Utilities

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**Taking a view of the 'other' utility vertical: Water**

We held our latest conference call with the National Association of Water Companies' (NAWC's) Michael Deane looking to delve into some of the opportunities across the Water utility sector alongside hosting a dinner with American Water (AWK) at our UBS Conference last week. While we would not expect any near term water M&A from electric utilities due to valuation, long term growth potential is substantive and worth watching, particularly with utility regulators keen to see consolidation to improve service quality and most importantly reducing the substantial regulatory filing burdens. While improving water quality new standards are an increasing reality, simply reinvesting to maintain the current level of service would appear a substantive opportunity with the current pace for AWK tracking closer to ~100-200 year replacement cycle relative to dramatically shorter replacement periods for gas of late. Our speaker noted to look for a wide variety of potential rules, including the Lead-Copper rules to drive these future investments along with new standards as well. We also note nascent interest in water and related infrastructure as electric utilities themselves evaluate future growth opportunities, particularly across the Western US given the substantial reliance on energy for pumping, etc. In particular, we highlight EIX as evaluating such opportunities via its nascent Edison Energy offerings. More broadly, we ask whether the definition of 'integrated' utilities could yet evolve as utilities continue to pursue novel angles of more regulated ratebase growth.

**Challenges to consolidation are real, but so is the opportunity to continue**

Our speaker noted continued fragmentation in the US water segment and synergies primarily in back office roles rather than actual system integration. With 52,000 community water system in the US as well as another 100K public (small, self-contained) waters systems, ~90% of US residents receive water from a utility, with only 16% of those from a privately owned utility. In fact, of the 52K community systems, 83% serve less than 3,300 people and >1% serve more than 100K people. Any M&A within these systems is further complicated by the 'emotional' factor of water ownership, particularly given recent Flint, Michigan issues (which was largely municipal based) highlighting the pitfalls of mismanagement. We see Flint as auguring well for true privatization rather than run by muni managers, less familiar with water systems.

**Though Regulatory Construct May Be Changing**

With tens of thousands of water systems in the US, discussions noted regulators and legislators are increasingly aware of the need for enabling factors to facilitate a shift – principally fair market value legislation to maintain asset value after significant depreciation vs a 100-200 year replacement cycle. Further, water companies are seeing increasing success advocating for specific riders/surcharges to help reduce regulatory lag as most rate cases are yet in a multi-year timeframe. Our speaker further noted the relative dearth of a 'true' consumer advocate to argue for both system improvements as well as bill stability – this could change as well given proper legislative backing.

### But Investment Potential is Significant

A number of states recently have targeted legislation favored by companies like American Water and others, underscoring the need for private investment. Our speaker noted that approximately $385B is required for the Safe Drinking Water Act alone, with $1T+ to fix the system's overall 'D' grade from the American Society of Civil Engineers. Yet just like any other utility, the pace of bill inflation is the primary gating factor, with anything above CPI inflation numbers garnering consternation among the utilities and regulators. On the other hand, the average household spent just over 1/3 (~$677/yr in 2014) on water versus electricity and gas (~$1,800/yr).

### Don't necessarily look for a big infrastructure push here either—

While there has been much discussed around the coming infra opportunities, we notice both electric utility and water utility infrastructure is not necessarily positioned to see an acceleration of capital under this wider push. Rather, while enabling public systems to invest potentially, the bulk of the drivers in investment will remain federal and regional environmental quality standards alongside wider consumer inflation considerations.

### What limits consolidation? It's just small sizes of each deal.

Discussions pointed to the simple blocking and tackling of pursuing municipal votes for privatization along with the precise valuation of assets established through this process as the key driver of consolidation, requiring years of requisite worth even if clear customer benefits (particularly if local upgrade costs will be socialized regionally under new regulatory mechanisms). Further, meetings noted this trend could persist at a reasonably consistent rate, with occasionally lumpy transactions (such as Scranton for AWK) driving disproportionate growth in certain years.

### Source of Funds Could Yet Expand the Private Role

Particularly in light of the new Administration's preference for spurring private investment, discussions noted continued opportunities to service local needs either through direct M&A or other options like public-private partnerships. Recent EPA appropriations (the Water Infrastructure Finance and Innovation Act) could allow for up to $1B of low-interest loans to large water projects which will provide some opportunity for investment, but this is a relatively small number in the wider water investment context. Further, meetings noted continued focus on water can help drive further investment and open up opportunities on the public-private side as well, given the magnitude of needs.

*We also hosted the largest publically traded water utility at our recent conference in Boston – some of the key takeaways are below*

## American Water Works Company (Unrated)

Among the infrastructure themes, water presents a relatively unique set of circumstances, with what appears to be a multi-decade runway on both the organic investment side and the M&A potential due to significant fragmentation. American Water invests $1-1.3B/yr, 2/3 of which is primarily geared towards the replacement cycle. On the other hand, mgmt. noted recent historic run rate of ~40K customer acquisitions per year suggest opportunity going forward for more M&A growth as well.

### Ratebase vs M&A; Legislation is key

Ratebase growth for AWK is about 6% per year, but organic growth is closer to 5%, with the balance made up of the previously acquired companies. Mgmt noted legislative shifts have driven much of the M&A opportunity, in particular the ability to pay fair market value (FMV) versus depreciated value, as the assets can in fact last much longer than the depreciation rate – the replacement cycle could be as high as 200 years in some cases. Six of the states AWK operates in (including the two largest, NJ and PA) have FMV legislation in place (~95% of finished deals), and a number of utilities in the 5-30K customer 'sweet spot' can still be found, though time to close deals could be well over a year, in the 12-18 month range typically.

### What About Rates?

Similar to the electric industry, AWK typically targets ~2.5% rate increases, though may have some latitude to hit the high end of a range given that water bills tend to be significantly smaller versus other bills in a household (~half or less). Part of what the company is achieving is also predicated on lowered O&M ratios, with the company targeting 32.5% over the next several years.

However, the notable exception to this would be California, where AWK is building a desalination plant ($300-400M capex) in Monterrey county

### Waste water the next opportunity?

AWK also noted a number of their jurisdictions do not share drinking water and wastewater ownership, leaving the door open to further opportunity. Only 2% of wastewater facilities are owned by investor owned utilities, and this represents an opportunity for the company to consolidate bills and leverage relationships already built in the community.

### Unregulated Business Still Growing

While AWK recognizes the potential risks of growing the regulated business, the company suggested it could be comfortable as high as 20% regulated if the risk profile was appropriately low. Currently, the homeowner services and military services groups in particular are the key areas, with the military services unit in particular positioned well if the government executes on any increase in defense spending.

## Conference call transcript with Michael Deane from the National Association of Water Companies

*We present below highlights from our recent call with Michael Deane from the National Association of Water Companies (NAWC). We look to understand the basic framework for water utilities as well as the challenges and opportunities in the sector going forward. We have edited the transcript below for clarity. Minor grammatical changes that do not impact the meaning of content have been applied. Changes to content to clarify meaning have been underlined. What we consider to be key points have been highlighted in bold. The opinions expressed herein do not necessarily reflect the views and opinions of UBS. UBS accepts no responsibility for the accuracy, reliability or completeness of the information and* *will not be liable either directly or indirectly for any loss or damage arising out of the use of this information or any part thereof.*

[Introductory sentences deleted]

**Julien Dumoulin-Smith:** Thank you, operator, and good afternoon, everyone. I appreciate you all joining us. So this afternoon we're going to change the topic away from our traditional electric utility focus, turning the focus back to water.

In conjunction with my colleague, Steve Fisher, our UBS E&C analyst, and we're joined this afternoon by Michael Deane, Executive Director of the National Association of Water Companies to go through sort of the backdrop of where the water industry stands today, prospects under the new administration and just in general prospects into 2017.

So he's going to go through a few initial remarks. For those of you who have questions, preferably send me an email. I can ask it on your behalf over the course of the next hour and hopefully that works.

With that, I'll turn it over to Michael to provide some opening comments before we engage in some Q&A. So good afternoon. Thank you for taking some time with us.

**Michael Deane:** Thank you very much, Julien, and thank you for all of you joining the call this afternoon. I trust no one was disappointed thinking they were calling about electric and gets to hear about the more exciting water sector here this afternoon. So I appreciate the opportunity.

I'm going to try to get through briefly a little about NAWC, our association, and framing the water sector, briefly about water as a utility service, a summary of the investment capital needs and the trajectory of those coming investments. A touch on EPA regulations because it is such an important part of the drinking water and the wastewater world and then opportunities for the investor on utility companies within that.

And then finally kind of the importance of the rate regulation environment in the ability and the opportunities for the private sector to help the nation address its very, very large water infrastructure and management challenges. And then we'll have some good Q&A.

So, just briefly, NAWC, not as well-known as most of you I'm sure as EEI or AGA, but we are the trade association for the private water industry and have been around for a long time. In 1895 we were established by a number of Pennsylvania investors on utilities in order to do work with their regulatory commission.

We represent the investor owned utilities as well as companies serving the municipal sector through various types of public-private partnerships. Across the country our members serve all the way from a few hundred customers to multi-state utilities that serve hundreds of communities and millions of customers.

Approximately 73 million people are touched by private operators every day. About 45, 50 million of those are through investor-owned private utilities and the balance through municipalities operating under public, private partnerships.

So the water sector, unlike much of the energy sector and certainly the telecommunications sector, it's highly fragmented. In the drinking water, we'll start the drinking water sector. **There's 52,000 community water systems in the**

**United States.** There's another 100 plus thousand what they call public water systems which include, perhaps, campuses, university campuses and others that have their own utilities.

But for those that probably serve a community, there are **52,000 systems. Eighty-three percent of those serve less than 3,300 people, the EPA definition of a small community. And less than 1 percent of those serve more than 100,000 people**. So, again, quite different than some of the other utility sectors.

A bit over 90 percent of the residents in the United States receive their drinking water from a utility with a balance of the population served by known private wells. **And of those that receive service from a utility, 84 percent receive them from a publicly owned utility and about 16 percent from a privately owned utility.**

So, again, we're the smaller part of the drinking water utility across the country. The important part is smaller than the municipal sector.

Wastewater, some of us fragmented, is about 16,000 wastewater systems. A lot more people are actually served by septic systems that are not on sewers. And of those, about 2 to 4 percent is an estimate. Although EPA doesn't actually track ownership of wastewater utilities as they do drinking water. The estimate is about 2 to 4 percent for the population served by wastewater utilities is served by a private utility.

So water as a utility, as I just mentioned, is highly fragmented. And therefore there's not much opportunity for economies of scale as it currently exists. But we always like to say because it is important. And not that other utilities aren't important, but water is the only utility that is ingested. And therefore, it must be safe for human consumption regardless of the cost. It doesn't mean cost isn't something we're very much focused on, but it has to be safe.

Also often lost to a lot of people is that **water utilities are critical for fire protection. As a matter of fact, most water utilities are sized for fire flows, not for the flows that would typically be needed for domestic and commercial consumption.** So all the way from pressure to pipe size and then therefore the infrastructure and operating costs are for those few times that we actually need to have fire flows.

There's no substitute in the short or long term in certainly the energy sector. And I guess one could argue in the communications sector you can certainly over the mid to long term change fuel sources and other forms of energy. But for water it's water. And we need to make sure that it continues to be delivered in communities.

We're seeing increasing threats to and variability of supply. And, again, the threats may be drought, as we saw in California, and the variability of supplies that we're seeing in California now, which is so much water that it cannot be held by impoundments and the reservoirs that we have.

So whether it be climate-induced or usage-induced or otherwise, utilities across the country are having to re-look at the resiliency of their supply to ensure they can continue to provide service to their customers.

There are strict public health and environmental regulation between water and wastewater utilities, which we will get into a little bit more. And yet there's no broad federal economic regulation like we see with FERC or the FCC. Economic regulation is limited to the states and for the most part is limited to the private utilities.

I mentioned that most utilities are municipal. And other than, I think, Wisconsin is the only state that entirely regulates municipal utilities. Some others do as well. They provide wholesale service outside of their political boundaries. **But for the most part, municipal utilities are governed by their own governing bodies or city councils unlike the investor in utilities that are under the jurisdiction of public service or public utility commissions.**

I want to get into capital needs a little bit that we're facing. EPA every four years for both drinking water and wastewater, alternating every two years, but every four years, does a what they call "needs" survey. **The most recent drinking water needs survey shows approximately $385 billion needed over the next 20 years to 2030 to comply with the Safe Drinking Water Act**. And that's only to comply with the State Drinking Water Act.

So the breakdown there is approximately 72.5 billion for drinking water treatment. About 40 billion for storage, 247.5 billion for transmission and distribution of drinking water and about 25 billion for source water protection and other needs.

On the wastewater side over the next 20 years from, I believe, it was about two years ago, 271 billion is needed, with EPA saying the bulk of that is loaded up front over the next five years.

In that case, for the treatment needs of secondary and advance treatment about 102 billion. New and repaired conveyance systems, wastewater collection systems, about 95 billion. And various what we call wet weather issues combined sewer overflows, storm water and some other needs are about $73 billion.

Beyond the trajectory of that, you look at drinking water. It's interesting. It's about pipes, right? For the most part, a large part, as I mentioned, about 250 billion is for pipes versus about 100 million for treatment and storage.

In addition the American Water Works Association, the professional group representing the water industry, broadly estimates it's really **a trillion dollars of investment is needed in underground infrastructure** of the pipes over the next 25 years. That's a larger number because it takes into account things that are not needed for compliance with the State Drinking Water Act, which EPA's numbers are limited to.

And then on the wastewater, of course, you see more parity, you think, between the treatment and conveyance, about a bit over 100 million - 100 billion per treatment and a bit under 100 billion for the pipes.

I think that reflects some of the aging infrastructure. You know, drinking water has been around for a long time. We have pipes that are 50, 100, 150 years old. And on the wastewater side a lot of the pipes are closer to 40, 50 years old. [Sentence deleted]

So the Clean Water Act was regulating wastewater. It was implemented for the first time in 1972. That's really when the country really started putting in place wastewater treatment and a lot more collection of treatment. So those are 40, 50 years old now.

And the Safe Drinking Water Act was put in place in 1974. And a lot of the treatment standards and therefore the treatment getting beyond very simple, you know, sand filtration, charcoal filtration, and things that were done for many, many years are reaching as well 40, 50 years. So we're seeing needs there in treatment, but again, the much longer life of pipes in drinking water is the reason that there's much more underground infrastructure needed for drinking water.

I want to focus on the EPA regulations briefly. There are **19 primary drinking water regulations that were established starting in 1975 and through 2013**. In all there are **91 contaminants regulated under those regulations** that have to be monitored and removed from drinking water before it is distributed to customers.

The national **compliance rate for these regulations is about 92 to 93 percent**. Although for large utilities, I mean, like **the large members like NAWC, it's closer to the higher 90s, 98, 99 percent generally**.

On the horizon we're seeing some things. Obviously lead is on everyone's mind following Flint a couple years ago. The lead and copper rule is being looked at, the long-term revisions to that. EPA is looking at that as we speak now. **Their goal is to publish a proposed regulation by the end of 2017 and to put in place final regulations for the lead and copper rule update in 2019 or perhaps 2020.**

These are very highly, you know, complex epidemiological studies, cost-benefit studies and they take quite a few years to establish.

Another big one that's on the horizon perhaps is pro chloride. EPA in 2011 made a positive regulatory determination, meaning they decided that it should be regulated under the terms of the Safe Drinking Water Act. And they are facing court deadlines of a proposed regulation in October 2018 and a final regulation in 2019.

Just in general to kind of wrap up the regulatory side, it's important to understand that [..] it's continuing. It's not just one and done and you're meeting drinking water standards. And you can go about your business. It's that EPA is constantly looking at the public health implications of various contaminants and regulations.

They currently publish what we call the six-year review, the third one since the Drinking Water Act. **Every six years the EPA is instructed to look back on its existing regulations to see whether they need to be strengthened**, updated or potentially removed.

Just at the end of 2016, EPA established its fourth unregulated contaminant monitoring rule. This is a requirement for utilities to monitor certain contaminants to find what their occurrence is, where they occur, how often they occur and in what concentrations.

And this is used going forward to inform the EPA whether they should consider establishing regulatory standards for any of those contaminants. So there's no treatment necessary at that time but there are significant monitoring costs to go along with that.

**Some of the things we're looking at now are things like algal toxins**. Many of you if you looked at water you saw what happened in Toledo a few years ago, algal toxins which can contaminate water supplies and then shut down water supplies.

And then brominated disinfection byproducts **–** I'm not going to get too complex there – but what's interesting is, yes, water is treated. You need to have disinfection in there because once it goes out of the treatment plant, it may go through hundreds or more miles of pipes. And those pipes have lots of opportunity to get to re-contaminate water. **So they need to be disinfected to ensure that the pathogens don't reestablish themselves in the water supply.**

**And then currently now, by January 2020, the EPA needs to determine the next regulatory determination looking at what they've discovered under monitoring and decide if they're going to establish regulations for certain new contaminants.** And potentially on that list are algal toxins, which we just mentioned, as well as things called PFOA and PFOS. I can never say these quite right. Sorry. So they're fluorinated organic compounds basically that are of major concern.

**So kind of to pull that together, there are major challenges for the broad water sector.** And top amongst those are aging infrastructure needing replacement, particularly pipes in the drinking water world, increasingly complex and caustic standards for treatment and with that fragmentation, far too many small and medium-sized utilities that likely are lacking the technical management and financial capacity to address the need to invest in infrastructure and to comply with these more complex treatments.

So that does provide major opportunities for the private regulated water utilities that are currently operating across the country. An opportunity to accelerate investment in communities' infrastructure replacement not only within our own service areas but in community areas where they're having a difficult time making those investments.

And then also consolidation of smaller systems. Again, we had 52,000 water systems. As I noted to you, many of them are very, very small. In order for these to be sustainable utilities going forward providing safe and reliable water and service to their customers, I believe there's going to have to be significant consolidation across the industry. And investor utilities are well positioned in many states to do that.

Obviously, the regulatory environment in states are critical as well. [..] I'm talking about the rate regulatory environment for our utilities. Again, as I mentioned, municipal utilities for the most part are not under public service regulation but other utilities are. So in order to encourage investment and to stop having a system of 150, 200, 300-year-old pipes around the country, **we've significant policy momentum across the states towards alternative regulation in the past few years**.

Various things, like the distribution system improvement charges. These are called various things across the states. But what they do is provide for between-rate cases, full-rate cases. They do provide an opportunity for surcharges to go in place because we all know that every year there are pipes that need to be replaced.

This is now waiting for the next EPA regulation and <u>part of upgrading your plant is that</u> every year there has to be pipes replaced. There's no mystery. And to wait for a **rate case for three or four years** to replace a pipe that you replaced yesterday does not make sense. So fortunately we've been working very productively with a lot of commissions to **put in place surcharges that provide the capital to make those investments along the way**.

We’ve seen these various charges increase from about 9 states in 2011 to 15 in 2014. And we continue to work across the country and other states as well.

Things like future tests help with that as well. And also in a time of declining consumption at the time of increasing need to invest in aging infrastructure various revenue adjustment mechanisms also are critical to a utility's ability to make the investments to provide the service that customers expect and demand.

The other rate regulatory issue is regarding consolidation. As I mentioned, that's another critical challenge that the nation faces. And the investors in utilities are in a good position to help address, particularly in those states where we have a significant presence already.

And what we've been **focusing on most recently is fair market value**. Unfortunately, a **lot of these small systems are fully depreciated**. They have not made a capital investment for many, many years. They face significant capital needs as well as operational challenges.

And for a company to acquire them at the, you know, **depreciated basis and take them on with no rate base does not make sense**. It does not provide an opportunity to provide the community with capital that it may need. And it certainly makes it a bit difficult for the acquiring utility to make investments on no rate base.

So across the country we're seeing significant movement towards establishing fair market value transactions with third-party assessment of what the fair market value of these systems are and that being able to be placed into rate base. Currently, we have five states, New Jersey, Pennsylvania, Illinois, Indiana and Missouri, which have this type of legislation in place.

And the other thing on consolidation that I see **–** that for the most part private utilities are in a unique position to offer – is some states are deciding that the single tariff pricing makes sense, which allows investors in utilities with multiple service areas in the state to spread investment costs for small systems with large capital needs across a broader customer base. So it's something we face. And some of the EPA **–** another struggle we have is a community serving 1,000 people that's facing a $5 million or $10 million investment need whether it be pipes or upgrades to their plant.

Spreading that across an existing customer base is just unsustainable. And so it's a policy decision that states can make and do make that where a utility is serving a broader geographic customer demographic, that those rates can be spread across the utilities with the understanding that all customers' utilities within that state are going to have needs going forward. And over time everyone will benefit from and they're going to contribute to their neighbor's needs as well.

So with that, it was kind of a quick overview. And I know that Julien had asked things about the potential administration policies, I think, and anything there. But I would imagine that we will have some of that in the question and answer period. So, Julien, I'm happy to take questions from you or any of the participants on the call.

**Julien Dumoulin-Smith:** Thank you very much, Michael. Fantastic. Really quite detailed. So with, [..] let's actually look at the white elephant in the room here real quickly. There is the subject of infrastructure spend. It clearly garnered a good amount of attention of late. Where does that stand vis-à-vis water spending across the various different niches that you're looking at?

**Michael Deane:** You mean the infrastructure spend generally? So if you look, and we were talking about this before, if you look at where the capital comes for all. And right now I'm not just talking about the investor in utilities, but the [..] community water systems, of which private utilities are the same as public utilities in community water systems.

Is it a book that has always come from the local utility through its customer rates, whether that be privately owned utilities or publicly owned utilities. There's always a lot of talk about the federal contribution or federal role in wastewater. It always had been larger.

Under the Clean Water Act in 1972, a very large grant program was established in order to stop rivers from burning basically, back then. Again, you've got to remember there was very little sewage treatment back then. There was a lot of collection and not treatment.

So as part of that, got a grant bargain to start treating sewage, as we called it at the time, not wastewater. The federal government had substantial grant money that phased out in the late 1980s and was replaced by a subsidized low-interest loan program run by the states.

But even that, it's still just a small fraction of the overall capital investment made every year. So it's really rates. Unfortunately, one of the reasons we've gotten into our deteriorating infrastructure and aging infrastructure and **American Society of Civil Engineers grade of D**, if you agree with it, for water and wastewater treatment across the country is that **too many utilities have not raised rates to continue to make the investments that they need, and particularly on the municipal side.**

So the federal government can play, I think, a leadership role in the types of investments that need to be made. But it's always been a very small percentage of annual investment, which shows that the customers are the source of revenue and the investment capital needed for these systems.

**Steve Fisher:** And Michael – it's Steve Fisher. When I look at the U.S. Census Bureau data for construction activity, they break out sewage and waste disposal as one category and water supply as the next. And it's really kind of a two-to-one ratio of sewage and waste disposal to water supply, with sewage and waste disposal running at about 22 billion a year and water supply running at around 11 to 12. And really, if you look back over the last 10 years, the numbers don't change that much on an annual basis.

**Julien Dumoulin-Smith:** Do you foresee…a couple things… Do you foresee [..] the pace of spending really kind of breaking out here at all over the next few years to address all those regulations that you mentioned? And do you think it would still run at that similar kind of ratio of much more sewage and waste disposal to just apply? And do those numbers sound, you know, reasonable to you in relatively the kind of things that you look at?

**Michael Deane:** [..] it's interesting. [..] unfortunately we don't have a water information administration like we have in energy. In data, anyone who is in this business, whether they be a utility or a journalist or an analyst, really struggles to find good data. The EPA has some but not much. On almost every page they have on data has a warning that the quality assurance, quality control is questionable. Census does a pretty good job. I think sometimes the categories are hard, what they put in places. I kind of wondered about it a little bit.

Obviously, sewage and waste is solid waste as well, is my understanding. There's some solid waste in there as well. So I think the split is probably about right. And I'll get into the reason for it in a second.

As far as constant, as a much younger person at EPA many years ago, I remember looking at that data on the Federal Reserve Bank data. I think it was Boston used to do a lot of looking at it. And on a, you know, constant dollar basis, back from the 70s into the 80s into the 90s, it was pretty constant, which leads one to believe that just **whatever the needs are, the utilities manage to make the investments they have to do in order to comply or be safe**.

I think that's changing a little bit for a couple of reasons. One of which, again, our pipes in particular are aging a lot more. I mean, 30, 40 years ago they were doing pretty well. Now a lot of them are not. They simply are falling apart and need to be replaced. So that's going to drive investments.

And, again, the aging of most, [..] a lot of the investment in drinking water and wastewater treatment started in the 70s and the 80s with the federal statutes. Whether there's new requirements or not, those are aging facilities that need to be rehabilitated.

And so while this country has benefited from pretty good compliance and safety over time, it's not going to continue if we don't up the investment to do that. So I do believe that there's, [..] a need for it, an opportunity for more investment.

If you look at a lot of these municipal systems, small, medium-sized systems that have not been making their investments, have been kind of, you know, feeding off of their assets, whether it be the investor in utilities acquiring them and making investments that have to be done. And then to be clear, there's some small private utilities as well. We talked to commissions.

They have some **very small systems that haven't changed their rates for 20 years**. They literally are charging the same nominal rate that they were 20 years ago. And obviously that can't be there.

So while we're not in a crisis mode right now, I think we all understand that we need to make a larger investment and that very much is going to be based on getting customers and governing bodies to understand that rates need to support the investment.

So I don't think it's going to be huge. [..] Turn the switch it is twice as much, but, I mean, that's $11 billion in drinking water. [..] The five largest NAWC members alone are putting in over $2 billion a year in their systems. And they are increasing their investment.

So, yes, I do see it increasing. At what rate, I really can't say. But if decision-makers – utilities know what they need to do. If those who establish the framework in which utilities make their investments do what they're supposed to do and are supportive, those investments will be made and increased.

**Julien Dumoulin-Smith:** Let's talk about customer bill increases. I mean, what's the palatable number that people talk about? I mean, I know in the electric utilities you know, you talk about [..] CPI-like numbers, 2, 3 percent at the outside. What are we talking about in terms of what is currently slated to be spent in terms of aggregate consumer inflation and what are we talking about in terms of reinvestment on the high side here?

**Michael Deane:** I'm sorry. What do you mean, reinvestment on the high side for what?

**Julien Dumoulin-Smith:** If you were to accelerate it, I mean, what does that acceleration look like in terms of a palatable pace?

**Michael Deane:** Oh, yes, if you look at, [..] there's always a big discussion of what's affordable for water. I mean, household incomes…

**Julien Dumoulin-Smith:** And I get that there's a dynamic between smaller systems versus larger systems. But, you know, across the board, how do you frame that conversation given the situation as you describe it?

**Michael Deane:** Well, I mean, personally, I believe that the law of averages don't mean much of anything really is that **people pay far too little for water and wastewater services in this country for the value they receive**, the economic public health value that they and the communities receive from it. It's changing in some places, **but it is by far the smallest utility bill**.

In 2014 it looks like, you know, the **average household spend on water and wastewater is about $677 a year versus up to, you know, $1,800 for electricity. Gas is about the same. Telecommunications is a lot more.**

So there certainly is capacity in total to up that investment. Whether it doubles, you know – I mean, just surmising here, if it were to double I think a lot of the investment needs would, you know, on an aggregate national basis would disappear. But, you know, that's not going to happen.

We are facing affordability issues in some communities. It's very important to look at those in context, which we haven't in the water sector. To that extent that there's been subsidy programs at the federal or state level, they often target subsidies at the utility level, so low-interest loan or the grants to the extent they exist.

**Subsidize the entire system rather than basically charging full cost of service for the utility and then identifying those households that have a difficulty with affordability and targeting subsidies towards them. I think we're going to see increasing emphasis and focus on that** in order to make the customer rate change increases that we need to going forward.

So percentage-wise, you know, I can't guess right now what the percentage increases would be. And again, because it's fragmented in nature, it's, you know, I'm here in District of Columbia. I forget what the numbers are, but, you know, D.C. water is increasing their rates. I think they're doubling over a number of years. A lot of the **large municipal wastewater utilities are seeing 5 to 8 percent year-over-year constant increases**. They're finally making the decisions they need to to make the investments.

Working with our public utility commissions, we're having those same discussions, which is again part of those distribution service improvement charges is that we know the pipes need to be replaced. There's no mystery.

So if you have a surcharge of 3 to 5 percent increase every year, or whatever the number is, to make those investments, you can address those challenges and help eliminate some of the rate shock which we've experienced in the past where you don't have the rate increase for three, four, five years and all of a sudden you're dealing with 25 percent rate increases rather than, you know, a series of smaller ones.

**Julien Dumoulin-Smith:** Well, can you talk a little bit about what the administration's plan and the transition team, etc., have been talking about in terms of kind of realizing reinvestment? And maybe also let's also hit, we come back to the core here, to what extent is this really being driven by local decisions about whether to reaccelerate or not? And to what extent can a federal decision, you know, call it an infrastructure plan at the federal level, actually impact the pace of investment?

**Michael Deane:** Sure. Well, I think there's two federal elements. One is what the federal potential investment is. And then also what the broader federal role is.

So one of the important things we didn't touch on too much is compliance. You know, we believe that our robust compliance program is an important part of running the utilities and ensuring the people are served safely and efficiently by utilities.

So certainly some of the smaller, mid-size utilities even the EPA will tell you that maybe we've been kicking the can down the road a little bit too long. Small systems not in compliance, kind of patching them up, giving them the opportunity, but not making the changes.

Kind of post-Flint in particular, I think that policymakers across the spectrum are realizing that certain segments of the population, whether they be small systems, perhaps – not all small systems are in a bad situation obviously, but some of the small poorer systems – or declining urban areas, perhaps, like a Flint, are **not going to benefit from the protections provided by the State Drinking Water Act or Clean Water Act if we don't really ensure that they meet compliance.**

That is going to help drive investment for those communities who can't make the investment. It provides opportunities for the investor owned utilities to come in and potentially acquire them, wrap them into a larger system to make those investments. So that kind of compliance enforcement is a critical part of it.

Again, on the capital investment side, the federal government has never – it's not like the transportation world where there's a huge, big federal cost share to a lot of transportation projects. It's always been pretty small, particularly in drinking water.

And whatever increases there may be – and the administration while it was in the **campaign had talked about tripling the size of the state revolving fund programs, which are the principal low interest loan programs now**. You know, we shall see. It sounds good but where's the money? How would it work?

There's a new WIFIA program, that Water Infrastructure Finance and Innovation Act, a model on the TIPIA, transportation program, which wasn't very successful, which is just starting up now. **The EPA just late last year got an appropriation to provide direct low-interest loans to large projects**.

That has potential. They have $17 million of appropriations which in their calculation supports $1 billion worth of assistance in loans. So that could provide significant money in the billions as well with more appropriations there.

So that can help drive it. But again to me it is going to be local investment, whether it be the private utility or public utility making the investment with some, you know, assistance in leadership from the federal sector.

As far as what the administration is talking about, and most people have seen the big proposal that was in a white paper, the policy paper, during the campaign on a tax credit that would lead to private investment. How that plays out for public utilities and certainly for private utilities is if it were to be implemented, which is, you know, far from certain could be the case. It was a proposal.

There's a lot of discussion going on of what can be done, how to promote more investment. But it would be private investment in public infrastructure, so under various steps of partnerships and concessions. Or how to help encourage more private investment in the private infrastructure as well. So early days in the administration.

As I think most of you know, the EPA just got its administrator Friday evening. EPA is critical to investment in drinking water. And there's a lot of discussions ongoing right now. So I think over the coming months we will see more policy proposals coming forward.

Again, always with an eye towards – it's not going to solve the problem, but can the federal government take a leadership in the types of investments that need to be made and the types of management of utilities that could be made, again, from an enforcement and consolidation standpoint?

**Julien Dumoulin-Smith:** Can you talk a little bit about some of the regional differences here? I suppose the American West has seen a lot of different shifts here. But speaking with some of the energy companies of late, they're obviously quite attuned to the water needs out West. But how differentiated regionally are you seeing the water reinvestment opportunities?

**Michael Deane:** That's a really good question. I think [..] there's a couple segments, right? If you look at the need in pipe which I articulated earlier, **the huge need in pipe, it's obviously, for the most part, older areas, often older urban areas** compared to say, new areas. If you're in some of the Sunbelt areas around, you know, just to make a – Arizona, I mean, Arizona has some older communities. But obviously a lot of communities have been put in place much more recently so their pipe isn't as old. It's not so <u>much a</u> matter of age to be honest with you.

We've got some really good 250-year-old wooden pipes in some places still. And we've got some really bad concrete pipes from 30 years ago because of material problems and materials changing over time. So the industry has really, you know, learned some lessons over time.

So it's based on age of the city to some extent. If you look in places like California, obviously drought resiliency is first and foremost in mind. But it's not just there. I mean, here we're in Washington, D.C. It was in the paper this week is that, I think, Virginia where I live is technically under a drought.

We had a mild winter, no snow, little rain and there's – the water supply is fine. So the regional differences are important. But again, this variability in supply is maybe more important than just, you know, places that are historically water-poor or water-rich is because you find because of weather induced or competition for water resources induced that it's not as big of an issue as elsewhere.

We've got water-rich areas where because of environmental regulations for ecological flows, you have to remember that there are requirements to ensure the sufficient flows in rivers and streams for environmental reasons. **We see competition within watersheds for agricultural flows and energy**. We have a lot of energy experts on the call. A lot of water is needed for various types of energy from extraction to production.

And so those challenges, I think, lead to supply investment needs for everybody combined with drinking water. I mean, under our infrastructure in aging areas, in particular upgrading old treatment plants, again, which sometimes are in large, older urban areas which may have declined in populations and declined in economics, and makes it difficult to increase investments with a smaller customer base. So again, there are some changes. But there's enough needs of various types to spread across the country.

**Steve Fisher:** It's Steve Fisher. I'm not sure if you mentioned this already, but who is it that, since rates are so important, who is it that's sort of the gating entity on the rate and who's looking out for the rate payer?

**Michael Deane:** Yes. Good question. Obviously, [..] if you're a regulated utility like our NAWC members are, investors in utilities, there's a very formal process in all states of, you know, utilities and commissions and commission staff and consumer advocates who have a, you know, legal, statutory or maybe constitutional in some cases responsibility to represent the customer.

In my mind, [..] obviously rates are part of that, a significant part of it. But also service in what you receive is that you can ensure the customers receive safe and reliable service as well so there's that balance that needs to be made.

You know, no one wants to pay more for anything, whether it be, [..]cell phone bill, loaf of bread or a gallon of water or a kilowatt of electricity. But you need to make those balances. So for the regulated water utility, that's a very formalized process.

For non-regulated, which are most municipal sectors, very few have…I mean, **some large cities have a similar kind of consumer advocate that can represent, you know, consumers to the city council** or if it's an independent, the water authority board, but most do not. And it's much more of a kind of a public relations political type of situation where a city council or board will have a public hearing and an opportunity for people to come and state their case.

But, again, the case typically is, you know, **we don't want to pay more as opposed to an official consumer advocate which needs to ensure that at the end of the day people are getting the service that they need.**

Assume if it's a city council, everyone wants the service. They just don't want to pay for it. When water was cheap, which it has been in many places over the course of this nation's history over the last 100 years, it hasn't been a big issue. **But it's an increasing cost environment.**

We are living off the investments that are our forefathers and foremothers made in the 70s in building treatment plants and this type of thing. And putting in place rates in many places where rates did not exist or they were just flat fees and not based on consumption [..] that they made investments. Those assets continue to deliver but it's now our turn to make those investments as well.

So there's a real education effort that we and our municipals partners are trying to make across the spectrum that yes, customer rates need to increase but you will be receiving something of value for those investments that you're making.

**Steve Fisher:** Got it. Thanks.

**Julien Dumoulin-Smith:** Awesome. All right. Just to keep it going here just real quickly. We're getting a couple different questions coming in here. So I just want to try to bang those out in the remaining minutes here.

Can you elaborate a little bit on where private equity investors versus publicly traded utilities might best be suited? I mean, I suppose this also goes back to the wider point of consolidation you were making before, but is there any specific niche that you might see today?

**Michael Deane:** Well, I mean if you look at – so if you look at the investor on the utility model, we call them investor one, sometimes shareholder one. As you know, there's **eight, nine really publicly traded companies**, which serve the bulk of the population served by private utilities. There's [..] literally tens of thousands of very small private systems. There would be mobile home parks that serve 30 mobile homes or these type of things as well.

But if you look at that [..] really utility side, we've got the publicly traded ones. We've got ones that are closely held. Some of the smaller mid-sized ones are closely held by families or a small group.

We have some that are owned by a private equity fund and some of our large utilities are as well. So if private equity can come in, it can acquire a utility or a portion of a utility. But also where we've seen an interest in private equity sort of globally and here is in what would be non-regulated utilities where various types of public, private partnerships **may be a concession where the underlying assets are still owned by a municipal or other public system**.

But they enter into a concession where there's, you know, private investment. **Private investment goes towards the capital needs**. They don't issue municipal bonds anymore. It may be a private equity pension fund or other mixed investment over long-term arrangement. They have to be long-term because these are investments that are being made in assets that are long-lived, and at the end of the day are owned by the underlying public/municipal utility as well, so…

**Those are just kind of two places where private equity can come in, which is investing in an investor one utility or investing in some long-term concession or other partnership**. And then for the investment of utilities, obviously, you know, that's the bulk of the business just from the private sector investment.

And really where, I think, the core – a good understanding, as I mentioned to many participants on this call – is investors. That's a world that they understand [..] really quite well, whether it be a publicly traded or a more closely held utility.

**Julien Dumoulin-Smith:** Got it. I mean, what do you actually do – let me just ask you this. I mean, we're getting a few different questions around this point. But to what extent are you seeing this consolidation thesis play out? I mean, I think there's been a lot of focus at the PUC level to see this consolidation happen simply from a paperwork perspective.

Obviously, you have this rate normalization spreading of costs that also lends itself to seize the argument that you bring private capital into play. In theory they're well-resourced to make it happen. But at the same time I suppose it comes down to municipal votes, just simply execution and on the ground work kind of stuff to make these consolidation-type deals work.

Where do you see us in terms of innings, if you will, in this consolidation theme? And what are the practical limitations? Why haven't we seen more of it thus far? Why is it so fragmented relative to, say, the electric industry?

**Michael Deane:** Well, I think, I mean, there's a couple questions in there. Why haven't we seen more of it so far? And you kind of answered it. **It's a fragmentation. We've got so many small systems spread out and geographically spread out that it's difficult to do**.

Water is also a very emotional issue. I mean, in the private consolidation of public utilities, there are cases where there's two communities in the middle of someplace that are 10 to 15 miles apart. And it makes sense for them to consolidate and run a pipe, you know, rather than build two new treatment plants and try to spread it across 1,000 people is run a pipe and serve 2,000 people.

And they just don't want to do it. They want control. Water controls their destiny. So there's a very emotional element of it as well.

But kind of getting back to why it hasn't happened. There hasn't been as much focus on it. And I think one of the reasons is kind of that kicking the can down the road again is that a lot of regulators in public health and environmental regulators have kind of gone along with what's happening.

**Maybe not quite in compliance, but [..] it's not a crisis yet**. That can't continue. And then so there's more pressure on getting in line, getting in compliance.

And if it's a utility that can't do it, they're going to be looking around for options. One of which is to be acquired. If it's a private system nearby, great. I mean, you know, I don't think a private system that doesn't have any operations in the middle of Wyoming or something is going to buy one small utility there. **But particularly in places where there's significant presence and economies of scale available, proximity where would it be physical interconnection with that or starting from a managerial investment standpoint, they'll make those**.

So I think the **issue is coming to a head**. And we are working with, as I mentioned, working with regulators, and that can not only be the public utility commissions but the public health environmental regulators in states who will work hand-in-hand with their PUC colleagues and say, okay, we've got to find a solution for this community. And whether require or encourage or facilitate its acquisition by a healthier professional water management company, we need to do that. So I do believe it's going to accelerate. We are seeing more of it and more interest in it as well.

**Julien Dumoulin-Smith:** [sentences deleted]

With the large profile in front of many utilities which is ultimately paid for by customers, well, actually, you know, you kind of addressed this question already. I mean, let me move on to the next one.

What is an acceptable water main break rate, i.e. the number of breaks per main mile per year as kind of a good framework to think about? This is a question coming in.

**Michael Deane:** Yes. Unfortunately, I don't know on the top of my head what I should have, but what kind of an NAWC standard would be for water loss rates. You know, and again, it really – I hate to say this but it really depends.

I mean, no one wants to see water loss because it's a significant amount of water and it costs a lot to, you know, energy and chemicals and labor to produce it. But, you know, **sometimes it does make sense to run to failure for a particular pipe that's if, you know, from a water supply standpoint the disruption of replacing it**.

But, you know, I hate to say it because it sounds so Washington-*ish*, it depends. And I'm sure I can follow up with you, you know, with an actual rate, you know, acceptable rate break number. And, of course, it's going to vary from what's acceptable to a professional engineer running a utility versus [..] a customer where that break happens to be as well.

But [..] it is a significant issue. We see far too many breaks. And many of them can be prevented if we make the investments ahead of time that we need. Sorry I don't have kind of a standard out there for you right now.

**Julien Dumoulin-Smith:** No worries. And then maybe just kind of following up. If main breaks are not problematic and customer service levels are high, what is an appropriate main replacement cycle to target? One hundred years, for instance?

**Michael Deane:** Yes. I mean, first of all, I wouldn't say that [..] breaks aren't a problem. I mean, obviously they are a problem generally. But again [..] sometimes it makes sense.

Yes, [..] if you look at – it depends on material science, right? Everything constantly changes but it is kind of a benchmark, a thumbnail of 100 years. I mean, it makes to folks on a 100-year replacement cycle. Certainly not a 300, 500 or 1,000-year, which we've seen in some of the utilities out there.

So I think it's a good target to go. I think most of us understand that whatever material it is, after 100 years there's a good chance that we should take a good look at changing it.

The other thing is inspection and looking at it. We're getting much smarter. It's very important to be efficient in running our utilities. That it is not efficient to replace a pipe that doesn't need to be replaced. So we need to get much better at our asset management as well as our investment in better materials. **But currently a 100-year replacement cycle is a good target**.

**Julien Dumoulin-Smith:** Perhaps just to [..] summarize, I know you've talked about a lot here. Well, actually, you know what? Let me ask you one other question coming in just to kind of hit it really quickly.

The lead and copper rules, I know that this is one that's come up a little bit. And you kind of alluded to it earlier, and actually let me just broaden it out as we kind of finalize the call, too. To what extent should we be paying attention to rules such as the lead and copper rule to drive further investment? Or are we simply targeting – let me rephrase this.

You've got the lead and copper rule out there. You've got other rules that you've alluded to in the last hour. Which of those are kind of the key driving rules that we should be paying attention to in terms of driving this investment level forward? I mean, you talk about need to reinvest. Presumably that is to reinvest to meet the tightening or even existing standards on the book.

**Michael Deane:** Yes, I think, so lead and copper rule [..] it's going to be interesting to see. Obviously, there's a lot to be discussed by EPA and everyone in that. There will be an investment element of that.

Obviously, there's [..] there's testing. There's monitoring. And everything as well. But this clearly will be, I think, post-Flint. You need to replace pipes, lead service lines. Again, it's not so much the distribution systems.

And so in these other regulations again, as I said, they're long term. There's nothing that's going to be hitting [..] any time before that other than perhaps pro chloride, which would be a treatment need driver as well.

But you will get kind of a cost of compliance – it's important. But [..] recently, I saw a presentation by the Water Research Foundation, which is a research foundation funded by utilities, public and private. And you kind of look at the cost of compliance with particular standards.

While it's significant, they estimate about $5.1 billion per year to meet those 19 regulations I mentioned. It's relatively small compared to the infrastructure needs that we have been talking about of rehabilitating, replacing a pipe, just upgrading the treatments, not necessarily upgrading to a new standard. It's simply: [..] you've had treatment in place for 30 or 40 years, it needs to be rehabilitated as well.

So they're important, but I do want to emphasize that just because you don't see a big-picture, headline-stealing new regulation requiring huge investments doesn't mean that a significant investment doesn't need to be made. Because while those will be coming in kind of a lumpy basis over time, as I've tried to emphasize there's an ongoing need every year to invest in rehabilitating existing infrastructure at the same time preparing for the new capital needs that will come in that more lumpy format when new treatment standards are in place

[Concluding sentences deleted]

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# Initiating Coverage of Aqua America with Hold Rating (WTR - $33 PT)

**April 19, 2016**

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AQUA

*Please see important disclosures beginning on page 14.*

# Initiation Summary



**Overview**

- ***In conjunction with our broader launch of water utility research, we are initiating coverage of Aqua America (WTR) with a Hold rating and $33 price target.***
- **Top-Tier Growth.** WTR is the second largest investor-owned water utility in the United States (after AWK), serving ~1mm customers through management of water systems across eight states. We consider WTR an elite name in the water space, with above-average projected 6-8% EPS and dividend growth over the next five years. WTR's growth engine is highly visible and entirely focused on upgrades to its aging water distribution systems (5-6% of EPS growth target) and the acquisition of smaller systems within its geographic footprint (1-2%).
- **M&A Leader:** WTR is well positioned to capitalize on the growing trend towards the consolidation and privatization of the nation's water and wastewater systems. WTR has proven itself a successful aggregator of these assets over the past two decades with ~300 completed acquisitions, the highest total within the industry over the period. With >50k water systems in the U.S., a majority of which serve <10k customers and in need of costly repairs, WTR has ample opportunity to continue to build shareholder value through roll up of this fragmented market.

**Investment Thesis**

- We see the fair value of WTR at $33/sh, using an equal combination of relative (P/E, EV/EBITDA) and absolute metrics.
- We expect WTR to achieve 6-8% EPS growth over next five years, with dividend growth modestly outstripping EPS growth given a low payout ratio. Both growth rates compare favorably vs. a 5-6% peer average. Faster growth primarily reflects existing system upgrades and accelerated acquisition of smaller, troubled systems. Combined with experienced management with a solid record of execution, strong cash flow and A+ level credit ratings, we believe shares warrant a premium valuation relative to its peers.
- We value WTR at a 22x P/E multiple on FY'17 EPS and 12x EV/FY'17 EBITDA, vs. a peer group which currently trades at 21x P/E multiples and 11x EV/EBITDA, respectively. At the current price, we view shares as fairly valued.
- Among many risks to our valuation assumptions, we note regulatory uncertainty, execution risk on infrastructure enhancement, rising interest rates, and expected need to regularly access the capital markets. Uniquely, our growth target for WTR relies heavily on an ability to successfully execute aggressive acquisition strategy.

**Report Structure**

- What follows in this report is a detailed review of WTR peer comps and valuation, management team and growth strategy, core operations and near term growth drivers, and review of important financial metrics.

# Valuation

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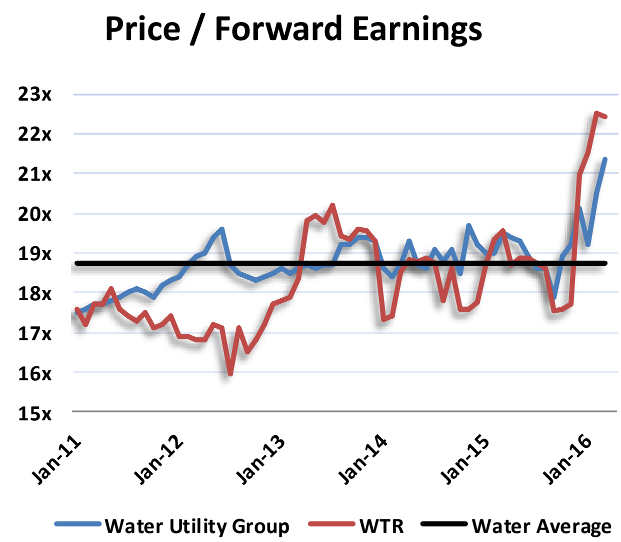
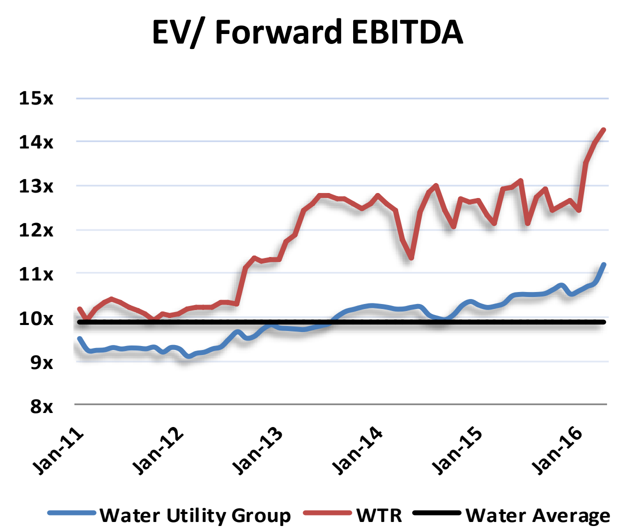
- Over the last five years, water utilities have traded at 17-21x forward P/E and 9-11x EV/forward EBITDA. More recently, water utilities have traded at the high end of the range given increased visibility of water infrastructure issues, an improved infrastructure investment outlook, expectations for acceleration in M&A, and broader takeover speculation among utilities.
- We see the industry moving from a historic EPS growth rate of 4-5%/yr to 5-6%/yr driven by accelerated infrastructure investment and M&A. With an improving growth outlook we see multiple expansion as likely, similar to the performance of the gas utility sector under an accelerating infrastructure replacement theme beginning in 2010. Accordingly, we see P/E range of 18-22x and EV/EBITDA of 10-12x as justified for the sector on average.
- Historically, the market has afforded higher multiples to utilities with greater percentages of regulated earnings given the perception of enhanced consistency in cash flows and earnings. We think high-end multiples are warranted for WTR given strong earnings and dividend growth of 6-8% over the next five years, an experienced management team with a solid track record of execution, strong cash flow and top-tier credit metrics.
- Our $33/sh fair value estimate is based on a methodology using an equal combination of relative metrics (P/E, EV/EBITDA - $34) and absolute metrics (Dividend Discount Model - $32).
- Our relative value of $33/share is based on a 22x P/E multiple on FY17 EPS of $1.42 ($32/sh) and a 12x multiple on EV/FY17 EBITDA of ~$0.5B ($37/sh). WTR shares have traded at an above-average 11-13x EBITDA multiple following positive tax legislation in PA in ’12. The tax provision benefits earnings-based measures but skews EBITDA-based measures. As a tax adjustment, we give lesser benefit to this relative measure, and normalize instead to the high end of our expected forward range at 12x in our valuation assumptions. Our absolute value of $32/share assumes a beta of 0.9, a risk-free rate of 3.0%, and an equity risk premium of 575 bps.






*Source: Bloomberg, USCA*

# Management & Strategy

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WTR is led by an experienced management team with a solid record of past execution. We view them as capable of executing on an infrastructure-driven growth and acquisition strategy targeting long-term >6% earnings and dividend growth.

- **Regulated Ops:** Focus will be on continuing to drive rate base growth of 6-7%/yr (~5-6% projected EPS growth) through regulatory capex trackers which allow system replacements and upgrades. Rate base growth and timely recovery flows through to net income growth. Additionally, target 1-2% EPS growth through regulated customer acquisitions of municipalities and private systems. Combined, regulated ops should represent 6-8% EPS growth/yr.
- **Non-Regulated Ops:** WTR has a market-based segment which offers services such as contract maintenance and homeowner services. However, the segment is being re-evaluated as to its long-term fit by management, and we see the segment as net-income neutral over the near-term.

Senior management team:

- **Christopher Franklin, President & CEO:** Franklin was named CEO in '15 after having served as president & COO and various other senior executive positions over twenty years at WTR. Prior to joining WTR, Franklin was a senior office at PECO Energy, a sub of Exelon (EXC).
- Franklin assumed the helm from long-time CEO and current Chairman Nick DeBenedictis following his retirement after 23 years as CEO. Under Franklin, we expect an accelerated pace of water and wastewater acquisitions and continued rationalization (divestment) of small non-regulated businesses.
- **Rick Fox, COO, Regulated Operations:** Fox was named COO in '15 after having served in various other executive positions since 2002. Prior to joining WTR, Fox spent 17 years in the chemical manufacturing industry.
- **David Smeltzer, CFO:** Smeltzer was named CFO in 1999 after having served as head of regulatory affairs and other executive positions over 30 years at WTR. Prior to joining WTR, Smeltzer served as an audit manager at KPMG LLP.
- **Dan Schuller, EVP Strategy & Corporate Development:** Schuller was named to his current role in '15. Prior to joining WTR, he was an investment principal with JP Morgan Asset Management Infrastructure Investments Group.

*Source: Company Reports, USCA*

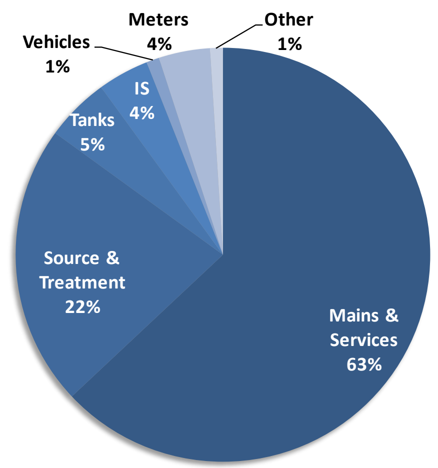
# Near Term Growth Drivers

Over the next several years, we expect WTR key growth drivers will focus on infrastructure replacement, organic customer growth additions and municipal water acquisitions.

We briefly discuss each of these drivers below:

- **Infrastructure Replacement:** Execution on $375mm annual spend on regulated system investments, with ~65% for water main replacement and upgrades, ~20% for upgrades to water and wastewater treatment facilities. Greater than 50% of spend will be in PA where a regulatory capex tracker allows for timely investment recovery driving earnings growth. Concentrating spend in PA allows for greater utilization of “Repair Tax deduction” implemented into PA rates in 2011. The provision greatly reduces WTR’s tax bill and enhances after-tax earnings available for shareholders.
- **Acquisitions:** WTR is targeting addition of 10-15k new customers in ‘16 and beyond (~1%/yr) primarily from a faster pace of municipal water acquisitions. Each additional 1% customer gain translates into ~1-2% net income growth. WTR plans to continue targeting fewer but larger municipal assets with ~5-25k new customers, and has identified multiple municipal wastewater targets within its eight-state footprint. Recent enabling legislation in PA, IL, IN and NJ we think offer the higher near-term opportunities.
- **Organic Customer Growth:** We expect ~8-10k new customers additions in ‘16 and beyond (~0.8%/yr ) driven by population and new construction growth. However this driver could be muted without regulatory revenue decoupling, and depending on weather conditions, this growth could be offset by conservation effects.

**2016 - 2018 Capex Breakdown**




**Total 3 Year Investment: $1.1B+**

*Source: Company reports, USCA*

# Core Operations – Growth Engine

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- **EPS Targets:** WTR 6-8% long-term growth target is driven by a combination of water infrastructure replacement and enhancement (~5-6% contribution) and acquisitions (~1-2%).
- **Overview:** WTR regulated water distribution operations (~99% of '15 pretax income) serves ~1mm customers in eight states (see map upper right). WTR operates ~12k miles of distribution pipeline, as well as 20 surface treatment plants and 183 wastewater plants, with a total rate base of ~$3.4B.

  From '11-'14, WTR divested smaller assets in SC, MO, ME, NY and FL for modest gains and acquired bolt-on assets in OH and TX to tighten up its portfolio and build scale in existing markets.
- ***We view WTR's broad geographic footprint positively as it diversifies the company's exposure to state regulatory commissions, regional weather conditions and favorably positions WTR to make acquisitions in several states.***

  Nonregulated operations (~1% of '15 pretax income) largely engaged in sewer line inspection/repair and various home services are not expected to be a material contributor to near-term EPS.
- **Customers:** WTR customer mix is ~ 85% water and ~15% wastewater. PA operations represent ~50% of total customers and revenues. Customer mix is ~95% residential, ~4% commercial and ~1% industrial and other.

  Historically, water customer growth has averaged ~1.0%, roughly in line with peer average, with organic growth contributing ~0.8% and acquisitions ~0.2%. ***With an accelerated planned acquisition strategy, we expect ~1.5-2.0% annual customer growth through '18.***


***Rate Base Details***

| State | Rate Base ($mm) | Water Connections (000s) | Wastewater Connections (000s) |
|---|---|---|---|
| PA | $2,369 | 426.7 | 19.7 |
| OH | $251 | 143.5 | 6.6 |
| IL | $209 | 62.6 | 9.6 |
| TX | $192 | 60.3 | 15.7 |
| NJ | $132 | 52.1 | 5.9 |
| NC | $125 | 77.8 | 16.9 |
| IN | $69 | 0.9 | 24.6 |
| VA | $63 | 24.2 | 7.4 |
| **Total** | **$3,412** | **848.1** | **106.7** |

*Source: Company reports, USCA*

# Core Ops (Cont'd)

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- **Regulation:** WTR blended, authorized ROE is ~10% and equity structure is ~50%, roughly in line with peer electric and gas utilities. Though they do not disclose earned returns by state, management has noted they are currently over-earning their authorized ROE in NJ and TX, earning their authorized ROE in OH, NJ and IL, and under-earning their authorized ROE in NC, IN and VA. ***WTR is planning to file a general rate cases in PA, its largest jurisdiction with >50% of revenues and rate base, in '17 to be effective in '18. No other rate case fillings are planned in its five other major jurisdictions in '16 or '17.***
- In recent years, WTR has successfully achieved important regulatory approved revenue and spending trackers across its multi-state jurisdictions. Chief among these are infrastructure trackers, which minimize regulatory lag and allow for accelerated infrastructure replacement and modernization. WTR has infrastructure trackers or surcharge authorizations in six of its eight state jurisdictions.
- **Rate Base Growth:** WTR has averaged ~5% rate base growth in recent years. They plan to spend ~$1.1B (~$375mm/yr) over the next three years at their water utilities primarily on upgrades to mains and treatment facilities. For utilities, spending = rate base growth = earnings. ***Assuming WTR spends ~$375mm annually over the next three years on a ~$3.4B current rate base, we see water rate base growing ~5-6%, in line with WTR's guidance.***

***Regulatory Overview***

| | Rate Base | | | Regulatory Trackers |
|---|---|---|---|---|
| **State** | **Customers** | **Rate Base ($mm)** | **Operating Revenue (%)** | **Infrastructure Tracker** |
| Pennsylvania | 446,000 | $2,369 | 51.7% | Yes |
| Ohio | 150,000 | $251 | 12.1% | Yes |
| Illinois | 71,000 | $209 | 7.1% | Yes |
| Texas | 75,000 | $192 | 8.5% | No |
| New Jersey | 58,000 | $132 | 4.1% | Yes |
| North Carolina | 94,000 | $125 | 6.4% | Yes |
| Indiana | 25,000 | $69 | 2.2% | Yes |
| Virginia | 31,000 | $63 | 3.2% | No |
| **Total** | **950,000** | **3,410** | **100%** | |

*Source: Company reports, USCA*

# Muni Acquisition Focus

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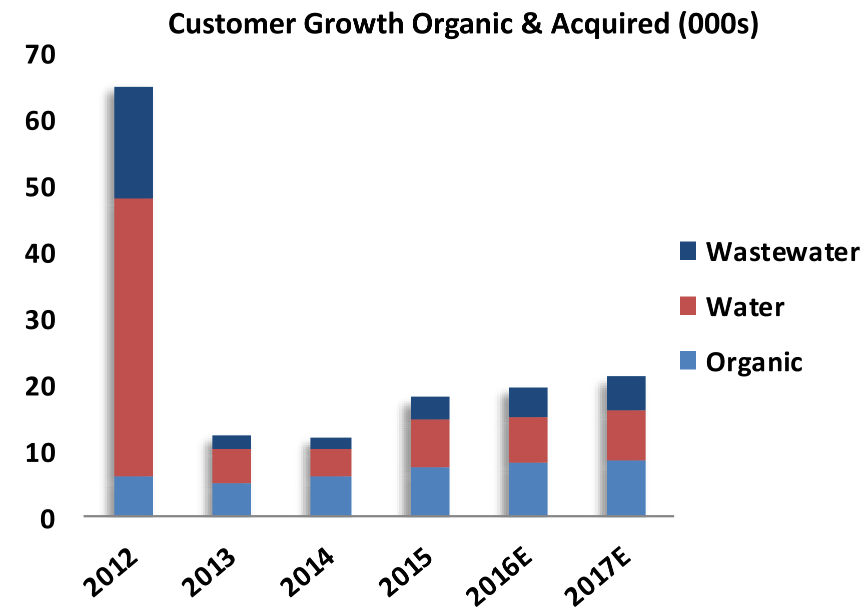
- **M&A Focus:** WTR has historically shown the ability to grow earnings through the acquisition of municipal water and wastewater systems. From 2000-2014, WTR completed 240 acquisitions of mostly smaller water systems, adding >400k new customers, effectively doubling their customer base.

  We believe WTR has substantial opportunity to continue to add shareholder value through a disciplined acquisition strategy. Incremental synergies may be captured via follow-on “tuck-in” transactions of systems near the acquirers service territory.

- **Recent Activity:** In ’15, WTR closed on 16 acquisitions totaling ~11k new customers, with an increasing mix toward larger municipal wastewater assets (~30% of adds vs. historic ~5%). The accelerating pace of acquisitions boosted WTR annual customer growth rate to 1.9% vs. historic ~1% level. In ’16 and beyond, WTR plans to continue targeting fewer but larger municipal assets with ~5-25k new customers.

- **Future Opportunity:** WTR has identified multiple municipal targets within its eight-state footprint. ***We think recent enabling legislation in PA, IL, IN and NJ should allow for improved near-term acquisition outlook.***




***Acquisition Details***

| | |
|---|---|
| **Average Spend/yr ($mm)** | **$37.3** |
| **Average Spend/Customer** | **$1,568** |
| **Average Customers/System** | **1,500** |

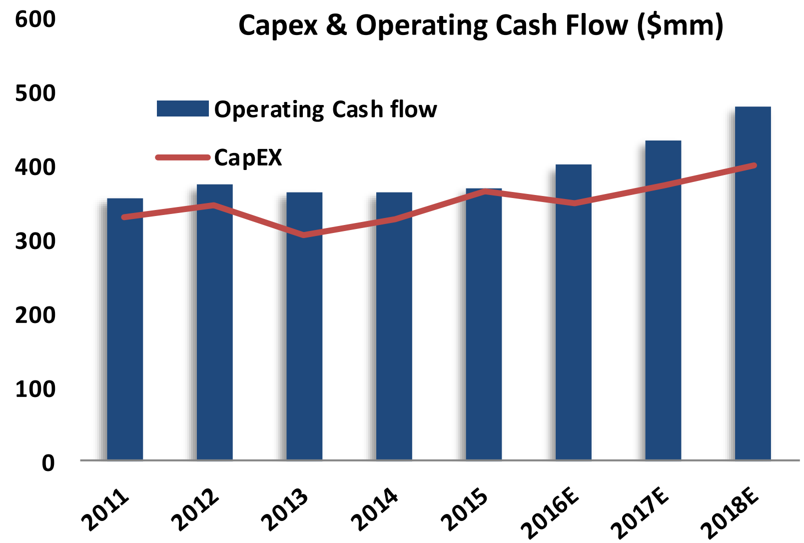
*Source: USCA, Company Reports*

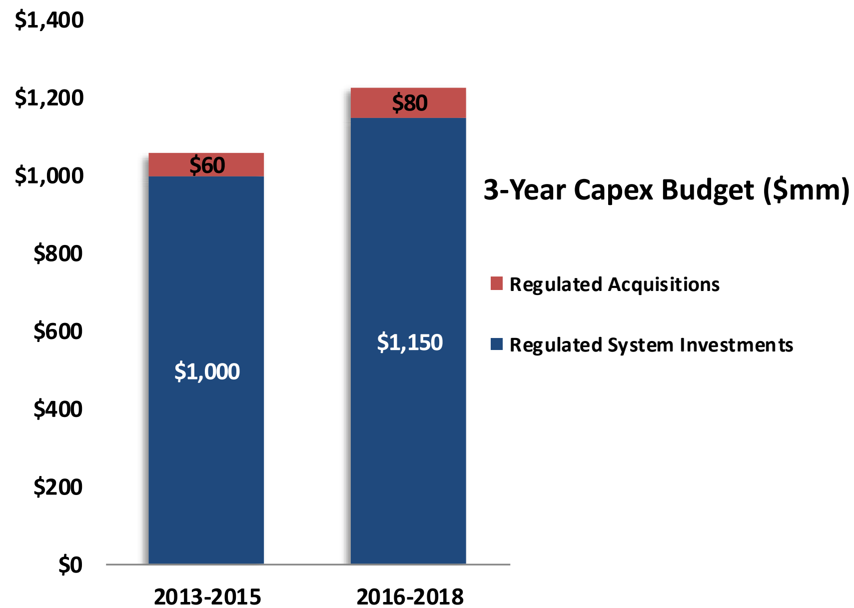
# Financial Review

# Capex and Cash Flow

U.S. Capital Advisors

- **Capex and Cash Flow:** WTR targeting ~$1.1B capex spend in '16-'18, or ~$375mm/yr for regulated system infrastructure upgrades. For '16, we project CFFO of ~$400mm, covering >100% of its requirements before dividends. Assuming ~$130mm in dividend payments, free CFFO covers ~85% of total requirements.
- **Financing:** In '16, we estimate the ~15% shortfall of ~$150mm will be funded with short-term debt. As with other utilities, we would expect short-term debt balances to be periodically rolled into long-term debt. ***With improving CFFO metrics driven by accelerated customer growth from acquisitions and expected cost efficiencies, we expect WTR will be free cash flow positive in '16 and beyond.***
- **Balance Sheet:** WTR has a stable but slightly below average balance sheet of ~50% equity at 12/31/15 vs. a peer average of ~54%. WTR has ~$0.4B of debt due over the next five years, or ~25% of total debt of ~$1.7B. We assume WTR issues new debt to replace the maturing debt. With improving cash flow metrics, we expect modest improvement in debt/capitalization metrics and continuation of strong A+ level investment grade credit ratings. Absent a sizable acquisition, we do not expect WTR will need to issue equity through '20.




Source: Bloomberg, USCA

# Accelerating Earnings Growth

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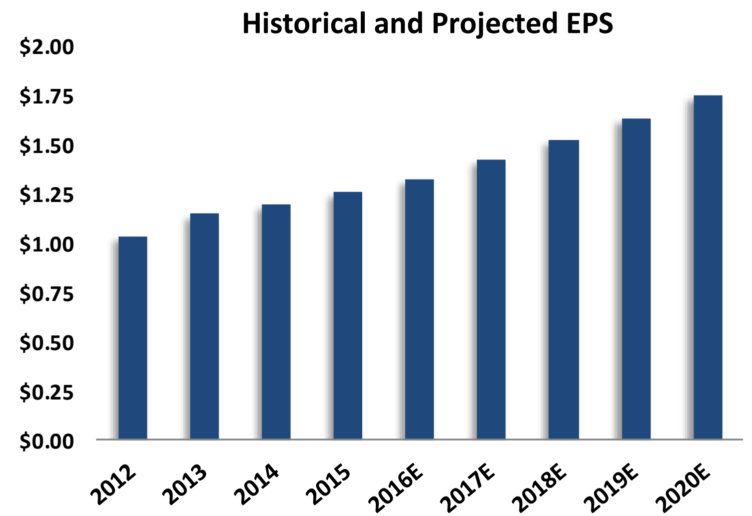
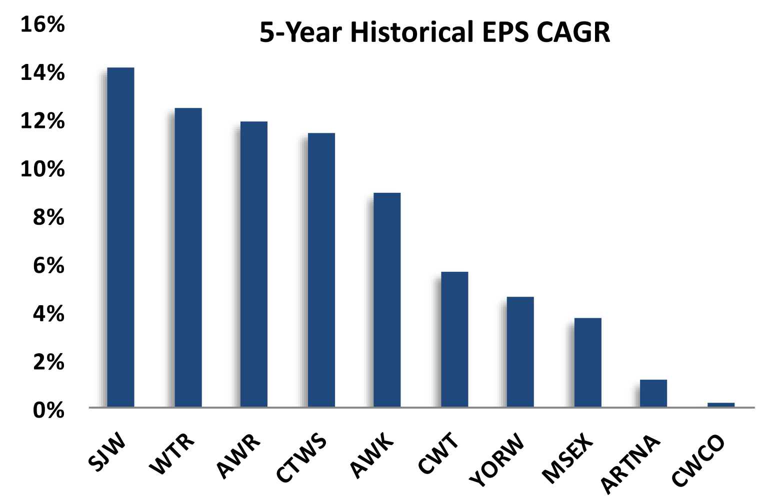
- We estimate the water industry's long-term earnings growth rate of ~4-5%, with potential to achieve higher growth through rate relief and successful acquisition strategies and partnerships.
- WTR grew EPS ~12% annually over the past five years, well above the water peer group average of ~5%, driven by a combination of organic customer growth, rate relief, cost efficiencies and acquisitions.
- For '16, WTR has guided to $1.30-$1.35/sh, up ~5% at the midpoint vs. '15 EPS of $1.26. Guidance assumes 1.5-2.0% customer growth (vs. 1.9% in '15) and 1-2% O&M expense growth (vs. 7% in '15).
- ***We view WTR '16 guidance as conservative at the outset. Rate base growth alone should get them to ~6% level given a $3.4B rate base, $375mm annual capex spend and ~$140mm in DD&A. Upside to >6% level will be largely dependent on the pace of acquisitions.***
- As previously noted, WTR is targeting 10-15k new customers annually primarily from municipal wastewater acquisitions. In this regard, WTR is off to a good start, closing on a 4k customer acquisition in PA in 1/16.
- Our initial EPS estimates for '16 and '17 of $1.33 and $1.42, respectively, assume ~6% annualized growth.



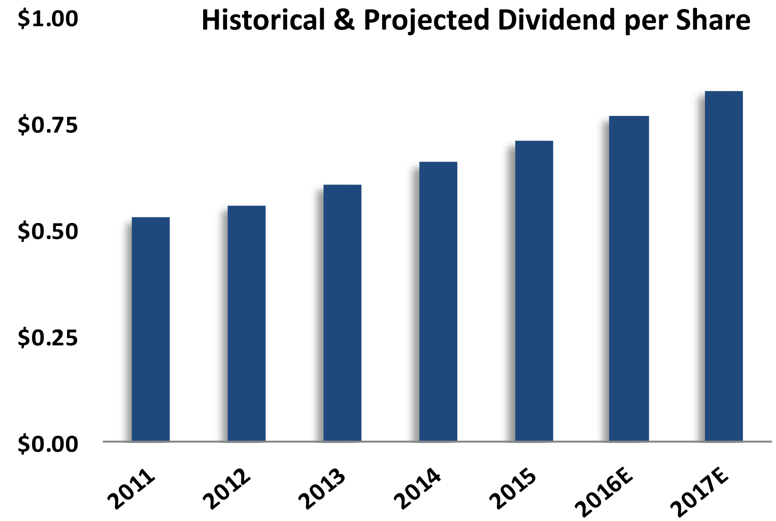


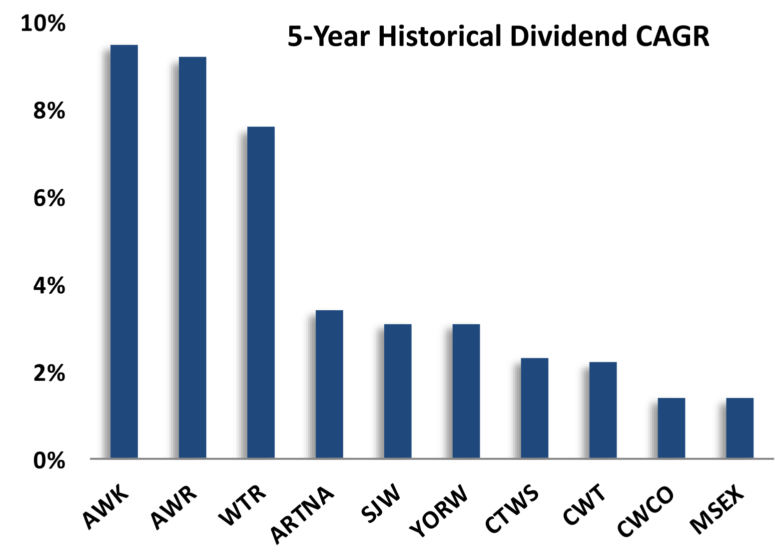

Source: Bloomberg, USCA

# Outsized Dividend Growth

U.S. Capital Advisors

- We estimate the water industry's long-term dividend growth rate of ~5-6%, in line with earnings growth, with potential to achieve higher growth through accelerating earnings growth tied to rate relief and/or successful acquisitions and partnerships.
- WTR grew EPS ~8% annually over the past five years, at the high end of growth over the period. WTR's strong results compare with a water peer group average of ~4%, which were restrained we think by high payout ratios and cash retention for projects.
- Our initial dividend estimates for '16 and '17 are 77c and 83c, respectively, reflecting 8% annual growth.
- WTR does not offer a long-term dividend growth rate guidance but targets a payout ratio of 60-70% of EPS. Our '16 and '17 dividend estimates represents 55-58% payout.
- ***Based on currently low payout, and recent history of ~8% annual hikes, we see clear room for dividend growth to modestly outstrip our ~6% EPS growth estimate in '16-'18.***




*Source: Bloomberg, USCA*

# WTR Comps

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- There are ten, publicly-traded water utilities in the United States.
- Excluding the two largest names, AWK and WTR, average water market cap is small at ~$500mm to ~$1.5B, with minimal liquidity - average daily trading volume of ~83k shares.
- Water utility average yield is ~2.5%, compare with ~3.0-3.5% yields for gas and electric utilities.
- The geographic footprint for a majority of names is coastal, with approximately half the names serving franchised service territories on the East Coast and half on the West Coast.
- A majority of water sales and revenue is derived from residential customers (~65%) and to a lesser extent from commercial and industrial customers.

***Water Utilities***

| Company | Ticker | Price 4/18/16 | 2017 P/E | EV/EBITDA | Debt/EBITDA | EV ($mm) | Yield | Payout Ratio | Daily Trading Volume (000s) | 3-Yr Avg ROE |
|---|---|---|---|---|---|---|---|---|---|---|
| American Water Works Co. | AWK | $71.69 | 23.5x | 11.1x | 4.3x | $19,235 | 2.3% | 51.5% | 2162 | 8.8% |
| Aqua America Inc. | WTR | $32.18 | 22.6x | 14.4x | 4.0x | $7,496 | 2.1% | 57.0% | 841 | 13.9% |
| American States Water Co. | AWR | $41.04 | 23.2x | 10.7x | 2.2x | $1,847 | 2.1% | 54.4% | 233 | 12.6% |
| California Water Service Group | CWT | $28.09 | 21.0x | 9.1x | 4.0x | $1,891 | 2.4% | 71.6% | 448 | 8.4% |
| SJW Corp. | SJW | $37.50 | 20.2x | 8.4x | 3.4x | $1,179 | 2.1% | 43.3% | 109 | 11.0% |
| Connecticut Water Service inc. | CTWS | $46.87 | 20.5x | 14.9x | 4.6x | $722 | 2.2% | 52.7% | 46 | 9.6% |
| Middlesex Water Co. | MSEX | $36.08 | 26.1x | 14.8x | 2.9x | $729 | 2.2% | 63.1% | 62 | 9.4% |
| The York Water Co. | YORW | $32.96 | 29.7x | 15.7x | 2.9x | $507 | 1.8% | 62.0% | 43 | 10.7% |
| Artesian Resources Corp. | ARTNA | $29.38 | 20.3x | 10.1x | 3.4x | $381 | 3.0% | 69.1% | 35 | 7.8% |
| Consolidated Water Co. | CWCO | $12.98 | 18.4x | 12.1x | n/a | $157 | 2.3% | 67.3% | 63 | 5.9% |
| **Median** | | | **21.3x** | **11.6x** | **3.4x** | **$954** | **2.2%** | **60%** | | **9.5%** |

| **Utility Peer Comparisons** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Gas Distributors | | | 20.7x | 10.4x | | | 3.1% | 60% | | 11.2% |
| Regulated Electrics | | | 17.3x | 9.0x | | | 3.0% | 54% | | 10.0% |
| Regulated Electric & Gas | | | 17.6x | 9.6x | | | 3.3% | 63% | | 10.2% |

*Source: Bloomberg, USCA*

# IMPORTANT DISCLOSURES

**Analyst Certification:**

I, Daniel Fidell, do hereby certify that the recommendations and opinions expressed in this research report accurately reflect my personal views about any and all of the subject securities or issues discussed herein. Furthermore, no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report. I do not own any shares directly or indirectly (or any derivative thereof) of the company that is subject to this research report. Neither I nor any member of my household serves as an officer, director or advisory board member of the company that is subject to this research report.

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**Analysts' Compensation:**

Analysts' compensation is not based on investment banking revenue and the analysts are not compensated by the subject companies. Additionally, within the next three months USCA may attempt to seek compensation for investment banking services from the companies mentioned within this report

# IMPORTANT DISCLOSURES

**Opinion Key:**
USCA uses a Buy, Overweight, Hold, Underweight and Sell rating system.

**BUY** - The stock has among the best combination of risk/reward and positive company specific catalysts within the sector. Stock is expected to trade higher on an absolute basis and be a top performer relative to peer stocks over the next 12 months.

**OVERWEIGHT** - The stock has above average risk/reward and is expected to outperform peer stocks over the next 12 months.

**HOLD** - The stock has average risk/reward and is expected to perform in line with peer stocks over the next 12 months.

**UNDERWEIGHT** - The stock has below average risk/reward and is expected to underperform peer stocks over the next 12 months.

**SELL** - The stock's risk/reward is skewed to the downside with possible negative company specific catalysts or excessive valuation. The stock is expected to trade lower on an absolute basis and be among the worst performers relative to peer stocks over the next 12 months.

U.S. Capital Advisors

# IMPORTANT DISCLOSURES

**Price Target Methodology:**
Our price targets for downstream utility stocks are developed through a combination of techniques, including relative and absolute measures. We believe it is important to look at both types of valuation methods in order to get a full understanding of a stock's trading dynamics. Our fair value estimate is based on a blended average of the two techniques.

**Relative Valuation:**
Downstream gas and electric utilities tend to trade on both projected earnings and cash flow. We believe investors should take both these considerations into account equally. Downstream utilities have traded between 12-17 times forward earnings and 7-9 times EV-to-forward EBITDA over the last decade. With many downstream utilities operating under fiscal years' ending September 30, we typically use "forward-year" projections for proper apples-to-apples comparisons. Accordingly, our fair value estimates currently use our FY16 projections.

**Absolute Valuation:**
Given their status as income-producing investments, we believe it is also important to value downstream utilities based on the value of the future dividend streams. Unlike comparative valuation techniques, this method ignores the current or historic trading multiple implied by the market. Our DDM assumes a midterm growth rate based on our FY14-FY16 estimates, a long-term growth rate based on our forward projections using an assumed ROE (typically between 10-12%) and payout ratio (typically 60%-70%) and an equity risk premium using risk-free rates (currently 4.5%) and company Betas (average 0.8).

**Risks:**
An increase in interest rates, a poor regulatory decision, a decrease in commodity price volatility, bypass threat from large industrial customers, a decline in the broad market or a decline in profits from non-regulated operations are among the many potential risks to achieving our price targets.

# IMPORTANT DISCLOSURES

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**Distribution of Ratings (as of April 19, 2016):**

| Recommendation | Count | Percent | Investment Banking Relationship | Count | Percent |
|---|---|---|---|---|---|
| Overweight/Buy | 29 | 46% | Overweight/Buy | 6 | 21% |
| Hold | 33 | 52% | Hold | 2 | 6% |
| Underweight/Sell | 1 | 2% | Underweight/Sell | 1 | 100% |

**Historical Ratings and Price Targets may be found by clicking the link below:**
USCA Rating and Price Target History

For hard a hard copy of our price target/ratings history, please call 888-601-USCA (8722), or write to U.S. Capital Advisors, 4444 Westheimer, Suite G500, Houston, TX, 77027.

**A list of common terms and abbreviations may be found by viewing our** Glossary.

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# Aqua America Inc



| S&P Capital IQ Recommendation | | Price | 12-Mo. Target Price | Report Currency | Investment Style |
|---|---|---|---|---|---|
| | STRONG SELL ★★★★★ | $33.83 (as of Jun 17, 2016 4:00 PM ET) | $30.00 | USD | Mid-Cap Growth |

**S&P Capital IQ Equity Analyst C. Muir**

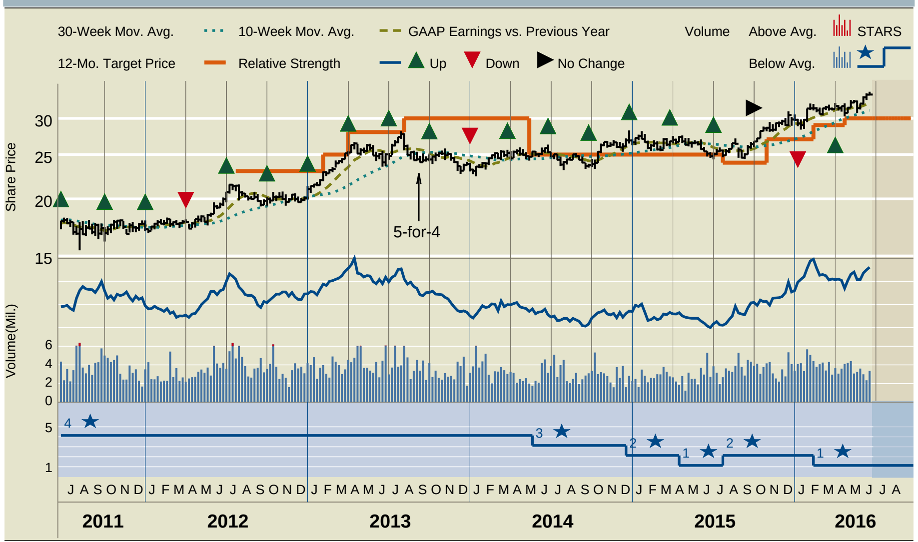
**GICS Sector** Utilities
**Sub-Industry** Water Utilities

**Summary** This company (formerly Philadelphia Suburban Corp.) is the second largest publicly traded water utility based in the U.S., serving nearly three million people in nine states.

## Key Stock Statistics (Source S&P Capital IQ, Vickers, company reports)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 52-Wk Range | $34.31– 24.40 | S&P Oper. EPS 2016**E** | 1.34 | Market Capitalization(B) | $5.997 | Beta | 0.44 |
| Trailing 12-Month EPS | $1.16 | S&P Oper. EPS 2017**E** | 1.40 | Yield (%) | 2.10 | S&P 3-Yr. Proj. EPS CAGR(%) | 6 |
| Trailing 12-Month P/E | 29.2 | P/E on S&P Oper. EPS 2016**E** | 25.2 | Dividend Rate/Share | $0.71 | S&P Quality Ranking | A+ |
| $10K Invested 5 Yrs Ago | $22,340 | Common Shares Outstg. (M) | 177.3 | Institutional Ownership (%) | 49 | | |

## Price Performance




**Past performance is not an indication of future performance and should not be relied upon as such.**

Analysis prepared by Equity Analyst **C. Muir** on Apr 20, 2016 04:06 PM, when the stock traded at **$31.98**.

## Highlights

- We project 4.8% revenue growth in 2016 and 5.4% in 2017 versus growth of 4.4% in 2015. We see growth driven by rate hikes and customer growth. We also see acquisitions of smaller water systems adding to revenue growth. Water and wastewater utility systems are among the most fragmented in the U.S., and WTR believes acquisitions are an important vehicle for customer growth. WTR is focusing on states with critical mass (Texas, Ohio and Pennsylvania), while divesting non-core assets.
- EBIT totaled $321 million in 2015, $314 million in 2014 and $305 million in 2013, with corresponding EBIT margins of 39.4%, 40.3% and 39.7%. We believe EBIT margins will rise in both 2016 and 2017, reaching over 41% in 2017. We believe WTR's focus on increasing efficiencies and rationalizing its portfolio will benefit EBIT margins in 2016. We see interest expense rising in both 2015 and 2016, driven by capital spending.
- Our 2016 recurring EPS estimate is $1.34, up 6.3% from 2015's $1.26, which excludes $0.12 of net nonrecurring charges. We forecast 2017 EPS of $1.40, up an additional 4.5%.

## Investment Rationale/Risk

- We have a favorable view of WTR's capital spending program, which WTR expects to total $1.0 billion from 2015 through 2017. We expect WTR to focus its spending on water quality and distribution line upgrades, and on system reliability projects. As WTR increases its rate base, we expect to see continued rate increases. We expect low-cost financing to continue to fund capital investment projects and small acquisitions. Nevertheless, we see the shares as overvalued compared to faster growing peers.
- Risks to our recommendation and target price include changes in long- or intermediate-term weather and rainfall patterns, regulatory outcomes and water production costs.
- WTR recently traded at 23.9X our 2016 EPS estimate, or a small discount to its water utility peers. Our target price of $30 is 22.4X our estimate, or a 5% discount to our peer target. This valuation is warranted by our projection of a three-year EPS growth rate and dividend yield that is lower than its peers. The shares recently yielded 2.2%.

## Analyst's Risk Assessment

| LOW | MEDIUM | HIGH |
|---|---|---|

Our risk assessment for Aqua America reflects the company's geographic diversity, which mitigates the risk of adverse weather and state regulatory commission rulings in rate case filings, and an S&P Quality Ranking of A, which indicates well above average long-term earnings and dividend growth.

## Revenue/Earnings Data

**Revenue (Million $)**

| | 1Q | 2Q | 3Q | 4Q | Year |
|---|---|---|---|---|---|
| 2016 | 192.6 | -- | -- | -- | -- |
| 2015 | 190.3 | 205.8 | 221.1 | 197.1 | 814.2 |
| 2014 | 182.7 | 195.3 | 210.5 | 191.4 | 779.9 |
| 2013 | 180.0 | 195.7 | 204.4 | 188.6 | 768.6 |
| 2012 | 164.0 | 191.7 | 214.6 | 187.5 | 757.8 |
| 2011 | 171.3 | 188.2 | 197.3 | 172.7 | 712.0 |

**Earnings Per Share ($)**

| | 1Q | 2Q | 3Q | 4Q | Year |
|---|---|---|---|---|---|
| 2016 | 0.29 | **E**0.34 | **E**0.42 | **E**0.30 | **E**1.34 |
| 2015 | 0.27 | 0.32 | 0.38 | 0.16 | 1.14 |
| 2014 | 0.24 | 0.31 | 0.38 | 0.28 | 1.20 |
| 2013 | 0.23 | 0.30 | 0.36 | 0.26 | 1.16 |
| 2012 | 0.16 | 0.24 | 0.29 | 0.37 | 1.06 |
| 2011 | 0.18 | 0.22 | 0.26 | 0.18 | 0.83 |

Fiscal year ended Dec. 31. Next earnings report expected: NA. EPS Estimates based on S&P Capital IQ Operating Earnings; historical GAAP earnings are as reported in Company reports.

## Dividend Data

| Amount ($) | Date Decl. | Ex-Div. Date | Stk. of Record | Payment Date |
|---|---|---|---|---|
| 0.178 | Aug 4 | Aug 12 | Aug 14 | Sep 1 '15 |
| 0.178 | Oct 16 | Nov 10 | Nov 13 | Dec 1 '15 |
| 0.178 | Feb 1 | Feb 10 | Feb 12 | Mar 1 '16 |
| 0.178 | Apr 15 | May 11 | May 13 | Jun 1 '16 |

Dividends have been paid since 1939. Source: Company reports.

**Past performance is not an indication of future performance and should not be relied upon as such.**

# Aqua America Inc

## Business Summary April 20, 2016

CORPORATE OVERVIEW. Aqua America provides water and waste services in eight states: Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana, North Carolina, Virginia and Georgia (unregulated). WTR is continuing to pursue a sale of its Georgia operations. In 2015, 51.6% of operating revenues were from Pennsylvania; with Ohio contributing 12.1%; Texas 8.5%; Illinois 7.1%; North Carolina 6.4%; other states (New Jersey, Indiana and Virginia) 10.0%; and other/eliminations 4.2%. The company notes that cool and wet weather between May and September could have a 5% to 10% negative impact on earnings, while a hot, dry summer could have an inverse effect.

As of late 2015, WTR was supplying water and wastewater services to 957,866 residential, commercial, industrial and public customers (nearly 3.0 million residents), with Aqua Pennsylvania accounting for about half of the total. Residential customers comprise 62.1% of the company's water and wastewater revenues.

In 2015, 88.4% of regulated operating revenues were derived from water supply, with 61.3% from residential water; 16.2% commercial water; 3.8% fire protection; 3.6% industrial water; and 3.5% other water. Regulated wastewater accounted for 10.2% of revenues, while 1.4% came from other utilities. Regulated revenues were 95.8% while non-regulated other/eliminations accounted for the rest.

LEGAL/REGULATORY ISSUES. In an effort to capture return on invested capital (ROIC) and maintain return on equity (ROE) between 10%-11%, the company continues to file for large rate increases. Rate cases added $8.50 million of revenues in 2015, $5.25 million in 2014 and $25.68 million in 2013. In 2013, the $25.7 million increase included $16.7 million in Pennsylvania. Rate cases generally take nine to 12 months to complete. With a rate base of more than $1.6 billion in Pennsylvania, the impact on ROE is significant, with every 25 basis point move translating into a $4 million impact on the company's revenue requirement.

CORPORATE STRATEGY. As part of a portfolio rationalization strategy to focus on operations in areas where the company has critical mass and economic growth potential WTR sold its Georgia operations in 2014, Florida in 2013, New York and Maine in 2012, Missouri in 2011 and South Carolina in 2010. The company decided that these areas had limited customer growth opportunities or were unable to achieve favorable operating results or a return on equity that WTR considered acceptable.

Otherwise, we expect the company to continue its strategy of expanding its customer base via acquisitions. During the five-year period through 2014, WTR completed 82 acquisitions or growth ventures, including 16 deals in 2014, 15 in 2013 and 17 in 2012. In May 2012, WTR completed the acquisition of American Water Works' (AWK) regulated operations in Ohio, while selling its New York regulated operations.

In September 2011, WTR announced a joint venture for the construction and operation of a $24 million, 18-mile private pipeline to provide fresh water to certain natural gas well drilling operations in the Marcellus Shale region in Pennsylvania. Phase 1 became operational in the second quarter of 2012, while Phase II started in December 2012, boosting the water supply by three million gallons per day, from nearly one million gallons as of May 2012. Phase III was completed in early 2013.

Water utilities in Pennsylvania are permitted to add a distribution system improvement charge (DSIC) to their bills, reflecting capital costs and depreciation related to certain distribution system improvement projects completed and put in service between rate filings. However, as a result of a repair tax accounting change, Aqua Pennsylvania's water rates were lowered by 2.8% as of January 2013 through the suspension of DSIC. Aqua Pennsylvania did not file a base rate case or for an infrastructure rehabilitation surcharge in 2013 or 2014.

FINANCIAL TRENDS. WTR's targeted debt to capital ratio was 50% at the end of 2015 and its net debt to total capitalization was 49.9%. WTR continues to target capital investments mainly at pipe replacement projects and plant upgrades with total expenditures of about $1.0 billion over the next three years. In 2016, it expects capital spending at levels similar to 2015. Capital expenditures totaled $365 million in 2015, $328 million in 2014 and $308 million in 2013.

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**COO & EVP**
R.S. Fox

**Board Members**
C. J. Burke
C. H. Franklin
L. R. Greenberg
W. F. Holland
N. DeBenedictis
R. H. Glanton
W. P. Hankowsky
E. T. Ruff

**Domicile**
Pennsylvania

**Founded**
1968

**Employees**
1,617

**Stockholders**
25,247

# Aqua America Inc

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

## Quantitative Evaluations

**S&P Capital IQ Fair Value Rank** 1

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

LOWEST — HIGHEST

Based on S&P Capital IQ's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5).

**Fair Value Calculation** $25.10

Analysis of the stock's current worth, based on S&P Capital IQ's proprietary quantitative model suggests that WTR is overvalued by $8.73 or 25.8%.

**Investability Quotient Percentile** 85

LOWEST = 1 — HIGHEST = 100

WTR scored higher than 85% of all companies for which an S&P Capital IQ Report is available.

**Volatility** LOW | AVERAGE | HIGH

**Technical Evaluation** BULLISH

Since June, 2016, the technical indicators for WTR have been BULLISH.

**Insider Activity** UNFAVORABLE | NEUTRAL | FAVORABLE

## Expanded Ratio Analysis

| | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|
| Price/Sales | 6.50 | 6.09 | 5.43 | 4.69 |
| Price/Tangible Book Value | 3.11 | 2.91 | 2.77 | 2.62 |
| Price/Pretax Income | 24.41 | 19.85 | 18.32 | 14.17 |
| P/E Ratio | 26.22 | 22.19 | 20.35 | 19.32 |
| Avg. Diluted Shares Outstg (M) | 177.5 | 177.8 | 176.8 | 174.9 |

Figures based on calendar year-end price

## Key Growth Rates and Averages

| **Past Growth Rate (%)** | 1 Year | 3 Years | 5 Years | 9 Years |
|---|---|---|---|---|
| Revenue | 4.40 | 2.33 | 2.49 | 4.32 |
| Net Income | -5.65 | 3.23 | 11.20 | 11.73 |
| **Ratio Analysis** (Annual Avg.) | | | | |
| Net Margin (%) | 24.78 | 26.29 | 24.70 | 20.84 |
| % LT Debt to Capitalization | 49.74 | 49.05 | 50.51 | 52.69 |

**For further clarification on the terms used in this report, please visit www.spcapitaliq.com/stockreportguide**

## Company Financials Fiscal Year Ended Dec. 31

| **Per Share Data ($)** | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|
| Tangible Book Value | 9.58 | 9.19 | 8.52 | 7.75 | 7.06 | 6.58 | 6.25 | 6.02 | 5.66 | 5.46 |
| Earnings | 1.14 | 1.20 | 1.16 | 1.06 | 0.83 | 0.72 | 0.62 | 0.58 | 0.57 | 0.56 |
| S&P Capital IQ Core Earnings | NA | NA | 1.17 | 1.06 | 0.75 | 0.73 | NA | 0.50 | 0.54 | 0.55 |
| Dividends | 0.69 | 0.63 | 0.58 | 0.54 | 0.50 | 0.47 | 0.44 | 0.41 | 0.38 | 0.36 |
| Payout Ratio | 60% | 53% | 50% | 51% | 61% | 66% | 71% | 70% | 68% | 63% |
| Prices:High | 31.09 | 28.22 | 28.12 | 21.54 | 19.03 | 18.38 | 17.20 | 17.60 | 21.30 | 23.83 |
| Prices:Low | 24.40 | 22.40 | 20.59 | 16.85 | 15.42 | 13.16 | 12.31 | 9.76 | 15.09 | 16.10 |
| P/E Ratio:High | 27 | 24 | 24 | 20 | 23 | 26 | 28 | 30 | 37 | 43 |
| P/E Ratio:Low | 21 | 19 | 18 | 16 | 19 | 18 | 20 | 17 | 27 | 29 |
| **Income Statement Analysis** (Million $) | | | | | | | | | | |
| Revenue | 814 | 780 | 769 | 758 | 712 | 726 | 671 | 627 | 602 | 533 |
| Depreciation | 129 | 127 | 125 | 117 | 112 | 121 | 115 | 88.8 | 88.0 | 75.0 |
| Maintenance | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fixed Charges Coverage | NA | 4.16 | 3.96 | 4.17 | 3.74 | 3.62 | 3.46 | 3.35 | 3.27 | 3.59 |
| Construction Credits | NA | 5.13 | 2.27 | 4.14 | 7.20 | 5.06 | 2.87 | 3.67 | 2.95 | 3.94 |
| Effective Tax Rate | 6.90% | 10.6% | 9.97% | 26.7% | 32.9% | 39.2% | 39.4% | 39.7% | 38.9% | 39.6% |
| Net Income | 202 | 214 | 205 | 184 | 145 | 124 | 104 | 97.9 | 95.0 | 92.0 |
| S&P Capital IQ Core Earnings | NA | NA | 207 | 185 | 131 | 125 | NA | 83.5 | 88.7 | 90.2 |
| **Balance Sheet & Other Financial Data** (Million $) | | | | | | | | | | |
| Gross Property | NA | 5,707 | 5,388 | 5,050 | 4,648 | 4,490 | 4,142 | 3,848 | 3,574 | 3,185 |
| Capital Expenditures | 365 | 329 | 308 | 348 | 331 | 327 | 284 | 267 | 238 | 272 |
| Net Property | NA | 4,402 | 4,167 | 3,936 | 3,613 | 3,469 | 3,227 | 2,997 | 2,793 | 2,506 |
| Capitalization:Long Term Debt | NA | 1,561 | 1,469 | 1,544 | 1,395 | 1,532 | 1,387 | 1,248 | 1,215 | 952 |
| Capitalization:% Long Term Debt | 49.7 | 48.5 | 48.9 | 52.7 | 52.7 | 56.6 | 55.6 | 54.1 | 55.4 | 50.8 |
| Capitalization:Preferred | NA | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| Capitalization:% Preferred | NA | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| Capitalization:Common | 1,726 | 1,655 | 1,535 | 1,386 | 1,251 | 1,174 | 1,109 | 1,058 | 976 | 922 |
| Capitalization:% Common | NA | 51.5 | 51.1 | 47.3 | 47.3 | 43.4 | 44.4 | 45.9 | 44.6 | 49.2 |
| Total Capital | 3,505 | 3,275 | 3,090 | 2,975 | 2,728 | 2,735 | 2,556 | 2,664 | 2,501 | 2,148 |
| % Operating Ratio | NA | 62.9 | 63.2 | 66.4 | 69.8 | 73.6 | 74.7 | 74.3 | 74.2 | 72.8 |
| % Earned on Net Property | NA | 7.4 | 7.5 | 8.6 | 8.2 | 8.1 | 7.6 | 7.8 | 8.2 | 11.7 |
| % Return on Revenue | 24.8 | 27.4 | 26.7 | 24.3 | 20.3 | 17.1 | 15.6 | 15.6 | 15.8 | 17.2 |
| % Return on Invested Capital | NA | 9.3 | 9.4 | 9.1 | 8.2 | 7.5 | 7.1 | 6.4 | 6.6 | 7.3 |
| % Return on Common Equity | 11.9 | 13.4 | 14.0 | 14.0 | 11.9 | 10.9 | 9.6 | 9.6 | 10.0 | 10.6 |

Data as originally reported in Company reports.; bef. results of disc opers/spec. items. Per share data adj. for stk. divs.; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# Aqua America Inc



## Sub-Industry Outlook

Our fundamental outlook for the water utilities sub-industry remains neutral, based on our view that population growth trends in the US are likely to continue yielding relatively low average customer growth rates. Yet, with housing starts continuing to recover, we see strengthening customer growth in some states. Longer term, we believe aging water systems will require repair, while demand for clean water in warm and dry regions where population is expanding drives capital investments.

We expect more budget-strapped municipalities to look to sell their water systems to private companies or establish public-private operating partnerships, despite some opposition by residential customers due to service and economic concerns. The water industry remains very fragmented and we see large water distribution utilities continuing to make acquisitions. Additional new revenue should come from water stations and pipelines set for refracking shale gas wells, which Aqua America has been installing in the Marcellus region in Pennsylvania.

We see modest global growth near term in desalination, a process by which salt is removed from seawater as a source for drinking water. However, as costs gradually decline, more desalination projects are likely in dry areas such as Nevada, Arizona, California and Texas, and developing regions of the world, especially in the Middle East. The American Water Works Association (AWWA) forecasts that the cost to replace deteriorating water pipes will total about $846 billion for water systems and $1.05 trillion for wastewater systems through 2039. In June 2013, an EPA survey projected total investments for U.S. drinking water system repairs and improvements of $384 billion through 2030, but the AWWA believes this figure is artificially low as it excludes several types of capital improvement projects and growth needs.

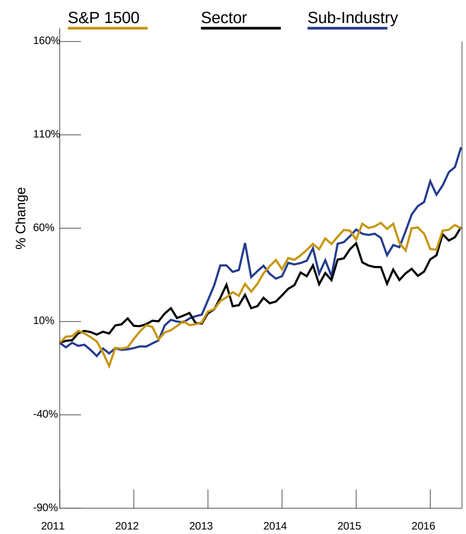
In 2015, the S&P Water Utilities Index rose 11.6%, versus a 1.0% decline for the S&P Composite 1500 Index and an 8.0% drop in the S&P Utilities Index. In 2014, the group rose 16.9%, versus a 10.9% gain for the broader market index and a 22.9% rise in the S&P Utilities Index. We believe long-term investors view this group as a safe haven during cyclical downturns. However, with economic indicators more favorable and signs of further interest rate hikes ahead, we believe investors will turn to sectors with lower debt-to-capital ratios, as utilities will likely incur higher interest expense when they roll over their long-term debt.

**-- Christopher Muir**

## Industry Performance

**GICS Sector:** **Utilities**
**Sub-Industry:** **Water Utilities**

Based on S&P 1500 Indexes
Five-Year market price performance through Jun 18, 2016




**NOTE:** All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS)

Past performance is not an indication of future performance and should not be relied upon as such.

## Sub-Industry : Water Utilities Peer Group*: Water Utilities

| Peer Group | Stock Symbol | Stk.Mkt. Cap. (Mil. $) | Recent Stock Price($) | 52 Week High/Low($) | Beta | Yield (%) | P/E Ratio | Fair Value Calc.($) | Quality Ranking | S&P IQ %ile | Return on Revenue (%) | LTD to Cap (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Aqua America** | **WTR** | **5,997** | **33.83** | **34.31/24.40** | **0.44** | **2.1** | **29** | **25.10** | **A+** | **85** | **24.8** | **49.7** |
| Amer States Water | AWR | 1,491 | 40.83 | 47.24/35.80 | 0.67 | 2.2 | 26 | 26.90 | A | 92 | 13.2 | 41.1 |
| Artesian Resources 'A' | ARTNA | 250 | 30.56 | 31.94/20.85 | 0.43 | 2.9 | 24 | NA | A- | 63 | 14.7 | 43.7 |
| Calif Water Svc Grp | CWT | 1,530 | 31.90 | 32.39/19.55 | 0.63 | 2.2 | 36 | 24.80 | A- | 70 | 7.7 | 44.1 |
| Connecticut Wtr Svc | CTWS | 581 | 51.77 | 53.15/33.15 | 0.60 | 2.2 | 25 | 38.10 | A | 91 | 23.7 | 43.8 |
| Consolidated Water | CWCO | 188 | 12.73 | 14.69/9.75 | 1.21 | 2.4 | 24 | 11.90 | NR | 62 | 13.9 | NA |
| Middlesex Water | MSEX | 634 | 39.05 | 40.65/22.12 | 0.71 | 2.0 | 30 | NA | A- | 89 | 15.8 | 38.8 |
| SJW Corp | SJW | 763 | 37.34 | 38.61/27.54 | 0.73 | 2.2 | 21 | NA | B | 26 | 12.4 | 49.6 |
| York Water | YORW | 381 | 29.71 | 33.40/19.69 | 0.43 | 2.1 | 31 | NA | A | 89 | 26.5 | 45.1 |

NA-Not Available NM-Not Meaningful NR-Not Rated. *For Peer Groups with more than 15 companies or stocks, selection of issues is based on market capitalization.

## S&P Capital IQ Analyst Research Notes and other Company News

**June 16, 2016**
Aqua America Inc. announced that Christopher S. Crockett has joined the company as its chief environmental officer. Crockett was previously deputy commissioner for planning and environmental services at the Philadelphia Water Department (PWD), where he has worked since 1995. In his new role, Crockett will be responsible for overseeing water quality and environmental compliance for all of Aqua's drinking water and wastewater systems in eight states. Crockett will also manage Aqua's in-house water and wastewater laboratory as well as the company's water quality services and water resources engineering departments.

**May 9, 2016**
Aqua America Inc. announced that its shareholders have elected Carolyn J. Burke, executive vice president, business operations and systems at Dynegy Inc., as a director. Burke has overall responsibility for supply chain, safety, environmental compliance, information technology, construction and engineering, and outage services at Dynegy. At Dynegy, Burke also serves as chief integration officer with responsibility for integration activities, most recently for Dynegy's $6 billion EquiPower Corp. and Duke merchant portfolio acquisitions. Burke also oversees the company's continuous margin and process improvement program.

**April 20, 2016**
02:14 pm ET ... S&P CAPITAL IQ MAINTAINS STRONG SELL OPINION ON SHARES OF AQUA AMERICA (WTR 32.15*): We lift our 12-month target by $1 to $30, a discount to peers 22.4X our '16 EPS estimate that we think is warranted by a below-peers three-year EPS growth rate. We keep our '16 EPS estimate of $1.34 and start '17's at $1.40. Despite strong capital spending, rate increases and acquisition-fueled customer growth, we think the shares are overvalued. We think Q4 results of $0.28, vs. $0.28 indicate continuing challenges in accelerating EPS growth. Capital IQ consensus estimates were $0.29. Higher revenues were offset by higher operating expenses and a higher effective tax rate. /C. Muir

**February 5, 2016**
11:19 am ET ... S&P CAPITAL IQ LOWERS VIEW ON SHARES OF AQUA AMERICA TO STRONG SELL FROM SELL (WTR 31.35*): We lift our 12-month target price by $2 to $29, due to higher peer valuations. We keep our '15 EPS estimate of $1.27, but trim '16's by $0.01 to $1.34. Our target price is 21.6X our '16 EPS estimate, or a small discount to our peer target that we think is warranted by our projection of a three-year EPS growth rate that is slower than its peers. While we have a favorable view of WTR's growth capital spending program and smaller bolt-on acquisitions, we think the shares are overvalued. We expect WTR to post Q4 EPS of $0.30, vs. $0.28, on Feb 23. The Capital IQ consensus is $0.29. /C. Muir

**October 26, 2015**
09:44 am ET ... S&P CAPITAL IQ MAINTAINS SELL OPINION ON SHARES OF AQUA AMERICA (WTR 28.52**): We raise our target price by $3 to $27, helped by higher peer valuations. We keep our '15 EPS estimate of $1.27, but trim '16's by $0.02 to $1.35. Our target price is 20.0X our '16 EPS estimate, or a 5% discount to our peer target that we think is warranted by a three-year EPS growth rate that is lower than its peers. We see capital spending on water quality upgrades, distribution line upgrades and system reliability projects helping to grow WTR's rate base and drive EPS growth. WTR posts Q2 EPS of $0.32, even with our estimate and the Capital IQ consensus forecast. /C. Muir

**July 17, 2015**
12:04 pm ET ... S&P CAPITAL IQ LIFTS VIEW ON SHARES OF AQUA AMERICA TO SELL FROM STRONG SELL (WTR 25.66**): We are keeping our '15 EPS estimate at $1.27 and lifting '16's by $0.03 to $1.37. We are trimming our 12-month target price by $1 to $24 on lower peer valuations. Our target price is 17.5X our '16 EPS estimate or a 14% discount to our peer target, which we think is warranted by our projection of a three-year EPS growth rate that is slower than peers. Despite a strong capital spending program, we think WTR's shares are overvalued versus faster growing water utility peers. Q1 recurring EPS of $0.27, vs. $0.25, beats our $0.25 estimate and the $0.26 Capital IQ consensus. /C. Muir

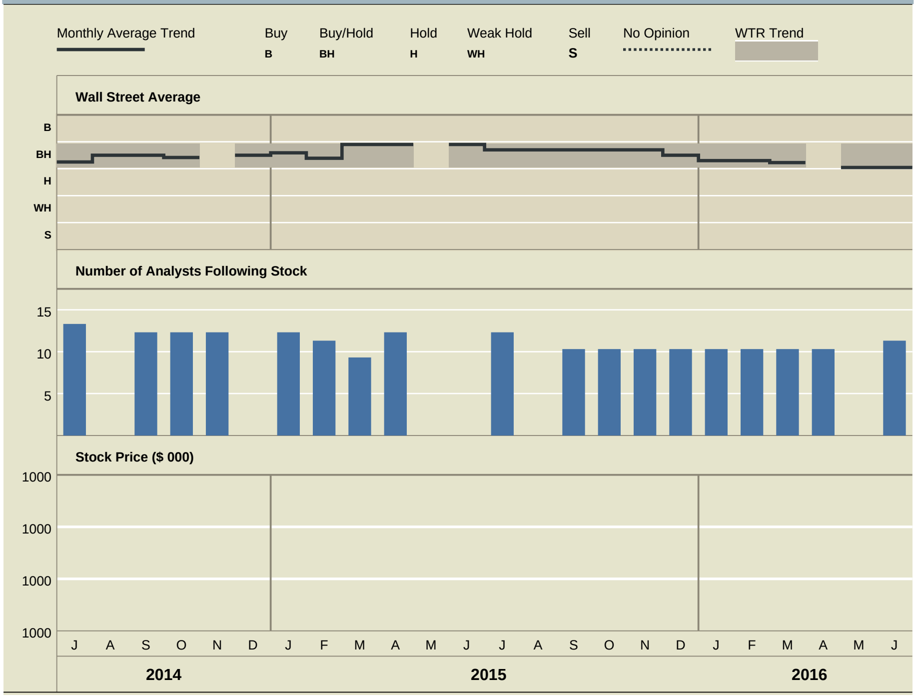
**June 4, 2015**
Aqua America Inc. appointed Christopher H. Franklin Chief Executive Officer. Franklin succeeded Nicholas DeBenedictis.

**April 14, 2015**
12:24 pm ET ... S&P CAPITAL IQ LOWERS OPINION ON SHARES OF AQUA AMERICA TO STRONG SELL FROM SELL (WTR 26.88*): Our opinion change is due to valuation. We are keeping our '15 EPS estimate at $1.27 and initiating '16's at $1.34. We are also leaving our 12-month target unchanged at $25, reflecting our stable fundamental outlook. Our target price is 19.7X our '15 EPS estimate, or a 10% discount to our peer target that we think is warranted by our projection of a three-year EPS growth rate that is lower than its peers. While we see capital spending leading to rate increases, we think WTR is overvalued. Q4 EPS of $0.28, vs. $0.26, beats our estimate and the Capital IQ consensus, both at $0.27. /C. Muir

**December 16, 2014**
09:01 am ET ... S&P CAPITAL IQ LOWERS OPINION ON SHARES OF AQUA AMERICA TO SELL FROM HOLD (WTR 25.68**): We are leaving our '14 EPS estimate at $1.21 and '15's at $1.27. We are also keeping our 12-month target price at $25. Our target price is 19.7X our '15 EPS estimate or a 3% discount to our peer target, which we think is warranted by our projection of a three-year EPS growth rate that is below peers. We believe that WTR will be active in acquiring smaller water systems and this combined with its $1.0 billion capital spending program will drive EPS growth. Q3 EPS of $0.38, vs. $0.36, matches our estimate and beats the $0.37 Capital IQ consensus. The shares yield 2.5%. /C. Muir

# Aqua America Inc

## Analysts' Recommendations




Of the total 11 companies following WTR, 11 analysts currently publish recommendations.

| | No. of Recommendations | % of Total | 1 Mo. Prior | 3 Mos. Prior |
|---|---|---|---|---|
| Buy | 4 | 36 | 4 | 5 |
| Buy/Hold | 0 | 0 | 0 | 0 |
| Hold | 6 | 55 | 6 | 5 |
| Weak Hold | 0 | 0 | 0 | 0 |
| Sell | 1 | 9 | 1 | 1 |
| No Opinion | 0 | 0 | 0 | 0 |
| **Total** | **11** | **100** | **11** | **11** |

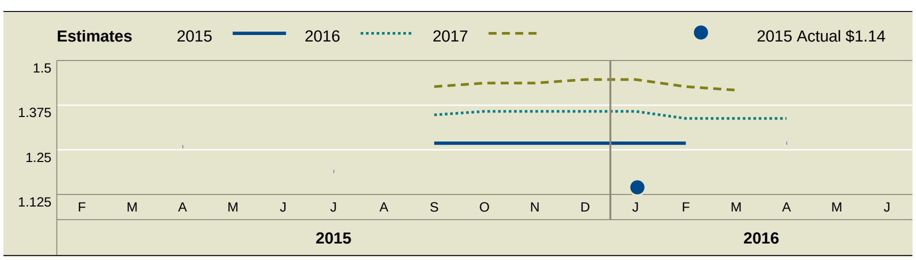
## Wall Street Consensus Opinion

**BUY/HOLD**

## Companies Offering Coverage

Argus Research Company
Barclays
Boenning & Scattergood, Inc.
Gabelli & Company, Inc.
HSBC
Hilliard Lyons
Janney Montgomery Scott LLC
Ladenburg Thalmann & Company
Macquarie Research
U.S. Capital Advisors LLC
Wells Fargo Securities, LLC

## Wall Street Consensus Estimates




| Fiscal Years | Avg Est. | High Est. | Low Est. | # of Est. | Est. P/E |
|---|---|---|---|---|---|
| 2017 | 1.41 | 1.47 | 1.36 | 11 | 24.0 |
| 2016 | 1.33 | 1.35 | 1.31 | 11 | 25.4 |
| **2017 vs. 2016** | **▲ 6%** | **▲ 9%** | **▲ 4%** | **0%** | **▼ -6%** |
| | | | | | |
| Q2'17 | 0.35 | 0.37 | 0.34 | 7 | 96.7 |
| Q2'16 | 0.34 | 0.36 | 0.32 | 7 | 99.5 |
| **Q2'17 vs. Q2'16** | **▲ 3%** | **▲ 3%** | **▲ 6%** | **0%** | **▼ -3%** |

A company's earnings outlook plays a major part in any investment decision. S&P Capital IQ organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years, as well as how those earnings estimates have changed over time. Note that the information provided in relation to consensus estimates is not intended to predict actual results and should not be taken as a reliable indicator of future performance.

## Wall Street Consensus vs. Performance

For fiscal year 2016, analysts estimate that WTR will earn US$ 1.33. For the 1st quarter of fiscal year 2016, WTR announced earnings per share of US$ 0.29, representing 22% of the total annual estimate. For fiscal year 2017, analysts estimate that WTR's earnings per share will grow by 6% to US$ 1.41.

# Aqua America Inc

## Glossary

### S&P Capital IQ STARS

Since January 1, 1987, S&P Capital IQ Equity Research has ranked a universe of U.S. common stocks, ADRs (American Depositary Receipts), and ADSs (American Depositary Shares) based on a given equity's potential for future performance. Similarly, S&P Capital IQ Equity Research has ranked Asian and European equities since June 30, 2002. Under proprietary STARS (STock Appreciation Ranking System), S&P Capital IQ equity analysts rank equities according to their individual forecast of an equity's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index (S&P Asia 50 Index, S&P Europe 350® Index or S&P 500® Index)), based on a 12-month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective. Data used to assist in determining the STARS ranking may be the result of the analyst's own models as well as internal proprietary models resulting from dynamic data inputs.

### S&P Capital IQ Quality Ranking

(also known as **S&P Capital IQ Earnings & Dividend Rankings**) - Growth and stability of earnings and dividends are deemed key elements in establishing S&P Capital IQ's earnings and dividend rankings for common stocks, which are designed to capsulize the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

| | | | |
|---|---|---|---|
| A+ | Highest | B | Below Average |
| A | High | B- | Lower |
| A- | Above Average | C | Lowest |
| B+ | Average | D | In Reorganization |
| NR | Not Ranked | | |

### S&P Capital IQ EPS Estimates

S&P Capital IQ earnings per share (EPS) estimates reflect analyst projections of future EPS from continuing operations, and generally exclude various items that are viewed as special, non-recurring, or extraordinary. Also, S&P Capital IQ EPS estimates reflect either forecasts of S&P Capital IQ equity analysts; or, the consensus (average) EPS estimate, which are independently compiled by Capital IQ, a data provider to S&P Capital IQ Equity Research. Among the items typically excluded from EPS estimates are asset sale gains; impairment, restructuring or merger-related charges; legal and insurance settlements; in process research and development expenses; gains or losses on the extinguishment of debt; the cumulative effect of accounting changes; and earnings related to operations that have been classified by the company as discontinued. The inclusion of some items, such as stock option expense and recurring types of other charges, may vary, and depend on such factors as industry practice, analyst judgment, and the extent to which some types of data is disclosed by companies.

### S&P Capital IQ Core Earnings

S&P Capital IQ Core Earnings is a uniform methodology for adjusting operating earnings by focusing on a company's after-tax earnings generated from its principal businesses. Included in the S&P Capital IQ definition are employee stock option grant expenses, pension costs, restructuring charges from ongoing operations, write-downs of depreciable or amortizable operating assets, purchased research and development, M&A related expenses and unrealized gains/losses from hedging activities. Excluded from the definition are pension gains, impairment of goodwill charges, gains or losses from asset sales, reversal of prior-year charges and provision from litigation or insurance settlements.

### S&P Capital IQ 12-Month Target Price

The S&P Capital IQ equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics, including S&P Capital IQ Fair Value.

### S&P Capital IQ Equity Research

S&P Capital IQ Equity Research U.S. includes Standard & Poor's Investment Advisory Services LLC; Standard & Poor's Equity Research Services Europe includes McGraw-Hill Financial Research Europe Limited trading as S&P Capital IQ; Standard & Poor's Equity Research Services Asia includes: McGraw-Hill Financial Singapore Pte. Limited, Standard & Poor's Investment Advisory Services (HK) Limited, Standard & Poor's Malaysia Sdn Bhd, and Standard & Poor's Information Services (Australia) Pty Ltd.

### Abbreviations Used in S&P Capital IQ Equity Research Reports

CAGR - Compound Annual Growth Rate
CAPEX - Capital Expenditures
CY - Calendar Year
DCF - Discounted Cash Flow
DDM - Dividend Discount Model
EBIT - Earnings Before Interest and Taxes
EBITDA - Earnings Before Interest, Taxes, Depreciation and Amortization
EPS - Earnings Per Share
EV - Enterprise Value
FCF - Free Cash Flow
FFO - Funds From Operations
FY - Fiscal Year
P/E - Price/Earnings
P/NAV - Price to Net Asset Value
PEG Ratio - P/E-to-Growth Ratio
PV - Present Value
R&D - Research & Development
ROCE - Return on Capital Employed
ROE - Return on Equity
ROI - Return on Investment
ROIC - Return on Invested Capital
ROA - Return on Assets
SG&A - Selling, General & Administrative Expenses
SOTP - Sum-of-The-Parts
WACC - Weighted Average Cost of Capital

### Dividends on American Depository Receipts (ADRs) and American Depository Shares (ADSs) are net of taxes (paid in the country of origin).

### S&P Capital IQ Qualitative Risk Assessment

Reflects an S&P Capital IQ equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The S&P Capital IQ Qualitative Risk Assessment is a relative ranking to the S&P U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices. For an ETF this reflects on a capitalization-weighted basis, the average qualitative risk assessment assigned to holdings of the fund.

### STARS Ranking system and definition:

**★★★★★ 5-STARS (Strong Buy):**
Total return is expected to outperform the total return of a relevant benchmark, by a wide margin over the coming 12 months, with shares rising in price on an absolute basis.

**★★★★☆ 4-STARS (Buy):**
Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.

**★★★☆☆ 3-STARS (Hold):**
Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.

**★★☆☆☆ 2-STARS (Sell):**
Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price not anticipated to show a gain.

**★☆☆☆☆ 1-STAR (Strong Sell):**
Total return is expected to underperform the total return of a relevant benchmark by a wide margin over the coming 12 months, with shares falling in price on an absolute basis.

### Relevant benchmarks:

In North America, the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are the S&P Europe 350 Index and the S&P Asia 50 Index, respectively.

## Disclosures

S&P Capital IQ ranks stocks in accordance with the following ranking methodologies:

### STARS Stock Reports:

S&P Capital IQ's qualitative STARS recommendations are determined and assigned by S&P Capital IQ equity analysts. For reports containing STARS recommendations refer to the Glossary section of the report for detailed methodology and the definition of STARS rankings.

### Quantitative Stock Reports:

S&P Capital IQ's quantitative recommendations quantitative recommendations are determined by ranking a universe of common stocks based on 5 measures or model categories: Valuation, Quality, Growth, Street Sentiment, and Price Momentum. In the U.S., a sixth sub-category for Financial Health will also be displayed. Percentile scores are used to compare each company to all other companies in the same universe for each model category. The five (six) model category scores are then weighted and rolled up into a single percentile ranking for that company. For reports containing quantitative recommendations refer to the Glossary section of the report for detailed methodology and the definition of Quantitative rankings.

### STARS Stock Reports and Quantitative Stock Reports:

The methodologies used in STARS Stock Reports and Quantitative Stock Reports (collectively, the "S&P Capital IQ's Research Reports" or "Research Reports") reflect different criteria, assumptions and analytical methods and may have differing recommendations.S&P Capital IQ believes that the methodologies and data used to generate the different types of Research Reports are reasonable and appropriate. Generally, S&P Capital IQ does not generate reports with different ranking methodologies for the same issuer. However, in the event that different methodologies or data are used on the analysis of an issuer, the methodologies may lead to different views or recommendations on the issuer, which may at times result in contradicting assessments of an issuer. S&P Capital IQ reserves the right to alter, replace or vary models, methodologies or assumptions from time to time and without notice to clients.

### STARS Stock Reports:

### S&P Capital IQ Global STARS Distribution as of March 31, 2016

| Ranking | North America | Europe | Asia | Global |
|---|---|---|---|---|
| Buy | 30.1% | 40.6% | 37.8% | 33.6% |
| Hold | 50.6% | 32.8% | 48.7% | 46.2% |
| Sell | 19.3% | 26.6% | 13.5% | 20.2% |
| Total | 100% | 100% | 100% | 100% |

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# Aqua America Inc

| S&P Capital IQ Recommendation | | Price | 12-Mo. Target Price | Report Currency | Investment Style |
|---|---|---|---|---|---|
| **S&P Capital IQ Recommendation** | STRONG SELL ★ ★ ★ ★ ★ | $32.58 (as of Aug 12, 2016 4:00 PM ET) | $32.00 | USD | Mid-Cap Growth |

**S&P Capital IQ Equity Analyst C. Muir**

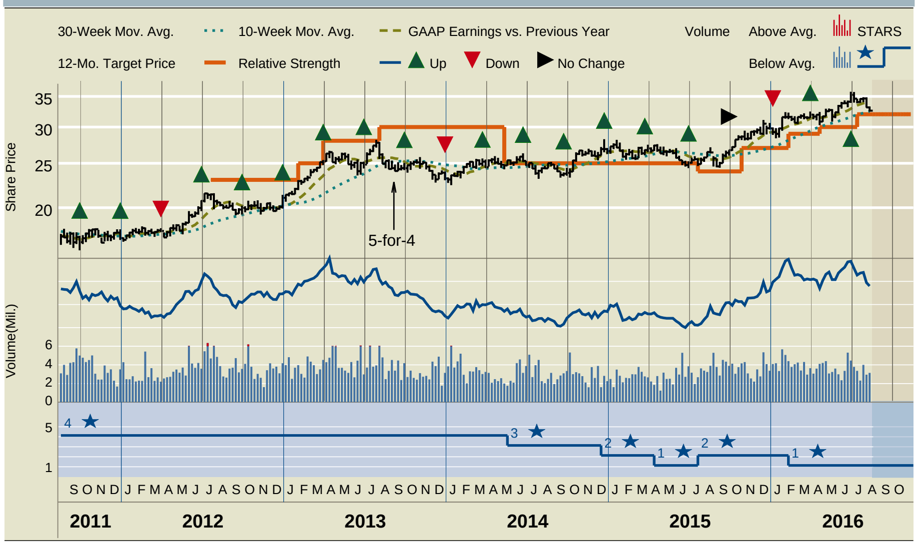
**GICS Sector** Utilities
**Sub-Industry** Water Utilities

**Summary** This company (formerly Philadelphia Suburban Corp.) is the second largest publicly traded water utility based in the U.S., serving nearly three million people in nine states.

## Key Stock Statistics (Source S&P Capital IQ, Vickers, company reports)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 52-Wk Range | **$35.83– 24.45** | S&P Oper. EPS 2016**E** | **1.34** | Market Capitalization(B) | **$5.777** | Beta | **0.44** |
| Trailing 12-Month EPS | **$1.17** | S&P Oper. EPS 2017**E** | **1.40** | Yield (%) | **2.35** | S&P 3-Yr. Proj. EPS CAGR(%) | **6** |
| Trailing 12-Month P/E | **27.9** | P/E on S&P Oper. EPS 2016**E** | **24.3** | Dividend Rate/Share | **$0.77** | S&P Quality Ranking | **A+** |
| $10K Invested 5 Yrs Ago | **$21,545** | Common Shares Outstg. (M) | **177.3** | Institutional Ownership (%) | **49** | | |

## Price Performance




**Past performance is not an indication of future performance and should not be relied upon as such.**

Analysis prepared by Equity Analyst **C. Muir** on Jul 08, 2016 01:20 PM, when the stock traded at **$34.39**.

## Highlights

- We project 2.2% revenue growth in 2016 and 3.6% in 2017 versus growth of 4.4% in 2015. We see growth driven by rate hikes and customer growth. We also see acquisitions of smaller water systems adding to revenue growth. Water and wastewater utility systems are among the most fragmented in the U.S., and WTR believes acquisitions are an important vehicle for customer growth. WTR is focusing on states with critical mass (Texas, Ohio and Pennsylvania), while divesting non-core assets.
- EBIT totaled $321 million in 2015, $314 million in 2014 and $305 million in 2013, with corresponding EBIT margins of 39.4%, 40.3% and 39.7%. We believe EBIT margins will rise in both 2016 and 2017, reaching over 41% in 2017. We believe WTR's focus on increasing efficiencies and rationalizing its portfolio will benefit EBIT margins in 2016 and 2017. We see interest expense rising in both 2016 and 2017, driven by capital spending.
- Our 2016 recurring EPS estimate is $1.34, up 6.3% from 2015's $1.26, which excludes $0.12 of net nonrecurring charges. We forecast 2017 EPS of $1.40, up an additional 4.5%.

## Investment Rationale/Risk

- We have a favorable view of WTR's capital spending program, which WTR expects to total $1.1 billion from 2016 through 2018. We expect WTR to focus its spending on water quality and distribution line upgrades, and on system reliability projects. As WTR increases its rate base, we expect to see continued rate increases. We expect low-cost financing to continue to fund capital investment projects and small acquisitions. Nevertheless, we see the shares as overvalued.
- Risks to our recommendation and target price include changes in long- or intermediate-term weather and rainfall patterns, regulatory outcomes and water production costs.
- WTR recently traded at 24.6X our 2016 EPS estimate, or a small premium to its water utility peers. Our target price of $32 is 22.9X our estimate, or a 3% premium to our peer target. This valuation is warranted by our projection of a three-year EPS growth rate and dividend yield that is slightly higher than its peers. The shares recently yielded 2.1%.

## Analyst's Risk Assessment

| LOW | MEDIUM | HIGH |
|---|---|---|

Our risk assessment for Aqua America reflects the company's geographic diversity, which mitigates the risk of adverse weather and state regulatory commission rulings in rate case filings, and an S&P Quality Ranking of A, which indicates well above average long-term earnings and dividend growth.

## Revenue/Earnings Data

**Revenue (Million $)**

| | 1Q | 2Q | 3Q | 4Q | Year |
|---|---|---|---|---|---|
| 2016 | 192.6 | 203.9 | -- | -- | -- |
| 2015 | 190.3 | 205.8 | 221.1 | 197.1 | 814.2 |
| 2014 | 182.7 | 195.3 | 210.5 | 191.4 | 779.9 |
| 2013 | 180.0 | 195.7 | 204.4 | 188.6 | 768.6 |
| 2012 | 164.0 | 191.7 | 214.6 | 187.5 | 757.8 |
| 2011 | 171.3 | 188.2 | 197.3 | 172.7 | 712.0 |

**Earnings Per Share ($)**

| | | | | | |
|---|---|---|---|---|---|
| 2016 | 0.29 | 0.33 | **E**0.42 | **E**0.30 | **E**1.34 |
| 2015 | 0.27 | 0.32 | 0.38 | 0.16 | 1.14 |
| 2014 | 0.24 | 0.31 | 0.38 | 0.28 | 1.20 |
| 2013 | 0.23 | 0.30 | 0.36 | 0.26 | 1.16 |
| 2012 | 0.16 | 0.24 | 0.29 | 0.37 | 1.06 |
| 2011 | 0.18 | 0.22 | 0.26 | 0.18 | 0.83 |

Fiscal year ended Dec. 31. Next earnings report expected: Early November. EPS Estimates based on S&P Capital IQ Operating Earnings; historical GAAP earnings are as reported in Company reports.

## Dividend Data

| Amount ($) | Date Decl. | Ex-Div. Date | Stk. of Record | Payment Date |
|---|---|---|---|---|
| 0.178 | Oct 16 | Nov 10 | Nov 13 | Dec 1 '15 |
| 0.178 | Feb 1 | Feb 10 | Feb 12 | Mar 1 '16 |
| 0.178 | Apr 15 | May 11 | May 13 | Jun 1 '16 |
| 0.191 | Aug 2 | Aug 16 | Aug 18 | Sep 1 '16 |

Dividends have been paid since 1939. Source: Company reports.

**Past performance is not an indication of future performance and should not be relied upon as such.**

# Aqua America Inc

## Business Summary July 08, 2016

CORPORATE OVERVIEW. Aqua America provides water and waste services in eight states: Pennsylvania, Ohio, Illinois, Texas, New Jersey, Indiana, North Carolina, Virginia and Georgia (unregulated). WTR is continuing to pursue a sale of its Georgia operations. In 2015, 51.6% of operating revenues were from Pennsylvania; with Ohio contributing 12.1%; Texas 8.5%; Illinois 7.1%; North Carolina 6.4%; other states (New Jersey, Indiana and Virginia) 10.0%; and other/eliminations 4.2%. The company notes that cool and wet weather between May and September could have a 5% to 10% negative impact on earnings, while a hot, dry summer could have an inverse effect.

As of late 2015, WTR was supplying water and wastewater services to 957,866 residential, commercial, industrial and public customers (nearly 3.0 million residents), with Aqua Pennsylvania accounting for about half of the total. Residential customers comprise 62.1% of the company's water and wastewater revenues.

In 2015, 88.4% of regulated operating revenues were derived from water supply, with 61.3% from residential water; 16.2% commercial water; 3.8% fire protection; 3.6% industrial water; and 3.5% other water. Regulated wastewater accounted for 10.2% of revenues, while 1.4% came from other utilities. Regulated revenues were 95.8% while non-regulated other/eliminations accounted for the rest.

LEGAL/REGULATORY ISSUES. In an effort to capture return on invested capital (ROIC) and maintain return on equity (ROE) between 10%-11%, the company continues to file for large rate increases. Rate cases added $8.50 million of revenues in 2015, $5.25 million in 2014 and $25.68 million in 2013. In 2013, the $25.7 million increase included $16.7 million in Pennsylvania. Rate cases generally take nine to 12 months to complete. With a rate base of more than $1.6 billion in Pennsylvania, the impact on ROE is significant, with every 25 basis point move translating into a $4 million impact on the company's revenue requirement.

CORPORATE STRATEGY. As part of a portfolio rationalization strategy to focus on operations in areas where the company has critical mass and economic growth potential WTR sold its Georgia operations in 2014, Florida in 2013, New York and Maine in 2012, Missouri in 2011 and South Carolina in 2010. The company decided that these areas had limited customer growth opportunities or were unable to achieve favorable operating results or a return on equity that WTR considered acceptable.

Otherwise, we expect the company to continue its strategy of expanding its customer base via acquisitions. During the five-year period through 2014, WTR completed 82 acquisitions or growth ventures, including 16 deals in 2014, 15 in 2013 and 17 in 2012. In May 2012, WTR completed the acquisition of American Water Works' (AWK) regulated operations in Ohio, while selling its New York regulated operations.

In September 2011, WTR announced a joint venture for the construction and operation of a $24 million, 18-mile private pipeline to provide fresh water to certain natural gas well drilling operations in the Marcellus Shale region in Pennsylvania. Phase 1 became operational in the second quarter of 2012, while Phase II started in December 2012, boosting the water supply by three million gallons per day, from nearly one million gallons as of May 2012. Phase III was completed in early 2013.

Water utilities in Pennsylvania are permitted to add a distribution system improvement charge (DSIC) to their bills, reflecting capital costs and depreciation related to certain distribution system improvement projects completed and put in service between rate filings. However, as a result of a repair tax accounting change, Aqua Pennsylvania's water rates were lowered by 2.8% as of January 2013 through the suspension of DSIC. Aqua Pennsylvania did not file a base rate case or for an infrastructure rehabilitation surcharge in 2013 or 2014.

FINANCIAL TRENDS. WTR's targeted debt to capital ratio was 50% at the end of 2015 and its net debt to total capitalization was 49.9%. WTR continues to target capital investments mainly at pipe replacement projects and plant upgrades with total expenditures of about $1.0 billion over the next three years. In 2016, it expects capital spending at levels similar to 2015. Capital expenditures totaled $365 million in 2015, $328 million in 2014 and $308 million in 2013.

## Corporate Information

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**Chrmn**
N. DeBenedictis

**EVP & CFO**
D.P. Smeltzer

**CEO & Pres**
C.H. Franklin

**SVP, Chief Acctg Officer & Cntlr**
R.A. Rubin

**COO & EVP**
R.S. Fox

**Board Members**
C. J. Burke
C. H. Franklin
L. R. Greenberg
W. F. Holland
N. DeBenedictis
R. H. Glanton
W. P. Hankowsky
E. T. Ruff

**Domicile**
Pennsylvania

**Founded**
1968

**Employees**
1,617

**Stockholders**
25,247

# Aqua America Inc



## Quantitative Evaluations

**S&P Capital IQ Fair Value Rank** 1

1 | 2 | 3 | 4 | 5
LOWEST — HIGHEST

Based on S&P Capital IQ's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5).

**Fair Value Calculation** $24.80

Analysis of the stock's current worth, based on S&P Capital IQ's proprietary quantitative model suggests that WTR is overvalued by $7.78 or 23.9%.

**Investability Quotient Percentile** 84

LOWEST = 1 — HIGHEST = 100

WTR scored higher than 84% of all companies for which an S&P Capital IQ Report is available.

**Volatility** LOW | AVERAGE | HIGH

**Technical Evaluation** NEUTRAL

Since August, 2016, the technical indicators for WTR have been NEUTRAL.

**Insider Activity** UNFAVORABLE | NEUTRAL | FAVORABLE

## Expanded Ratio Analysis

| | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|
| Price/Sales | 6.50 | 6.09 | 5.43 | 4.69 |
| Price/Tangible Book Value | 3.11 | 2.91 | 2.77 | 2.62 |
| Price/Pretax Income | 24.41 | 19.85 | 18.32 | 14.17 |
| P/E Ratio | 26.22 | 22.19 | 20.35 | 19.32 |
| Avg. Diluted Shares Outstg (M) | 177.5 | 177.8 | 176.8 | 174.9 |

Figures based on calendar year-end price

## Key Growth Rates and Averages

| **Past Growth Rate (%)** | 1 Year | 3 Years | 5 Years | 9 Years |
|---|---|---|---|---|
| Revenue | 4.40 | 2.33 | 2.49 | 4.32 |
| Net Income | -5.65 | 3.23 | 11.20 | 11.73 |
| **Ratio Analysis** (Annual Avg.) | | | | |
| Net Margin (%) | 24.78 | 26.29 | 24.70 | 20.84 |
| % LT Debt to Capitalization | 50.30 | 49.23 | 50.62 | 52.76 |

**For further clarification on the terms used in this report, please visit www.spcapitaliq.com/stockreportguide**

## Company Financials Fiscal Year Ended Dec. 31

| **Per Share Data ($)** | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|
| Tangible Book Value | 9.58 | 9.19 | 8.52 | 7.75 | 7.06 | 6.58 | 6.25 | 6.02 | 5.66 | 5.46 |
| Earnings | 1.14 | 1.20 | 1.16 | 1.06 | 0.83 | 0.72 | 0.62 | 0.58 | 0.57 | 0.56 |
| S&P Capital IQ Core Earnings | NA | NA | 1.17 | 1.06 | 0.75 | 0.73 | NA | 0.50 | 0.54 | 0.55 |
| Dividends | 0.69 | 0.63 | 0.58 | 0.54 | 0.50 | 0.47 | 0.44 | 0.41 | 0.38 | 0.36 |
| Payout Ratio | 60% | 53% | 50% | 51% | 61% | 66% | 71% | 70% | 68% | 63% |
| Prices:High | 31.09 | 28.22 | 28.12 | 21.54 | 19.03 | 18.38 | 17.20 | 17.60 | 21.30 | 23.83 |
| Prices:Low | 24.40 | 22.40 | 20.59 | 16.85 | 15.42 | 13.16 | 12.31 | 9.76 | 15.09 | 16.10 |
| P/E Ratio:High | 27 | 24 | 24 | 20 | 23 | 26 | 28 | 30 | 37 | 43 |
| P/E Ratio:Low | 21 | 19 | 18 | 16 | 19 | 18 | 20 | 17 | 27 | 29 |
| **Income Statement Analysis** (Million $) | | | | | | | | | | |
| Revenue | 814 | 780 | 769 | 758 | 712 | 726 | 671 | 627 | 602 | 533 |
| Depreciation | 129 | 127 | 125 | 117 | 112 | 121 | 115 | 88.8 | 88.0 | 75.0 |
| Maintenance | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fixed Charges Coverage | NA | 4.16 | 3.96 | 4.17 | 3.74 | 3.62 | 3.46 | 3.35 | 3.27 | 3.59 |
| Construction Credits | 6.22 | 5.13 | 2.27 | 4.14 | 7.20 | 5.06 | 2.87 | 3.67 | 2.95 | 3.94 |
| Effective Tax Rate | 6.90% | 10.6% | 9.97% | 26.7% | 32.9% | 39.2% | 39.4% | 39.7% | 38.9% | 39.6% |
| Net Income | 202 | 214 | 205 | 184 | 145 | 124 | 104 | 97.9 | 95.0 | 92.0 |
| S&P Capital IQ Core Earnings | NA | NA | 207 | 185 | 131 | 125 | NA | 83.5 | 88.7 | 90.2 |
| **Balance Sheet & Other Financial Data** (Million $) | | | | | | | | | | |
| Gross Property | 6,088 | 5,707 | 5,388 | 5,050 | 4,648 | 4,490 | 4,142 | 3,848 | 3,574 | 3,185 |
| Capital Expenditures | 365 | 329 | 308 | 348 | 331 | 327 | 284 | 267 | 238 | 272 |
| Net Property | 4,089 | 4,402 | 4,167 | 3,936 | 3,613 | 3,469 | 3,227 | 2,997 | 2,793 | 2,506 |
| Capitalization:Long Term Debt | 1,744 | 1,561 | 1,469 | 1,544 | 1,395 | 1,532 | 1,387 | 1,248 | 1,215 | 952 |
| Capitalization:% Long Term Debt | 50.3 | 48.5 | 48.9 | 52.7 | 52.7 | 56.6 | 55.6 | 54.1 | 55.4 | 50.8 |
| Capitalization:Preferred | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| Capitalization:% Preferred | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil | Nil |
| Capitalization:Common | 1,726 | 1,655 | 1,535 | 1,386 | 1,251 | 1,174 | 1,109 | 1,058 | 976 | 922 |
| Capitalization:% Common | 49.7 | 51.5 | 51.1 | 47.3 | 47.3 | 43.4 | 44.4 | 45.9 | 44.6 | 49.2 |
| Total Capital | 3,505 | 3,275 | 3,090 | 2,975 | 2,728 | 2,735 | 2,556 | 2,664 | 2,501 | 2,148 |
| % Operating Ratio | NA | 62.9 | 63.2 | 66.4 | 69.8 | 73.6 | 74.7 | 74.3 | 74.2 | 72.8 |
| % Earned on Net Property | NA | 7.4 | 7.5 | 8.6 | 8.2 | 8.1 | 7.6 | 7.8 | 8.2 | 11.7 |
| % Return on Revenue | 24.8 | 27.4 | 26.7 | 24.3 | 20.3 | 17.1 | 15.6 | 15.6 | 15.8 | 17.2 |
| % Return on Invested Capital | NA | 9.3 | 9.4 | 9.1 | 8.2 | 7.5 | 7.1 | 6.4 | 6.6 | 7.3 |
| % Return on Common Equity | 11.9 | 13.4 | 14.0 | 14.0 | 11.9 | 10.9 | 9.6 | 9.6 | 10.0 | 10.6 |

Data as originally reported in Company reports.; bef. results of disc opers/spec. items. Per share data adj. for stk. divs.; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# Aqua America Inc

## Sub-Industry Outlook

Our fundamental outlook for the water utilities sub-industry remains neutral, based on our view that population growth trends in the US are likely to continue yielding relatively low average customer growth rates. Yet, with housing starts continuing to recover, we see strengthening customer growth in some states. Longer term, we believe aging water systems will require repair, while demand for clean water in warm and dry regions where population is expanding drives capital investments.

We expect more budget-strapped municipalities to look to sell their water systems to private companies or establish public-private operating partnerships, despite some opposition by residential customers due to service and economic concerns. The water industry remains very fragmented and we see large water distribution utilities continuing to make acquisitions. Additional new revenue should come from water stations and pipelines set for refracking shale gas wells, which Aqua America has been installing in the Marcellus region in Pennsylvania.

We see modest global growth near term in desalination, a process by which salt is removed from seawater as a source for drinking water. However, as costs gradually decline, more desalination projects are likely in dry areas such as Nevada, Arizona, California and Texas. The American Water Works Association (AWWA) forecasts that the cost to replace deteriorating water pipes will total about $846 billion for water systems and $1.05 trillion for wastewater systems through 2039. In June 2013, an EPA survey projected total investments for U.S. drinking water system repairs and improvements of $384 billion through 2030, but the AWWA believes this figure is artificially low as it excludes several types of capital improvement projects and growth needs.

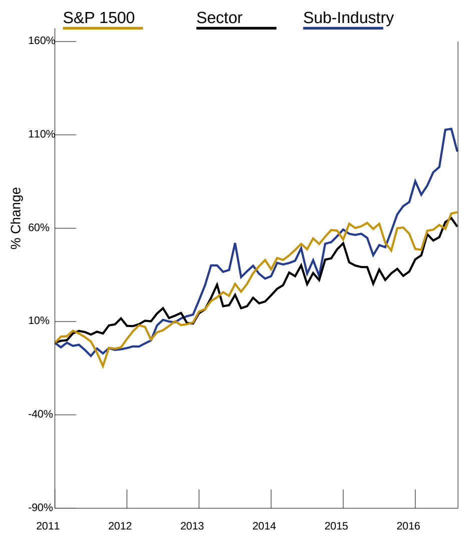
Through July 1, 2016, the S&P 1500 Water Utilities Index rose 24.5%, versus a 3.3% rise for the S&P Composite 1500 Index and an 21.7% increase in the S&P 1500 Utilities Sector Index. In 2015, the group rose 11.6%, versus a 1.0% decline for the broader market index and a 8.0% drop in the S&P Utilities Index. We believe long-term investors view this group as a safe haven during cyclical downturns. However, with economic indicators growing slowly and signs of further interest rate hikes ahead, we believe investors will turn to sectors with lower debt-to-capital ratios, as utilities will likely incur higher interest expense when they roll over their debt.

**-- Christopher Muir**

## Industry Performance

**GICS Sector:** Utilities
**Sub-Industry:** Water Utilities

Based on S&P 1500 Indexes
Five-Year market price performance through Aug 13, 2016




**NOTE:** All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS)

Past performance is not an indication of future performance and should not be relied upon as such.

## Sub-Industry : Water Utilities Peer Group*: Water Utilities

| Peer Group | Stock Symbol | Stk.Mkt. Cap. (Mil. $) | Recent Stock Price($) | 52 Week High/Low($) | Beta | Yield (%) | P/E Ratio | Fair Value Calc.($) | Quality Ranking | S&P IQ %ile | Return on Revenue (%) | LTD to Cap (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Aqua America** | **WTR** | **5,777** | **32.58** | **35.83/24.45** | **0.44** | **2.3** | **28** | **24.80** | **A+** | **84** | **24.8** | **49.7** |
| Amer States Water | AWR | 1,532 | 41.92 | 47.24/35.80 | 0.67 | 2.1 | 26 | 27.60 | A | 92 | 13.2 | 41.1 |
| Artesian Resources 'A' | ARTNA | 258 | 31.44 | 35.00/21.32 | 0.43 | 2.9 | 25 | NA | A- | 63 | 14.7 | 43.7 |
| Calif Water Svc Grp | CWT | 1,520 | 31.69 | 35.62/19.55 | 0.63 | 2.2 | 34 | 25.80 | A- | 73 | 7.7 | 44.1 |
| Connecticut Wtr Svc | CTWS | 569 | 50.62 | 56.62/33.30 | 0.60 | 2.2 | 23 | 40.10 | A | 91 | 23.7 | 43.8 |
| Consolidated Water | CWCO | 192 | 12.99 | 14.69/9.75 | 1.21 | 2.3 | 25 | 12.00 | NR | 60 | 13.9 | NA |
| Middlesex Water | MSEX | 620 | 38.07 | 44.11/22.12 | 0.71 | 2.1 | 28 | NA | A- | 88 | 15.8 | 38.8 |
| SJW Corp | SJW | 825 | 40.36 | 42.94/27.54 | 0.73 | 2.0 | 18 | NA | B | 33 | 12.4 | 49.6 |
| York Water | YORW | 380 | 29.53 | 33.40/20.26 | 0.43 | 2.1 | 31 | NA | A | 89 | 26.5 | 45.1 |

NA-Not Available NM-Not Meaningful NR-Not Rated. *For Peer Groups with more than 15 companies or stocks, selection of issues is based on market capitalization.

## S&P Capital IQ Analyst Research Notes and other Company News

**August 8, 2016**
Aqua America Inc. CFO David P. Smeltzer announced the promotion Stan Szczygiel to vice president, finance and treasurer. Stan Szczygiel is vice president, finance and treasurer for Aqua America. In addition to his previous responsibilities as vice president of finance, Szczygiel will assume oversight of the company's accounts payable, payroll and treasury operations all areas in which he has prior experience. Szczygiel began his career with Aqua in 2006 as the controller for its southern operations and was later promoted to director of planning before becoming vice president, finance.

**July 15, 2016**
Aqua America Inc. announced that Patricia Tuso has been hired as director, human resources. Tuso brings more than 17 years of progressive human resources experience in the healthcare, telecommunications, business process outsourcing, utilities and consulting industries. As director, human resources, Tuso will be responsible for the strategic direction of talent acquisition, training and organizational development, succession planning, and the information systems functions within the human resources department. Additionally, Tuso will partner and collaborate with the management team to assist with and support the attainment of short- and long-term business goals.

**July 8, 2016**
09:59 am ET ... S&P GLOBAL MAINTAINS STRONG SELL OPINION ON SHARES OF AQUA AMERICA (WTR 34.40*): We lift our 12-month target by $2 to $32 due to higher peer valuations. Our target is a peer-premium 22.9X our '17 EPS estimate that we think is warranted by our projection of an above-peers three-year EPS growth rate. We keep our '16 and '17 EPS estimates of $1.34 and $1.40. Despite its strong capital spending program that we see leading to rate increases, we think the shares are overvalued. WTR posted Q1 EPS of $0.29, vs. $0.27, over our estimate and the Capital IQ consensus, both at $0.28. Q1 results were helped by customer growth, partly offset by lower usage per customer. /C. Muir

**June 16, 2016**
Aqua America Inc. announced that Christopher S. Crockett has joined the company as its chief environmental officer. Crockett was previously deputy commissioner for planning and environmental services at the Philadelphia Water Department (PWD), where he has worked since 1995. In his new role, Crockett will be responsible for overseeing water quality and environmental compliance for all of Aqua's drinking water and wastewater systems in eight states. Crockett will also manage Aqua's in-house water and wastewater laboratory as well as the company's water quality services and water resources engineering departments.

**May 9, 2016**
Aqua America Inc. announced that its shareholders have elected Carolyn J. Burke, executive vice president, business operations and systems at Dynegy Inc., as a director. Burke has overall responsibility for supply chain, safety, environmental compliance, information technology, construction and engineering, and outage services at Dynegy. At Dynegy, Burke also serves as chief integration officer with responsibility for integration activities, most recently for Dynegy's $6 billion EquiPower Corp. and Duke merchant portfolio acquisitions. Burke also oversees the company's continuous margin and process improvement program.

**April 20, 2016**
02:14 pm ET ... S&P CAPITAL IQ MAINTAINS STRONG SELL OPINION ON SHARES OF AQUA AMERICA (WTR 32.15*): We lift our 12-month target by $1 to $30, a discount to peers 22.4X our '16 EPS estimate that we think is warranted by a below-peers three-year EPS growth rate. We keep our '16 EPS estimate of $1.34 and start '17's at $1.40. Despite strong capital spending, rate increases and acquisition-fueled customer growth, we think the shares are overvalued. We think Q4 results of $0.28, vs. $0.28 indicate continuing challenges in accelerating EPS growth. Capital IQ consensus estimates were $0.29. Higher revenues were offset by higher operating expenses and a higher effective tax rate. /C. Muir

**February 5, 2016**
11:19 am ET ... S&P CAPITAL IQ LOWERS VIEW ON SHARES OF AQUA AMERICA TO STRONG SELL FROM SELL (WTR 31.35*): We lift our 12-month target price by $2 to $29, due to higher peer valuations. We keep our '15 EPS estimate of $1.27, but trim '16's by $0.01 to $1.34. Our target price is 21.6X our '16 EPS estimate, or a small discount to our peer target that we think is warranted by our projection of a three-year EPS growth rate that is slower than its peers. While we have a favorable view of WTR's growth capital spending program and smaller bolt-on acquisitions, we think the shares are overvalued. We expect WTR to post Q4 EPS of $0.30, vs. $0.28, on Feb 23. The Capital IQ consensus is $0.29. /C. Muir

**October 26, 2015**
09:44 am ET ... S&P CAPITAL IQ MAINTAINS SELL OPINION ON SHARES OF AQUA AMERICA (WTR 28.52**): We raise our target price by $3 to $27, helped by higher peer valuations. We keep our '15 EPS estimate of $1.27, but trim '16's by $0.02 to $1.35. Our target price is 20.0X our '16 EPS estimate, or a 5% discount to our peer target that we think is warranted by a three-year EPS growth rate that is lower than its peers. We see capital spending on water quality upgrades, distribution line upgrades and system reliability projects helping to grow WTR's rate base and drive EPS growth. WTR posts Q2 EPS of $0.32, even with our estimate and the Capital IQ consensus forecast. /C. Muir

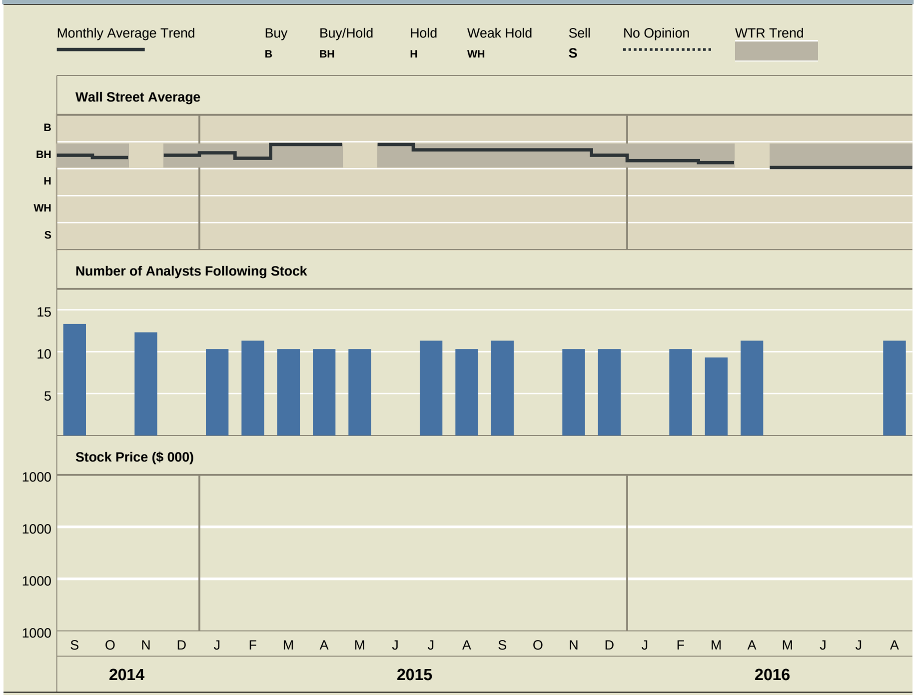
**July 17, 2015**
12:04 pm ET ... S&P CAPITAL IQ LIFTS VIEW ON SHARES OF AQUA AMERICA TO SELL FROM STRONG SELL (WTR 25.66**): We are keeping our '15 EPS estimate at $1.27 and lifting '16's by $0.03 to $1.37. We are trimming our 12-month target price by $1 to $24 on lower peer valuations. Our target price is 17.5X our '16 EPS estimate or a 14% discount to our peer target, which we think is warranted by our projection of a three-year EPS growth rate that is slower than peers. Despite a strong capital spending program, we think WTR's shares are overvalued versus faster growing water utility peers. Q1 recurring EPS of $0.27, vs. $0.25, beats our $0.25 estimate and the $0.26 Capital IQ consensus. /C. Muir

**June 4, 2015**
Aqua America Inc. appointed Christopher H. Franklin Chief Executive Officer. Franklin succeeded Nicholas DeBenedictis.

**April 14, 2015**
12:24 pm ET ... S&P CAPITAL IQ LOWERS OPINION ON SHARES OF AQUA AMERICA TO STRONG SELL FROM SELL (WTR 26.88*): Our opinion change is due to valuation. We are keeping our '15 EPS estimate at $1.27 and initiating '16's at $1.34. We are also leaving our 12-month target unchanged at $25, reflecting our stable fundamental outlook. Our target price is 19.7X our '15 EPS estimate, or a 10% discount to our peer target that we think is warranted by our projection of a three-year EPS growth rate that is lower than its peers. While we see capital spending leading to rate increases, we think WTR is overvalued. Q4 EPS of $0.28, vs. $0.26, beats our estimate and the Capital IQ consensus, both at $0.27. /C. Muir

# Aqua America Inc

## Analysts' Recommendations




Of the total 11 companies following WTR, 11 analysts currently publish recommendations.

| | No. of Recommendations | % of Total | 1 Mo. Prior | 3 Mos. Prior |
|---|---|---|---|---|
| Buy | 4 | 36 | 4 | 4 |
| Buy/Hold | 0 | 0 | 0 | 0 |
| Hold | 6 | 55 | 6 | 6 |
| Weak Hold | 0 | 0 | 0 | 0 |
| Sell | 1 | 9 | 1 | 1 |
| No Opinion | 0 | 0 | 0 | 0 |
| **Total** | **11** | **100** | **11** | **11** |

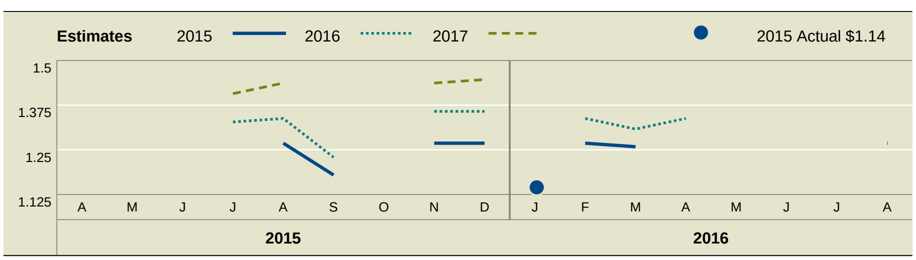
## Wall Street Consensus Opinion

**BUY/HOLD**

## Companies Offering Coverage

Argus Research Company
Barclays
Boenning & Scattergood, Inc.
Gabelli & Company, Inc.
HSBC
Hilliard Lyons
Janney Montgomery Scott LLC
Ladenburg Thalmann & Company
Macquarie Research
U.S. Capital Advisors LLC
Wells Fargo Securities, LLC

## Wall Street Consensus Estimates




| Fiscal Years | Avg Est. | High Est. | Low Est. | # of Est. | Est. P/E |
|---|---|---|---|---|---|
| 2017 | 1.40 | 1.45 | 1.35 | 11 | 23.3 |
| 2016 | 1.33 | 1.35 | 1.30 | 11 | 24.5 |
| **2017 vs. 2016** | **▲ 5%** | **▲ 7%** | **▲ 4%** | **0%** | **▼ -5%** |
| | | | | | |
| Q3'17 | 0.44 | 0.46 | 0.42 | 4 | 74.0 |
| Q3'16 | 0.40 | 0.43 | 0.38 | 7 | 81.4 |
| **Q3'17 vs. Q3'16** | **▲ 10%** | **▲ 7%** | **▲ 11%** | **▼ -43%** | **▼ -9%** |

A company's earnings outlook plays a major part in any investment decision. S&P Capital IQ organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years, as well as how those earnings estimates have changed over time. Note that the information provided in relation to consensus estimates is not intended to predict actual results and should not be taken as a reliable indicator of future performance.

## Wall Street Consensus vs. Performance

For fiscal year 2016, analysts estimate that WTR will earn US$ 1.33. For the 2nd quarter of fiscal year 2016, WTR announced earnings per share of US$ 0.33, representing 25% of the total annual estimate. For fiscal year 2017, analysts estimate that WTR's earnings per share will grow by 5% to US$ 1.40.

## Glossary

### S&P Capital IQ STARS
Since January 1, 1987, S&P Capital IQ Equity Research has ranked a universe of U.S. common stocks, ADRs (American Depositary Receipts), and ADSs (American Depositary Shares) based on a given equity's potential for future performance. Similarly, S&P Capital IQ Equity Research has ranked Asian and European equities since June 30, 2002. Under proprietary STARS (STock Appreciation Ranking System), S&P Capital IQ equity analysts rank equities according to their individual forecast of an equity's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index (S&P Asia 50 Index, S&P Europe 350® Index or S&P 500® Index)), based on a 12-month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective. Data used to assist in determining the STARS ranking may be the result of the analyst's own models as well as internal proprietary models resulting from dynamic data inputs.

### S&P Capital IQ Quality Ranking
(also known as **S&P Capital IQ Earnings & Dividend Rankings**) - Growth and stability of earnings and dividends are deemed key elements in establishing S&P Capital IQ's earnings and dividend rankings for common stocks, which are designed to capsulize the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

| | | | |
|---|---|---|---|
| A+ | Highest | B | Below Average |
| A | High | B- | Lower |
| A- | Above Average | C | Lowest |
| B+ | Average | D | In Reorganization |
| NR | Not Ranked | | |

### S&P Capital IQ EPS Estimates
S&P Capital IQ earnings per share (EPS) estimates reflect analyst projections of future EPS from continuing operations, and generally exclude various items that are viewed as special, non-recurring, or extraordinary. Also, S&P Capital IQ EPS estimates reflect either forecasts of S&P Capital IQ equity analysts; or, the consensus (average) EPS estimate, which are independently compiled by Capital IQ, a data provider to S&P Capital IQ Equity Research. Among the items typically excluded from EPS estimates are asset sale gains; impairment, restructuring or merger-related charges; legal and insurance settlements; in process research and development expenses; gains or losses on the extinguishment of debt; the cumulative effect of accounting changes; and earnings related to operations that have been classified by the company as discontinued. The inclusion of some items, such as stock option expense and recurring types of other charges, may vary, and depend on such factors as industry practice, analyst judgment, and the extent to which some types of data is disclosed by companies.

### S&P Capital IQ Core Earnings
S&P Capital IQ Core Earnings is a uniform methodology for adjusting operating earnings by focusing on a company's after-tax earnings generated from its principal businesses. Included in the S&P Capital IQ definition are employee stock option grant expenses, pension costs, restructuring charges from ongoing operations, write-downs of depreciable or amortizable operating assets, purchased research and development, M&A related expenses and unrealized gains/losses from hedging activities. Excluded from the definition are pension gains, impairment of goodwill charges, gains or losses from asset sales, reversal of prior-year charges and provision from litigation or insurance settlements.

### S&P Capital IQ 12-Month Target Price
The S&P Capital IQ equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics, including S&P Capital IQ Fair Value.

### S&P Capital IQ Equity Research
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### Abbreviations Used in S&P Capital IQ Equity Research Reports
CAGR - Compound Annual Growth Rate
CAPEX - Capital Expenditures
CY - Calendar Year
DCF - Discounted Cash Flow
DDM - Dividend Discount Model
EBIT - Earnings Before Interest and Taxes
EBITDA - Earnings Before Interest, Taxes, Depreciation and Amortization
EPS - Earnings Per Share
EV - Enterprise Value
FCF - Free Cash Flow
FFO - Funds From Operations
FY - Fiscal Year
P/E - Price/Earnings
P/NAV - Price to Net Asset Value
PEG Ratio - P/E-to-Growth Ratio
PV - Present Value
R&D - Research & Development
ROCE - Return on Capital Employed
ROE - Return on Equity
ROI - Return on Investment
ROIC - Return on Invested Capital
ROA - Return on Assets
SG&A - Selling, General & Administrative Expenses
SOTP - Sum-of-The-Parts
WACC - Weighted Average Cost of Capital

### Dividends on American Depository Receipts (ADRs) and American Depository Shares (ADSs) are net of taxes (paid in the country of origin).

### S&P Capital IQ Qualitative Risk Assessment
Reflects an S&P Capital IQ equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The S&P Capital IQ Qualitative Risk Assessment is a relative ranking to the S&P U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices. For an ETF this reflects on a capitalization-weighted basis, the average qualitative risk assessment assigned to holdings of the fund.

### STARS Ranking system and definition:
★★★★★ **5-STARS (Strong Buy):**
Total return is expected to outperform the total return of a relevant benchmark, by a wide margin over the coming 12 months, with shares rising in price on an absolute basis.
★★★★☆ **4-STARS (Buy):**
Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.
★★★☆☆ **3-STARS (Hold):**
Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.
★★☆☆☆ **2-STARS (Sell):**
Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price not anticipated to show a gain.
★☆☆☆☆ **1-STAR (Strong Sell):**
Total return is expected to underperform the total return of a relevant benchmark by a wide margin over the coming 12 months, with shares falling in price on an absolute basis.

### Relevant benchmarks:
In North America, the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are the S&P Europe 350 Index and the S&P Asia 50 Index, respectively.

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### S&P Capital IQ Global STARS Distribution as of June 30, 2016

| Ranking | North America | Europe | Asia | Global |
|---|---|---|---|---|
| Buy | 24.6% | 17.8% | 30.0% | 23.7% |
| Hold | 48.0% | 57.8% | 45.0% | 49.6% |
| Sell | 27.4% | 24.4% | 25.0% | 26.7% |
| Total | 100% | 100% | 100% | 100% |

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February 23, 2017

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: EPS Outlook Intact--Reiterate Market Perform**

**Market Perform**

Sector: Water Utilities
Market Weight

***Company Note***

| | 2016A | 2017E | | 2018E | |
|---|---|---|---|---|---|
| **EPS** | | **Curr.** | **Prior** | **Curr.** | **Prior** |
| **Q1** (Mar.) | $0.29 | $0.29 | | NE | |
| **Q2** (June) | 0.33 | 0.34 | | NE | |
| **Q3** (Sep.) | 0.41 | 0.43 | | NE | |
| **Q4** (Dec.) | 0.28 | 0.31 | | NE | |
| **FY** | $1.32 | $1.37 | NC | $1.42 | |
| **CY** | $1.32 | $1.37 | | $1.42 | |
| **FY P/EPS** | 23.3x | 22.4x | | 21.6x | |
| **Rev.(MM)** | $832 | $876 | | $932 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2017 ongoing diluted EPS guidance is $1.34-1.39.*

| | |
|---|---|
| Ticker | WTR |
| Price (02/23/2017) | $30.73 |
| 52-Week Range: | $28-36 |
| Shares Outstanding: (MM) | 177.4 |
| Market Cap.: (MM) | $5,451.5 |
| S&P 500: | 2,363.81 |
| Avg. Daily Vol.: | 532,558 |
| Dividend/Yield: | $0.77/2.5% |
| LT Debt: (MM) | $1,858.0 |
| LT Debt/Total Cap.: | 50.4% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 5.0% |
| CY 2017 Est. P/EPS-to-Growth: | 4.5x |
| Last Reporting Date: | 02/22/2017 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*

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- **Summary.** Mgmt affirmed '17 EPS guidance of $1.34-1.39 on the YE'16 call. In addition, WTR reiterated that Aqua PA expects to file for a distribution system improvement charge (DSIC) later in '17 with a full rate case filing likely in '18. The disclosures were consistent with WTR's 1/17 guidance call. No change to our EPS outlook or Market Perform rating. On a P/E basis, WTR shares trade at 5% discounts on our 18E & 19E to water utility peers which we believe largely reflects the potential for WTR to pursue an M&A deal outside of the water sector as well as, to a lesser extent, below average near-term EPS growth and rate case risk. However, relative to electrics, the P/E premium is 20% which we consider more than adequate given forecasted EPS (5%), rate base (6-7%) and dividend (7%) growth rates that are not all that dissimilar to the median electric utility.

- **Industry Valuation Thoughts.** On an absolute performance basis, water utilities are up only 4% over the last three months vs. +10% for both the regulated electrics and gas utilities. However, water utilities still trade at 25-30% (electrics) and 7-9% (gas) premiums. This is inclusive of the fact that gas utilities as well as SMID cap electrics seem to enjoy an acquisition premium due to recent utility M&A activity. While we continue to believe that the water utility sector should be ascribed a premium valuation to other utility-sub-sectors (lower risk, long-term elevated capex needs, consolidation opportunities, scarcity premium, etc.), we think the relative premiums are more than adequate – especially given our view that the likelihood is low that a publicly traded water utility agrees to be acquired.

- **EPS Outlook.** Our 17-20E EPS are $1.37, $1.42, $1.50 & $1.59. Rate recovery of infrastructure capex, cost efficiencies and M&A activity are the primary drivers of our forecasted 5% EPS CAGR. This is below WTR's expected 6-7% rate base growth due to over-earning situations in some states, including PA. However, forecasted capex is expected to grow rate base and lower the realized returns over the next few years. By '19, we expect EPS growth to approximate rate base growth.

- **PA Rate Relief.** Aqua PA has not been able to make a DSIC filing since the infrastructure surcharge mechanism was suspended 1/1/2013 as a condition in the 2012 rate case settlement regarding the adoption of the repairs tax deduction. Essentially, Aqua PA has been precluded from seeking rate relief for DSIC qualifying infrastructure investments until the utility's underlying rate base grows large enough such that the revenue requirement set in the 2012 order is insufficient to earn a fair return. (In other words, WTR pulled forward future rate base and EPS growth in 2012/13). That tipping point is approaching. For the 12-months ended 9/30/16, Aqua PA's earned ROE was 10.32% per quarterly regulatory filings which compares to PA's current DSIC allowed ROE of 9.65%. WTR expects to implement a DSIC increase by Q4'17. As for the next full blown Aqua PA rate case, a 2H'18 filing with new rates effective in '19 is still mgmt's expectation. However, potential corporate tax reform could accelerate the timing – a lower corporate rate would reduce the repairs tax deduction benefit amount.

### Valuation Range: $31.00 to $33.00

Our VR is based on a P/E multiple (apply a 5-10% discount to the 17E water utility median of 24.5-25X to our 18E) and DDM analyses. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

### Investment Thesis:

We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.

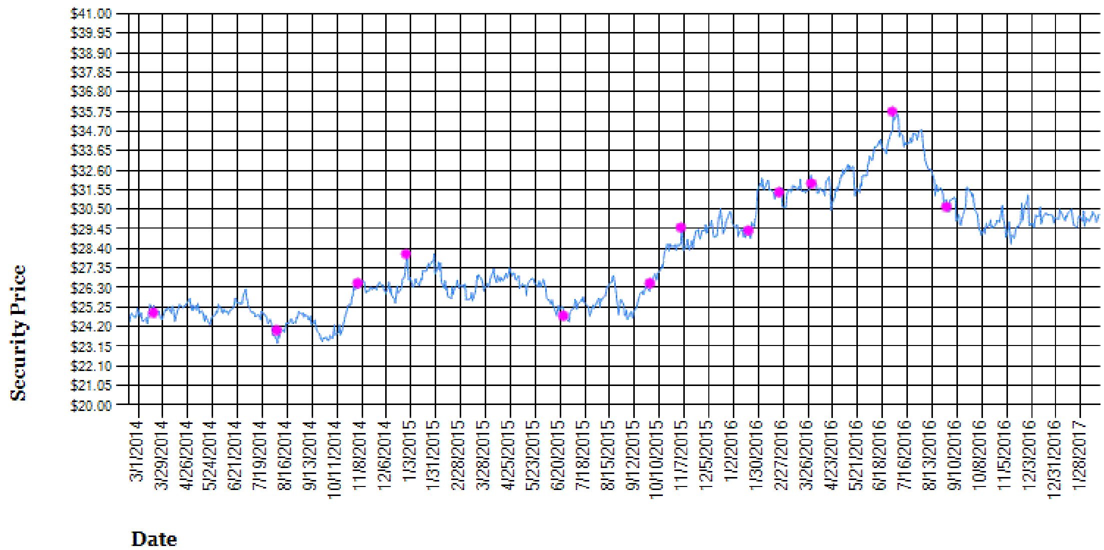
**Please see page 3 for rating definitions, important disclosures and required analyst certifications. All estimates/forecasts are as of 02/23/17 unless otherwise stated. 02/23/17 18:54:59 ET**

## Company Description:

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. Management has been active optimizing its portfolio of states, including the recent divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures

## Aqua America (WTR) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|
| 2/18/2014 | | Kalton | | | |
| 2/18/2014 | NA | 2 | 24.00 | 25.00 | 24.67 |
| • 3/20/2014 | 24.90 | 2 | 25.00 | 26.00 | 24.90 |
| • 8/6/2014 | 23.96 | 2 | 24.00 | 25.00 | 23.96 |
| • 11/4/2014 | 26.44 | 2 | 26.00 | 27.00 | 26.44 |
| • 12/29/2014 | 26.85 | 2 | 27.00 | 28.00 | 28.05 |
| • 6/25/2015 | 24.80 | 2 | 26.00 | 27.00 | 24.75 |
| • 9/30/2015 | 26.25 | 2 | 27.00 | 28.00 | 26.47 |
| • 11/4/2015 | 29.12 | 2 | 29.00 | 30.00 | 29.41 |
| • 1/19/2016 | 28.99 | 2 | 30.00 | 31.00 | 29.31 |
| • 2/24/2016 | 30.84 | 2 | 32.00 | 33.00 | 31.32 |
| • 3/31/2016 | 31.82 | 2 | 33.00 | 34.00 | 31.82 |
| • 6/30/2016 | 35.39 | 2 | 35.00 | 36.00 | 35.66 |
| • 8/30/2016 | 30.38 | 2 | 31.00 | 33.00 | 30.53 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Valuation Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- ☐ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

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## SECTOR RATING

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**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

## VOLATILITY RATING

**V** = A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: February 23, 2017

| | |
|---|---|
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WELLS FARGO SECURITIES

# Water Industry Thoughts -- Upgrading WTR To Outperform

***Utilities***

| USD | Rating | | Price | FY EPS | | | | Price Target | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2017E | | 2018E | | | |
| Ticker | Curr. | Prior | 10/18/17 | Curr. | Prior | Curr. | Prior | To | From |
| **Water Utilities, Market Weight** | | | | | | | | | |
| AWR | 2 | NC | 55.03 | 1.70 | NC | 1.75 | NC | $51 | $48 |
| AWK | 2 | NC | 86.22 | 3.02 | NC | 3.30 | NC | $89 | $84 |
| WTR | 1 | 2 | 35.30 | 1.37 | NC | 1.42 | NC | $40 | $35 |
| CWT | 3 | NC | 42.90 | 1.27 | NC | 1.32 | NC | $37 | $34 |
| CTWS | 2 | NC | 63.02 | 2.20 | NC | 2.35 | NC | $64 | $60 |

Source: Company data and Wells Fargo Securities, LLC estimates

1= Outperform, 2 = Market Perform, 3 = Underperform, V = Volatile, = Company is on the Priority Stock List
NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful

- **Summary.** We met with water utility executives around the 2017 NAWC Water Summit. In general, we believe the underlying industry fundamentals are strong: (1) elevated infrastructure capex needs for the foreseeable future, (2) relatively constructive regulatory treatment, (3) consolidation potential including the recent uptick in municipal deals, (4) solid financial profiles and (5) secure and growing dividends. However, valuations continue to temper our overall enthusiasm for the group. Waters screen expensive on an absolute P/E basis and closer to fair value (but still somewhat expensive) on relative P/E and interest rates bases – similar to how electric utilities screen on these metrics. In addition, we question the longer-term sustainability of the relative P/E premiums that waters enjoy over SMID cap electric (35%) and gas (20%) utilities, particularly in a rising interest rate environment. That said, ***we elect to upgrade WTR to Outperform*** and increase price targets on all names due to a higher peer group multiple.

- **Upgrading WTR to Outperform.** Following our meeting with WTR, we are increasingly convinced that potentially pursuing growth outside of the regulated water/wastewater space (i.e. gas LDC purchase or non-reg venture) is on the back burner. Instead, WTR is focused on capitalizing on the budding opportunities in the "tuck-in" M&A arena. In addition, we believe a constructive outcome will be achieved in the upcoming PA rate case ('18 filing). We believe these two concerns have caused investors to ascribe a discount multiple to WTR – currently shares trade at 7-9% P/E discounts to water peers (3-5% discount to AWK) on our below consensus 18E/19E EPS of $1.42/$1.50. We believe a more in line multiple is deserved and should materialize as WTR's growth rate normalizes to 5-7% with the help of PA rate relief (implemented 2.5% DSIC increase on 10/1) and tuck-in M&A activity (our forecast is predicated on $50M/year of deals in '18 & beyond vs. the more than $120M pending, thus there could be upside potential).

- **3 Quick Takeaways.** (1) Optimism towards consolidation potential, particularly from AWK and WTR, is very high. (2) A CA Cost of Capital settlement appears unlikely and a CPUC decision may slip into 2018. (3) Military base privatization is expected to offer continued regulated-like growth opportunities for AWK and AWR (perhaps CWT and others?). See p. 2 for a complete discussion of industry observations as well as individual takeaways on each of our covered companies.

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**Please see page 10 for rating definitions, important disclosures and required analyst certifications. All estimates/forecasts are as of 10/19/17 unless otherwise stated. 10/18/17 19:23:35 ET**



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## Water Industry Thoughts – Takeaways from the Pacific Northwest

We recently met with the senior water utility executives, including from the five names that we cover (AWK, AWR, CTWS, CWT & WTR), around the 2017 NAWC Water Summit held October 15-17 in Seattle. Below we offer both industry observations as well as some individual takeaways on each of the covered companies.

In general, we believe the water utility sector's underlying fundamentals remain very strong. Features include (1) elevated infrastructure investment needs for the foreseeable future, (2) relatively constructive regulatory treatment, (3) consolidation potential including the recent uptick in municipal deal flow, (4) solid financial profiles and (5) secure and growing dividends.

However, valuation considerations continue to temper our overall enthusiasm for the group. Year-to-date, water utilities have provided investors a 20.6% total return versus 12.8% for U.S. regulated electrics and 16.2% for the S&P 500. Waters screen expensive on an absolute P/E basis and closer to fair value (but still somewhat expensive) on relative P/E and interest rates bases – similar to how electric utilities screen on these metrics. In addition, we question the longer-term sustainability of the relative P/E premiums that waters enjoy over SMID cap electric (35%) and gas (20%) utilities, particularly in a rising interest rate environment. Please see the appendix on p. 6 for supporting valuation figures.

With that said, we have elected to upgrade WTR to Outperform (from Market Perform) and continue to rate CWT Underperform – both are primarily valuation calls relative to water utility peers. In addition, we have increased 12-18 month price targets on all covered water utilities due to a materially higher peer group multiple since our last refresh.

## Upgrading WTR to Outperform.

We are upgrading shares of WTR to Outperform from Market Perform with a 12-18 month price target of $40/share. Combined with WTR's industry leading dividend yield (2.3% vs. 1.9% water utility median), we see attractive total return potential of 15+% based on the 10/18 closing price of $35.30. Our forward looking price target is based on a relative P/E (apply an in-line to modest discount to the 18E water utility median P/E of 27.0-27.5X to our 19E EPS of $1.50) and two-stage dividend discount model (key assumptions include a 7% discount rate, a 7% near-term dividend growth rate and 4.5% long-term growth) analyses.

Following our meeting with WTR management, we are increasingly convinced that potentially pursuing growth outside of the regulated water/wastewater space (i.e. gas LDC purchase or a non-regulated venture) is squarely on the back burner for now. Instead, WTR management is focused on capitalizing on the budding opportunities in the "tuck-in" M&A arena. In addition, we believe a constructive outcome will be achieved in the upcoming PA rate case ('18 filing).

We believe these two concerns have caused investors to ascribe a discount multiple to WTR – currently shares trade at 7-9% P/E discounts to water peers (3-5% discount to AWK) on our below consensus 18E & 19E EPS of $1.42 & $1.50. (See Figures 1 & 2.) We believe a more in line multiple to water utility peers is deserved and should materialize as WTR's annual growth rate starts to normalize to an estimated 5-7% pace (roughly in line with the 6% peer group average) with the help of PA rate relief (see WTR bullets later in the report for details on DSIC and rate case filings) and tuck-in M&A activity (our EPS forecast is predicated on only $50M of deals annually in '18 & beyond versus the more than $120M pending, thus we believe there could be upside potential to our outlook if the accelerated pace continues).

**Figure 1: Aqua America's EPS Outlook**

| | EPS | | | | |
|---|---|---|---|---|---|
| | 2017E | 2018E | 2019E | 2020E | 2021E |
| Wells Fargo Securities, LLC | $1.37 | $1.42 | $1.50 | $1.58 | $1.66 |
| Consensus | $1.36 | $1.44 | $1.55 | $1.64 | N/E |

Source: Wells Fargo Securities, LLC Estimates and FactSet

**Figure 2: Aqua America's Relative Valuation to Peers**

| | Price 10/18/17 | EPS 2017E | EPS 2018E | EPS 2019E | P/E 2017E | P/E 2018E | P/E 2019E | Div. Yield | 17E Payout |
|---|---|---|---|---|---|---|---|---|---|
| Aqua America | $35.30 | $1.37 | $1.42 | $1.50 | 25.8x | 24.9x | 23.5x | 2.3% | 60% |
| Water Utility Group Median | | | | | 28.9x | 27.2x | 25.2x | 1.9% | 57% |
| *WTR Relative to Regulated Water Peers (Discount)/Premium* | | | | | *-11%* | *-9%* | *-7%* | | |
| SMID Cap Regulated Electric Group Median | | | | | 21.2x | 20.2x | 19.0x | 3.0% | 63% |
| *WTR Relative to SMID Cap Regulated Electrics (Discount)/Premium* | | | | | *21%* | *23%* | *24%* | | |
| *Water Utility Group Premium to SMID Cap Regulated Electrics* | | | | | *36%* | *35%* | *33%* | | |

Source: Wells Fargo Securities, LLC Estimates and FactSet

## Industry Observation #1: Consolidation

AWK and WTR remain as optimistic as ever about tuck-in M&A opportunities across the multi-state footprints, particularly on the municipal and/or wastewater side. Enabling legislation/regulatory principles (fair market value legislation, statewide/regional rates allowing socialization of costs, NJ's Water Quality Accountability Act, etc.) as well as persisting local forces (pension problems, EPA non-compliance, budget constraints, lack of expertise particularly when operational challenges arise, etc.) have translated into a considerable spike in potentially willing sellers.

The various management teams and NAWC are focused on getting more states to adopt these enabling principles and view IOUs as the solution to solving the water and wastewater industry's problems. While the size/volume of deals in the last 12-24 months has been encouraging, we remain curious to see whether the accelerated pace can be sustained going forward.

Lastly – and interestingly for the first time in many years – we did have some executives speculate that an IOU could get bought or perhaps we see a merger of equals over the next 5 years. With that said, it has been some time since there has been a willing IOU seller and we have no indication there is one today.

## Industry Observation #2: California Cost of Capital

A settlement agreement in the pending Cost of Capital (CoC) proceeding appears unlikely as parties' post-hearing briefs have all been filed and the case is now in the ALJ's hands. Though a settlement would have been preferred from a risk perspective, the multi-facets of the proceeding seemingly presented too great of a challenge – while ROE was likely the most controversial aspect, ORA's and the four IOU's filed positions also differed on equity ratios and cost of debt calculations.

Although the procedural schedule lays out a 11/14 ALJ proposed decision and 12/14 CPUC final decision, the general consensus was that the case is likely to take a little longer to resolve (not a huge surprise given the CPUC's poor track record for issuing timely decisions and the fact that other high profile matters, such as the northern CA wildfires, could also divert attention). With that said, the executives expressed optimism that the downside ROE risk remains limited while acknowledging that individual commissioner positons on the matters are very much unknown, in particular the two newest commissioners.

We continue to believe that an up to 25 bps reduction from the prevailing 9.43% allowed ROE is possible. And given the ORA's stated position, we expect authorized equity ratios north of 52% and continuation of the Water Cost of Capital Mechanism (WCCM).

## Industry Observation #3: Military Base Privatization

AWK and AWR remain focused on expanding the number of bases within the portfolios given regulated-like risk profiles and attractive earnings growth possibilities. And new entrant CWT – won Travis AFB in 2016 – expressed a desire to compete for certain new bases west of the Mississippi River under the regulated rate base approach.

The recent awards of Wright-Patterson AFB in OH to AWK and Fort Riley in KS to AWR continue the Department of Defense's recent streak of concluding a couple of the pending RFPs each year and that sort of pace is expected to persist into the future. The opportunity set remains robust – AWK remains active in

6 pending RFPs and believes there are still 30-35 bases yet to be privatized that would be of interest while AWR indicated both the Air Force and the Army still have roughly 25 bases each that need to go through the process and the Navy has yet to even get started.

We continue to believe that AWK and AWR will win their fair share of new bases going forward and are curious to see whether CWT (or someone else?) emerges as a significant third competitor in the segment.

## Individual Company Takeaways/Thoughts:

### ***AWR***

- While AWR has yet to comment on the potential full year accretion from the Fort Riley base addition or expectations for ASUS's 2018 EPS contribution, we got the sense that our current assumptions of $0.03-0.05 and roughly $0.40, respectively, are within reason.

- Depending on the success of AWR's efforts to increase capex deployment rate at Golden State Water via the pending general rate cases, the company may find itself with excess cash. If so and absent the opportunity to acquire something of size within CA or even a new state, share buybacks could be initiated. Potentially accelerating the dividend growth rate beyond the current target of "at least 5%" may also be considered (while keeping the payout ratio within reason – less than 65%).

- The threat of unwarranted system condemnations could be diminished as GSWC recently successfully defended Claremont's attempt and the judge ordered the city to compensate the utility for the nearly $8M in legal defense fees.

### ***AWK***

- Announced a $62M black box settlement in the pending PA rate case – represents roughly 60% of the $108M request. AWK hopes for PA commission approval in December with new rates effective January 2018.

- Management is optimistic similarly constructive outcomes can be achieved in the pending NJ and MO cases. Specific to MO, it sounds like the current case should result in a single, statewide rate (currently AWK has 3 regional rates) and AWK believes there is some traction with respect to the forward test year request but noted it might take one or two more rate cycles before adoption.

- The planned December guidance call is to include a refresh of the long-term EPS growth target likely anchored off the 2016 base (currently 7-10% off the 2015 base with 4-6% from regulated utility capex, 1-2% from regulated M&A and 2% from Market-Based Businesses). We did not get the sense the 7-10% target is likely to change. Despite early successes and an optimistic outlook with regard to M&A, it could be premature to increase the 1-2% regulated M&A target without another year or two of results under the belt. As for the Market-Based Businesses delivering 2% growth, management indicated the 2H'17 pick-up in activity for Keystone (communicated on the Q2 EPS call) is transpiring and the award of new military bases is according to plan.

### ***CTWS***

- A strategy change is unlikely following the departure of CEO Eric Thornburg and appointment of then-current CFO Dave Benoit to the interim CEO position. In particular, the company expects to continue the aggressive (but accretive) pursuit of systems (water and wastewater) in CT (despite the likely entrance of Eversource Energy into the CT water segment via the pending Aquarion deal) – specifically, the Board has not expressed an interest in anything other than growing. In addition, the company is prepping for a likely 2018 CT rate filing.

- The new water treatment plant in Maine continues to move forward through the development stages. CTWS targets breaking ground in 2019 with a 2020 in-service date. The total cost of the plant could be in the $35-45M range and thus far potential regional partners have only expressed interested in signing long-term take-or-pay contracts with CTWS (as opposed to taking an equity position).

### ***CWT***

- Management expressed a relatively high degree of confidence in the ability to earn near the 9.43% allowed ROE in 2017. The gross margin increase approved in the 2017-19 general rate case (GRC) is the primary driver however the trackers for uncontrollable expenses like healthcare and pension also help. In addition, booking allowance for funds used during construction (AFUDC) at the full rate of return (equity and debt rather than only booking a debt AFUDC return like before) will also help. And should inflation stay rather benign, the potential ’18 and ’19 step increases outlined in the 2017-19 GRC order should help minimize regulatory lag in years 2 and 3 of the GRC cycle.

- Execution on the 2017-19 GRC capex budget is progressing. Management believes that the roughly $200M of Advice Letter Recovery projects approved will get completed however it is still too early to tell if they all can be placed in-service by 2019 or if some will slip into 2020. Recall, CWT’s 2017-19 GRC authorized a meaningful step up in the rate of capex – however, even after the step up CWT’s main replacement cycle of roughly 200 years lags other CA water utilities.

- Given the elevated capex with no signs of a slow down on the horizon as well as the ORA’s recommendation for a 54.44% equity ratio (above Cal Water’s currently authorized 53.4%), it sounds like equity financing could be needed in the not too distant future. This is consistent with our model which projects roughly $100M of new equity over the next five years.

***WTR***

- Preparations for the 2018 PA rate case filing continue. On 10/1, a 2.5% DSIC increase went into effect and the plan is to institute two additional 2.5% increases on 1/1/18 and 4/1/18 such that the 7.5% DSIC cap is reached. The exact timing of the PA filing is still being finalized – will impact what can or cannot be included in PA’s new fully projected future test year. Management believes (1) the request will be reasonable, (2) will by no means catch the PaPUC off guard and (3) that a settled outcome is very achievable (consistent with most recent PA rate cases). With that said, the commission and staff has largely turned over in the 6+ years since WTR’s last PA rate case and management will be mindful of that when presenting/supporting the request.

- Kinks are still being worked out in the implementation of PA’s Act 12 – fair market value legislation. The PaPUC approved the New Garden Township wastewater acquisition in June however the ALJ changed the rate base value such that it is below where the third party appraisals came in. The commission has yet to approve the ALJ’s recommended value and WTR may challenge given it is not consistent with the letter of the law.

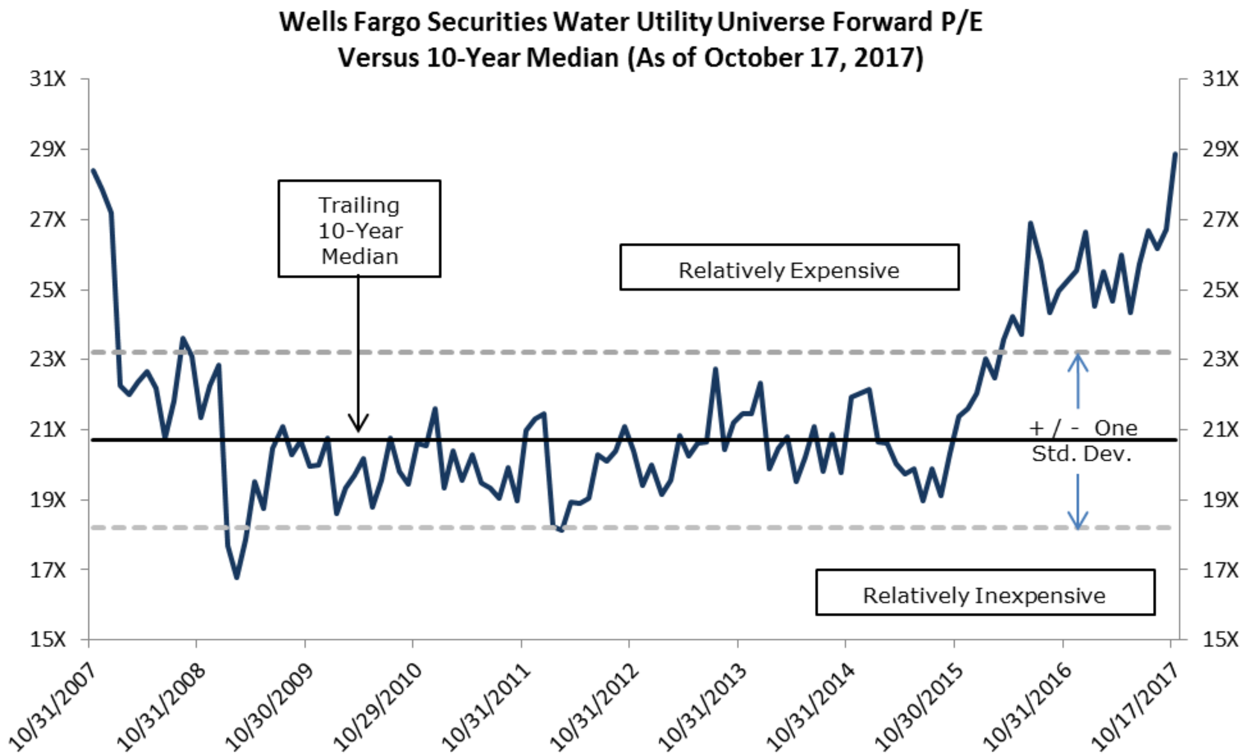
- Growth through M&A is still very much on WTR’s mind. However, the likelihood of regulated M&A outside of the water/wastewater sector has seemingly diminished – in part because gas LDC utility valuations have become too rich for WTR’s blood but also because management believes the growth opportunities from municipal acquisitions is quite robust (and confidence in this outlook has strengthened over the last 12-18 months). Management likes the states it currently operates in but would not hesitate to enter a new state if the regulatory environment was reasonable and WTR could go in with size (roughly 30k customers) so as to be able to wield regulatory clout.

- While WTR does not have a long-term growth target, the goal is to get to an industry leading growth rate via timely recovery of regulated infrastructure investments (PA getting back to normal rate relief – quarterly DSIC filings and rate case filings every few years – should allow EPS to track rate base growth) and tuck-in water/wastewater M&A deals.

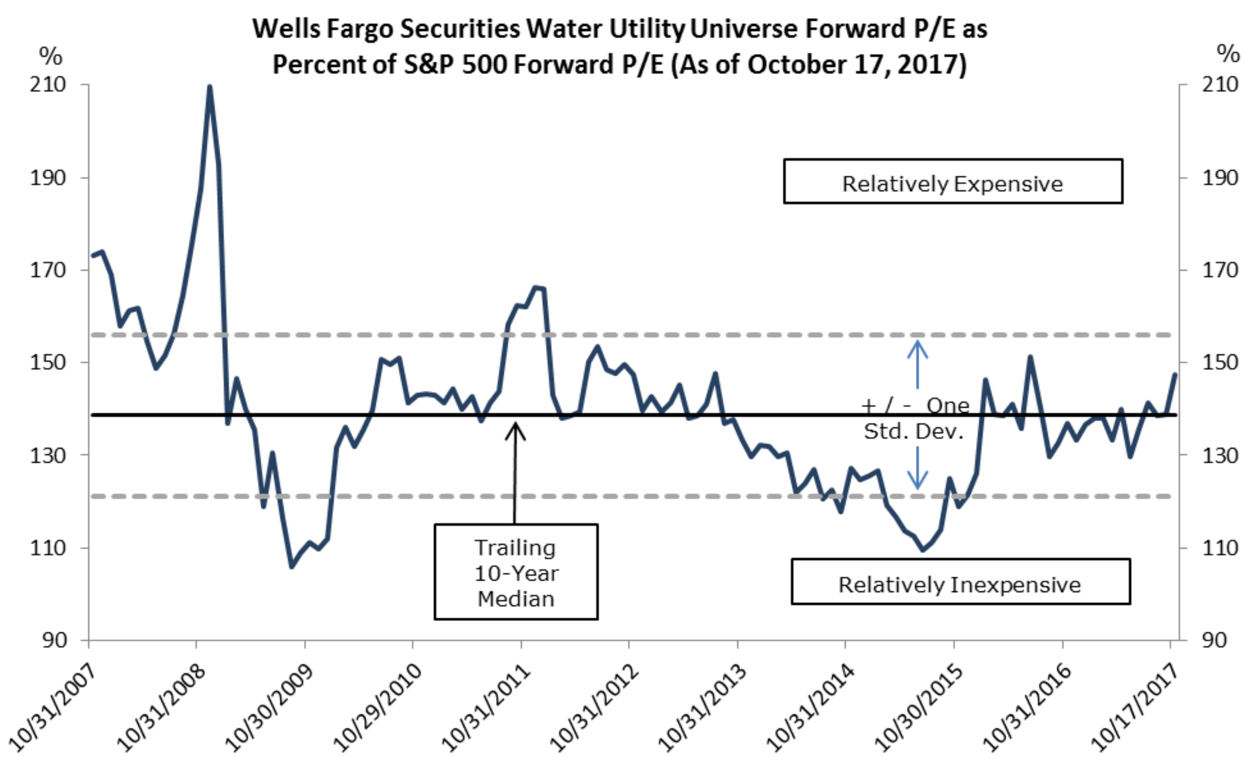
## Glossary of terms:

AFB – Air Force Base
ALJ – Administrative Law Judge
CPUC – California Public Utilities Commission
DSIC – Distribution System Investment Charge
IOU – Investor Owned Utility
LDC – Local Distribution Company
NAWC – National Association of Water Companies
ORA – Office of Ratepayer Advocates
PaPUC – Pennsylvania Public Utility Commission
RFP – Request for Proposals

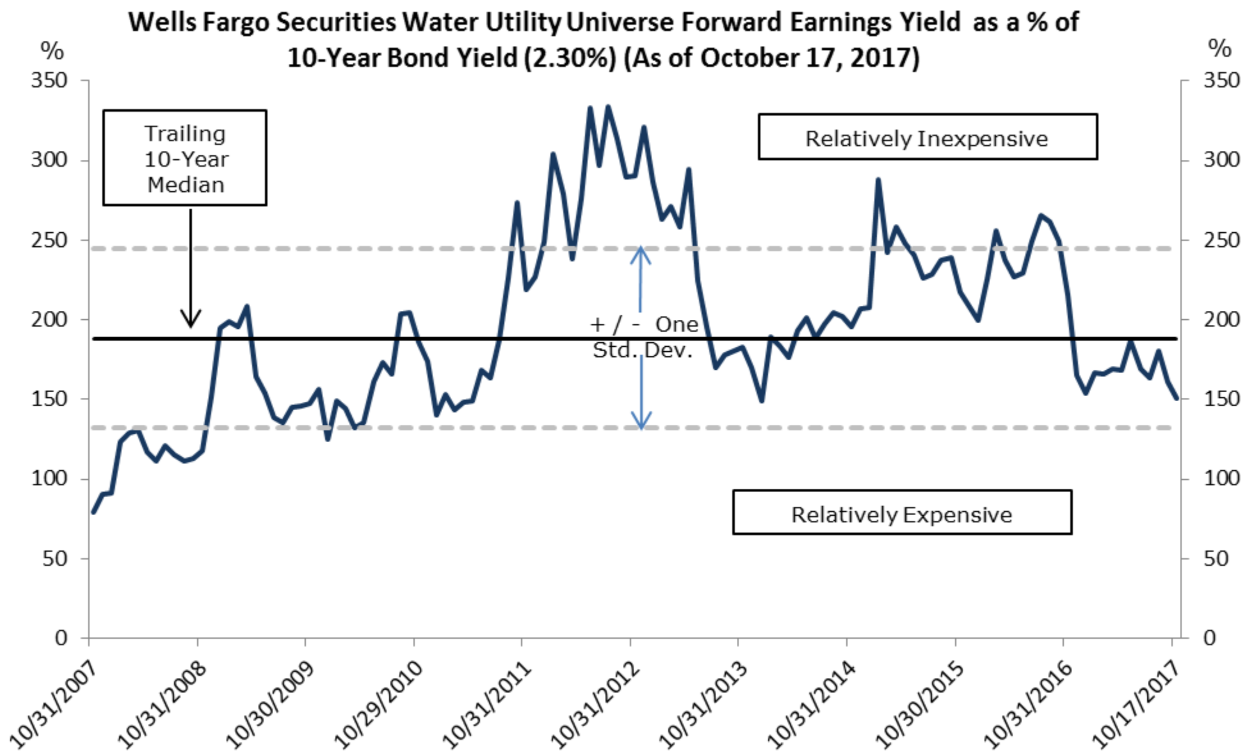
**Appendix: Water Utility Industry Valuation Figures**



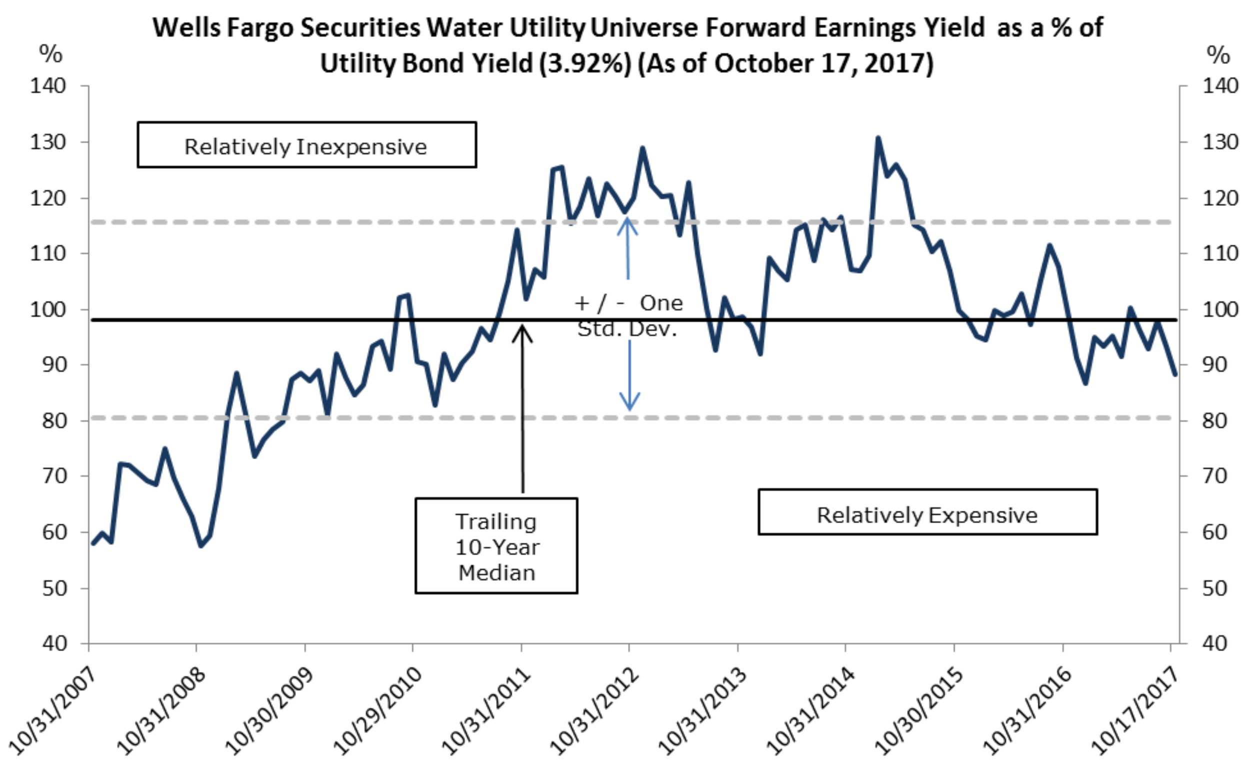

Source: FactSet and Wells Fargo Securities, LLC



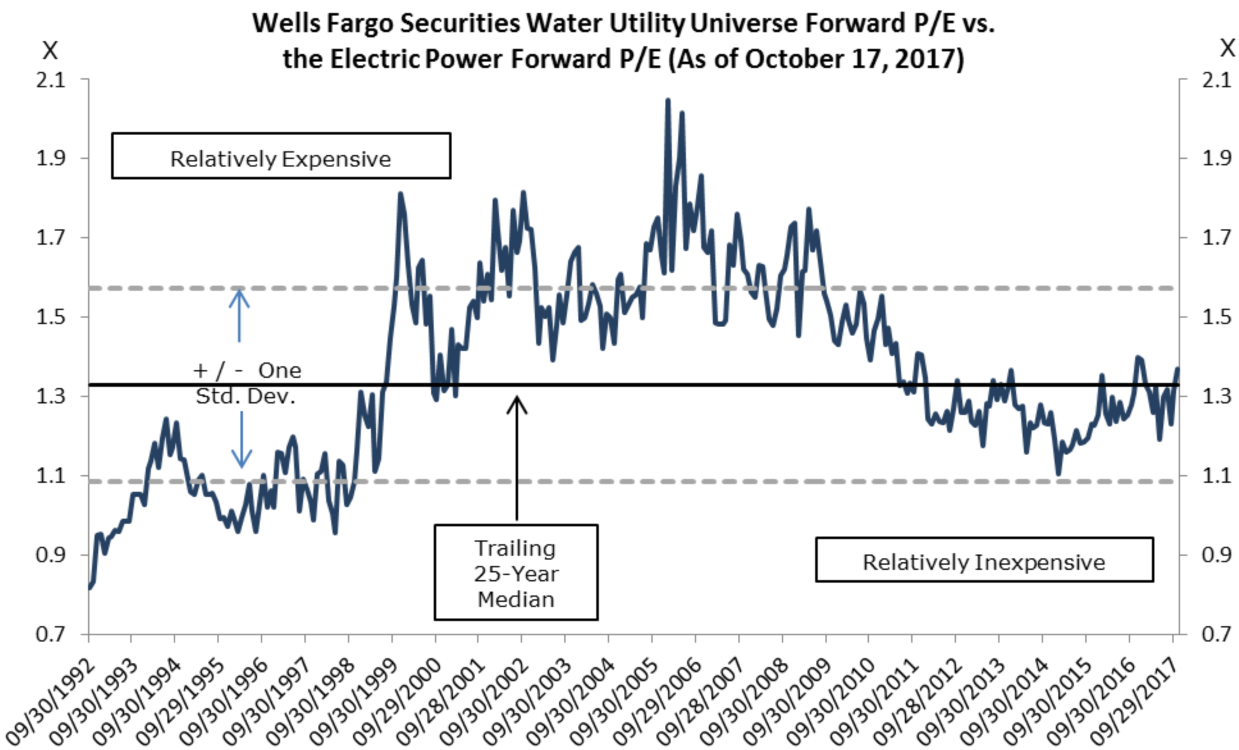

Source: FactSet and Wells Fargo Securities, LLC




Source: FactSet and Wells Fargo Securities, LLC




Source: FactSet and Wells Fargo Securities, LLC




Source: FactSet and Wells Fargo Securities, LLC

## Rating Basis Information:

AWK Thesis: We believe AWK is well positioned to capitalize on favorable industry dynamics which should lead to above average rate base, EPS and DPS growth. Our rating reflects valuation considerations.

AWR Thesis: We regard AWR as a low risk water utility with a growing dividend. We consider CA regulation to be constructive. In addition, we believe ASUS could contribute 20-25% to consolidated EPS with upside potential if new military contracts are awarded. Our rating reflects valuation considerations.

CTWS Thesis: We regard CTWS as a high quality, low risk water utility that offers investors 7-10% total return potential. Our Market Perform rating reflects valuation considerations.

CWT Thesis: We regard CWT as a high-quality, low-risk water utility with a secure and growing dividend. EPS growth is highly dependent upon CA regulation which we consider constructive. Our Underperform rating solely reflects valuation considerations.

WTR Thesis: We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Outperform rating is premised on the fact that shares trade at 7-9% P/E discounts to water peers on our below consensus 18E & 19E EPS of $1.42 & $1.50. We believe a more in-line multiple to water utility peers is deserved and should materialize as WTR's annual growth rate starts to normalize to an estimated 5-7% pace with the help of PA rate relief and tuck-in M&A activity.

## Price Target Information:

AWR Basis and Risks: Our $51/sh price target is based on a P/E multiple (apply a modest premium to the 18E water utility median of 27.0-27.5X to our 19E of $1.83) and DDM analyses. Regulatory and ASUS construction levels are key risks.

AWK Basis and Risks: Our $89/sh price target is based on a P/E multiple (apply a roughly 25X multiple to our 19E of $3.55) and DDM analyses. Risks include regulatory and profitably executing the non-regulated growth strategy.

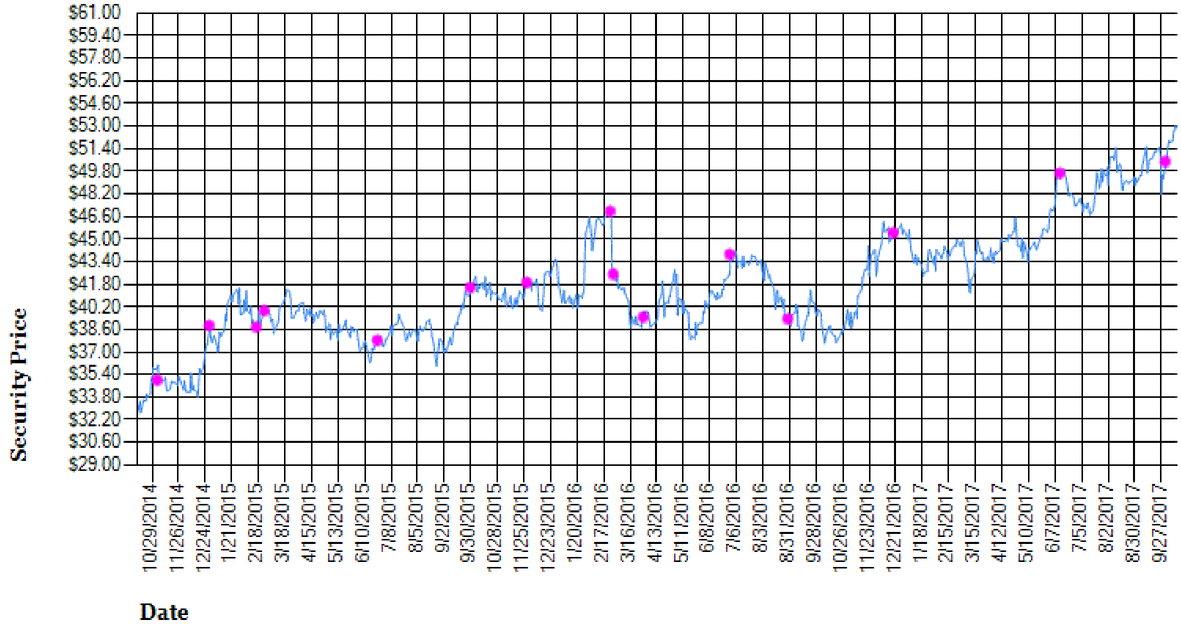
WTR Basis and Risks: Our $40/sh price target is based on a P/E multiple (apply an in-line to modest discount to the 18E water utility median P/E of 27.0-27.5X to our 19E EPS of $1.50) and DDM analyses. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

CWT Basis and Risks: Our $37/sh price target is based on a P/E multiple (apply the 18E water utility median of 27.0-27.5X to our 19E of $1.40) and DDM analyses. Risks are regulatory, execution and lack of geographical diversity.

CTWS Basis and Risks: Our $64/sh price target is based on a P/E multiple (apply the 18E water utility median of 27.0-27.5X to our 19E of $2.50) and DDM analyses. Chief risks include regulatory risk and potential to pursue undisciplined M&A growth.

# Required Disclosures

**American States Water (AWR) 3-yr. Price Performance**




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 10/13/2014 | | Kalton | | | | |
| | 10/13/2014 | NA | 2 | NE | 29.00 | 30.00 | 32.31 |
| • | 11/5/2014 | 34.90 | 2 | NE | 32.00 | 33.00 | 34.90 |
| • | 12/29/2014 | 37.53 | 2 | NE | 34.00 | 35.00 | 38.71 |
| • | 2/17/2015 | 39.04 | 2 | NE | 35.00 | 36.00 | 38.65 |
| • | 2/26/2015 | 39.84 | 2 | NE | 36.00 | 37.00 | 39.84 |
| • | 6/25/2015 | 37.96 | 2 | NE | 35.00 | 36.00 | 37.68 |
| • | 9/30/2015 | 41.17 | 2 | NE | 36.00 | 38.00 | 41.40 |
| • | 11/30/2015 | 41.83 | 2 | NE | 37.00 | 39.00 | 41.83 |
| • | 2/25/2016 | 46.87 | 2 | NE | 41.00 | 43.00 | 46.87 |
| • | 2/29/2016 | 42.41 | 2 | NE | 38.00 | 40.00 | 42.41 |
| • | 3/31/2016 | 39.36 | 2 | NE | 37.00 | 39.00 | 39.36 |
| • | 6/30/2016 | 43.25 | 2 | NE | 41.00 | 43.00 | 43.82 |
| • | 8/30/2016 | 39.15 | 2 | NE | 40.00 | 42.00 | 39.26 |
| • | 12/20/2016 | 45.17 | 2 | NE | 43.00 | 45.00 | 45.31 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 49.47 | 2 | 46 | 43.00 | 45.00 | 49.47 |
| • | 10/2/2017 | 49.96 | 2 | 48 | 43.00 | 45.00 | 50.40 |

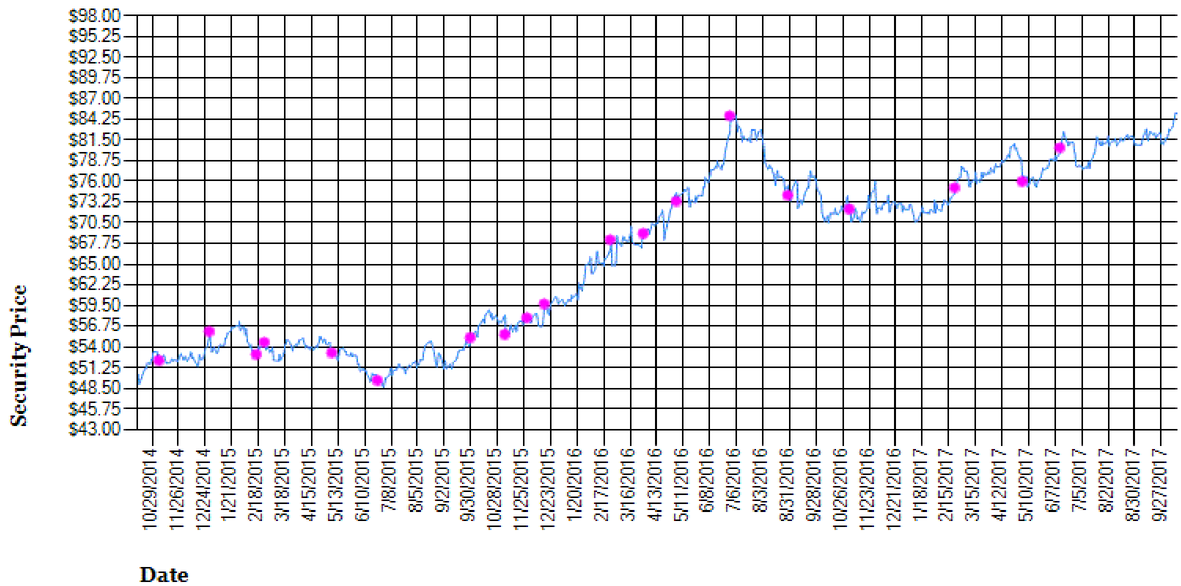
Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## American Water Works Company, Inc. (AWK) 3-yr. Price Performance




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
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| | 10/13/2014 | NA | 2 | NE | 50.00 | 51.00 | 49.54 |
| • | 11/6/2014 | 52.27 | 2 | NE | 53.00 | 54.00 | 51.99 |
| • | 12/29/2014 | 54.02 | 2 | NE | 57.00 | 58.00 | 55.86 |
| • | 2/17/2015 | 52.64 | 2 | NE | 56.00 | 57.00 | 52.75 |
| • | 2/25/2015 | 54.65 | 2 | NE | 57.00 | 58.00 | 54.46 |
| • | 5/7/2015 | 53.04 | 2 | NE | 54.00 | 55.00 | 52.99 |
| • | 6/25/2015 | 49.53 | 2 | NE | 52.00 | 53.00 | 49.37 |
| • | 9/30/2015 | 54.55 | 2 | NE | 55.00 | 56.00 | 55.08 |
| • | 11/6/2015 | 58.19 | 2 | NE | 58.00 | 59.00 | 55.44 |
| • | 11/30/2015 | 57.76 | 2 | NE | 59.00 | 60.00 | 57.76 |
| • | 12/18/2015 | 59.22 | 2 | NE | 62.00 | 63.00 | 59.55 |
| • | 2/25/2016 | 67.75 | 2 | NE | 69.00 | 70.00 | 68.05 |
| • | 3/31/2016 | 68.93 | 2 | NE | 72.00 | 73.00 | 68.93 |
| • | 5/5/2016 | 73.38 | 2 | NE | 73.00 | 74.00 | 73.20 |
| • | 6/30/2016 | 84.01 | 2 | NE | 82.00 | 83.00 | 84.51 |
| • | 8/30/2016 | 73.86 | 2 | NE | 76.00 | 78.00 | 74.03 |
| • | 11/3/2016 | 72.09 | 2 | NE | 75.00 | 77.00 | 72.09 |
| • | 2/22/2017 | 74.63 | 2 | NE | 76.00 | 78.00 | 74.92 |
| • | 5/4/2017 | 76.45 | 2 | NE | 77.00 | 79.00 | 75.68 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 80.18 | 2 | 84 | 77.00 | 79.00 | 80.18 |

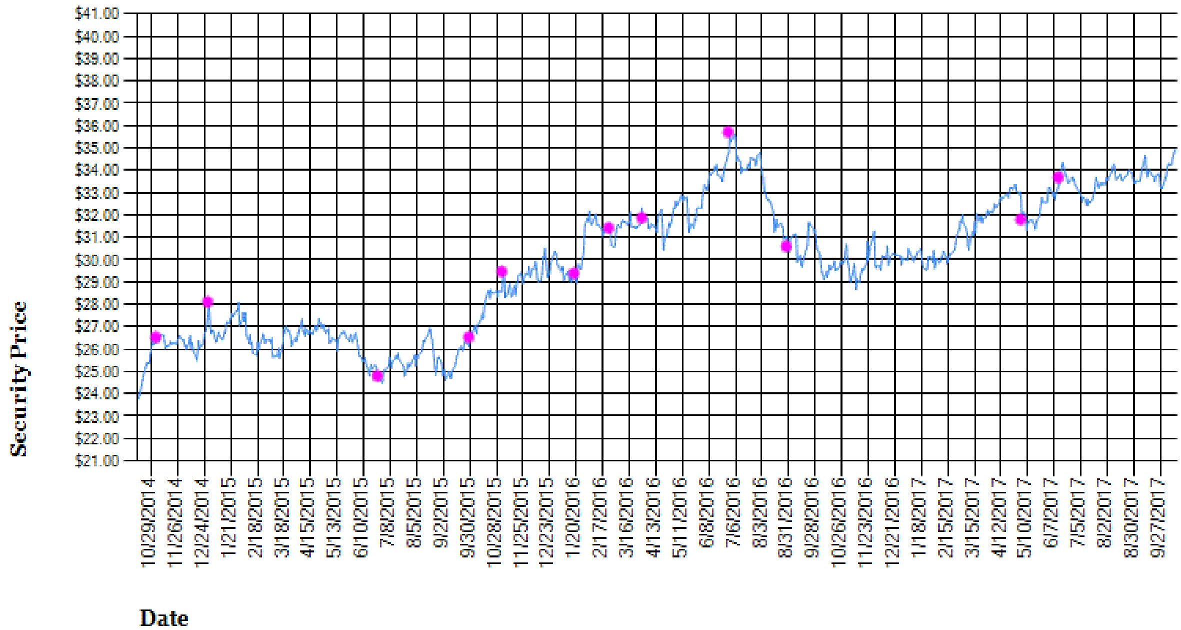
Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- ☐ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## Aqua America (WTR) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|
| 10/14/2014 | | Kalton | | | | |
| 10/14/2014 | NA | 2 | NE | 24.00 | 25.00 | 24.29 |
| • 11/4/2014 | 26.44 | 2 | NE | 26.00 | 27.00 | 26.44 |
| • 12/29/2014 | 26.85 | 2 | NE | 27.00 | 28.00 | 28.05 |
| • 6/25/2015 | 24.80 | 2 | NE | 26.00 | 27.00 | 24.75 |
| • 9/30/2015 | 26.25 | 2 | NE | 27.00 | 28.00 | 26.47 |
| • 11/4/2015 | 29.12 | 2 | NE | 29.00 | 30.00 | 29.41 |
| • 1/19/2016 | 28.99 | 2 | NE | 30.00 | 31.00 | 29.31 |
| • 2/24/2016 | 30.84 | 2 | NE | 32.00 | 33.00 | 31.32 |
| • 3/31/2016 | 31.82 | 2 | NE | 33.00 | 34.00 | 31.82 |
| • 6/30/2016 | 35.39 | 2 | NE | 35.00 | 36.00 | 35.66 |
| • 8/30/2016 | 30.38 | 2 | NE | 31.00 | 33.00 | 30.53 |
| • 5/4/2017 | 31.70 | 2 | NE | 32.00 | 34.00 | 31.73 |
| 6/13/2017 | | Reeder | | | | |
| 6/13/2017 | 33.62 | 2 | 35 | 32.00 | 34.00 | 33.62 |

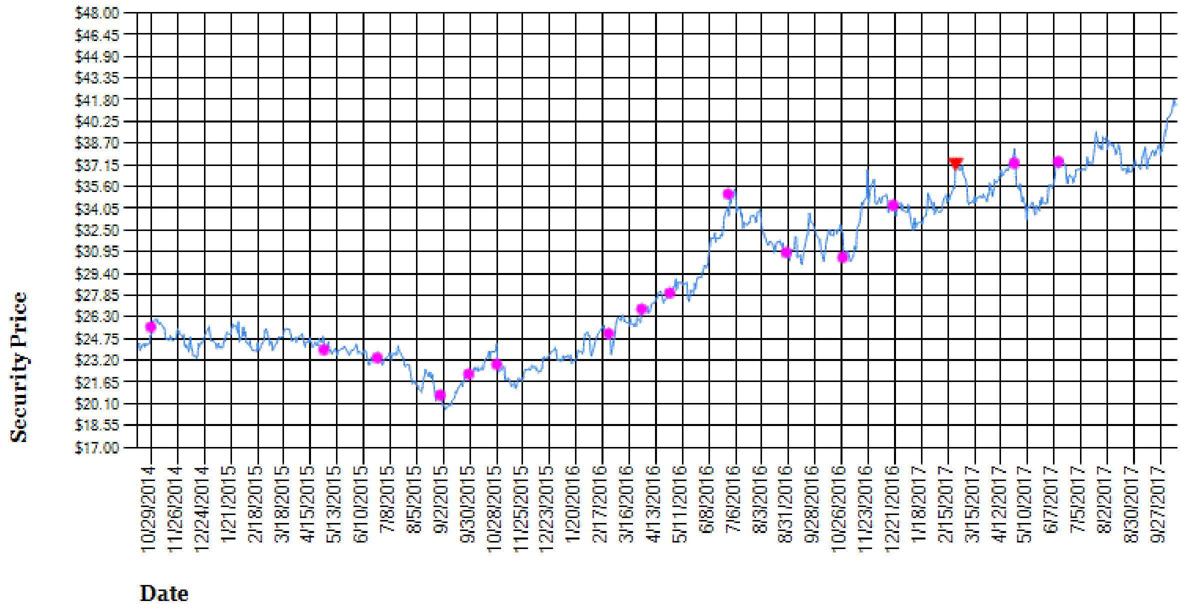
Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- ❐ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## California Water Service (CWT) 3-yr. Price Performance




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 10/14/2014 | | Kalton | | | | |
| | 10/14/2014 | NA | 2 | NE | 22.00 | 23.00 | 24.11 |
| • | 10/30/2014 | 25.46 | 2 | NE | 25.00 | 26.00 | 25.46 |
| • | 4/30/2015 | 24.25 | 2 | NE | 24.00 | 25.00 | 23.87 |
| • | 6/25/2015 | 23.36 | 2 | NE | 23.00 | 24.00 | 23.21 |
| • | 8/31/2015 | 20.63 | 2 | NE | 22.00 | 23.00 | 20.63 |
| • | 9/30/2015 | 22.06 | 2 | NE | 23.00 | 24.00 | 22.12 |
| • | 10/29/2015 | 23.09 | 2 | NE | 24.00 | 25.00 | 22.82 |
| • | 2/25/2016 | 24.89 | 2 | NE | 26.00 | 27.00 | 24.97 |
| • | 3/31/2016 | 26.72 | 2 | NE | 27.00 | 28.00 | 26.72 |
| • | 4/29/2016 | 27.80 | 2 | NE | 28.00 | 29.00 | 27.93 |
| • | 6/30/2016 | 34.35 | 2 | NE | 33.00 | 34.00 | 34.93 |
| • | 8/30/2016 | 30.44 | 2 | NE | 31.00 | 32.00 | 30.73 |
| • | 10/28/2016 | 32.20 | 2 | NE | 30.00 | 31.00 | 30.40 |
| • | 12/20/2016 | 34.13 | 2 | NE | 32.00 | 34.00 | 34.20 |
| ▼• | 2/24/2017 | 37.60 | 3 | NE | 31.00 | 33.00 | 37.00 |
| • | 4/27/2017 | 37.15 | 3 | NE | 32.00 | 34.00 | 37.15 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 37.25 | 3 | 34 | 32.00 | 34.00 | 37.25 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

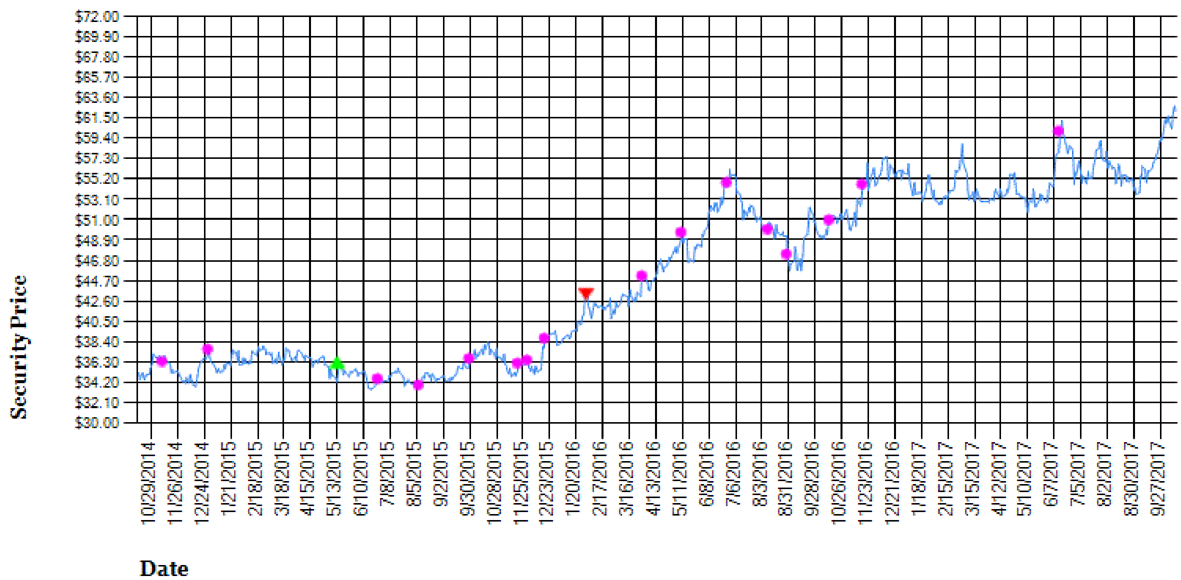
**Symbol Key**

- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- ❐ Split Adjustment

**Rating Code Key**

- 1 Outperform/Buy
- 2 Market Perform/Hold
- 3 Underperform/Sell
- SR Suspended
- NR Not Rated
- NE No Estimate

## Connecticut Water Service, Inc. (CTWS) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|
| 10/14/2014 | | Kalton | | | | |
| 10/14/2014 | NA | 2 | NE | 34.00 | 35.00 | 34.74 |
| 11/10/2014 | 36.15 | 2 | NE | 36.00 | 37.00 | 36.15 |
| 12/29/2014 | 36.65 | 2 | NE | 38.00 | 39.00 | 37.50 |
| 5/15/2015 | 34.87 | 1 | NE | 39.00 | 40.00 | 36.04 |
| 6/25/2015 | 34.40 | 1 | NE | 38.00 | 39.00 | 34.34 |
| 8/7/2015 | 33.84 | 1 | NE | 37.00 | 38.00 | 33.79 |
| 9/30/2015 | 36.13 | 1 | NE | 39.00 | 40.00 | 36.52 |
| 11/20/2015 | 36.27 | 1 | NE | 40.00 | 41.00 | 35.99 |
| 11/30/2015 | 36.31 | 1 | NE | 41.00 | 42.00 | 36.31 |
| 12/18/2015 | 38.62 | 1 | NE | 43.00 | 44.00 | 38.62 |
| 2/1/2016 | 42.93 | 2 | NE | 45.00 | 46.00 | 43.07 |
| 3/31/2016 | 45.10 | 2 | NE | 46.00 | 47.00 | 45.10 |
| 5/10/2016 | 49.50 | 2 | NE | 50.00 | 52.00 | 49.50 |
| 6/28/2016 | 54.67 | 2 | NE | 55.00 | 57.00 | 54.67 |
| 8/9/2016 | 49.67 | 2 | NE | 52.00 | 54.00 | 49.89 |
| 8/30/2016 | 46.42 | 2 | NE | 50.00 | 52.00 | 47.31 |
| 10/14/2016 | 50.77 | 2 | NE | 54.00 | 56.00 | 50.76 |
| 11/18/2016 | 54.27 | 2 | NE | 56.00 | 58.00 | 54.48 |
| 6/13/2017 | | Reeder | | | | |
| 6/13/2017 | 60.00 | 2 | 60 | 56.00 | 58.00 | 60.00 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- ● Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

Additional Information Available Upon Request

I certify that:
1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
2) No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by me in this research report.

- Wells Fargo Securities, LLC and/or its affiliates, have beneficial ownership of 0.5% or more of any class of the common stock of American Water Works Company, Inc..
- Wells Fargo Securities, LLC and/or its affiliates, have beneficial ownership of 1% or more of any class of the common stock of American Water Works Company, Inc..
- Wells Fargo Securities, LLC or its affiliates received compensation for investment banking services from an affiliate of American Water Works Company, Inc. in the past 12 months.
- Wells Fargo Securities, LLC, or any of its affiliates, intends to seek or expects to receive compensation for investment banking services from American Water Works Company, Inc., Aqua America, Inc., Connecticut Water Service, Inc. in the next three months.
- Wells Fargo Securities, LLC or its affiliates intends to seek or expects to receive compensation for investment banking services in the next three months from an affiliate of American Water Works Company, Inc.
- Wells Fargo Securities, LLC or its affiliates managed or co managed a public offering of securities for an affiliate of American Water Works Company, Inc. within the past 12 months
- Wells Fargo Securities, LLC maintains a market in the common stock of American States Water Company, American Water Works Company, Inc., Aqua America, Inc., California Water Service Group, Connecticut Water Service, Inc..
- Wells Fargo Securities, LLC or its affiliates has a significant financial interest in American States Water Company, American Water Works Company, Inc., Aqua America, Inc., California Water Service Group.

**AWK:** Risks include regulatory and profitably executing the non-regulated growth strategy.
**AWR:** Regulatory and ASUS construction levels are key risks.
**CTWS:** Chief risks include regulatory risk and potential to pursue undisciplined M&A growth.
**CWT:** Risks are regulatory, execution and lack of geographical diversity.
**WTR:** Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC's research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm, which includes, but is not limited to investment banking revenue.

**STOCK RATING**
**1=Outperform**: The stock appears attractively valued, and we believe the stock's total return will exceed that of the market over the next 12 months. BUY
**2=Market Perform**: The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform**: The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

**SECTOR RATING**
**O=Overweight**: Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight**: Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight**: Industry expected to underperform the relevant broad market benchmark over the next 12 months.

**VOLATILITY RATING**
**V=**A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: October 18, 2017

44% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Outperform.

Wells Fargo Securities, LLC has provided investment banking services for 46% of its Equity Research Outperform-rated companies.

54% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Market Perform.

Wells Fargo Securities, LLC has provided investment banking services for 31% of its Equity Research Market Perform-rated companies.

2% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Underperform.

Wells Fargo Securities, LLC has provided investment banking services for 25% of its Equity Research Underperform-rated companies.

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November 1, 2017 | Equity Research

# Aqua America

## WTR: Reiterate Outperform--Most Reasonably Priced Water Utility

**Outperform/$40**

Water Utilities
Market Weight

**Earnings Reported**

- **Summary.** We viewed WTR's Q3'17 report and call to be consistent with our expectations and supportive of our Outperform thesis. No change to our EPS outlook as a result. With the resumption of regular PA rate relief (implemented a 2.5% infrastructure surcharge [DSIC] on 10/1), we believe EPS growth should more closely track rate base growth going forward. Combined with the recent surge in municipal tuck-in M&A activity (WTR added a 4k customer, $25M wastewater deal to the backlog in Q3'17), we believe WTR's EPS growth rate should normalize to a 5-7% pace – which would be at least consistent (if not above) peers. As such, we believe a more in-line multiple is deserved as opposed to the roughly 5% P/E discounts that shares currently trade at relative to water peers (and AWK) on our below consensus 18E & 19E EPS of $1.42 & $1.50. Reiterate Outperform as we believe WTR remains the most reasonably priced water utility within our coverage.

- **Outlook.** Management affirmed all aspects of 2017 guidance with the Q3'17 report. Our 2017-20E EPS remain $1.37, $1.42, $1.50 & $1.58. Importantly, we do not consider our outlook to be overly aggressive and highlight that our 2018-20E EPS are 1-4% below consensus. Key items for WTR going forward include (1) successfully navigating the upcoming PA rate case and (2) closing on the five pending municipal deals while finding additional M&A opportunities in the market – our forecast is predicated on only $50M/year of deals in '18 & beyond versus the nearly $150M pending, thus there could be upside. We consider WTR's management team capable of meeting these challenges but acknowledge that they do present some level of execution risk.

- **PA Rate Relief.** On 10/1, a 2.5% DSIC increase went into effect and WTR's plan is to institute two additional 2.5% increases on 1/1/18 and 4/1/18 such that the 7.5% DSIC cap is reached. The exact timing of the 2018 PA filing is still being finalized – will impact what can or cannot be included in PA's new fully projected future test year. Management believes (1) the request will be reasonable, (2) will by no means catch the Pennsylvania Public Utility Commission off guard and (3) that a settled outcome is achievable (consistent with most recent PA rate cases). With that said, the commission and staff has largely turned over in the 6+ years since WTR's last PA rate case and management will be mindful of that when presenting/supporting the request.

| USD EPS | 2016A | 2017E Curr. | 2017E Prior | 2018E Curr. | 2018E Prior |
|---|---|---|---|---|---|
| **Q1** (Mar.) | $0.29 | $0.28 A | NC | NE | |
| **Q2** (June) | 0.33 | 0.34 A | NC | NE | |
| **Q3** (Sep.) | 0.41 | **0.43 A** | **0.43** | NE | |
| **Q4** (Dec.) | 0.28 | 0.31 | NC | NE | |
| **FY** | $1.32 | $1.37 | NC | $1.42 | NC |
| **CY** | $1.32 | $1.37 | | $1.42 | |
| **FY P/EPS** | 26.9x | 25.9x | | 25.0x | |
| **Rev.(MM)** | $820 | $848 | | $925 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*
*EPS excludes non-recurring items.*
*Management's 2017 ongoing diluted EPS guidance is $1.34-1.39.*

| Ticker | WTR |
|---|---|
| **Price Target/Prior:** | **$40/NC** |
| **Price (11/01/2017)** | **$35.44** |
| 52-Week Range: | $28-37 |
| Shares Outstanding: (MM) | 177.6 |
| Market Cap.: (MM) | $6,294.1 |
| S&P 500: | 2,367.34 |
| Avg. Daily Vol.: | 481,418 |
| Dividend/Yield: | $0.82/2.3% |
| LT Debt: (MM) | $1,911.0 |
| LT Debt/Total Cap.: | 50.7% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 5.0% |
| CY 2017 Est. P/EPS-to-Growth: | 5.2x |
| Last Reporting Date: | 10/31/2017 After Close |

*NC = No Change*
*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


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## Price Target

Price Target: $40 from NC

Our $40/sh price target is based on a P/E multiple (apply the 18E water utility median P/E of 26.5-27.0X to our 19E EPS of $1.50) and DDM analyses. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

## Investment Thesis

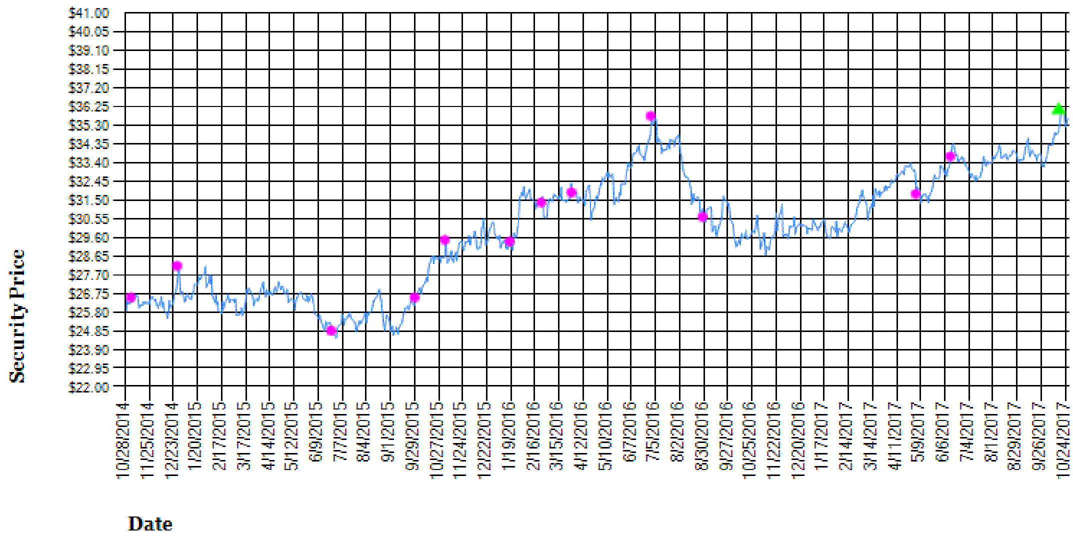
We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Outperform rating is premised on the fact that shares trade at roughly 5% P/E discounts to water peers on our below consensus 18E & 19E EPS of $1.42 & $1.50. We believe a more in-line multiple to water utility peers is deserved and should materialize as WTR's annual growth rate starts to normalize to an estimated 5-7% pace with the help of PA rate relief and tuck-in M&A activity.

## Company Description

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. In recent years management optimized the portfolio of states, including the divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures

**Aqua America (WTR) 3-yr. Price Performance**




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 10/28/2014 | | Kalton | | | | |
| | 10/28/2014 | NA | 2 | NE | 24.00 | 25.00 | 25.81 |
| ● | 11/4/2014 | 26.44 | 2 | NE | 26.00 | 27.00 | 26.44 |
| ● | 12/29/2014 | 26.85 | 2 | NE | 27.00 | 28.00 | 28.05 |
| ● | 6/25/2015 | 24.80 | 2 | NE | 26.00 | 27.00 | 24.75 |
| ● | 9/30/2015 | 26.25 | 2 | NE | 27.00 | 28.00 | 26.47 |
| ● | 11/4/2015 | 29.12 | 2 | NE | 29.00 | 30.00 | 29.41 |
| ● | 1/19/2016 | 28.99 | 2 | NE | 30.00 | 31.00 | 29.31 |
| ● | 2/24/2016 | 30.84 | 2 | NE | 32.00 | 33.00 | 31.32 |
| ● | 3/31/2016 | 31.82 | 2 | NE | 33.00 | 34.00 | 31.82 |
| ● | 6/30/2016 | 35.39 | 2 | NE | 35.00 | 36.00 | 35.66 |
| ● | 8/30/2016 | 30.38 | 2 | NE | 31.00 | 33.00 | 30.53 |
| ● | 5/4/2017 | 31.70 | 2 | NE | 32.00 | 34.00 | 31.73 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 33.62 | 2 | 35 | 32.00 | 34.00 | 33.62 |
| ▲ ● | 10/19/2017 | 35.30 | 1 | 40 | 32.00 | 34.00 | 36.03 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
▼ Rating Downgrade
▲ Rating Upgrade
● Price Target/Val Range Change
◆ Initiation, Resumption, Drop or Suspend
■ Analyst Change
❐ Split Adjustment

**Rating Code Key**
1 Outperform/Buy
2 Market Perform/Hold
3 Underperform/Sell
SR Suspended
NR Not Rated
NE No Estimate

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**STOCK RATING**
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**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

**SECTOR RATING**
**O=Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

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**V =** A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: November 1, 2017

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January 17, 2017

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: '17 Guidance Issued--EPS Outlook Lowered**

## Market Performance

- **Summary.** We have lowered our EPS outlook following WTR's 2017 guidance conference call. Our new/old 2016-19E EPS are $1.32/$1.33, $1.37/$1.40, $1.42/$1.47 & $1.50/$1.55. On a P/E basis, WTR shares trade at 2-9% discounts on our 2017-19E to water utility peers which we believe largely reflects the potential for WTR to pursue an M&A deal outside of the water sector as well as, to a lesser extent, a below average near-term EPS growth rate. However, relative to regulated electrics, WTR trades at roughly 20% P/E premiums, which we consider more than adequate given forecasted EPS (5%), rate base (6-7%) and dividend (7%) growth rates that are not all that dissimilar to the median electric utility. We remain comfortable with our Market Perform rating.
- **Guidance.** Management indicated 2016 EPS is expected to be at or just below the midpoint of the $1.30-1.35 range and 2017 EPS of $1.32-1.37 is anticipated. Key 2017 assumptions include (1) 1.5-2% customer growth, (2) same-system O&M expense up 1-2%, (3) more than $450M of capex with more than $1.2B over the 2017-19 period and (4) limited rate relief. Specifically on PA rate relief, WTR expects to make an infrastructure surcharge mechanism filing in 2017 followed by a full general rate case filing in 2018 (with new rates effective in 2019). However, potential corporate tax reform could accelerate the rate case filing – a lower corporate rate would reduce the amount of the repairs tax deduction benefit.
- **EPS Outlook.** Our 2016-20E EPS are $1.32, $1.37, $1.42, $1.50 & $1.58. Rate recovery of infrastructure capex, cost efficiencies and M&A activity are the primary drivers of our forecasted 5% EPS CAGR. This is below WTR's expected 6-7% rate base growth due to over-earning situations at some of WTR's regulated states, including PA. However, forecasted capex is expected to grow rate base and lower the realized returns over the next few years. By 2019, we anticipate EPS growth to approximate rate base growth.
- **M&A Activity.** Management remains optimistic that the revised approach to cultivating water/wastewater M&A will bear fruit shortly. After a 2016 that saw the backlog of small pending deals close (19 deals; 6.5k customers; $22M price paid), WTR anticipates closing at least four muni deals in 2017 for $114M (roughly 12k customer equivalents). CEO Chris Franklin noted that the heightened M&A activity is unlike anything he has seen in the past but is mostly concentrated in states with fair market value legislation. Assuming a muni decides to pursue a sale, WTR's main competitors are other strategic buyers (AWK, other munis, etc.) as the 2,500-25,000 customer systems are typically too small to garner financial buyer's interest. Last but not least, management affirmed interest in the regulated gas distribution (LDC) sector while acknowledging various factors (including WTR's relative P/E to gas LDCs – only a roughly 5% premium) make finding the right deal a challenge.

**Valuation Range: $31.00 to $33.00**

Our $31-33/sh valuation range is based on a P/E multiple (apply a 5-10% discount to the 17E water utility median of 24.0-24.5X to our 18E of $1.42) and DDM analyses. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

**Investment Thesis:**

We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.

**Please see page 5 for rating definitions, important disclosures and required analyst certifications. All estimates/forecasts are as of 01/17/17 unless otherwise stated. 01/17/17 14:29:04 ET**

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# Market Perform

Sector: Water Utilities
Market Weight

### *Earnings Estimate Revised Down*

| | 2015A | 2016E | | 2017E | |
|---|---|---|---|---|---|
| **EPS** | | **Curr.** | **Prior** | **Curr.** | **Prior** |
| **Q1** (Mar.) | $0.27 | $0.29 A | NC | NE | |
| **Q2** (June) | 0.32 | 0.33 A | NC | NE | |
| **Q3** (Sep.) | 0.38 | 0.41 A | NC | NE | |
| **Q4** (Dec.) | 0.28 | **0.29** | **0.30** | NE | |
| **FY** | $1.26 | **$1.32** | **1.33** | **$1.37** | **1.40** |
| **CY** | $1.26 | $1.32 | | $1.37 | |
| **FY P/EPS** | 24.2x | 23.1x | | 22.2x | |
| **Rev.(MM)** | $814 | $832 | | $874 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2017 ongoing diluted EPS guidance is $1.34-1.39.*
*2015A excludes a 1-time item impairment charge on the Marcellus water pipeline JV of $0.12 in Q4.*

| | |
|---|---|
| Ticker | WTR |
| Price (01/17/2017) | $30.46 |
| 52-Week Range: | $28-36 |
| Shares Outstanding: (MM) | 177.3 |
| Market Cap.: (MM) | $5,400.6 |
| S&P 500: | 2,270.87 |
| Avg. Daily Vol.: | 622,225 |
| Dividend/Yield: | $0.77/2.5% |
| LT Debt: (MM) | $1,858.0 |
| LT Debt/Total Cap.: | 50.4% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 5.0% |
| CY 2017 Est. P/EPS-to-Growth: | 4.4x |
| Last Reporting Date: | 11/01/2016 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


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| Earnings Model ($ in thousands, except per share data) | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | 2019E | 2020E | 2021E |
|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **761,893** | **779,903** | **814,204** | **831,993** | **873,531** | **927,768** | **982,464** | **1,039,142** | **1,096,990** |
| **Operating Expenses** | | | | | | | | | |
| Operation & Maintenance | 283,561 | 288,556 | 309,310 | 314,169 | 322,866 | 337,923 | 352,614 | 369,450 | 386,356 |
| Efficiency Ratio | 37.2% | 37.0% | 38.0% | 37.5% | 37.0% | 36.5% | 36.0% | 35.5% | 35.0% |
| Depreciation & Amortization | 123,985 | 126,535 | 128,737 | 136,985 | 147,027 | 157,875 | 167,665 | 177,220 | 187,002 |
| Property & Other Taxes | 52,685 | 50,453 | 55,057 | 58,330 | 62,196 | 66,394 | 69,865 | 73,070 | 76,276 |
| **Total Operating Expenses** | **460,231** | **465,544** | **493,104** | **509,484** | **532,089** | **562,193** | **590,143** | **619,741** | **649,633** |
| **Operating Income** | **301,662** | **314,359** | **321,100** | **322,508** | **341,443** | **365,575** | **392,321** | **419,402** | **447,357** |
| **EBITDA** | **425,647** | **440,894** | **449,837** | **459,493** | **488,470** | **523,451** | **559,986** | **596,622** | **634,359** |
| Other Income | (242) | 1,141 | (27,812) | 3,719 | 4,719 | 6,219 | 7,719 | 7,869 | 8,034 |
| Interest Expense | 77,316 | 76,397 | 76,536 | 82,019 | 91,811 | 102,199 | 109,941 | 116,046 | 121,734 |
| EBT | 224,104 | 239,103 | 216,752 | 244,209 | 254,351 | 269,595 | 290,099 | 311,225 | 333,657 |
| Income Tax Expense | 21,233 | 25,219 | 14,962 | 10,391 | 14,003 | 20,932 | 28,438 | 36,724 | 45,519 |
| Tax Rate | 9.5% | 10.5% | 6.9% | 4.3% | 5.5% | 7.8% | 9.8% | 11.8% | 13.6% |
| Net Income | 202,871 | 213,884 | 201,790 | 233,817 | 240,348 | 248,664 | 261,661 | 274,501 | 288,138 |
| Other Comprehensive Income | 231 | 442 | (101) | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Recurring Items | (231) | (442) | 21,433 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ongoing Net Income | 202,871 | 213,884 | 223,122 | 233,817 | 240,348 | 248,664 | 261,661 | 274,501 | 288,138 |
| Diluted EPS, as reported | $1.15 | $1.21 | $1.14 | $1.32 | $1.37 | $1.42 | $1.50 | $1.58 | $1.67 |
| Adjustments | ($0.00) | ($0.00) | $0.12 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Ongoing Diluted EPS** | **$1.15** | **$1.20** | **$1.26** | **$1.32** | **$1.37** | **$1.42** | **$1.50** | **$1.58** | **$1.67** |
| Avg. Diluted Common Shares Out | 176,814 | 177,763 | 177,517 | 176,753 | 175,953 | 175,153 | 174,391 | 173,665 | 172,974 |
| **Dividends:** | | | | | | | | | |
| Dividends Paid Per Share | $0.58 | $0.63 | $0.69 | $0.74 | $0.80 | $0.86 | $0.92 | $0.98 | $1.04 |
| Payout Ratio | 51% | 53% | 55% | 56% | 58% | 60% | 61% | 62% | 62% |
| **Statistics:** | | | | | | | | | |
| Year-end BVPS | $8.68 | $9.37 | $9.78 | $10.27 | $10.75 | $11.22 | $11.72 | $12.24 | $12.78 |
| Average BVPS | $8.30 | $9.02 | $9.57 | $10.02 | $10.51 | $10.99 | $11.47 | $11.98 | $12.51 |
| **Earned ROE, ongoing** | **13.8%** | **13.3%** | **13.1%** | **13.2%** | **13.0%** | **12.9%** | **13.1%** | **13.2%** | **13.3%** |
| Debt/EBITDA | 3.7 | 3.7 | 4.0 | 4.2 | 4.5 | 4.6 | 4.5 | 4.5 | 4.4 |
| FFO/Debt | 23.1% | 22.2% | 20.6% | 21.1% | 19.4% | 18.5% | 18.3% | 18.2% | 18.1% |

Source: Wells Fargo Securities, LLC estimates and company filings

| Cash Flow Model ($ in thousands) | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | 2019E | 2020E | 2021E |
|---|---|---|---|---|---|---|---|---|---|
| **Operating Cash Flows** | | | | | | | | | |
| Net Income | 202,871 | 213,884 | 201,790 | 233,817 | 240,348 | 248,664 | 261,661 | 274,501 | 288,138 |
| Depreciation and Amortization | 123,985 | 126,535 | 128,737 | 136,985 | 147,027 | 157,875 | 167,665 | 177,220 | 187,002 |
| Other | 40,963 | 23,369 | 40,267 | 38,265 | 37,265 | 35,765 | 34,265 | 34,115 | 33,950 |
| **Net Cash Flows from Operations** | **367,819** | **363,788** | **370,794** | **409,067** | **424,640** | **442,304** | **463,590** | **485,837** | **509,089** |
| **Investing Cash Flows** | | | | | | | | | |
| Capital Expenditures | (307,908) | (328,605) | (364,689) | (360,000) | (450,000) | (383,625) | (391,375) | (401,159) | (411,188) |
| Acquisitions, Net of System Sales | (9,682) | (14,058) | (28,341) | (25,000) | (75,000) | (75,000) | (35,000) | (35,000) | (35,000) |
| Other | 96,027 | 50,162 | (1,032) | 0 | 0 | 0 | 0 | 0 | 0 |
| **Net Cash Flows from Investing** | **(221,563)** | **(292,501)** | **(394,062)** | **(385,000)** | **(525,000)** | **(458,625)** | **(426,375)** | **(436,159)** | **(446,188)** |
| *Capex/Depreciation* | *2.6* | *2.7* | *2.9* | *2.7* | *3.1* | *2.5* | *2.4* | *2.3* | *2.3* |
| **Financing Cash Flows** | | | | | | | | | |
| Issuance of Long-term Debt | 263,834 | 317,699 | 560,544 | 175,000 | 360,000 | 300,000 | 235,000 | 190,000 | 185,000 |
| Repayment of Long-term Debt | (300,323) | (253,192) | (400,407) | (35,593) | (103,007) | (103,878) | (89,636) | (49,419) | (49,419) |
| Short-term Debt, net | (43,643) | (18,342) | (1,677) | 0 | 0 | 0 | 0 | 0 | 0 |
| Common Stock Issuance, net | 23,165 | (8,460) | (17,030) | (25,000) | (25,000) | (25,000) | (25,000) | (25,000) | (25,000) |
| Dividends on Common Stock | (102,889) | (112,106) | (121,248) | (130,107) | (139,441) | (149,278) | (159,053) | (168,773) | (178,441) |
| Other | 13,103 | 2,343 | 2,177 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **Net Cash Flows from Financing** | **(146,753)** | **(72,058)** | **22,359** | **(14,700)** | **93,552** | **22,844** | **(37,689)** | **(52,192)** | **(66,860)** |
| Net Change in Cash | (497) | (771) | (909) | 9,367 | (6,808) | 6,523 | (474) | (2,515) | (3,959) |
| Beginning of Year Balance | 5,521 | 5,058 | 4,138 | 3,229 | 12,596 | 5,789 | 12,312 | 11,838 | 9,323 |
| **End of Year Balance** | **5,024** | **4,287** | **3,229** | **12,596** | **5,789** | **12,312** | **11,838** | **9,323** | **5,364** |

| Capital Structure ($ in thousands) | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | 2019E | 2020E | 2021E |
|---|---|---|---|---|---|---|---|---|---|
| Common Equity | 1,534,835 | 1,655,343 | 1,725,930 | 1,804,640 | 1,880,548 | 1,954,934 | 2,032,541 | 2,113,269 | 2,197,966 |
| Long-term Debt | 1,554,871 | 1,619,270 | 1,779,205 | 1,918,612 | 2,175,605 | 2,371,727 | 2,517,091 | 2,657,672 | 2,793,253 |
| Short-term Debt | 36,740 | 18,398 | 16,721 | 16,721 | 16,721 | 16,721 | 16,721 | 16,721 | 16,721 |
| Minority Interest | 208 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Capitalization** | **3,126,654** | **3,293,051** | **3,521,856** | **3,739,973** | **4,072,874** | **4,343,382** | **4,566,353** | **4,787,662** | **5,007,940** |
| **% Common Equity** | **49.1** | **50.3** | **49.0** | **48.3** | **46.2** | **45.0** | **44.5** | **44.1** | **43.9** |
| % Long-term Debt | 49.7 | 49.2 | 50.5 | 51.3 | 53.4 | 54.6 | 55.1 | 55.5 | 55.8 |
| % Other | 1.2 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 |
| **Year-end Rate Base (Estimated)** | **2,998,465** | **3,322,898** | **3,469,869** | **3,691,884** | **4,043,857** | **4,318,607** | **4,551,317** | **4,784,256** | **5,017,443** |

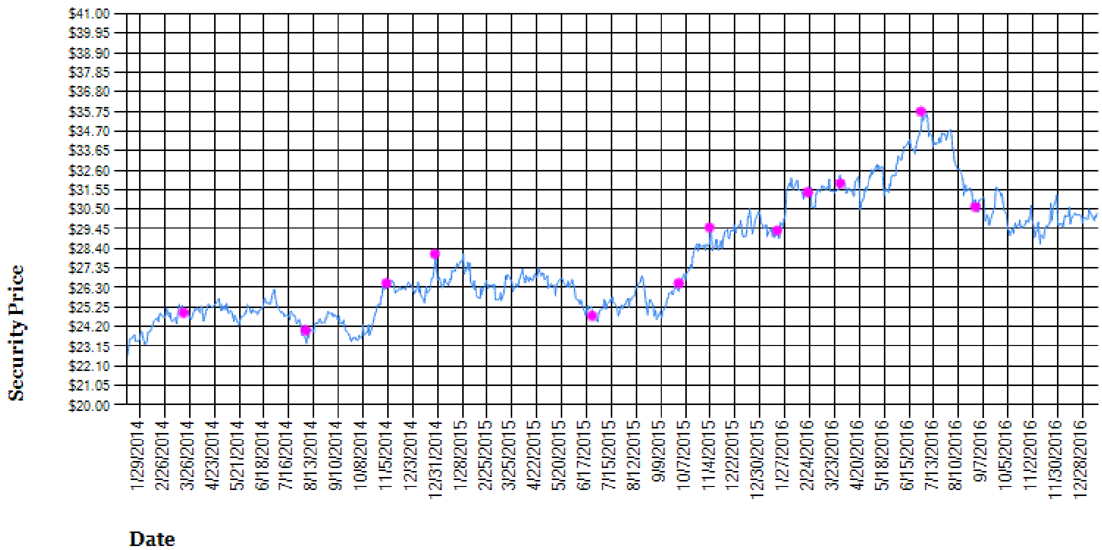
Source: Wells Fargo Securities, LLC estimates and company filings

## Company Description:

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. Management has been active optimizing its portfolio of states, including the recent divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures

### Aqua America (WTR) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|
| 1/14/2014 | | Kalton | | | |
| 1/14/2014 | NA | 2 | 24.00 | 25.00 | 22.59 |
| 3/20/2014 | 24.90 | 2 | 25.00 | 26.00 | 24.90 |
| 8/6/2014 | 23.96 | 2 | 24.00 | 25.00 | 23.96 |
| 11/4/2014 | 26.44 | 2 | 26.00 | 27.00 | 26.44 |
| 12/29/2014 | 26.85 | 2 | 27.00 | 28.00 | 28.05 |
| 6/25/2015 | 24.80 | 2 | 26.00 | 27.00 | 24.75 |
| 9/30/2015 | 26.25 | 2 | 27.00 | 28.00 | 26.47 |
| 11/4/2015 | 29.12 | 2 | 29.00 | 30.00 | 29.41 |
| 1/19/2016 | 28.99 | 2 | 30.00 | 31.00 | 29.31 |
| 2/24/2016 | 30.84 | 2 | 32.00 | 33.00 | 31.32 |
| 3/31/2016 | 31.82 | 2 | 33.00 | 34.00 | 31.82 |
| 6/30/2016 | 35.39 | 2 | 35.00 | 36.00 | 35.66 |
| 8/30/2016 | 30.38 | 2 | 31.00 | 33.00 | 30.53 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- ● Valuation Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

# Additional Information Available Upon Request

I certify that:
1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
2) No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by me in this research report.

- Wells Fargo Securities, LLC maintains a market in the common stock of Aqua America.

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**WTR:** Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

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**1=Outperform:** The stock appears attractively valued, and we believe the stock's total return will exceed that of the market over the next 12 months. BUY
**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

## SECTOR RATING

**O=Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

## VOLATILITY RATING

**V** = A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: January 17, 2017

| | |
|---|---|
| 42% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Outperform. | Wells Fargo Securities, LLC has provided investment banking services for 39% of its Equity Research Outperform-rated companies. |
| 56% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Market Perform. | Wells Fargo Securities, LLC has provided investment banking services for 28% of its Equity Research Market Perform-rated companies. |
| 2% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Underperform. | Wells Fargo Securities, LLC has provided investment banking services for 19% of its Equity Research Underperform-rated companies. |

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November 2, 2016

# Equity Research

## Aqua America

**WTR: Valuation Tempting But We Remain On Sidelines For Now**

**Market Perform**

Sector: Water Utilities
Market Weight

*Earnings Reported*

| EPS | 2015A | 2016E Curr. | 2016E Prior | 2017E Curr. | 2017E Prior |
|---|---|---|---|---|---|
| **Q1** (Mar.) | $0.27 | $0.29 A | NC | NE | |
| **Q2** (June) | 0.32 | 0.33 A | NC | NE | |
| **Q3** (Sep.) | 0.38 | **0.41 A** | **0.40** | NE | |
| **Q4** (Dec.) | 0.28 | 0.30 | NC | NE | |
| **FY** | $1.26 | $1.33 | NC | $1.40 | NC |
| **CY** | $1.26 | $1.33 | | $1.40 | |
| **FY P/EPS** | 23.6x | 22.4x | | 21.2x | |
| **Rev.(MM)** | $814 | $835 | | $878 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2016 ongoing diluted EPS guidance is $1.30-1.35.*
*2015A excludes a 1-time item impairment charge on the Marcellus water pipeline JV of $0.12 in Q4.*

| | |
|---|---|
| Ticker | WTR |
| Price (11/02/2016) | $29.72 |
| 52-Week Range: | $28-36 |
| Shares Outstanding: (MM) | 177.3 |
| Market Cap.: (MM) | $5,269.4 |
| S&P 500: | 2,104.32 |
| Avg. Daily Vol.: | 851,816 |
| Dividend/Yield: | $0.77/2.6% |
| LT Debt: (MM) | $1,858.0 |
| LT Debt/Total Cap.: | 50.4% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 6.0% |
| CY 2016 Est. P/EPS-to-Growth: | 3.7x |
| Last Reporting Date: | 11/01/2016 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


- **Summary.** No changes to our EPS outlook or thesis following WTR's Q3 report. We remain attracted to WTR's strategy of (1) timely recovery of infrastructure investments and (2) consolidating the fragmented water and wastewater industry. We believe WTR's revised approach to municipal M&A will start bearing fruit in 2017 aided by enabling legislation in IL, IN, NJ and PA as well as the potential for NC and OH to follow suit. We reiterate our Market Perform rating despite the fact that WTR shares have underperformed year-to-date (+2% vs. +17% for our water utility index and +13% for the S&P Utilities) and trade at 8-10% P/E discounts to water utility peers on our 2017-19E EPS. We believe the discount valuation reflects investor concerns that the water industry premium P/E will be eroded if WTR announces a M&A deal outside of the regulated water space. Should WTR announce a strategic deal, it could create an attractive entry point in our opinion.


- **Relative Valuation Thoughts.** Currently, the water utility sub-sector enjoys premiums of roughly 35% to the electric and 20-25% to the gas utility sub-sectors. We don't disagree that a non-water transaction could trigger further near-term underperformance in WTR shares – particularly if the relative size of the hypothetical target is similar to WTR. However, we do question the sustainability of the waters' current relative premium. We believe current water utility share prices imply a roughly 75 bps lower equity risk premium (ERP) than electrics in our dividend discount models. We agree a lower ERP is warranted for the lower risk water business model (might 75 bps be too steep though?) but point out that if interest rates eventually rise from historic lows, the implied premium P/E multiples represented by a 75 bps lower ERP naturally diminish as the risk-free rate rises. In other words, the 35% relative premium the waters currently command over the electrics should contract as interest rates rise.

- **Implications to Our Thesis.** If WTR's hypothetical deal makes strategic sense (increases WTR's EPS growth rate, offers capex and rate base growth at least commensurate with the water utility industry, possesses a similar business risk profile, etc.) and allows WTR to take advantage of today's premium currency (WTR trades at P/E premiums of 22-24% to electric and 8-15% to gas utilities), a further pullback in shares could create an attractive entry point versus water utility peers as the erosion of the relative water premium may be inevitable if/when rates rise. So while we find WTR's current 8-10% P/E discount to water peers tempting, we elect to remain on the sidelines until (1) the details of a potential deal materializes and (2) there is a potential further pullback in shares.

- **Outlook.** Our 2016-19E EPS remain $1.33, $1.40, $1.47 & $1.55. We do not assume any strategic M&A despite the fact that WTR has financial flexibility and WTR has articulated a clear desire to explore such opportunities. Barring a very sizeable deal, we do not foresee the need for new equity and, in fact, WTR has previously indicated that roughly $750MM of additional debt capacity exists. As such, we believe share buybacks and/or accelerated dividend increases (greater than 8%) may be considered to achieve a consolidated equity ratio closer to 45%.

**Valuation Range: $31.00 to $33.00**

Our VR is based on a P/E multiple (5-10% discount to 17E water median of 23.6X to our 18E of $1.47) and DDM analyses. Primary risks are regulatory and M&A.

**Investment Thesis:**

We are attracted to WTR's strong fundamentals. Our Market Perform rating primarily reflects valuation considerations.


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**Please see page 3 for rating definitions, important disclosures and required analyst certifications**

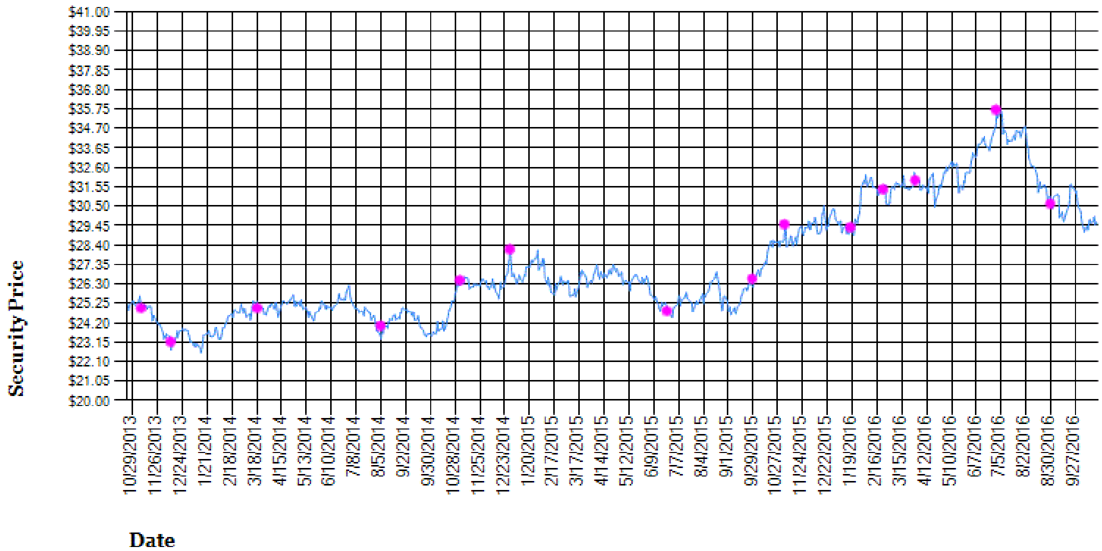

**All estimates/forecasts are as of 11/02/16 unless otherwise stated.**

## Company Description:

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. Management has been active optimizing its portfolio of states, including the recent divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures

### Aqua America (WTR) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|
| 10/22/2013 | | Kalton | | | |
| 10/22/2013 | NA | 2 | 19.20 | 20.00 | 25.20 |
| 11/8/2013 | 24.77 | 2 | 25.00 | 26.00 | 24.92 |
| 12/12/2013 | 23.14 | 2 | 24.00 | 25.00 | 23.11 |
| 3/20/2014 | 24.90 | 2 | 25.00 | 26.00 | 24.90 |
| 8/6/2014 | 23.96 | 2 | 24.00 | 25.00 | 23.96 |
| 11/4/2014 | 26.44 | 2 | 26.00 | 27.00 | 26.44 |
| 12/29/2014 | 26.85 | 2 | 27.00 | 28.00 | 28.05 |
| 6/25/2015 | 24.80 | 2 | 26.00 | 27.00 | 24.75 |
| 9/30/2015 | 26.25 | 2 | 27.00 | 28.00 | 26.47 |
| 11/4/2015 | 29.12 | 2 | 29.00 | 30.00 | 29.41 |
| 1/19/2016 | 28.99 | 2 | 30.00 | 31.00 | 29.31 |
| 2/24/2016 | 30.84 | 2 | 32.00 | 33.00 | 31.32 |
| 3/31/2016 | 31.82 | 2 | 33.00 | 34.00 | 31.82 |
| 6/30/2016 | 35.39 | 2 | 35.00 | 36.00 | 35.66 |
| 8/30/2016 | 30.38 | 2 | 31.00 | 33.00 | 30.53 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- ● Valuation Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## Additional Information Available Upon Request

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1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
2) No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by me in this research report.

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- Wells Fargo Securities, LLC or its affiliates intends to seek or expects to receive compensation for investment banking services in the next three months from Aqua America.
- Wells Fargo Securities, LLC or its affiliates has a significant financial interest in Aqua America.

**WTR:** Primary risks are regulatory and M&A.

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**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

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**O=Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

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As of: November 2, 2016

| | |
|---|---|
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WELLS FARGO SECURITIES

# Aqua America, Inc.

## WTR: Analyst Day Takeaways--Strategic M&A Is Still On The Table

**Market Perform/$36.00**

Water Utilities
Market Weight

**Earnings Estimate Revised Down**


- **Summary.** Management utilized the NYC analyst event to highlight WTR's attractive 6-7%+ longer-term growth profile (post conclusion of the PA rate case) driven primarily by continued elevated infrastructure investment needs across the company's existing water and wastewater footprint and supplemented by tuck-in acquisition opportunities. Specifically, the 2018-20 capex budget of $1.4B and resulting rate base growth (7%) was modestly above our previous forecast. That said, near-term EPS growth is expected to be modestly lower – due in part to unique federal tax reform impacts, delays in closing two sizeable municipal deals and the over-earning situations in a few states, including PA. We refine our 2018-20E EPS to/from $1.40/$1.42, $1.47/$1.50 & $1.58/$1.58. We reiterate our Market Perform rating but nudge down our price target to $36/share from $37/share due to our revised 19E and a slightly lower peer group multiple. Shares of WTR trade in-line with water industry peers on our 20E (the first full year after the PA rate case) which we consider appropriate given attractive EPS and dividend growth prospects partially offset by near-term heightened regulatory risk and the potential to pursue non-water/wastewater regulated M&A – at the analyst event, management reiterated that strategic M&A is still part of WTR's overall growth strategy which will believe will cause investors some degree of apprehension.


- **Tax Reform Implications.** In general, we believe WTR is well positioned to benefit from tax reform over the longer-term. First, rate base growth should be higher as bonus depreciation is eliminated, certain deferred tax liabilities are flowed back to customers and more capital can be invested with less impact on customer rates. Second, the strong balance sheet (in our view) should allow the 2018-20 capex budget to be funded without external equity while still supporting the A credit rating--that said, should annual capex run at roughly $450M/year in '21 and '22, we believe the excess debt capacity on WTR's balance sheet could become largely utilized and eventually put WTR in a position where it periodically needs equity to fund long-term growth (the pre-bonus depreciation water utility model!). And last, the lower customer rates could help make WTR's rates more competitive with municipal systems that it seeks to acquire. On the flip side, there is a temporary headwind until the PA rate case is resolved in 1H'19 as the repair tax deduction is expected to be greater than taxable income. This puts the PA sub in a net operating loss position and the lower tax rate reduces the NOL benefit.

| $ | 2017A | 2018E | | 2019E | |
|---|---|---|---|---|---|
| EPS | | Curr. | Prior | Curr. | Prior |
| **Q1** (Mar.) | 0.28 | 0.29 | | NE | |
| **Q2** (June) | 0.34 | 0.36 | | NE | |
| **Q3** (Sep.) | 0.43 | 0.44 | | NE | |
| **Q4** (Dec.) | 0.32 | 0.31 | | NE | |
| **FY** | 1.36 | **1.40** | **1.42** | 1.47 | 1.50 |
| **CY** | 1.36 | 1.40 | | 1.47 | |
| **FY P/EPS** | 25.1x | 24.4x | | 23.3x | |
| **Rev.(MM)** | 810 | 853 | | 920 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*
*EPS excludes non-recurring items.*
*Management's 2018 ongoing diluted EPS guidance is $1.37-1.42.*

| Ticker | WTR |
|---|---|
| Price Target/Prior: | $36.00/$37.00 |
| **Price (02/28/2018)** | **$34.19** |
| 52-Week Range: | $30-40 |
| Shares Outstanding: (MM) | 177.7 |
| Market Cap.: (MM) | $6,075.6 |
| S&P 500: | 2,713.83 |
| Avg. Daily Vol.: | 767,948 |
| Dividend/Yield: | $0.82/2.4% |
| LT Debt: (MM) | $2,143.0 |
| LT Debt/Total Cap.: | 52.2% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 6.0% |
| CY 2018 Est. P/EPS-to-Growth: | 4.1x |
| Last Reporting Date: | 02/27/2018 After Close |

*NC = No Change*
*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


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- **Core Growth Strategy**. WTR's basic strategy of seeking timely recovery of the significant capex needs is expected to result in 6-7% rate base and EPS growth longer-term. We consider this rate of growth to be attractive and consistent with WTR's closest peer, AWK. Positively, more than 50% of the $1.4B capex budget qualifies for infrastructure surcharge mechanism recovery.

  Beyond investing in existing systems, WTR will continue to look towards municipal/tuck-in M&A opportunities to further accelerate growth. Recent efforts across the water and wastewater industry, such as fair market value legislation or policies promoting the acquisition of troubled system, seek to encourage consolidation of the municipally dominated industry and has provided an uptick in recent deal activity. WTR outlined the more proactive, targeted approach to cultivating deals that was established a few years ago and reiterated a belief that the municipal growth opportunity is as robust as it has ever been in the industry. The company's focus is on acquiring systems that serve between 2,500 and 25,000 customers and management noted that the 10 largest municipal deals at various stages of the "development" pipeline would represent nearly 300,000 customer additions. However, if history is any indicator, materialization of two or three of these deals would be considered a success. As things currently stand, WTR has six deals pending representing more than 16,000 customers, $150M in deal value and an estimated $0.04 of incremental EPS power.

- **Strategic M&A and Market-Based Activities.** To be honest, we were somewhat surprised to hear management continue to highlight strategic M&A and market-based activities as potential growth avenues given the robust level of municipal deal activity/interest that WTR (and AWK) tout exist in the industry today. That said, with water utilities once again trading at meaningful 30-35% premiums to electric utilities and 20-25% premiums to gas utilities, we can only conclude that management is currently giving (or has recently given) serious consideration to potential utility/infrastructure acquisition opportunities as a way to potentially take advantage of WTR's balance sheet capacity and valuable currency.

  While we believe a regulated deal of size outside of the water/wastewater industry would likely cause an immediate erosion of a portion of WTR's "water" premium P/E multiple, we do think that longer-term the right deal could perhaps make some strategic sense (provide regulatory diversity, open up additional growth/investment opportunities, etc.) given our belief that the current degree of the water utility premium relative to the other utility sub-sectors is unsustainable over time (perhaps contract if/when we see a material rise in interest rates?). Based on previous discussions with management, we believe this sort of view is also shared by WTR's Board of Directors. As for market-based activities, having recently exited substantially all of WTR's non-regulated businesses, we struggle to see what sort of meaningful non-regulated deal would make sense for the company at the moment, especially given the sizeable regulated growth profile, unless of course it came along in a strategic M&A transaction.

- **EPS Outlook.** Our 2018-20E EPS are $1.40, $1.47 & $1.58 and we forecast a 5.5% EPS CAGR through '22 off of the '17 ongoing base of $1.36. We expect annual EPS growth to accelerate in '20 & beyond once the PA rate case is resolved as EPS growth should track rate base growth of 6-7%. We assume WTR's annual capex over the next 5-years stays around $450M ('18 is expected to be $500M) and the utility is afforded timely and constructive regulatory recovery of the investments. As for municipal/tuck-in deals, while the potential is significant and activity has picked up, we continue to believe the pace of industry consolidation will remain somewhat measured (i.e. the floodgates are not going to open up). That said, we do expect somewhat elevated activity relative to a few years ago to persist as the recent legislation/policy efforts do remove some of the often cited barriers to getting deals done. WTR expects the six pending deals to close during 2018 and, when combined with some organic customer growth, should lead to 2-3% customer growth this year. Beyond the pending deals, our outlook assumes $50 of deals annually. We do not foresee the need for WTR to issue any external equity over the 2018-22 period to fund the growth, support the high quality credit metrics or continue growing the dividend at least in-line with EPS growth.

- **PA Rate Case.** WTR plans to file the long-awaited PA rate case this summer with resolution expected by spring '19. It has been 7 years since PA last filed a rate case and the utility will be seeking formal rate recognition of more than $2B of investment as this will be the first time that WTR takes advantage of PA's fully projected test year. That said, the trade-off of flowing through the repairs deduction and tax reform benefits to ratepayers is expected to result in a reasonable request. We expect a constructive outcome in the case and note the longstanding ability of PA utilities to reach rate case settlement agreements that are based on competitive ROEs (including AWK in 2H'17). Nonetheless, we consider WTR's regulatory risk to be heightened over the next 12-15 months given PA represents more than 70% of consolidated rate base and the length of time since the utility's last rate case in the state.

| Earnings Model ($ in thousands, except per share data) | 2015 | 2016 | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|---|---|---|
| **Revenues** | **814,204** | **819,875** | **809,525** | **852,609** | **920,098** | **991,180** | **1,049,852** | **1,108,678** |
| **Operating Expenses** | | | | | | | | |
| Operation & Maintenance | 309,310 | 304,897 | 287,206 | 292,357 | 306,421 | 325,234 | 339,309 | 352,847 |
| Efficiency Ratio | 38.0% | 37.2% | 35.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Depreciation & Amortization | 128,737 | 133,008 | 136,724 | 148,181 | 160,182 | 170,535 | 180,816 | 191,330 |
| Property & Other Taxes | 55,057 | 56,385 | 56,628 | 61,560 | 66,250 | 69,936 | 73,457 | 76,982 |
| **Total Operating Expenses** | **493,104** | **494,290** | **480,558** | **502,097** | **532,852** | **565,705** | **593,583** | **621,159** |
| **Operating Income** | **321,100** | **325,585** | **328,967** | **350,512** | **387,245** | **425,476** | **456,269** | **487,518** |
| **EBITDA** | **449,837** | **458,593** | **465,691** | **498,693** | **547,428** | **596,010** | **637,086** | **678,848** |
| Other Income | (27,812) | 10,169 | 16,026 | 15,592 | 15,649 | 15,693 | 15,741 | 15,794 |
| Interest Expense | 76,536 | 80,594 | 88,341 | 100,481 | 115,407 | 125,634 | 134,087 | 143,193 |
| EBT | 216,752 | 255,160 | 256,652 | 265,623 | 287,487 | 315,534 | 337,923 | 360,120 |
| Income Tax Expense | 14,962 | 20,978 | 16,914 | 16,555 | 25,174 | 33,879 | 38,618 | 43,283 |
| Tax Rate | 6.9% | 8.2% | 6.6% | 6.2% | 8.8% | 10.7% | 11.4% | 12.0% |
| Net Income | 201,790 | 234,182 | 239,738 | 249,068 | 262,313 | 281,655 | 299,305 | 316,837 |
| Other Comprehensive Income | (101) | (18) | 191 | 0 | 0 | 0 | 0 | 0 |
| Non-Recurring Items | 21,433 | 0 | 3,136 | 0 | 0 | 0 | 0 | 0 |
| Ongoing Net Income | 223,122 | 234,164 | 243,065 | 249,068 | 262,313 | 281,655 | 299,305 | 316,837 |
| Diluted EPS, as reported | $1.14 | $1.32 | $1.35 | $1.40 | $1.47 | $1.58 | $1.68 | $1.78 |
| Adjustments | $0.12 | $0.00 | $0.02 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Ongoing Diluted EPS** | **$1.26** | **$1.32** | **$1.36** | **$1.40** | **$1.47** | **$1.58** | **$1.68** | **$1.78** |
| Avg. Diluted Common Shares Out | 177,517 | 177,846 | 178,175 | 178,314 | 178,314 | 178,314 | 178,314 | 178,314 |
| **Dividends:** | | | | | | | | |
| Dividends Paid Per Share | $0.69 | $0.74 | $0.79 | $0.85 | $0.91 | $0.98 | $1.05 | $1.12 |
| Payout Ratio | 55% | 56% | 58% | 61% | 62% | 62% | 63% | 63% |
| **Statistics:** | | | | | | | | |
| Year-end BVPS | $9.78 | $10.43 | $11.02 | $11.57 | $12.13 | $12.73 | $13.36 | $14.02 |
| Average BVPS | $9.57 | $10.10 | $10.72 | $11.29 | $11.85 | $12.43 | $13.05 | $13.69 |
| **Earned ROE, ongoing** | **13.1%** | **13.0%** | **12.7%** | **12.4%** | **12.4%** | **12.7%** | **12.9%** | **13.0%** |
| Debt/EBITDA | 4.0 | 4.2 | 4.6 | 5.1 | 5.1 | 5.0 | 5.0 | 5.0 |
| FFO/Debt | 20.6% | 20.7% | 17.8% | 15.7% | 15.3% | 15.2% | 15.1% | 15.1% |

Source: Wells Fargo Securities, LLC estimates and company filings

| Cash Flow Model ($ in thousands) | 2015 | 2016 | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|---|---|---|
| **Operating Cash Flows** | | | | | | | | |
| Net Income | 201,790 | 234,182 | 239,738 | 249,068 | 262,313 | 281,655 | 299,305 | 316,837 |
| Depreciation and Amortization | 128,737 | 133,008 | 136,724 | 148,181 | 160,182 | 170,535 | 180,816 | 191,330 |
| Other | 40,267 | 28,973 | 4,856 | 2,044 | 1,987 | 1,943 | 1,895 | 1,842 |
| **Net Cash Flows from Operations** | **370,794** | **396,163** | **381,318** | **399,293** | **424,482** | **454,133** | **482,017** | **510,009** |
| **Investing Cash Flows** | | | | | | | | |
| Capital Expenditures | (364,689) | (382,996) | (478,089) | (500,000) | (459,000) | (441,000) | (452,025) | (463,326) |
| Acquisitions, Net of System Sales | (28,341) | (1,677) | (4,518) | (150,700) | (50,000) | (50,000) | (50,000) | (50,000) |
| Other | (1,032) | 1,464 | 2,223 | 0 | 0 | 0 | 0 | 0 |
| **Net Cash Flows from Investing** | **(394,062)** | **(383,209)** | **(480,384)** | **(650,700)** | **(509,000)** | **(491,000)** | **(502,025)** | **(513,326)** |
| *Capex/Depreciation* | *2.9* | *2.9* | *3.5* | *3.4* | *2.9* | *2.6* | *2.5* | *2.4* |
| **Financing Cash Flows** | | | | | | | | |
| Issuance of Long-term Debt | 560,544 | 503,586 | 591,024 | 510,000 | 385,000 | 250,000 | 235,000 | 225,000 |
| Repayment of Long-term Debt | (400,407) | (373,087) | (359,068) | (113,769) | (144,622) | (44,403) | (36,811) | (25,155) |
| Short-term Debt, net | (1,677) | (10,186) | (2,885) | 0 | 0 | 0 | 0 | 0 |
| Common Stock Issuance, net | (17,030) | 2,620 | 2,159 | 0 | 0 | 0 | 0 | 0 |
| Dividends on Common Stock | (121,248) | (130,923) | (140,660) | (150,844) | (162,395) | (174,835) | (187,275) | (199,715) |
| Other | 2,177 | (4,430) | 8,937 | 7,312 | 7,312 | 7,312 | 7,312 | 7,312 |
| **Net Cash Flows from Financing** | **22,359** | **(12,420)** | **99,507** | **252,699** | **85,295** | **38,074** | **18,226** | **7,442** |
| Net Change in Cash | (909) | 534 | 441 | 1,293 | 777 | 1,207 | (1,782) | 4,126 |
| Beginning of Year Balance | 4,138 | 3,229 | 3,763 | 4,204 | 5,497 | 6,274 | 7,482 | 5,700 |
| **End of Year Balance** | **3,229** | **3,763** | **4,204** | **5,497** | **6,274** | **7,482** | **5,700** | **9,825** |

| Capital Structure ($ in thousands) | 2015 | 2016 | 2017 | 2018E | 2019E | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|---|---|---|
| Common Equity | 1,725,930 | 1,850,068 | 1,957,621 | 2,055,845 | 2,155,763 | 2,262,583 | 2,374,614 | 2,491,736 |
| Long-term Debt | 1,779,205 | 1,910,633 | 2,143,127 | 2,539,358 | 2,779,736 | 2,985,333 | 3,183,522 | 3,383,367 |
| Short-term Debt | 16,721 | 6,535 | 3,650 | 3,650 | 3,650 | 3,650 | 3,650 | 3,650 |
| Minority Interest | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Capitalization** | **3,521,856** | **3,767,236** | **4,104,398** | **4,598,853** | **4,939,149** | **5,251,566** | **5,561,786** | **5,878,753** |
| **% Common Equity** | **49.0** | **49.1** | **47.7** | **44.7** | **43.6** | **43.1** | **42.7** | **42.4** |
| % Long-term Debt | 50.5 | 50.7 | 52.2 | 55.2 | 56.3 | 56.8 | 57.2 | 57.6 |
| % Other | 0.5 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| **Year-end Rate Base (Estimated)** | **3,469,869** | **3,750,000** | **4,125,000** | **4,627,782** | **4,976,863** | **5,297,591** | **5,619,063** | **5,941,321** |

Source: Wells Fargo Securities, LLC estimates and company filings

## Price Target

Price Target: $36.00 from $37.00

Our $37/sh price target is based on a P/E multiple (apply the 18E water utility median P/E of 23X to our 19E EPS of $1.47) and DDM analyses. We believe at least an in-line multiple to water utility peers is deserved as we believe WTR's EPS will grow at at least a 5-7% annual rate with the help of PA rate relief and tuck-in M&A activity. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

## Investment Thesis

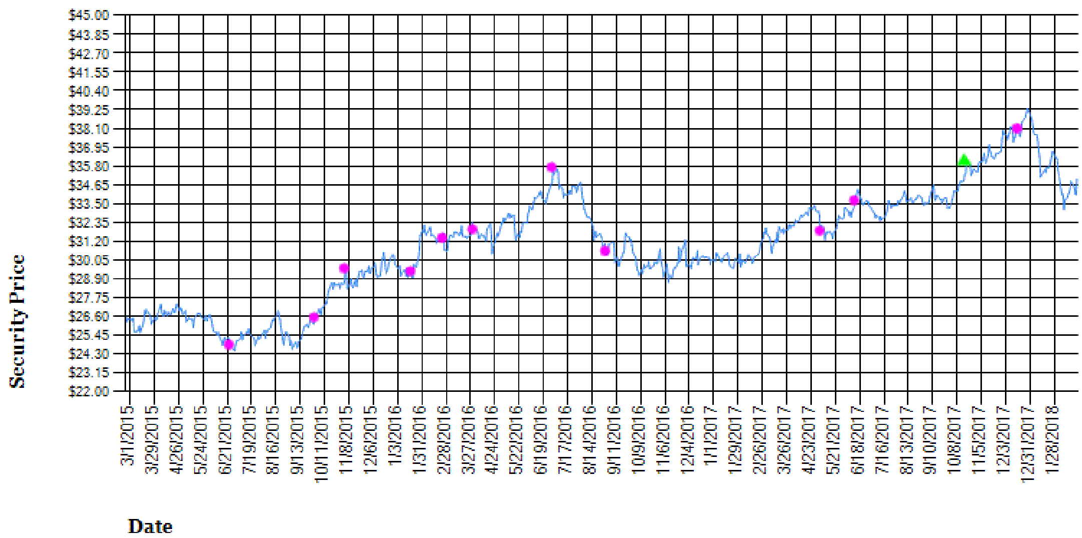
We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating reflects valuation considerations.

## Company Description

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. In recent years management optimized the portfolio of states, including the divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 99% of consolidated revenues.

# Required Disclosures

### Aqua America, Inc. (WTR) 3-yr. Price Performance




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 2/24/2015 | | Kalton | | | | |
| | 2/24/2015 | NA | 2 | NE | 27.00 | 28.00 | 26.69 |
| ● | 6/25/2015 | 24.80 | 2 | NE | 26.00 | 27.00 | 24.75 |
| ● | 9/30/2015 | 26.25 | 2 | NE | 27.00 | 28.00 | 26.47 |
| ● | 11/4/2015 | 29.12 | 2 | NE | 29.00 | 30.00 | 29.41 |
| ● | 1/19/2016 | 28.99 | 2 | NE | 30.00 | 31.00 | 29.31 |
| ● | 2/24/2016 | 30.84 | 2 | NE | 32.00 | 33.00 | 31.32 |
| ● | 3/31/2016 | 31.82 | 2 | NE | 33.00 | 34.00 | 31.82 |
| ● | 6/30/2016 | 35.39 | 2 | NE | 35.00 | 36.00 | 35.66 |
| ● | 8/30/2016 | 30.38 | 2 | NE | 31.00 | 33.00 | 30.53 |
| ● | 5/4/2017 | 31.70 | 2 | NE | 32.00 | 34.00 | 31.73 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 33.62 | 2 | 35 | | | 33.62 |
| ▲● | 10/19/2017 | 35.30 | 1 | 40 | NE | NE | 36.03 |
| ● | 12/18/2017 | 38.14 | 1 | 43 | NE | NE | 38.03 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- ● Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- ❐ Split Adjustment

**Rating Code Key**
- 1 Outperform/Buy
- 2 Market Perform/Hold
- 3 Underperform/Sell
- SR Suspended
- NR Not Rated
- NE No Estimate

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**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

**SECTOR RATING**
**O=Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
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As of: March 1, 2018

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May 9, 2018 | Equity Research

# Aqua America, Inc.

## WTR: Quiet Q1; PA Rate Case And New Municipal Deals On The Horizon

**Market Perform/$36**

Water Utilities
Market Weight

**Earnings Reported**

- **Summary.** WTR was able to overcome higher operating expenses due to a spike in water main breaks as a result of severe winter temperatures and reported Q1'18 EPS in-line with expectations. In addition, management affirmed previously articulated guidance including 2018 EPS in the $1.37-1.42 range, plans to invest $1.4B over the '18-20 period and the filing of a PA rate case later this year. No change to our EPS outlook. We reiterate our Market Perform rating and 12-18 month price target of $36/sh.
- **Valuation Thoughts.** Shares of WTR trade at 8-10% discounts to water utility peers on our 18-20E EPS. We believe a discount valuation is appropriate as (1) we project a consolidated EPS growth rate of 5% over the next 5 years which falls at the lower end of the 5-7% water utility median, (2) elevated regulatory risk given the upcoming PA rate case and (3) our belief that WTR is an unlikely takeout candidate – water utilities as a whole trade at sizeable P/E premiums of 45% and 25% to regulated electric and gas utilities which seemingly reflects a heightened degree of takeover premium given recent utility M&A events. In fact, management continues to remark that strategic M&A (potentially outside the core water/wastewater utility space) remains under consideration though the company intends to remain a disciplined buyer (believes recent investor-owned deals have been at multiples that are hard to justify). Taken together, we apply a 5-10% P/E multiple discount in our relative valuation analysis.
- **Outlook.** Our 2018-20E EPS are $1.40, $1.47 & $1.58 and we forecast a 5.5% EPS CAGR through '22 off of the '17 ongoing base of $1.36. We expect annual EPS growth to accelerate in '20 & beyond once the PA rate case is resolved as EPS growth should track close to rate base growth of 6-7%. Key assumptions include (1) WTR's annual capex over the next 5-years stays around $450M ('18 is expected to be $500M) and the utility is afforded timely and constructive regulatory recovery of the investments and (2) beyond the pending deals, we model roughly $50M of deals annually. Under these assumptions, we do not foresee the need for WTR to issue any external equity over the 2018-22 period to fund the growth, support the high quality credit metrics or continue growing the dividend at least in-line with EPS growth.
- ***M&A Update and PA Rate Case comments continue on p. 2.***

| $ EPS | 2017A | 2018E Curr. | 2018E Prior | 2019E Curr. | 2019E Prior |
|---|---|---|---|---|---|
| **Q1** (Mar.) | 0.28 | **0.29 A** | **0.29** | NE | |
| **Q2** (June) | 0.34 | 0.36 | NC | NE | |
| **Q3** (Sep.) | 0.43 | 0.44 | NC | NE | |
| **Q4** (Dec.) | 0.32 | 0.31 | NC | NE | |
| **FY** | 1.36 | 1.40 | NC | 1.47 | NC |
| **CY** | 1.36 | 1.40 | | 1.47 | |
| **FY P/EPS** | 25.1x | 24.4x | | 23.3x | |
| **Rev.(MM)** | 810 | 853 | | 920 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*
*EPS excludes non-recurring items.*
*Management's 2018 ongoing diluted EPS guidance is $1.37-1.42.*

| **Ticker** | **WTR** |
|---|---|
| **Price Target/Prior:** | **$36/NC** |
| **Price (05/09/2018)** | **$34.18** |
| 52-Week Range: | $31-40 |
| Shares Outstanding: (MM) | 177.7 |
| Market Cap.: (MM) | $6,073.8 |
| S&P 500: | 2,681.66 |
| Avg. Daily Vol.: | 478,160 |
| Dividend/Yield: | $0.82/2.4% |
| LT Debt: (MM) | $2,143.0 |
| LT Debt/Total Cap.: | 52.2% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 5.0% |
| CY 2018 Est. P/EPS-to-Growth: | 4.9x |
| Last Reporting Date: | 05/08/2018 After Close |

*NC = No Change*
*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*

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**Rena Wang**
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- **M&A Commentary.** While the potential is significant and activity has picked up, we continue to believe the pace of industry consolidation will remain somewhat measured (i.e. the floodgates are not going to open up). That said, we do expect the elevated municipal activity relative to a few years ago to persist as the recent legislation/policy efforts do remove some of the often cited barriers to getting deals done. WTR expects the six pending deals to close during 2018 (represents more than 16,000 customers, $150M in deal value and an estimated $0.04 of incremental EPS power) and, when combined with some organic customer growth, should lead to 2-3% customer growth this year. In addition, management indicated on the Q1 call that there were additional municipal deals that the company expects to be able to announce shortly representing another 10,000 customers.

- **PA Rate Case.** No real changes with regards to the long-awaited PA rate case as WTR plans to make the filing during Q3 with a mid-'19 effective date. It has been 7 years since PA last filed a rate case and the utility will be seeking formal rate recognition of more than $2B of investment as this will be the first time that WTR takes advantage of PA's fully projected test year. That said, the trade-off of flowing through the repairs deduction and tax reform benefits to ratepayers is expected to result in a reasonable request. We expect a constructive outcome in the case and note the longstanding ability of PA utilities to reach rate case settlement agreements that are based on competitive ROEs (including AWK in 2H'17). Nonetheless, we consider WTR's regulatory risk to be heightened over the next 12-15 months given PA represents more than 70% of consolidated rate base, there has been turnover in the commissioners and staff since Aqua's last case and just the length of time since that last PA rate case.

## Price Target

Price Target: $36 from NC

Our $36/sh price target is based on a P/E multiple (apply a 5-10% discount to the 18E water utility median P/E of 26.5-27.0X to our 19E EPS of $1.47) and DDM analyses. We believe a discount multiple is currently warranted as (1) the water median reflects a heightened degree of takeover premium given recent utility M&A events and we consider WTR an unlikely takeout candidate, (2) WTR's 5-year EPS growth rate may fall at the lower end of the industry's 5-7% average and (3) elevated regulatory risk given the upcoming PA rate case. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

## Investment Thesis

We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating reflects valuation considerations.

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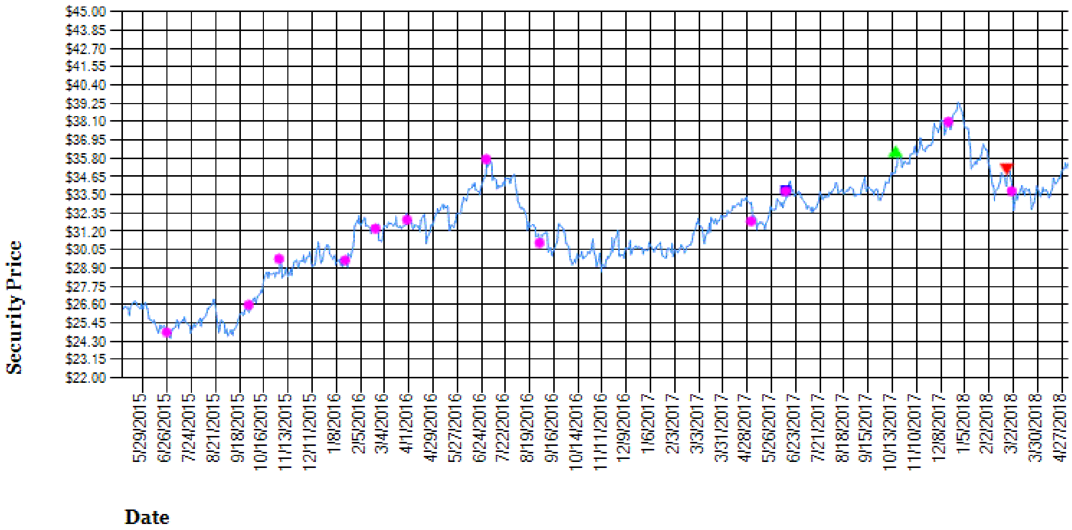
Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. In recent years management optimized the portfolio of states, including the divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 99% of consolidated revenues.

# Required Disclosures

**Aqua America, Inc. (WTR) 3-yr. Price Performance**




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 5/5/2015 | | Kalton | | | | |
| | 5/5/2015 | NA | 2 | NE | 27.00 | 28.00 | 26.27 |
| ● | 6/26/2015 | 24.80 | 2 | NE | 26.00 | 27.00 | 24.78 |
| ● | 9/30/2015 | 26.25 | 2 | NE | 27.00 | 28.00 | 26.47 |
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| ● | 12/18/2017 | 38.14 | 1 | 43 | NE | NE | 38.03 |
| ▼ ● | 2/25/2018 | 35.00 | 2 | 37 | NE | NE | 35.00 |
| ● | 3/1/2018 | 34.19 | 2 | 36 | NE | NE | 33.66 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- ● Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

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WELLS FARGO SECURITIES

# August 3 Water Utility Earnings Call Takeaways

*Utilities*

## Comments On AWK, AWR & WTR

| USD Ticker | Rating Curr. | Rating Prior | Price 08/03/17 | FY EPS 2017E Curr. | FY EPS 2017E Prior | FY EPS 2018E Curr. | FY EPS 2018E Prior | Price Target To | Price Target From |
|---|---|---|---|---|---|---|---|---|---|
| **Water Utilities, Market Weight** | | | | | | | | | |
| AWR | 2 | NC | 49.81 | 1.70 | 1.65 | 1.73 | 1.72 | $46 | NC |
| AWK | 2 | NC | 80.65 | 3.05 | NC | 3.30 | NC | $84 | NC |
| WTR | 2 | NC | 33.59 | 1.37 | 1.38 | 1.42 | NC | $35 | NC |

Source: Company data and Wells Fargo Securities, LLC estimates

1= Outperform, 2 = Market Perform, 3 = Underperform, V = Volatile, = Company is on the Priority Stock List
NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful

- **Summary.** Three of our water utilities – AWK, AWR & WTR – reported results after the market close on 8/2 and hosted conference calls on 8/3. Company-specific takeaways are discussed below. In terms of group valuation, we continue to believe that the P/E premium of the water utilities relative to the other utility sub-sectors, in particular electrics, will dissipate over time when/if long-term rates rise. However, with long-term rates hovering near historically low levels and perhaps no near-term catalyst in sight that might change that fact, we do believe the current relative valuations are supported by our generic DDM models as the lower risk premium we ascribe to the waters has an outsized impact on valuations in a low risk-free rate environment.

- **AWK Update.** Management affirmed 2017 ongoing diluted EPS guidance of $2.98-3.08 despite Q2'17 EPS that optically looked weak vs. Q2'16 ($0.73 vs. $0.77). Results were largely in-line with internal expectations as Q2'16 had +$0.03 of abnormal benefits whereas Q2'17 faced -$0.04 of anticipated headwinds. Importantly, the 7-10% EPS CAGR target through '21 off the '15 weather-normalized base of $2.64 is intact. Achieving constructive outcomes in the pending Pennsylvania ($108M request) and Missouri ($84M request) rate cases will be key to hitting the target. The PA case reflects the recent Scranton wastewater system acquisition and the need to socialize the system's revenue shortfall across AWK's larger customer base. This could prove as somewhat of a litmus test for the next PA rate case when AWK will seek recovery of the pending $156M McKeesport wastewater deal (regulatory hearings are underway, management did not seem concerned with the 3rd party fair market value analysis procedure under PA's Act 12 and the deal is expected to close late '17/early '18). We have a high degree of confidence that the regulated segment can deliver on its growth goals – both organic and M&A. As for the unregulated segments, lower capital upgrades at military continues to be a headwind however AWK indicated it was active in 8 new base RFPs (requests for proposals) with the potential for two to be decided later this year by the Department of Defense. Historically, when AWK has had a reasonable line of site on the timing of RFP decisions, it has resulted in a win for the company. In addition, management expects Keystone's results to improve in 2H'17 due to the backlog of work in the Appalachian shale. **(Comments continued on p. 2)**

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- **AWK Update. (Continued…)** So while our 17E EPS could prove somewhat optimistic given the tax law changes in NY (Q2 impact of -$0.02) and IL (Q3 impact of -$0.02), we have elected to leave our estimate unchanged ahead of the weather-sensitive third quarter (management indicated favorable July weather was likely a +$0.01 benefit). Our 2017-19E EPS remain $3.05, $3.30 & $3.55 and our 5-year EPS CAGR falls at the lower end of AWK's 7-10% target. We reiterate our Market Perform rating and $84/sh forward price target.

- **AWR Update.** AWR reported a solid Q2'17 with ongoing EPS increasing to $0.47 (excludes $0.15 of one-time gains) vs. Q2'16 of $0.42. After reevaluating some assumptions in our model, we increase our 2017-19E EPS to/from $1.70/$1.65, $1.73/$1.72 & $1.80/$1.78. Of note, our forecast assumes Golden State Water (GSWC) continues its recent trend of earning in excess of the allowed ROE, mainly driven by successful cost controls. With that said, we do believe there could be downward pressure on the earned ROE in '18 & beyond from the Cost of Capital (CoC) proceeding as well as the recently filed 2019-21 water General Rate Case (GRC). The Office of Ratepayer Advocates (ORA) filed CoC testimony on 8/1 recommending ROEs for the four large California water utilities (subs of AWK, AWR, CWT & SJW) in the 8.22-8.30% range. Specific to GSWC, the ORA recommends a 54.1% equity ratio, below GSWC's 57.0% request and currently authorized 55.0%, as well as a lower cost of debt (6.4% vs. 6.6% request and current 7.0%). Management indicated that ORA's testimony was not particularly surprising and remains optimistic that a constructive CoC outcome can be achieved, which could include a settlement. As outlined in our 8/2 note, we believe downside risk to the current 9.43% water ROE is limited (maybe up to 25bp?). However, an adopted equity ratio and cost of debt similar to ORA's recommendation would present incremental headwinds for AWR's '18 EPS growth. As for the water GRC, GSWC filed an application in July which requests average annual capex of roughly $125M – this represents a meaningful increase from the roughly $85M/year approved in the 2016-18 GRC. Like past years, we expect the appropriate level of capex will be one of the primary points of contention with ORA and other intervenors. If approved as filed, AWR indicated it would support 2019 average water rate base of $876M, a 22% increase over 2017's adopted average water rate base of $717M. Decisions in the CoC and water GRC are anticipated by year-end '17 and '18, respectively. Last, the Board approved a 5.4% increase in the quarterly dividend (annual rate goes to $1.02) and we forecast dividend growth at least commensurate with that pace. We reiterate our Market Perform rating and $46/sh forward price target.

- **WTR Update.** Q2 results were in-line with expectations. Management affirmed '17 diluted EPS guidance of $1.34-1.39 and all other aspects of the 3-year plan including capex of $1.2B+ over the 2017-19 period with $450M+ in '17. More clarity was given regarding the expected timing of Pennsylvania rate relief – file for a Q4'17 DSIC (Distribution System Improvement Charge) increase with plans to ramp up the total DSIC increase to the 7.5% cap by mid-2018, at which point a general rate case filing would be made (resolution in 1H'19). As for M&A, WTR added a nice-sized muni deal (3,000 customers; $12.3M) to the backlog which brings the total to five that the company expects to close in 2017 or 2018 (combined represent 12,000 customers and a $126M purchase price) and management believes the deal pipeline is promising. M&A combined with organic customer growth is expected to drive 1.5-2% customer growth in '17. In addition, the Board approved a 7% increase in the quarterly dividend (annual rate goes to roughly $0.82). We nudge our 17E EPS down to $1.37 from $1.38. No change to our 2018-20E EPS of $1.42, $1.50 & $1.58. Key items for WTR going forward include (1) successfully navigating the upcoming PA rate filings and (2) closing on the four pending municipal deals while finding additional M&A opportunities in the market. We consider WTR's management team capable of meeting these challenges but acknowledge that they do present some level of execution risk. We reiterate our Market Perform and $35/sh forward price target.

## Rating Basis Information:

AWK Thesis: We believe AWK is well positioned to capitalize on favorable industry dynamics which should lead to above average rate base, EPS and DPS growth. Our rating reflects valuation considerations.

AWR Thesis: We regard AWR as a low risk water utility with a growing dividend. We consider CA regulation to be constructive. We believe ASUS could contribute 20% to consolidated EPS with upside potential if new military contracts are awarded. Our rating reflects valuation considerations.

WTR Thesis: We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.

## Price Target Information:

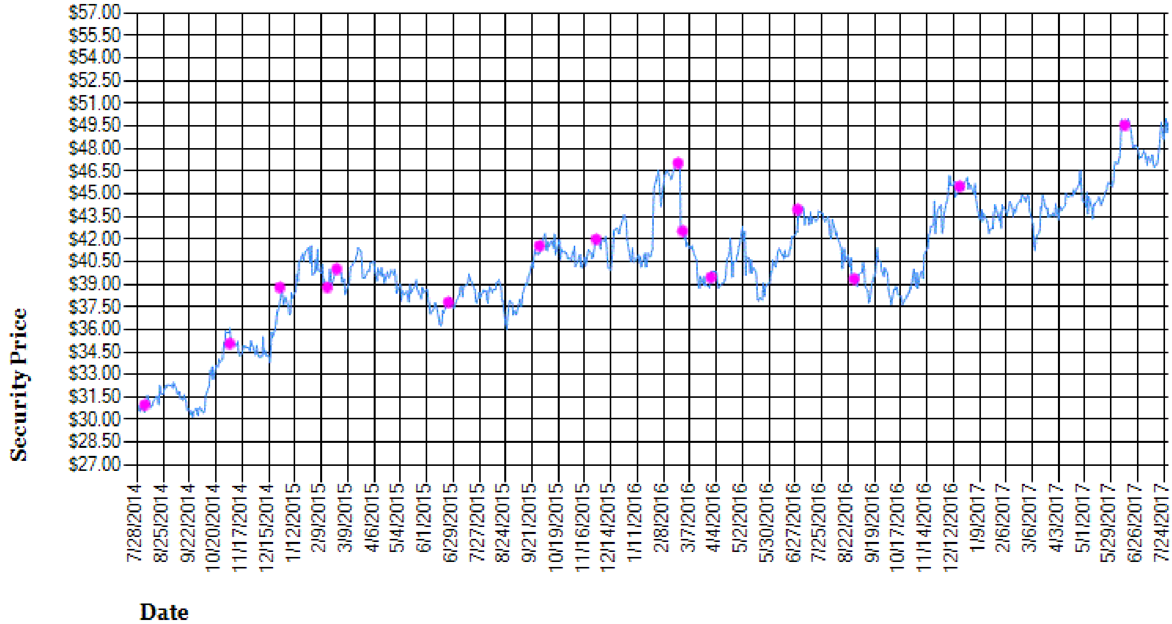
AWR Basis and Risks: Our $46/sh price target is based on a P/E multiple (apply the 18E water utility median of ~24.5X to our 19E of $1.80) and DDM analyses. Regulatory and ASUS construction levels are key risks.

AWK Basis and Risks: Our $84/sh price target is based on a P/E multiple (apply a 23.5-24.0X multiple to our 19E of $3.55) and DDM analyses. Risks include regulatory and profitably executing the non-regulated growth strategy.

WTR Basis and Risks: Our $35/sh price target is based on a P/E multiple (apply a modest discount to the 18E water utility median of ~24.5X to our 19E of $1.50) and DDM analyses. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

# Required Disclosures

**American States Water (AWR) 3-yr. Price Performance**




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 7/28/2014 | | Kalton | | | | |
| | 7/28/2014 | NA | 2 | NE | 30.00 | 31.00 | 31.06 |
| • | 8/6/2014 | 30.84 | 2 | NE | 29.00 | 30.00 | 30.84 |
| • | 11/5/2014 | 34.90 | 2 | NE | 32.00 | 33.00 | 34.90 |
| • | 12/29/2014 | 37.53 | 2 | NE | 34.00 | 35.00 | 38.71 |
| • | 2/17/2015 | 39.04 | 2 | NE | 35.00 | 36.00 | 38.65 |
| • | 2/26/2015 | 39.84 | 2 | NE | 36.00 | 37.00 | 39.84 |
| • | 6/25/2015 | 37.96 | 2 | NE | 35.00 | 36.00 | 37.68 |
| • | 9/30/2015 | 41.17 | 2 | NE | 36.00 | 38.00 | 41.40 |
| • | 11/30/2015 | 41.83 | 2 | NE | 37.00 | 39.00 | 41.83 |
| • | 2/25/2016 | 46.87 | 2 | NE | 41.00 | 43.00 | 46.87 |
| • | 2/29/2016 | 42.41 | 2 | NE | 38.00 | 40.00 | 42.41 |
| • | 3/31/2016 | 39.36 | 2 | NE | 37.00 | 39.00 | 39.36 |
| • | 6/30/2016 | 43.25 | 2 | NE | 41.00 | 43.00 | 43.82 |
| • | 8/30/2016 | 39.15 | 2 | NE | 40.00 | 42.00 | 39.26 |
| • | 12/20/2016 | 45.17 | 2 | NE | 43.00 | 45.00 | 45.31 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 49.47 | 2 | 46 | 43.00 | 45.00 | 49.47 |

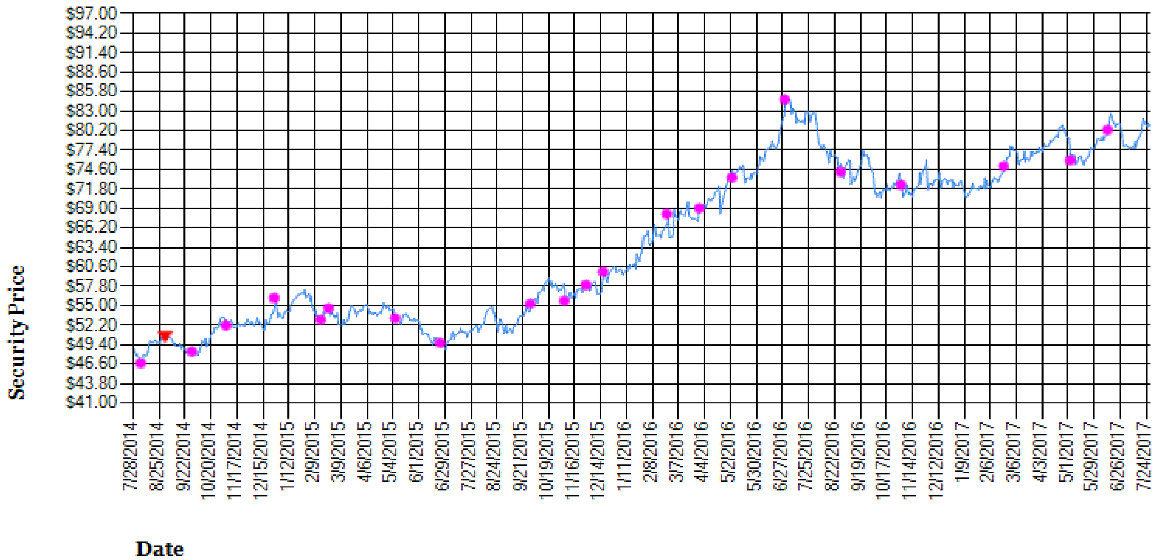
Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## American Water Works Company, Inc. (AWK) 3-yr. Price Performance




| | Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|---|
| | 7/28/2014 | | Kalton | | | | |
| | 7/28/2014 | NA | 1 | NE | 53.00 | 54.00 | 49.05 |
| • | 8/7/2014 | 46.61 | 1 | NE | 52.00 | 53.00 | 46.55 |
| ▼ | 9/2/2014 | 50.61 | 2 | NE | 52.00 | 53.00 | 50.14 |
| • | 9/30/2014 | 48.32 | 2 | NE | 50.00 | 51.00 | 48.23 |
| • | 11/6/2014 | 52.27 | 2 | NE | 53.00 | 54.00 | 51.99 |
| • | 12/29/2014 | 54.02 | 2 | NE | 57.00 | 58.00 | 55.86 |
| • | 2/17/2015 | 52.64 | 2 | NE | 56.00 | 57.00 | 52.75 |
| • | 2/25/2015 | 54.65 | 2 | NE | 57.00 | 58.00 | 54.46 |
| • | 5/7/2015 | 53.04 | 2 | NE | 54.00 | 55.00 | 52.99 |
| • | 6/25/2015 | 49.53 | 2 | NE | 52.00 | 53.00 | 49.37 |
| • | 9/30/2015 | 54.55 | 2 | NE | 55.00 | 56.00 | 55.08 |
| • | 11/6/2015 | 58.19 | 2 | NE | 58.00 | 59.00 | 55.44 |
| • | 11/30/2015 | 57.76 | 2 | NE | 59.00 | 60.00 | 57.76 |
| • | 12/18/2015 | 59.22 | 2 | NE | 62.00 | 63.00 | 59.55 |
| • | 2/25/2016 | 67.75 | 2 | NE | 69.00 | 70.00 | 68.05 |
| • | 3/31/2016 | 68.93 | 2 | NE | 72.00 | 73.00 | 68.93 |
| • | 5/5/2016 | 73.38 | 2 | NE | 73.00 | 74.00 | 73.20 |
| • | 6/30/2016 | 84.01 | 2 | NE | 82.00 | 83.00 | 84.51 |
| • | 8/30/2016 | 73.86 | 2 | NE | 76.00 | 78.00 | 74.03 |
| • | 11/3/2016 | 72.09 | 2 | NE | 75.00 | 77.00 | 72.09 |
| • | 2/22/2017 | 74.63 | 2 | NE | 76.00 | 78.00 | 74.92 |
| • | 5/4/2017 | 76.45 | 2 | NE | 77.00 | 79.00 | 75.68 |
| | 6/13/2017 | | Reeder | | | | |
| | 6/13/2017 | 80.18 | 2 | 84 | 77.00 | 79.00 | 80.18 |

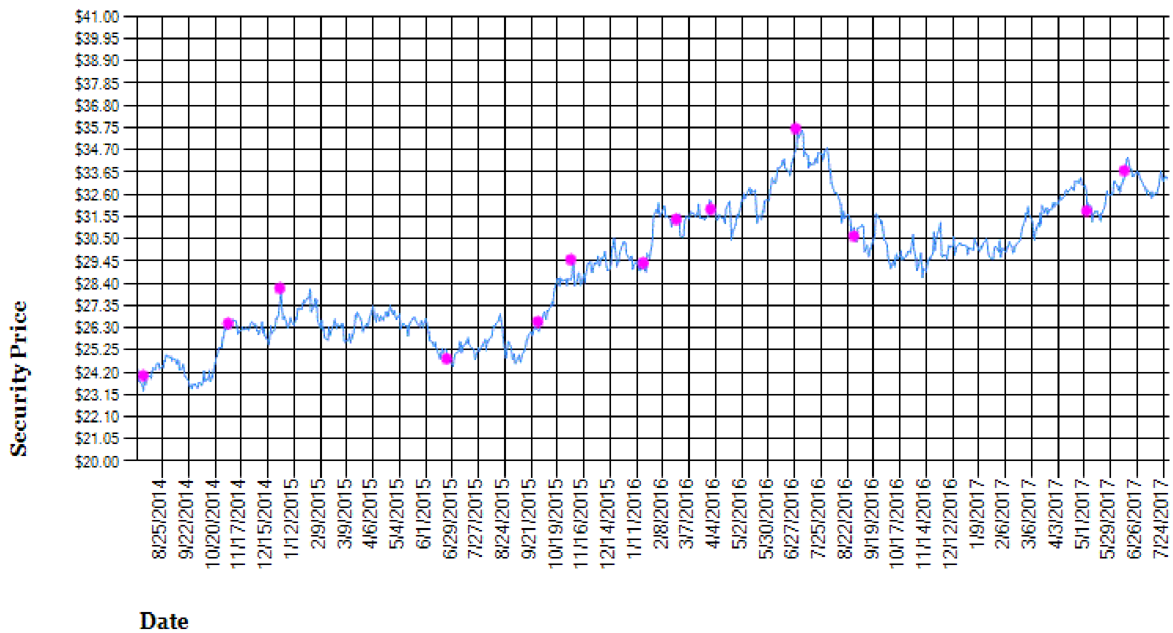
Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## Aqua America (WTR) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Price Target | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|---|
| 7/29/2014 | | Kalton | | | | |
| 7/29/2014 | NA | 2 | NE | 25.00 | 26.00 | 24.41 |
| • 8/6/2014 | 23.96 | 2 | NE | 24.00 | 25.00 | 23.96 |
| • 11/4/2014 | 26.44 | 2 | NE | 26.00 | 27.00 | 26.44 |
| • 12/29/2014 | 26.85 | 2 | NE | 27.00 | 28.00 | 28.05 |
| • 6/25/2015 | 24.80 | 2 | NE | 26.00 | 27.00 | 24.75 |
| • 9/30/2015 | 26.25 | 2 | NE | 27.00 | 28.00 | 26.47 |
| • 11/4/2015 | 29.12 | 2 | NE | 29.00 | 30.00 | 29.41 |
| • 1/19/2016 | 28.99 | 2 | NE | 30.00 | 31.00 | 29.31 |
| • 2/24/2016 | 30.84 | 2 | NE | 32.00 | 33.00 | 31.32 |
| • 3/31/2016 | 31.82 | 2 | NE | 33.00 | 34.00 | 31.82 |
| • 6/30/2016 | 35.39 | 2 | NE | 35.00 | 36.00 | 35.66 |
| • 8/30/2016 | 30.38 | 2 | NE | 31.00 | 33.00 | 30.53 |
| • 5/4/2017 | 31.70 | 2 | NE | 32.00 | 34.00 | 31.73 |
| 6/13/2017 | | Reeder | | | | |
| 6/13/2017 | 33.62 | 2 | 35 | 32.00 | 34.00 | 33.62 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**

- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Price Target/Val Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- ☐ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

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**WTR:** Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

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May 4, 2017

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: YTD Outperformance Has Us Squarely On The Sidelines**

**Market Perform**

Sector: Water Utilities
Market Weight


- **Summary.** WTR's Q1 call affirmed '17 guidance ($1.34-$1.39) and the 3-year plan. As a result, no change to our EPS outlook or investment thesis. Key items for WTR going forward include (1) successfully navigating the upcoming PA rate filings and (2) closing on the four pending municipal deals while finding additional M&A opportunities in the market. We consider WTR's management team capable of meeting these challenges but acknowledge that they do present execution risk. We reiterate our Market Perform rating due to valuation considerations and nudge up our 12-18 month valuation range to $32-34/share from $31-33. WTR shares trade in-line with Water peers on our 18E & 19E EPS but at 20% premiums to Regulated Electric and 2-4% premiums to Regulated Gas utilities. We consider these relative valuations more than adequate given forecasted EPS (5%), rate base (6-7%) and dividend (7%) growth rates that are not all that dissimilar to the aforementioned utility subgroup medians.


- **Recent Performance.** WTR shares have outperformed our water utility index by 300 bps year-to-date. This has enabled shares to close the P/E multiple gap with water peers – traded at roughly 5% discounts at the beginning of the year. We believe the outperformance is primarily attributable to the following two factors: (1) waning investor concern that WTR may announce a deal to acquire a non-water/wastewater utility (due to compressed multiples between the water and gas utility sub-sectors) and (2) the fact that global money continues to find the U.S. market (and utilities' stable yields) relatively attractive and WTR & AWK are the only water names with reasonable liquidity.

- **EPS Outlook.** Our 17-20E EPS are $1.38, $1.42, $1.50 & $1.58. Rate recovery of infrastructure capex, cost efficiencies and M&A activity are the primary drivers of our forecasted 5% EPS CAGR. This is below WTR's expected 6-7% rate base growth due to over-earning situations in some states, including PA. However, forecasted capex is expected to grow rate base and lower the realized returns over the next few years. By '19, we expect EPS growth to approximate rate base growth.

- **What To Watch For?** Management reiterated expectations of implementing a distribution system improvement charge (DSIC) increase by Q4'17, filing a full blown Aqua PA rate case in 2H'18 and having new rates effective in '19. Should corporate tax reform materialize, a lower corporate rate would reduce the repairs tax deduction benefit amount and perhaps accelerate the timing of the rate case filing. On the M&A front, WTR's four municipal deals – $113M purchase price for 12K customer equivalents – are expected to close in '17 pending necessary approvals, including from state regulators. Getting recovery (muni deal-enabling legislation is designed to allow the full purchase price to be recovered in rate base) and keeping the M&A momentum moving forward by signing more deals are key to WTR's growth strategy.

**Valuation Range: $32.00 to $34.00** from $31.00 to $33.00

Our $32-34/sh valuation range is based on a P/E multiple (apply a modest discount to the 17E water utility median of 24.0-24.5X to our 18E) and DDM analyses. Primary risks are regulatory and M&A (particularly if acquisitive outside of the regulated water space) related.

**Investment Thesis:**

We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.

### *Valuation Range Change*

| EPS | 2016A | 2017E Curr. | 2017E Prior | 2018E Curr. | 2018E Prior |
|---|---|---|---|---|---|
| **Q1** (Mar.) | $0.29 | **$0.28 A** | **0.29** | NE | |
| **Q2** (June) | 0.33 | 0.34 | NC | NE | |
| **Q3** (Sep.) | 0.41 | 0.43 | NC | NE | |
| **Q4** (Dec.) | 0.28 | 0.31 | NC | NE | |
| **FY** | $1.32 | $1.38 | NC | $1.42 | NC |
| **CY** | $1.32 | $1.38 | | $1.42 | |
| **FY P/EPS** | 24.0x | 23.0x | | 22.3x | |
| **Rev.(MM)** | $820 | $855 | | $930 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2017 ongoing diluted EPS guidance is $1.34-1.39.*

| | |
|---|---|
| Ticker | WTR |
| Price (05/04/2017) | $31.70 |
| 52-Week Range: | $28-36 |
| Shares Outstanding: (MM) | 177.6 |
| Market Cap.: (MM) | $5,629.9 |
| S&P 500: | 2,367.34 |
| Avg. Daily Vol.: | 714,336 |
| Dividend/Yield: | $0.77/2.4% |
| LT Debt: (MM) | $1,911.0 |
| LT Debt/Total Cap.: | 50.7% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 5.0% |
| CY 2017 Est. P/EPS-to-Growth: | 4.6x |
| Last Reporting Date: | 05/03/2017 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


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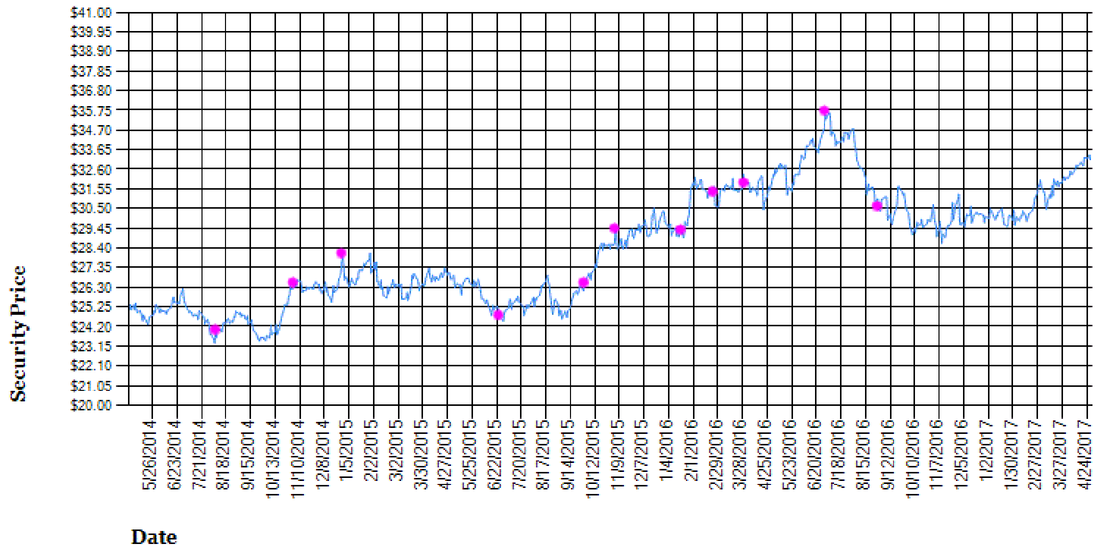
## Company Description:

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. Management has been active optimizing its portfolio of states, including the recent divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures

## Aqua America (WTR) 3-yr. Price Performance




| Date | Published Price ($) | Rating Code | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|
| 4/29/2014 | | Kalton | | | |
| 4/29/2014 | NA | 2 | 25.00 | 26.00 | 25.38 |
| • 8/6/2014 | 23.96 | 2 | 24.00 | 25.00 | 23.96 |
| • 11/4/2014 | 26.44 | 2 | 26.00 | 27.00 | 26.44 |
| • 12/29/2014 | 26.85 | 2 | 27.00 | 28.00 | 28.05 |
| • 6/25/2015 | 24.80 | 2 | 26.00 | 27.00 | 24.75 |
| • 9/30/2015 | 26.25 | 2 | 27.00 | 28.00 | 26.47 |
| • 11/4/2015 | 29.12 | 2 | 29.00 | 30.00 | 29.41 |
| • 1/19/2016 | 28.99 | 2 | 30.00 | 31.00 | 29.31 |
| • 2/24/2016 | 30.84 | 2 | 32.00 | 33.00 | 31.32 |
| • 3/31/2016 | 31.82 | 2 | 33.00 | 34.00 | 31.82 |
| • 6/30/2016 | 35.39 | 2 | 35.00 | 36.00 | 35.66 |
| • 8/30/2016 | 30.38 | 2 | 31.00 | 33.00 | 30.53 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- ▼ Rating Downgrade
- ▲ Rating Upgrade
- • Valuation Range Change
- ◆ Initiation, Resumption, Drop or Suspend
- ■ Analyst Change
- □ Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

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1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
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**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

## SECTOR RATING

**O=Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

## VOLATILITY RATING

**V** = A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: May 4, 2017

| | |
|---|---|
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| 57% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Market Perform. | Wells Fargo Securities, LLC has provided investment banking services for 32% of its Equity Research Market Perform-rated companies. |
| 2% of companies covered by Wells Fargo Securities, LLC Equity Research are rated Underperform. | Wells Fargo Securities, LLC has provided investment banking services for 25% of its Equity Research Underperform-rated companies. |

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August 3, 2016

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: Quiet Q2 But What Does The M&A Future Hold?**

**Market Perform**

Sector: Water Utilities
Market Weight

- **Summary.** No change to our EPS outlook following WTR's Q2 report. The base business continues to execute – invest capital, grow rate base and seek recovery – but WTR's new mgmt team has ratcheted up the desire to grow through M&A. Investor focus/angst reflects concerns around what the M&A future holds in store for WTR. The more proactive, methodical approach to municipal deals is likely to start bearing fruit in 2017 (good!) but pursuit of a strategic acquisition outside of the water space has caused valuation concerns (bad!). Reiterate Market Perform rating and \$35-36/sh valuation range. Shares trade at modest P/E discounts to water utility peers on our 2016-19E EPS which we consider appropriate given potential P/E multiple degradation from M&A outside the regulated water sector. In addition, water utilities as a whole seem to be fully valued as the group trades at P/E premiums of 35-40% to electric and 12-18% to gas utilities.

- **Results.** Q2'16 EPS were \$0.33 vs \$0.32 in Q2'15. Adverse weather impacted consumption causing \$4.2M of lower revenues. However, the impact was muted by \$4.2M of non-recurring favorable expense comparison items, including \$3.5M of charges taken in Q2'15. With weather in mind, mgmt indicated comfortability with the middle of the \$1.30-1.35 2016 EPS guidance range.

- **Outlook.** We continue to believe that a 5-yr EPS CAGR of 6% is achievable driven by timely rate recognition of investment, cost controls and modest M&A activity. Our 2016-19E EPS of \$1.33, \$1.40, \$1.47 & \$1.55 are predicated on \$1.2B of regulated investments over the 2016-18 period, including \$75M of M&A activity. Thus, we do not assume any transformational M&A despite the fact that WTR has financial flexibility and mgmt has articulated a clear desire to explore such opportunities. Barring a very sizeable deal, we do not foresee the need for new equity and, in fact, mgmt has previously indicated that roughly \$750M of additional debt capacity exists. As such, we believe share buybacks and/or accelerated dividend increases (greater than 8%) may be considered to achieve a consolidated equity ratio closer to 45% and a 60-70% dividend payout ratio.

- **Strategy Update.** WTR is focused on (1) efficiently deploying capital across the regulated platform, (2) aggressively pursuing muni system deals and (3) scouring the broader utility landscape for strategic M&A as well as potential market-based opportunities. Mgmt indicated muni acquisition enabling legislation in IL, IN, NJ and PA is creating an uptick in interest and the pipeline is strong, including with deals of size. WTR's Board has set a goal of \$50M/year worth of deals. Given the longer lead times for muni deals, look for efforts to bear fruit in 2017. As for strategic deals, mgmt affirmed interest and continues to believe core competencies are transferable across utility platforms. While stepping outside of water could lead to a merging of multiples (which would have to be taken into consideration), mgmt believes there could be long-term value creation if it opens up a path to attractive growth and allows fixed costs to be further spread out.

**Valuation Range: \$35.00 to \$36.00**

Our \$35-36/sh valuation range is based on a P/E multiple (apply a modest discount to the 17E water utility median of 24.5-25.0X to our 18E of \$1.47) and DDM analyses. Primary risks are regulatory and M&A related.

**Investment Thesis:**

We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.

**Please see page 3 for rating definitions, important disclosures and required analyst certifications**
**All estimates/forecasts are as of 08/03/16 unless otherwise stated.**



### *Earnings Reported*

| | 2015A | 2016E | | 2017E | |
|---|---|---|---|---|---|
| **EPS** | | **Curr.** | **Prior** | **Curr.** | **Prior** |
| **Q1** (Mar.) | \$0.27 | \$0.29 A | NC | NE | |
| **Q2** (June) | 0.32 | **0.33 A** | **0.32** | NE | |
| **Q3** (Sep.) | 0.38 | **0.40** | **0.41** | NE | |
| **Q4** (Dec.) | 0.28 | 0.30 | NC | NE | |
| **FY** | \$1.26 | \$1.33 | NC | \$1.40 | NC |
| **CY** | \$1.26 | \$1.33 | | \$1.40 | |
| **FY P/EPS** | 27.0x | 25.6x | | 24.3x | |
| **Rev.(MM)** | \$814 | \$835 | | \$878 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*Management's 2016 ongoing diluted EPS guidance is \$1.30-1.35.*
*2015A excludes a 1-time item impairment charge on the Marcellus water pipeline JV of \$0.12 in Q4.*

| | |
|---|---|
| Ticker | WTR |
| Price (08/03/2016) | \$34.06 |
| 52-Week Range: | \$24-36 |
| Shares Outstanding: (MM) | 177.3 |
| Market Cap.: (MM) | \$6,038.8 |
| S&P 500: | 2,161.15 |
| Avg. Daily Vol.: | 722,633 |
| Dividend/Yield: | \$0.77/2.3% |
| LT Debt: (MM) | \$1,796.0 |
| LT Debt/Total Cap.: | 50.1% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 6.0% |
| CY 2016 Est. P/EPS-to-Growth: | 4.3x |
| Last Reporting Date: | 08/02/2016 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*

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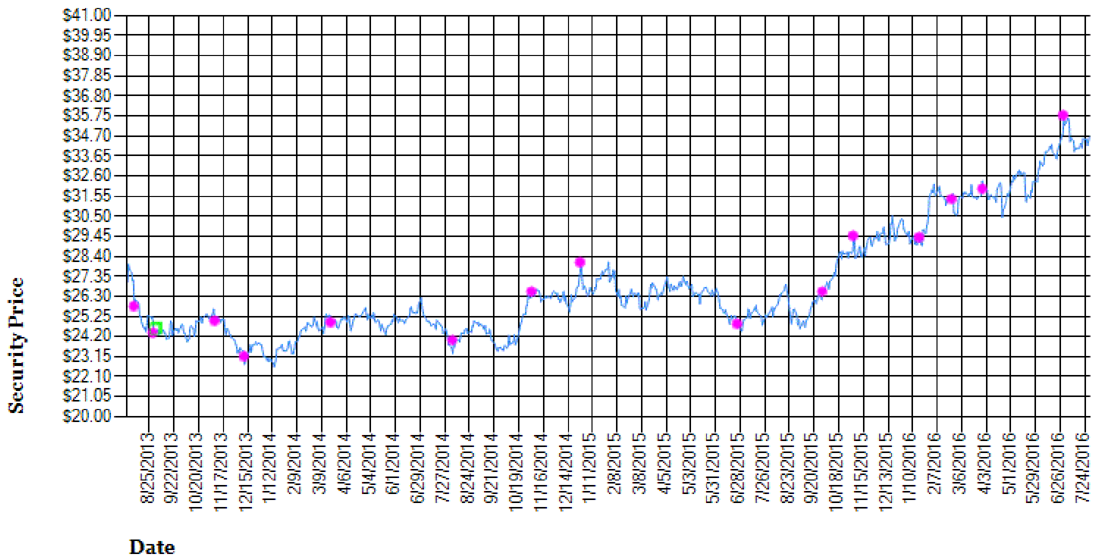
Together we'll go far

**Company Description:**

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. Management has been active optimizing its portfolio of states, including the recent divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures

## Aqua America (WTR) 3-yr. Price Performance



| Date | Published Price ($) | Rating Code | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|
| 7/30/2013 | | Kalton | | | |
| 7/30/2013 | NA | 2 | 23.20 | 24.00 | 27.11 |
| 8/8/2013 | 25.74 | 2 | 24.80 | 25.60 | 25.74 |
| 8/30/2013 | 24.59 | 2 | 24.00 | 24.80 | 24.30 |
| 9/3/2013 | | 5:4 split | | | |
| 11/8/2013 | 24.77 | 2 | 25.00 | 26.00 | 24.92 |
| 12/12/2013 | 23.14 | 2 | 24.00 | 25.00 | 23.11 |
| 3/20/2014 | 24.90 | 2 | 25.00 | 26.00 | 24.90 |
| 8/6/2014 | 23.96 | 2 | 24.00 | 25.00 | 23.96 |
| 11/4/2014 | 26.44 | 2 | 26.00 | 27.00 | 26.44 |
| 12/29/2014 | 26.85 | 2 | 27.00 | 28.00 | 28.05 |
| 6/25/2015 | 24.80 | 2 | 26.00 | 27.00 | 24.75 |
| 9/30/2015 | 26.25 | 2 | 27.00 | 28.00 | 26.47 |
| 11/4/2015 | 29.12 | 2 | 29.00 | 30.00 | 29.41 |
| 1/19/2016 | 28.99 | 2 | 30.00 | 31.00 | 29.31 |
| 2/24/2016 | 30.84 | 2 | 32.00 | 33.00 | 31.32 |
| 3/31/2016 | 31.82 | 2 | 33.00 | 34.00 | 31.82 |
| 6/30/2016 | 35.39 | 2 | 35.00 | 36.00 | 35.66 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- Rating Downgrade
- Rating Upgrade
- Valuation Range Change
- Initiation, Resumption, Drop or Suspend
- Analyst Change
- Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

## Additional Information Available Upon Request

I certify that:
1) All views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers discussed; and
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## STOCK RATING

**1=Outperform:** The stock appears attractively valued, and we believe the stock's total return will exceed that of the market over the next 12 months. BUY
**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

## SECTOR RATING

**O=Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.
**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

## VOLATILITY RATING

**V** = A stock is defined as volatile if the stock price has fluctuated by +/-20% or greater in at least 8 of the past 24 months or if the analyst expects significant volatility. All IPO stocks are automatically rated volatile within the first 24 months of trading.

As of: August 3, 2016

| | |
|---|---|
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June 23, 2016

WELLS FARGO SECURITIES

# *Equity Research*

## Aqua America

**WTR: Takeaways From Midwest Investor Meetings**

**Market Perform**

Sector: Water Utilities
Market Weight


- **Summary.** We hosted investor meetings with WTR mgmt, including CFO Dave Smeltzer, on 6/23. WTR is focused on a three-pronged strategy of (1) efficiently deploying capital across the regulated platform, (2) aggressively pursuing municipal system acquisitions and (3) scouring the broader utility landscape for strategic M&A. The meetings reinforced our belief that a 5-yr EPS CAGR of 6% is achievable – we did tweak our 17E & 18E to/from $1.40/$1.42 & $1.47/$1.48 – driven by timely rate recognition of investment and modest M&A activity. Importantly, we do not assume any transformational M&A despite the fact that WTR has financial flexibility and mgmt has articulated a clear desire to explore such opportunities. Reiterate Market Perform rating. Shares trade at modest P/E discounts to water utility peers on our 17-19E EPS. We consider this appropriate given potential P/E multiple degradation from M&A outside the regulated water sector. In addition, water utilities as a whole seem to be fully valued as the group trades at P/E premiums of 35-40% to electric and 15-20% to gas utilities.


- **Base Business.** WTR's existing water and wastewater utility platform continues to perform well. Rate base is expected to grow at a 6-7% CAGR over the 2016-18 period given infrastructure investment of $350M/yr. However earnings growth is likely to lag somewhat in the near term as most states are earning near the allowed ROEs and thus rate relief is minimal. On that front, Pennsylvania (WTR's largest sub) remains in an overearning situation due to the repairs tax deduction benefit and the next base rate case is not likely to be filed until 2H'18.

- **Muni Acquisitions.** The company is taking a more proactive, methodical approach towards cultivating "tuck-in" acquisition opportunities that focuses on larger systems (2,000-20,000 connections) that mgmt believes have a greater likelihood of selling. Enabling legislation has been passed in IL, IN, NJ and most recently PA, to encourage consolidation of the fragmented, municipally dominated sector. WTR's Board has set a goal of $50M/yr worth of deals which compares to recent averages of only $15-20M. While it remains early in the process, WTR has announced a handful of muni deals recently and has noticed an uptick in interested sellers. Thus we are optimistic that this trend may have legs.

- **Strategic M&A.** Mgmt was not shy about the desire to utilize the strong balance sheet (excess debt capacity without impacting A credit rating) and currency (stock valuation). Unlike the muni strategy, strategic M&A could extend beyond water and wastewater to regulated electric and gas utilities. WTR's logic is that core competencies of effectively deploying capital, fostering constructive regulatory relationships and operational excellence are transferable across utility platforms. While acknowledging that stepping outside of water could lead to a merging of multiples (which would have to be taken into consideration), mgmt believes there could be long-term value creation if it opens up a path to attractive growth and allows fixed costs to be further spread out.

**Valuation Range: $33.00 to $34.00**
Our $33-34/sh valuation range is based on a P/E multiple (apply a modest discount to the 17E water utility median of 24.5-25.0X to our 18E of $1.47) and DDM analyses. Primary risks are regulatory and M&A related.

**Investment Thesis:**
We are attracted to WTR's strong fundamentals - a proven EPS growth strategy, a growing rate base, constructive regulation, efficient operations, and financial flexibility. Our Market Perform rating primarily reflects valuation considerations.


**Please see page 5 for rating definitions, important disclosures and required analyst certifications**

**All estimates/forecasts are as of 06/23/16 unless otherwise stated.**



### *Earnings Estimate Revised Down*

| | 2015A | 2016E | | 2017E | |
|---|---|---|---|---|---|
| **EPS** | | **Curr.** | **Prior** | **Curr.** | **Prior** |
| **Q1** (Mar.) | $0.27 | $0.29 A | NC | NE | |
| **Q2** (June) | 0.32 | 0.32 | NC | NE | |
| **Q3** (Sep.) | 0.38 | 0.41 | NC | NE | |
| **Q4** (Dec.) | 0.28 | 0.30 | NC | NE | |
| **FY** | $1.26 | $1.33 | NC | **$1.40** | **1.42** |
| **CY** | $1.26 | $1.33 | | $1.40 | |
| **FY P/EPS** | 26.8x | 25.4x | | 24.2x | |
| **Rev.(MM)** | $814 | $835 | | $878 | |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*
*NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful*
*V = Volatile, = Company is on the Priority Stock List*

*2015A excludes a 1-time item impairment charge on the Marcellus water pipeline JV of $0.12 in Q4.*
*Management's 2016 ongoing diluted EPS guidance is $1.30-1.35.*

| | |
|---|---|
| Ticker | WTR |
| Price (06/23/2016) | $33.82 |
| 52-Week Range: | $24-35 |
| Shares Outstanding: (MM) | 177.0 |
| Market Cap.: (MM) | $5,986.1 |
| S&P 500: | 2,113.32 |
| Avg. Daily Vol.: | 705,520 |
| Dividend/Yield: | $0.71/2.1% |
| LT Debt: (MM) | $1,779.0 |
| LT Debt/Total Cap.: | 50.5% |
| ROE: | 13.0% |
| 3-5 Yr. Est. Growth Rate: | 6.0% |
| CY 2016 Est. P/EPS-to-Growth: | 4.2x |
| Last Reporting Date: | 05/03/2016 After Close |

*Source: Company Data, Wells Fargo Securities, LLC estimates, and Reuters*


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| Earnings Model ($ in thousands, except per share data) | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | 2019E | 2020E | 2021E |
|---|---|---|---|---|---|---|---|---|---|
| **Revenues** | **761,893** | **779,903** | **814,204** | **835,298** | **877,844** | **924,669** | **978,561** | **1,040,764** | **1,103,340** |
| **Operating Expenses** | | | | | | | | | |
| Operation & Maintenance | 283,561 | 288,556 | 309,310 | 314,462 | 322,069 | 332,560 | 347,120 | 363,957 | 380,362 |
| Efficiency Ratio | 37.2% | 37.0% | 38.0% | 37.5% | 37.0% | 36.5% | 36.0% | 35.5% | 35.0% |
| Depreciation & Amortization | 123,985 | 126,535 | 128,737 | 136,985 | 145,693 | 154,822 | 164,297 | 174,016 | 184,008 |
| Property & Other Taxes | 52,685 | 50,453 | 55,057 | 58,330 | 61,450 | 64,696 | 68,019 | 71,356 | 74,721 |
| **Total Operating Expenses** | **460,231** | **465,544** | **493,104** | **509,777** | **529,211** | **552,079** | **579,436** | **609,330** | **639,091** |
| **Operating Income** | **301,662** | **314,359** | **321,100** | **325,521** | **348,632** | **372,590** | **399,125** | **431,434** | **464,249** |
| **EBITDA** | **425,647** | **440,894** | **449,837** | **462,506** | **494,325** | **527,412** | **563,422** | **605,450** | **648,257** |
| Other Income | (242) | 1,141 | (27,812) | 3,719 | 4,719 | 6,219 | 7,719 | 7,869 | 8,034 |
| Interest Expense | 77,316 | 76,397 | 76,536 | 82,019 | 89,336 | 96,237 | 103,416 | 110,421 | 117,122 |
| EBT | 224,104 | 239,103 | 216,752 | 247,221 | 264,016 | 282,573 | 303,428 | 328,882 | 355,161 |
| Income Tax Expense | 21,233 | 25,219 | 14,962 | 11,581 | 17,820 | 26,058 | 33,703 | 43,698 | 54,013 |
| Tax Rate | 9.5% | 10.5% | 6.9% | 4.7% | 6.7% | 9.2% | 11.1% | 13.3% | 15.2% |
| Net Income | 202,871 | 213,884 | 201,790 | 235,640 | 246,195 | 256,515 | 269,725 | 285,184 | 301,148 |
| Other Comprehensive Income | 231 | 442 | (101) | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Recurring Items | (231) | (442) | 21,433 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ongoing Net Income | 202,871 | 213,884 | 223,122 | 235,640 | 246,195 | 256,515 | 269,725 | 285,184 | 301,148 |
| Diluted EPS, as reported | $1.15 | $1.21 | $1.14 | $1.33 | $1.40 | $1.47 | $1.55 | $1.65 | $1.75 |
| Adjustments | ($0.00) | ($0.00) | $0.12 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Ongoing Diluted EPS** | **$1.15** | **$1.20** | **$1.26** | **$1.33** | **$1.40** | **$1.47** | **$1.55** | **$1.65** | **$1.75** |
| Avg. Diluted Common Shares Out | 176,814 | 177,763 | 177,517 | 176,675 | 175,760 | 174,889 | 174,058 | 173,268 | 172,515 |
| **Dividends:** | | | | | | | | | |
| Dividends Paid Per Share | $0.58 | $0.63 | $0.69 | $0.74 | $0.81 | $0.89 | $0.97 | $1.05 | $1.13 |
| Payout Ratio | 51% | 53% | 55% | 56% | 58% | 61% | 63% | 64% | 65% |
| **Statistics:** | | | | | | | | | |
| Year-end BVPS | $8.68 | $9.37 | $9.78 | $10.26 | $10.73 | $11.19 | $11.66 | $12.13 | $12.63 |
| Average BVPS | $8.30 | $9.02 | $9.57 | $10.02 | $10.49 | $10.96 | $11.42 | $11.90 | $12.38 |
| **Earned ROE, ongoing** | **13.8%** | **13.3%** | **13.1%** | **13.3%** | **13.3%** | **13.4%** | **13.6%** | **13.8%** | **14.1%** |
| EBITDA Per Share | $2.41 | $2.48 | $2.53 | $2.62 | $2.81 | $3.02 | $3.24 | $3.49 | $3.76 |
| FCF (After Dividends, B4 Financing) | 43,367 | (40,819) | (144,516) | (104,758) | (114,952) | (131,488) | (133,143) | (133,095) | (132,558) |
| FCF Per Share | $0.25 | ($0.23) | ($0.81) | ($0.59) | ($0.65) | ($0.75) | ($0.76) | ($0.77) | ($0.77) |

Source: Wells Fargo Securities, LLC estimates and company filings

| Cash Flow Model ($ in thousands) | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | 2019E | 2020E | 2021E |
|---|---|---|---|---|---|---|---|---|---|
| **Operating Cash Flows** | | | | | | | | | |
| Net Income | 202,871 | 213,884 | 201,790 | 235,640 | 246,195 | 256,515 | 269,725 | 285,184 | 301,148 |
| Depreciation and Amortization | 123,985 | 126,535 | 128,737 | 136,985 | 145,693 | 154,822 | 164,297 | 174,016 | 184,008 |
| Other | 40,963 | 23,369 | 40,267 | 38,265 | 37,265 | 35,765 | 34,265 | 34,115 | 33,950 |
| **Net Cash Flows from Operations** | **367,819** | **363,788** | **370,794** | **410,890** | **429,153** | **447,102** | **468,287** | **493,315** | **519,106** |
| **Investing Cash Flows** | | | | | | | | | |
| Capital Expenditures | (307,908) | (328,605) | (364,689) | (360,000) | (376,875) | (388,125) | (397,828) | (409,763) | (422,056) |
| Acquisitions, Net of System Sales | (9,682) | (14,058) | (28,341) | (25,000) | (25,000) | (35,000) | (35,000) | (35,000) | (35,000) |
| Other | 96,027 | 50,162 | (1,032) | 0 | 0 | 0 | 0 | 0 | 0 |
| **Net Cash Flows from Investing** | **(221,563)** | **(292,501)** | **(394,062)** | **(385,000)** | **(401,875)** | **(423,125)** | **(432,828)** | **(444,763)** | **(457,056)** |
| **Financing Cash Flows** | | | | | | | | | |
| Issuance of Long-term Debt | 263,834 | 317,699 | 560,544 | 175,000 | 250,000 | 255,000 | 255,000 | 210,000 | 210,000 |
| Repayment of Long-term Debt | (300,323) | (253,192) | (400,407) | (35,593) | (103,007) | (103,878) | (89,636) | (49,419) | (49,419) |
| Short-term Debt, net | (43,643) | (18,342) | (1,677) | 0 | 0 | 0 | 0 | 0 | 0 |
| Common Stock Issuance, net | 23,165 | (8,460) | (17,030) | (30,000) | (30,000) | (30,000) | (30,000) | (30,000) | (30,000) |
| Dividends on Common Stock | (102,889) | (112,106) | (121,248) | (130,648) | (142,230) | (155,465) | (168,602) | (181,647) | (194,608) |
| Other | 13,103 | 2,343 | 2,177 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **Net Cash Flows from Financing** | **(146,753)** | **(72,058)** | **22,359** | **(20,241)** | **(24,237)** | **(33,343)** | **(32,238)** | **(50,066)** | **(63,027)** |
| Net Change in Cash | (497) | (771) | (909) | 5,649 | 3,041 | (9,366) | 3,221 | (1,514) | (977) |
| Beginning of Year Balance | 5,521 | 5,058 | 4,138 | 3,229 | 8,878 | 11,919 | 2,553 | 5,773 | 4,259 |
| **End of Year Balance** | **5,024** | **4,287** | **3,229** | **8,878** | **11,919** | **2,553** | **5,773** | **4,259** | **3,282** |

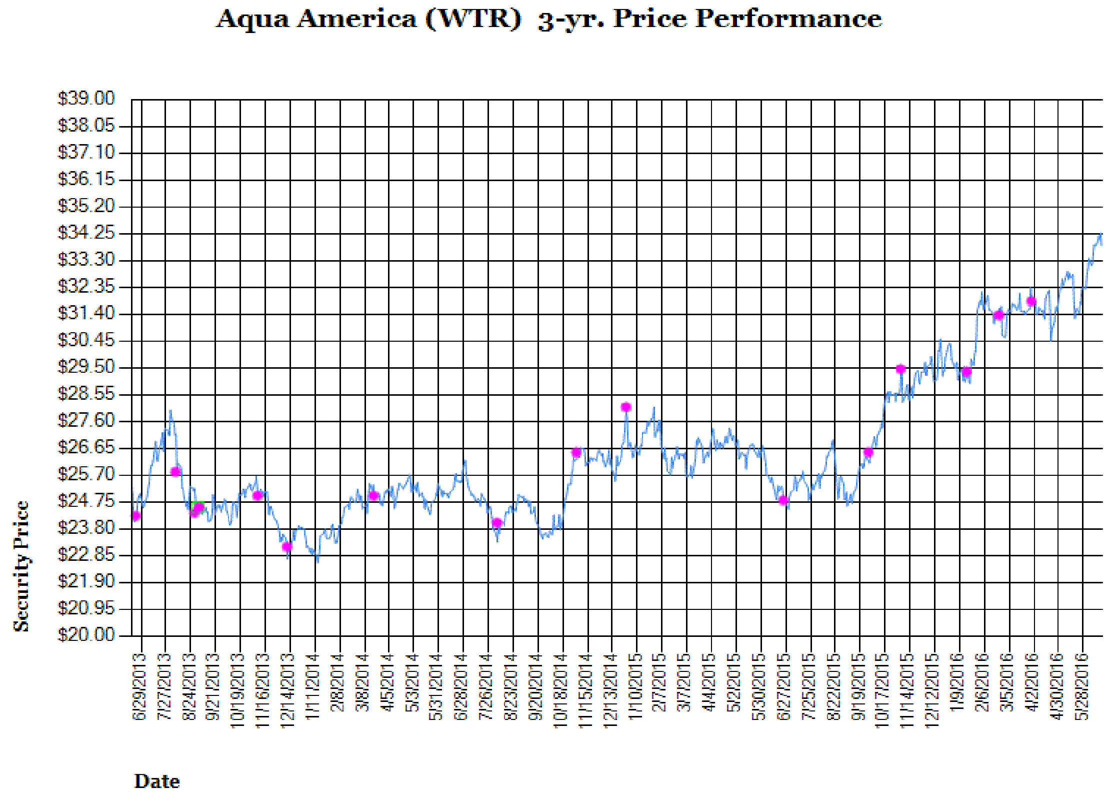
| Capital Structure ($ in thousands) | 2013 | 2014 | 2015 | 2016E | 2017E | 2018E | 2019E | 2020E | 2021E |
|---|---|---|---|---|---|---|---|---|---|
| Common Equity | 1,534,835 | 1,655,343 | 1,725,930 | 1,800,922 | 1,874,887 | 1,945,936 | 2,017,060 | 2,090,597 | 2,167,137 |
| Long-term Debt | 1,554,871 | 1,619,270 | 1,779,205 | 1,918,612 | 2,065,605 | 2,216,727 | 2,382,091 | 2,542,672 | 2,703,253 |
| Short-term Debt | 36,740 | 18,398 | 16,721 | 16,721 | 16,721 | 16,721 | 16,721 | 16,721 | 16,721 |
| Minority Interest | 208 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Capitalization** | **3,126,654** | **3,293,051** | **3,521,856** | **3,736,255** | **3,957,213** | **4,179,384** | **4,415,872** | **4,649,990** | **4,887,111** |
| **% Common Equity** | **49.1** | **50.3** | **49.0** | **48.2** | **47.4** | **46.6** | **45.7** | **45.0** | **44.3** |
| % Long-term Debt | 49.7 | 49.2 | 50.5 | 51.4 | 52.2 | 53.0 | 53.9 | 54.7 | 55.3 |
| % Other | 1.2 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 |
| **Year-end Rate Base (Estimated)** | **2,998,465** | **3,322,898** | **3,469,869** | **3,691,884** | **3,922,066** | **4,164,369** | **4,406,900** | **4,651,648** | **4,898,696** |

Source: Wells Fargo Securities, LLC estimates and company filings

## Company Description:

Headquartered in Bryn Mawr, PA, Aqua America (WTR) is one of the largest U.S.-based investor-owned regulated water and wastewater utilities. The company serves approximately 3 million residents (1 million customer connections) in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Indiana and Virginia. WTR's largest subsidiary, Aqua Pennsylvania, accounts for approximately half of the company's total customer base and nearly 70% of consolidated rate base. Management has been active optimizing its portfolio of states, including the recent divestitures of operations in Florida, Maine, Missouri, New York and South Carolina while adding to customer counts in Ohio and Texas (through utility swaps with American Water Works). Going forward, the company has expressed a desire to accelerate customer growth through a more active and focused acquisition strategy across its entire portfolio. Regulated operations account for more than 95% of consolidated revenues.

# Required Disclosures




| Date | Published Price ($) | Rating Code | Val. Rng. Low | Val. Rng. High | Close Price ($) |
|---|---|---|---|---|---|
| 6/18/2013 | | Kalton | | | |
| 6/18/2013 | NA | 2 | 24.80 | 25.60 | 25.36 |
| 6/24/2013 | 24.03 | 2 | 23.20 | 24.00 | 24.22 |
| 8/8/2013 | 25.74 | 2 | 24.80 | 25.60 | 25.74 |
| 8/30/2013 | 24.59 | 2 | 24.00 | 24.80 | 24.30 |
| 9/3/2013 | | 5:4 split | | | |
| 9/3/2013 | 19.83 | 2 | 19.20 | 20.00 | 24.50 |
| 11/8/2013 | 24.77 | 2 | 25.00 | 26.00 | 24.92 |
| 12/12/2013 | 23.14 | 2 | 24.00 | 25.00 | 23.11 |
| 3/20/2014 | 24.90 | 2 | 25.00 | 26.00 | 24.90 |
| 8/6/2014 | 23.96 | 2 | 24.00 | 25.00 | 23.96 |
| 11/4/2014 | 26.44 | 2 | 26.00 | 27.00 | 26.44 |
| 12/29/2014 | 26.85 | 2 | 27.00 | 28.00 | 28.05 |
| 6/25/2015 | 24.80 | 2 | 26.00 | 27.00 | 24.75 |
| 9/30/2015 | 26.25 | 2 | 27.00 | 28.00 | 26.47 |
| 11/4/2015 | 29.12 | 2 | 29.00 | 30.00 | 29.41 |
| 1/19/2016 | 28.99 | 2 | 30.00 | 31.00 | 29.31 |
| 2/24/2016 | 30.84 | 2 | 32.00 | 33.00 | 31.32 |
| 3/31/2016 | 31.82 | 2 | 33.00 | 34.00 | 31.82 |

Source: Wells Fargo Securities, LLC estimates and Reuters data

**Symbol Key**
- Rating Downgrade
- Rating Upgrade
- Valuation Range Change
- Initiation, Resumption, Drop or Suspend
- Analyst Change
- Split Adjustment

**Rating Code Key**

| | | | |
|---|---|---|---|
| 1 | Outperform/Buy | SR | Suspended |
| 2 | Market Perform/Hold | NR | Not Rated |
| 3 | Underperform/Sell | NE | No Estimate |

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**1=Outperform:** The stock appears attractively valued, and we believe the stock's total return will exceed that of the market over the next 12 months. BUY
**2=Market Perform:** The stock appears appropriately valued, and we believe the stock's total return will be in line with the market over the next 12 months. HOLD
**3=Underperform:** The stock appears overvalued, and we believe the stock's total return will be below the market over the next 12 months. SELL

## SECTOR RATING

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**M=Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.
**U=Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

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As of: June 23, 2016

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**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR23. If applicable, supply a listing of all common equity infusions from the parent to the company over the past 5 years. In each case, identify date and dollar amount.

| | | |
|---|---|---|
| A. | 2013 | $45,750,000 |
| | 2014 | $49,000,000 |
| | 2015 | $20,000,000 |
| | 2016 | $20,000,000 |
| | 2017 | $0 |

**G. Rate of Return**

RR24. If applicable, identify the company's common dividend payments to its parent for each of the last 5 years.

| | | |
|---|---|---|
| A. | 2013 | $0 |
| | 2014 | $15,000,000 |
| | 2015 | $60,000,000 |
| | 2016 | $30,000,000 |
| | 2017 | $50,000,000 |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR25. Provide the latest year-by-year financial projections for the company for the next 5 years. Also, please indicate the date these projections were prepared; whether approved by management; and whether the projections have been submitted to bond rating agencies. The information will be treated in a confidential manner, if requested by the company in writing, as set forth in 52 Pa. Code § 5.423.

A. Please refer to Exhibit 1-A, Schedule A-1 for water and Exhibit 1-B, Schedule A-1 for wastewater for the Company's most recent financial projections. Financial projections beyond what is projected in Exhibits 1-A and 1-B have not yet been approved by company management.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
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**G. Rate of Return**

RR26. Provide the company's 5-year construction budget.

A. Please see the attached.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**COMPANY'S DRAFT CAPITAL BUDGET - 2019 THROUGH 2023**

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| 301100-Organization-WA | (40,000) | (40,000) | (40,000) | (40,000) | (40,000) |
| 303000-Land & Land Rights-WA | 160,000 | 160,000 | 160,000 | 260,000 | 160,000 |
| 304000-Structures & Improvements-WA | 28,842,700 | 9,181,700 | 8,456,700 | 6,092,600 | 4,173,300 |
| 305200-Collect & Impound Res-WA | 2,904,000 | 6,909,000 | 12,939,000 | 4,519,000 | 2,784,000 |
| 306200-Lake, River & Other Intak-WA | 200,000 | 1,000,000 | 50,000 | 1,050,000 | 50,000 |
| 307200-Wells & Springs-WA | 5,025,000 | 3,020,000 | 5,435,000 | 2,335,000 | 3,135,000 |
| 310000-Power Generation Equip-WA | 4,618,000 | 418,000 | 318,000 | 618,000 | 898,000 |
| 311000-Pumping Equipment-WA | 3,125,000 | 980,000 | 2,500,000 | 2,035,000 | 1,535,000 |
| 320300-Water Treatment Equip-WA | 20,635,800 | 15,380,300 | 14,867,300 | 13,914,300 | 9,217,300 |
| 330400-Distrib Res & Standpipe-WA | 9,198,000 | 6,861,000 | 3,945,000 | 5,000,000 | 2,250,000 |
| 331400-T & D Mains-WA | 157,201,573 | 143,501,640 | 140,519,123 | 130,202,336 | 127,109,730 |
| 333400-Services-WA | 26,563,100 | 25,262,800 | 25,050,500 | 23,262,700 | 23,500,300 |
| 334400-Meters-WA | 11,050,000 | 5,752,000 | 8,342,800 | 6,010,700 | 6,161,300 |
| 335400-Fire Hydrants-WA | 5,698,800 | 3,917,000 | 3,868,400 | 3,482,000 | 3,551,000 |
| 336400-Backflow Prevention-WA | 50,000 | - | - | - | - |
| 339000-Other Plant & Misc Equip-WA | 138,660 | 675,000 | 500,000 | 1,600,000 | - |
| 340500-Office Furn & Equip-WA | 13,527,547 | 8,721,200 | 7,938,207 | 9,888,544 | 7,794,730 |
| 341500-Transport Equip-WA | 4,550,600 | 4,092,500 | 3,994,000 | 4,152,000 | 4,081,500 |
| 342500-Stores Equip-WA | 448,900 | 277,800 | 428,800 | 293,000 | 423,500 |
| 343500-Tools, Shop & Garage Eq-WA | 2,275,200 | 1,832,400 | 2,126,700 | 2,275,600 | 1,832,100 |
| 344500-Laboratory Equip-WA | 881,000 | 562,500 | 861,000 | 605,000 | 655,000 |
| 346500-Communication Equip-WA | 3,615,000 | 2,115,000 | 1,890,000 | 2,530,000 | 995,000 |
| 347500-Misc Equip-WA | 9,000 | 9,000 | 15,000 | 15,000 | 15,000 |
| 354000-Structures & Improvements-WW | 7,582,400 | 3,292,400 | 2,600,000 | 1,393,600 | 1,393,600 |
| 355000-Power Gen Equip-WW | 175,000 | - | 200,000 | - | - |
| 360200-Collection Mains Force-WW | 95,000 | 100,000 | 195,000 | 95,000 | 95,000 |
| 361200-Collection Mains Gravity-WW | 2,780,100 | 2,610,000 | 3,130,000 | 1,330,000 | 2,530,000 |
| 363200-Services To Customers-WW | 146,000 | 146,000 | 146,000 | 146,000 | 136,000 |
| 371000-Pumping Equip-WW | 1,734,000 | 774,000 | 1,844,000 | 404,000 | 404,000 |
| 380000-Treat & Disp Equip-WW | 17,669,900 | 13,806,900 | 5,706,900 | 1,236,900 | 523,900 |
| 382400-Outfall Lines-WW | 50,000 | - | - | - | - |
| 390700-Office Furn & Equip-WW | 357,720 | 233,360 | 204,570 | 265,720 | 206,240 |
| 391700-Transportation Equip-WW | 87,000 | 68,500 | 33,000 | 33,000 | 84,500 |
| 393700-Tools, Shop & Garage Eq-WW | 65,000 | 65,000 | 65,000 | 65,000 | 65,000 |
| 394700-Laboratory Equip-WW | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |
| 396700-Communication Equip-WW | 350,000 | 285,000 | 630,000 | 350,000 | 400,000 |
| 398700-Other Tangible Plant-WW | 200,000 | 200,000 | 50,000 | 50,000 | 50,000 |
| Total Capital Budget | 332,000,000 | 262,200,000 | 259,000,000 | 225,500,000 | 206,200,000 |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR27. Identify the company's and, if applicable, its parent's capital structure targets (percentages of capital types). Provide the complete basis for the capital structure targets.

A. The Company strives to maintain close to a 47/53 long term debt/equity capital structure over time. Please refer to the direct testimony of Paul R. Moul and the accompanying Exhibit 4 for the target structure at March 31, 2020.

**<u>AQUA PENNSYLVANIA, INC.</u>**
**<u>2018 RATE CASE</u>**
**<u>FILING REQUIREMENTS</u>**

**G. Rate of Return**

RR28. For each month, of the most recent 24 months, supply the company's:

a. Short-term debt balance.

b. Short-term debt interest rate.

c. Balance of construction work in progress.

d. Balance of construction work in progress which is eligible for AFUDC accrual:

A. Please see the attached.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
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| Seq. | Month | Short-Term Debt Balance | Short-Term Interest Rate | Balance in CWIP | CWIP Balance AFUDC Eligible |
|---|---|---|---|---|---|
| 1 | June-18 | 0 | 2.7420% | 108,528,327 | 101,963,635 |
| 2 | May-18 | 45,000,000 | 2.5970% | 111,617,737 | 104,152,124 |
| 3 | April-18 | 30,000,000 | 2.5530% | 105,487,548 | 98,561,032 |
| 4 | March-18 | 20,342,486 | 2.4500% | 94,650,286 | 88,832,276 |
| 5 | February-18 | 15,662,300 | 2.2670% | 101,820,888 | 95,618,913 |
| 6 | January-18 | 13,579,851 | 2.2140% | 110,330,095 | 103,707,229 |
| 7 | December-17 | 3,649,998 | 2.2170% | 131,250,810 | 124,148,267 |
| 8 | November-17 | 285,998 | 2.0100% | 153,078,766 | 146,817,898 |
| 9 | October-17 | 25,000,000 | 1.8900% | 148,943,439 | 143,238,637 |
| 10 | September-17 | 20,000,000 | 1.8880% | 141,012,733 | 135,954,115 |
| 11 | August-17 | 11,729,546 | 1.8870% | 140,375,868 | 135,613,697 |
| 12 | July-17 | 10,000,000 | 1.8800% | 127,445,358 | 122,608,292 |
| 13 | June-17 | 66,466,406 | 1.8060% | 131,372,785 | 123,837,973 |
| 14 | May-17 | 50,899,566 | 1.6570% | 134,458,523 | 128,664,774 |
| 15 | April-17 | 31,069,437 | 1.6480% | 122,871,990 | 117,732,879 |
| 16 | March-17 | 26,742,244 | 1.4310% | 110,260,920 | 104,428,740 |
| 17 | February-17 | 18,874,870 | 1.4310% | 111,621,096 | 105,941,123 |
| 18 | January-17 | 10,000,000 | 1.4200% | 120,512,652 | 115,012,558 |
| 19 | December-16 | 5,545,213 | 1.4210% | 117,908,180 | 112,197,572 |
| 20 | November-16 | 52,905,430 | 1.2110% | 123,580,192 | 113,887,600 |
| 21 | October-16 | 50,691,859 | 1.2200% | 113,929,126 | 104,993,409 |
| 22 | September-16 | 47,000,000 | 1.1810% | 100,120,833 | 91,893,641 |
| 23 | August-16 | 37,374,868 | 1.1350% | 94,942,149 | 87,506,667 |
| 24 | July-16 | 34,872,705 | 1.1570% | 89,462,372 | 80,774,562 |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR29. Fully identify all debt, other than instruments traded in public markets, owed to all shareholders, corporate officers, or members of the board of directors, its affiliates, parent company, or subsidiaries.

A. None.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR30. Provide a summary statement of all stock dividends, splits, or par value changes during the 2-year calendar period preceding the rate case filing.

A. There have been no splits or par value changes during the 2-year calendar period preceding the rate case filing.

There have been the following stock dividends during the 2-year calendar period preceding the rate case filing.

| | |
|---|---|
| 9/1/2016 | $0.1913 |
| 12/1/2016 | $0.1913 |
| 3/1/2017 | $0.1913 |
| 6/1/2017 | $0.1913 |
| 9/1/2017 | $0.2047 |
| 12/1/2017 | $0.2047 |
| 3/1/2018 | $0.2047 |
| 6/1/2018 | $0.2047 |

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR31. If a claim of the filing utility is based on utilization of the capital structure or capital costs of the parent company and consolidated system, the reasons for this claim must be fully stated and supported.

A. The Company's claims are not based on the capital structure of its parent company.

**AQUA PENNSYLVANIA, INC.**
**2018 RATE CASE**
**FILING REQUIREMENTS**

**G. Rate of Return**

RR32. To the extent not provided elsewhere, supply financial data of the company, and its parent, if applicable, for the last 5 years.

a. Times interest earned ratio—pre- and post tax basis.

b. Preferred stock dividend coverage ratio—post tax basis.

c. Times fixed charges earned ratio—pretax basis.

d. Dividend payout ratio.

e. AFUDC as a percent of earnings available for common equity.

f. Construction work in progress as a percent of net utility plant.

g. Effective income tax rate.

h. Internal cash generations as a percent of total capital requirements.

A. Please refer to the direct testimony of Paul R. Moul and the accompanying Exhibit 4 for the Company's financial data, including the details requested in items (a) through (h).