BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

DIRECT TESTIMONY OF

JOSEPH F. GOLDEN, JR.

ON BEHALF OF
PHILADELPHIA GAS WORKS

Docket No. R-2020-3017206

Philadelphia Gas Works

General Rate Increase Request

TOPICS:

Financial Condition
Presentation of Pro Forma Test Year Data
Supporting Justification for Requested Increase

February 28, 2020

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND POSITION WITH THE COMPANY.

A. My name is Joseph F. Golden, Jr. My position is Executive Vice President and Acting Chief Financial Officer for Philadelphia Gas Works ("PGW" or "Company").

Q. HOW LONG HAVE YOU HELD THIS POSITION?

A. I was appointed Executive Vice President and Acting Chief Financial Officer in March 2012. I started with PGW in August 1986. My prior titles at PGW include: Controller, Treasurer, Manager Treasury Department, Senior Staff Accountant, and Staff Accountant. Before starting with PGW, I had prior work experience in public accounting, treasury accounting and cash management, and cost accounting for a manufacturing company.

Q. WHAT ARE YOUR VARIOUS JOB RESPONSIBILITIES?

A. In my present position, I am responsible for the treasury, accounting, and budgeting functions.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.

A. I hold a Bachelor of Science degree in Accounting from Villanova University, a Master of Business Administration degree from Drexel University, and a Juris Doctor degree, *cum laude*, from Temple University School of Law.

Q. HAVE YOU EVER PROVIDED TESTIMONY BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION ("COMMISSION")?

A. Yes. I submitted testimony in PGW's last base rate proceeding (Docket No. R-2017-2586783). I also submitted rebuttal testimony on behalf of PGW in the Petition of Philadelphia Gas Works for Waiver of Provisions of Act 11 to Increase the Distribution

System Improvement Charge ("DSIC") Cap and to Permit Levelization of DSIC Charges (Docket No. P-2015-2501500).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to: 1) provide the documentation and supporting methodology for the schedules and exhibits that are included in PGW's base rate filing; 2) describe PGW's financial results for the Fully Projected Future Test Year (comprised of the period from September 1, 2020 through August 31, 2021); and 3) detail and provide supporting justification for PGW's requested increase in existing annual base rates of $70.0 million (in year one).

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I am sponsoring the following exhibits:

- **Exh. JFG-1:** Exhibit JFG-1 provides schedules showing PGW's Statement of Income, Cash Flow Statement, Debt Service Coverage Statement and Balance Sheet <u>at present rates</u> for the Historical Test Year ("HTY"), FY 2019, the Future Test Year ("FTY"), FY 2020, and the Fully Projected Future Test Year ("FPFTY"), FY 2021 and the period, FY 2022 through FY 2025 ("Forecast Period").
- **Exh. JFG-2:** Exhibit JFG-2 provides schedules showing PGW's Statement of Income, Cash Flow Statement, Debt Service Coverage Statement and Balance Sheet <u>at requested rates</u> for the HTY, FTY and FPFTY and the Forecast Period.
- **Exh. JFG-3:** Exhibit JFG-3 contains copies of ratings reports from the three rating agencies that rate the City of Philadelphia Gas Works Revenue Bonds.

- **Exh. JFG-4:** Exhibit JFG-4 is an exhibit I presented in my rebuttal testimony in PGW's last base rate proceeding (Docket No. R-2017-2586783). The exhibit provides the set of projected results for PGW in the fully projected future test year at proposed rates submitted in that proceeding.

II. BACKGROUND FOR CONSIDERATION OF RATE REQUEST

A. Financial Condition

Q. PLEASE PROVIDE THE BACKGROUND OF PGW'S CURRENT FINANCIAL CONDITION.

A. Since its last general rate increase in 2017, PGW's financial strength has been steady and stable. The ratings from the three rating agencies[1] that rate the City of Philadelphia Gas Works Revenue Bonds ("PGW's Bonds") are:

Moody's: A3 (Stable Outlook)
S&P: A (Stable Outlook)
Fitch: BBB+ (Stable Outlook)

Since PGW's last base rate proceeding, PGW's rating from Moody's has improved from Baa1 to A3. But, as Mr. Moser (PGW St. No. 7) explains, as its financial health has improved, PGW has steadily increased its efforts to improve safety, reliability, and customer service on its system. And, as Mr. Hartman (PGW St. No. 3) also explains, it is crucially important that PGW, at least, maintain these bond ratings – or, ideally, improve them – so that it can continue to have access to the capital markets on acceptable terms and to finance a portion of these improvements through internally generated funds ("IGF"). In the last ten fiscal years, PGW has been able to finance approximately $260.9

[1] *See* Exhibit JFG-3.

million of capital additions through IGF, which otherwise would have had to come from additional long-term borrowing. Mr. Hartman describes the importance of PGW continuing to fund a portion of its capital improvement program through IGF as well as meeting or exceeding the other financial metrics PGW must maintain in order to continue to be able to access the capital markets on reasonable terms. Thus, the rate increase requested by PGW is critically necessary to place the Company in a position to continue to modernize its infrastructure, take additional steps to make its distribution system safer and more efficient, and continue to improve customer service.

B. Long-Term Debt

Q. PLEASE SUMMARIZE RECENT ACTIVITY REGARDING PGW'S LONG-TERM DEBT ISSUANCES.

PGW successfully completed the issuance of revenue bonds, City of Philadelphia Gas Works Revenue Bonds, in the par amount of $273.1 million in fiscal year ("FY") 2017, the 12 months ended August 31, 2017. On August 16, 2017, the City issued Gas Works Revenue Bonds, Fifteenth Series (1998 General Ordinance) in the par amount of $273.1 million. A portion of the proceeds from the sale of the Fifteenth Series Bonds were utilized to refund a portion of the Seventh Series Bonds and redeem the City's outstanding Capital Project Notes. The Fifteenth Series Bonds also contained new money debt issued to finance a portion of PGW's ongoing Capital Improvement Program, pay the costs of issuing the bonds, and provide a deposit to the Sinking Fund Reserve. The Fifteenth Series Bonds, with fixed interest rates that range from 2.0% to 5.0%, have maturity dates through 2047. The loss on the refunding component was $0.3 million, which will be amortized over the life of the Fifteenth Series Bonds. This refunding transaction provided net present value debt service savings of $0.7 million utilizing an arbitrage yield of 2.98%. The savings as a percentage of refunded bonds was 10.11%.

As Mr. Hartman explains, PGW's ability to continue to take advantage of an attractive interest rate environment and refinance existing debt requires PGW to maintain or improve its current financial condition.

Q. WHAT PLANS DOES PGW HAVE TO SELL BONDS IN THE FORESEEABLE FUTURE?

A. PGW anticipates issuing City of Philadelphia Gas Works Revenue Bonds in the par amount of $260.0 million in the FTY, which is FY 2020, the 12 months ended August 31, 2020. The exact timing of the issuance would be subject to market conditions. The next bond issuance is projected to be in FY 2023 and in the amount of $235.0 million.

III. PGW'S NEED FOR RATE RELIEF

Q. PLEASE SUMMARIZE THE RATE INCREASE SOUGHT BY PGW IN THIS PROCEEDING.

A. PGW is requesting an increase in its annual base rate operating revenues of $70.0 million, or 10.5% on a total revenue basis.

Q. WHY IS PGW SEEKING RATE RELIEF AT THIS TIME?

A. Since PGW's last base rate case in 2017, the Company has continued to modernize its infrastructure, make its system safer and more efficient and improve customer service. While some of those efforts have been financed through surcharges (i.e., the acceleration of PGW's main replacement program via the DSIC), PGW has undertaken numerous other efforts that have been financed through base rates or additional borrowing. At the same time, PGW has experienced material increases in operating costs while seeing weather normalized levels of sales and associated revenues. During this period, PGW's financial health has continued to improve, compared to 2008 levels. However, PGW's pro forma results clearly demonstrate that a rate increase is needed if the Company is going to maintain its improving financial status and current favorable bond ratings and be able to continue with its significant efforts to improve the safety, efficiency and reliability of its system and continue to work to improve customer service.

Q. WHAT ARE SOME OF THE KEY DRIVERS FOR THE REQUESTED INCREASE?

A. Some of the key drivers for the requested base rate increase are: increasing health care costs, general higher costs of operations, and higher levels of capital spending financed by IGF. The statement of income as presented on an accrual basis, shows operating expenses remaining relatively the same in the FPFTY as the recent prior years. However, the increase in cash outlays for OPEB payments and cash outlays for pension payments are not seen because, as a result of the implementation of recent GASB pronouncements, some of these cash outlays are not recorded on the income statement (rather, on the balance sheet). Given that PGW's rates are based on the cash flow ratemaking methodology, these cash outlays must be considered as well. Other key drivers include increased capital spending for projects like the CIS replacement and building consolidation which are financed, in part, by internally generated funds. Additionally, debt service has increased.

Q. HAS PGW TAKEN STEPS TO CONTROL THE GROWTH OF ITS OPERATING EXPENSES?

A. Yes, as explained by Mr. Moser, PGW continues to benefit from its efforts to reduce health care costs for its active and retired workers through self-insurance and an actively managed wellness program. PGW is also benefitting from past steps taken to reduce pension costs, which continue to keep costs lower than they otherwise would be.[2]

Q. PLEASE EXPLAIN PGW'S EFFORTS TO REDUCE ITS OVERALL BORROWING COSTS RELATED TO LONG-TERM DEBT.

A. In fiscal years 2015, 2016, and 2017 PGW refunded portions of its outstanding revenue bonds. I previously noted the results of PGW's FY 2017 revenue bond transaction. On August 30, 2016, the City issued Gas Works Revenue Bonds, Fourteenth Series (1998 General Ordinance) in the amount of $312.4 million for the purpose of advanced refunding of select maturities of the Seventh Series Bonds (1998 General Ordinance), Ninth Series Bonds (1998 General Ordinance), and Eighth Series A Bonds (1998 General Ordinance), and to make termination payments with respect to a portion of the swap agreements associated with certain maturities of the Eighth Series B, C, D, and E Bonds. The Fourteenth Series Bonds, with fixed interest rates that range from 2.0% to 5.0%, have maturity dates through 2038. The loss on this refunding was $33.5 million, which will be amortized over the life of the Fourteenth Series Bonds. This transaction provided net present value debt service savings of $38.2 million utilizing an arbitrage yield of 2.11%. The savings as a percentage of refunded bonds was 10.86%.

On August 18, 2015, the City issued Gas Works Revenue Bonds, Thirteenth Series (1998 General Ordinance) in the amount of $261.8 million for the purpose of redeeming, refunding, or defeasing all outstanding City of Philadelphia Gas Works Revenue Bonds under the 1975 Ordinance and to redeem all of the outstanding Fourth Series Bonds (1998 General Ordinance), Fifth Series A-1 Bonds (1998 General Ordinance), defease a portion of the Outstanding Seventh Series Bonds (1998 General

[2] See, PGW St. 7 (Moser).

Ordinance), and paying the costs of issuing the bonds. The Thirteenth Series Bonds, with fixed interest rates that range from 3.0% to 5.0%, have maturity dates through 2034. The loss on this refunding was $13.5 million, which will be amortized over the life of the Thirteenth Series Bonds. This transaction provided net present value debt service savings of $34.3 million utilizing an arbitrage yield of 2.91%. The savings as a percentage of refunded bonds was 11.02%.

Additionally, PGW has been able to reduce its costs associated with its Tax-Exempt Commercial Paper program and the cost of the Letters of Credit associated with its variable rate long-term debt. In August 2017, PGW's cost associated with the Letters of Credit was approximately $1.2 million per year, or 81 basis points. The projected cost is approximately $0.4 million per year, or 29 basis points. In addition to current market trends, this decrease in the costs can be related to PGW's 2017 rate increase and PGW's good working relationship with the PUC.

IV. PRO FORMA FINANCIAL RESULTS

Q. HAVE YOU PREPARED A PRO FORMA TEST YEAR INCOME STATEMENT, CASH FLOW, DEBT SERVICE COVERAGE AND BALANCE SHEET THAT PROJECTS THE COMPANY'S STATUS IN THE CURRENT YEAR AS WELL AS ON A PROJECTED BASIS?

A. Yes.

Q. FIRST, PLEASE EXPLAIN THE TEST YEAR ON WHICH PGW'S CLAIMED REVENUE REQUIREMENT IS BASED.

A. As permitted by Act 11 of 2012, PGW has based its claimed revenue requirement on the fully forecasted 12 months ending August 31, 2021, referred to as the Fully Projected Future Test Year ("FPFTY"). The Future Test Year ("FTY") is FY 2020 and the Historical Test Year ("HTY") is FY 2019. Those results are displayed on Exhibit JFG-1.

Each page of this exhibit shows data for: (1) the HTY, the 12 months ended August 31, 2019 or FY 2019; (2) the FTY, the 12 months ended August 31, 2020 or FY 2020; and, (3) the FPFTY, the 12 months ended August 31, 2021 or FY 2021. The Exhibit also shows projections for FY 2022 through FY 2025 (which I refer to as the "Forecast Period"). Page 1 of Exhibit JFG-1 displays operating revenues, operating expenses and net earnings (Statement of Income); page 2 displays PGW's Cash Flow Statement, page 3 shows Debt Service Coverage; and page 4 shows the Company's Balance Sheet and capitalization ratios.

Q. PLEASE DESCRIBE HOW THE DATA FOR THE HISTORIC TEST YEAR WERE DERIVED.

A. The HTY is the actual audited results for FY 2019.

Q. PLEASE DESCRIBE HOW THE FUTURE TEST YEAR AND FULLY PROJECTED FUTURE TEST YEAR RESULTS WERE CREATED.

A. The FTY and FPFTY results were derived by starting with PGW's current (FY 2020) Budget ("Budget year"), approved by the Philadelphia Gas Commission ("PGC"). PGW develops its annual Budget in the following manner. With respect to revenues, PGW's Marketing and Gas Planning departments calculated revenues and sales by class for the Budget year, and provided projections for the forecast years. This process is fully described in the testimony of Kenneth Dybalski (PGW St. 6). Revenue-related expenses (chiefly natural gas) were then calculated.

Q. PLEASE EXPLAIN HOW BUDGET YEAR EXPENSES ARE DETERMINED.

A. Budget year expenses are determined in the following manner. Each department submitted its view of the expense levels it will experience in the budget year. Where a specific cost category increases or changes affecting the expense level were identified, those levels were used to establish the expense for the respective Budget year. For example, PGW utilized the annual wage increases established in its current collective bargaining agreement to calculate wage expense for various departments. Also, PGW utilized information provided by its actuary and benefits consultant to project health care costs and other benefit costs, including pension expense and Other Post-Employment Benefits ("OPEB"). Long-term debt interest expense and debt amortization were also adjusted to reflect more recent information concerning the results of the recent debt refinancing. These results were then used to prepare the four key financial schedules for FY 2020: income statement; cash flow statement; debt service coverage; and the balance sheet.

Q. DOES PGW ALSO PREPARE A FIVE-YEAR FORECAST OF FINANCIAL OPERATIONS?

A. Yes. Using the Budget year as the base year, PGW rolls forward its budgeted operating results to create a five-year forecast, taking account of any known rate or other changes that might affect the results in a particular year. PGW is using the first year of its five-year forecast, FY 2021, as its FPFTY.

Q. WHAT IS THE REVIEW AND APPROVAL PROCESS ASSOCIATED WITH THIS BUDGET AND FIVE-YEAR FORECAST?

A. In addition to an internal review and approval process by the PGW executive team, PGW is required to obtain approval of its annual budget from both the Philadelphia Facilities Management Corporation ("PFMC") (the equivalent of PGW's Board of Directors) and the PGC. PGW's capital budget must be approved by the PFMC, the PGC, and Philadelphia City Council.

Q. ARE THE AMOUNTS SHOWN ON JFG-1 DIFFERENT THAN THOSE APPROVED BY PFMC, PGC, AND PHILADELPHIA CITY COUNCIL (WHERE APPLICABLE)?

A. No, the amounts shown on JFG-1 are not different.

Q. PLEASE EXPLAIN THE ITEM SHOWN ON LINE 4, PAGE 1 OF EXHIBIT JFG-1 LABELED "REVENUE ADJUSTMENT (TED/BUS RATE)."

A. This reflects a minor upward adjustment to Total Gas Revenues to reflect an update of the additional revenue PGW is projecting it will receive from TED/BUS Rider customers in the FTY and FPFTY.

Q. AN ADJUSTMENT LABELED "UNBILLED ADJUSTMENT" APPEARS ON LINE 7. CAN YOU EXPLAIN WHAT THIS IS AND WHY THIS ADJUSTMENT WAS MADE?

A. Based on PGW's cyclical billing, adjustments are made for natural gas delivered to customers but not yet billed. This is the annual cumulative effect of these adjustments.

Q. WERE ANY ADJUSTMENTS TO BUDGETED OPERATING EXPENSES MADE ON EXHIBIT JFG-1?

A. No adjustments were made.

Q. WHAT OTHER ITEMS HAVE BEEN UPDATED?

A. The cost of PGW's anticipated bond issuance in the FTY (FY 2020) has been reflected in the FPFTY. In addition, PGW's rate case expense has been amortized over five years.

V. CALCULATION OF REVENUE REQUIREMENT

A. Cash Flow Ratemaking

Q. PLEASE EXPLAIN THE BASIS ON WHICH PGW HAS CALCULATED ITS REVENUE REQUIREMENT FOR THE FPFTY.

A. As noted, PGW is not regulated on the basis of a fair rate of return on a used and useful rate base as are investor-owned utilities; instead, the Company's revenue requirement is established on the basis of the "Cash Flow Method." While I am informed that the use of the Cash Flow Method is mandated by the Gas Choice Act,[3] the Commission has

[3] 66 Pa.C.S. § 2212(e); 52 Pa.Code § 69.2702(b) ("The Commission is obligated under law to use the cash flow methodology to determine PGW's just and reasonable rates.").

explained how it intends to implement that standard for PGW. In its 2010 Policy Statement, the Commission described the requirements of the Cash Flow Method as follows:

> (b) The Commission is obligated under law to use the cash flow methodology to determine PGW's just and reasonable rates. Included in that requirement is the subsidiary obligation to provide revenue allowances from rates adequate to cover its reasonable and prudent operating expenses, depreciation allowances and debt service, as well as sufficient margins to meet bond coverage requirements and other internally generated funds over and above its bond coverage requirements, as the Commission deems appropriate and in the public interest for purposes such as capital improvements, retirement of debt and working capital.[4]

The Commission also stated that, in determining just and reasonable rate levels for PGW it would consider, among other relevant items, the following financial factors:

- PGW's test year-end and (as a check) projected future levels of non-borrowed year-end cash.
- Available short-term borrowing capacity and internal generation of funds to fund construction.
- Debt to equity ratios and financial performance of similarly situated utility enterprises.
- Level of financial performance needed to maintain or improve PGW's bond rating thereby permitting PGW to access the capital markets at the lowest reasonable costs to customers over time.[5]

Q. PLEASE EXPLAIN HOW PGW HAS APPLIED THIS GUIDANCE IN DETERMINING ITS REVENUE REQUIREMENT.

A. As a "cash flow" regulated company, PGW's operations are entirely funded from rates, either indirectly as a result of short-term or long-term borrowing (which then must be

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4 52 Pa.Code § 69.2702.

5 52 Pa.Code § 69.2703.

paid back by ratepayers) or directly through charges to customers. Accordingly, PGW's most important financial metrics are:

1) debt service coverage ratios; and

2) end of year days cash on hand; and, separately,

3) liquidity balance; and

4) debt to equity capitalization ratio.

First, PGW's debt service coverage levels are crucial because if the Company falls below the 1.5x minimum requirement in its bond covenants, reflected in the City of Philadelphia Ordinance that establishes the requirements for PGW's bonds,[6] it will be in technical default and its access to capital markets will be severely harmed. However, it needs higher levels of debt service coverage (above the 1.5x minimum) in order to meet cash requirements not contained in the Bond Ordinance calculation or in the operating expense category of the income statement.

Second, PGW's end of year cash balance is also crucial because PGW needs an accumulated balance of cash in its accounts at fiscal year-end to pay its substantial obligations (the largest of which are invoices for natural gas and upstream pipeline capacity used by its customers) and working capital requirements beginning in the fall and continuing into the winter, prior to collecting revenues for the winter heating season.

[6] The General Gas Works Revenue Bond Ordinance of 1998, approved on May 30, 1998, Bill No. 980232, as amended and supplemented from time to time (the "1998 General Ordinance") and the General Gas Works Revenue Bond Ordinance of 1975, approved on May 30, 1975, Bill No. 1871, as amended and supplemented from time to time (the "1975 General Ordinance") (collectively referred to as the "Bond Ordinance").

Third, PGW's year-end liquidity (cash plus available short-term borrowing capacity) is also important to meet its substantial obligations during the winter prior to receiving revenues from customers, and to provide a responsible and reasonable measure of cushion for unforeseen circumstances.

In addition to the three metrics discussed above, the other indices that are important are the Company's capitalization ratio and its sources of IGF to fund construction. Both of these factors are listed in the Commission's 2010 Policy Statement and are among the main focus points that are considered by the bond rating agencies in evaluating the creditworthiness of PGW.[7]

Q. HOW DO THE OPERATING RESULTS SHOWN ON THE ATTACHED EXHIBITS TREAT THE CITY PAYMENT OF $18.0 MILLION?

A. The City Payment is shown as an expense of the Company since PGW is legally obligated to make this payment.[8] Based upon the latest budget and forecast information submitted by the City, it intends to continue to have PGW remit this fee for the foreseeable future. Accordingly, the City Payment is treated as a "known and definite" expense in PGW's operating results and resulting financial metrics.

B. Justification for Requested Increase

Non-Borrowed Year-End Cash

Q. AT PRESENT RATES, WHAT LEVELS OF YEAR END CASH IS PGW PROJECTING IT WILL EXPERIENCE IN THE FPFTY?

A. At present rates, and for the FPFTY (FY 2021), PGW is projecting that it will end the year with just $45.2 million in cash; this cash projection is negative in FY 2022 and

[7] *See, e.g.,* Exhibit JFG-3 at Moody's Investors Service, Philadelphia (City of) PA Gas Works, Credit Opinion (August 8, 2016); S & P Global Ratings Direct, Philadelphia; Gas; Joint Criteria (August 10, 2016).

[8] *See* 66 Pa.C.S. 2212(f).

dramatically decreases in the remainder of the Forecast Period (FY 2023 through FY 2025). That level of cash in the FPFTY (FY 2021) equates to just 33.9 days of cash on hand[9] — with the cash balance being negative starting FY 2022 and continuing to be negative throughout the Forecast Period.

As more fully explained by Mr. Hartman, the bond rating agencies that closely follow PGW's financial performance have indicated that a cash balance of between 70 and 100 days of cash on hand is necessary for PGW to maintain its existing bond rating and not be downgraded.[10] Therefore, a cash balance of only 33.9 days would not only be extremely concerning to the rating agencies, it would also pose real challenges to the Company's ability to meet all of its obligations when they came due.

It is important to understand that the measurement of 33.9 days cash on hand is being presented as of the end of the FPFTY (i.e., August 31, 2021), PGW's fiscal year-end. PGW's cash balance changes throughout the fiscal year and is at a low point in the middle of the fiscal year. Maintaining a days' cash on hand balance of 70 to 100 days at August 31st will be followed by a lower balance in the middle of PGW's fiscal year. Thus, the FPFTY's balance of just 33.9 days cash on hand at fiscal year-end would result in zero or close to zero balances in January and February, leaving very little ability to respond to contingencies such as lower than *pro forma* sales or unanticipated expenditures.

Debt Service Coverage

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[9] Days of cash on hand calculation: Total Operating Expenses, less non-cash items, depreciation and amortized pensions, divided by 365, divided into cash balance.

[10] Exhibit JFG-3 at Moody's Rating Action, June 10, 2019, p. 4 (Days cash on hand is forecast to remain in the 70-100 days range for the next several years.)

Q. WHY IS IT IMPORTANT TO MAINTAIN OR IMPROVE DEBT SERVICE COVERAGE?

A. The fundamental ratemaking philosophy for most financially stable municipal utilities is to provide safe and reliable service at rates that recover all current costs, plus a margin in excess of current costs. This margin, also referred to as coverage, is a municipal utility's only real alternative to issuing debt to fund capital program costs. Coverage also covers cash obligations that are not shown on the cash flow statement and provides assurance to investors that the utility will be able to make timely debt service payments. The recent rating agency reports have emphasized the need for PGW to improve debt service coverage. Maintaining or improving debt service coverage is critically necessary to keep PGW in a position to continue to have access to the capital markets on acceptable terms and to finance a portion of the capital program through IGF as necessary to provide significant savings to ratepayers over time.

Q. PLEASE DISCUSS, AT PRESENT RATES, PGW'S DEBT SERVICE COVERAGE RATIOS IN THE FPFTY AND IN THE FORECAST PERIOD.

A. Turning back to the first important financial metric, at present rates, PGW's debt service coverage ratios are minimally above its Bond Ordinance coverage requirement of 1.5x in the FPFTY. This coverage calculation does not take account of certain cash obligations that are not in the operating expense section of the income statement, including the City Payment, capital funding, and certain pension and OPEB obligations, all of which must be paid out of the cash that is part of the "coverage" in excess of the debt service. PGW's calculations show that it needs coverage at approximately 2.2x and above in order to produce enough cash to be able to meet all of its obligations throughout the year, including the City Payment, pensions, OPEBs, capital funding from IGF, and additional funds for working capital.

Q. PLEASE EXPLAIN PGW'S USE OF THE CASH GENERATED BY THE DEBT SERVICE COVERAGE RATIO REQUIREMENT IN EXCESS OF 1.0 TIMES COVERAGE.

A. Under the Bond Ordinance, PGW has a mandatory debt service coverage ratio of 1.5x the debt service, which is calculated by subtracting operating expenses from total funds available to derive total funds available to cover debt service. The cash generated by this ratio (funds available to cover debt service) is used to pay other expenses that do not appear on the Statement of Income. These payments include the $18.0 million City Payment, $18.5 million to the OPEB Trust Fund, $2.0 to $3.0 million to the pension fund, and $5.0 million towards retiree health care cost. Additionally, PGW continues to utilize IGF for capital construction to reduce its dependence on long-term debt financing and contributed between $18.0 million to $33.0 million in the last five fiscal years (i.e. FY 2015 to FY 2019) towards IGF. As of August 2019, this has saved PGW approximately $13.7 million in interest costs over the last five fiscal years. PGW's base rates need to produce approximately $42.0 million in IGF in order for PGW to continue to meet its IGF goals.

Q. WOULD THE RATING AGENCIES VIEW A DEBT SERVICE COVERAGE LEVEL JUST ABOVE 1.5X AS CAUSE FOR A DOWNGRADE?

A. In my opinion, yes, most definitely. And, without rate relief, PGW would experience debt service coverage at these unacceptably low levels. While the FPFTY debt service coverage on an "Ordinance" basis is 1.71x, Ordinance coverage drops to 1.59x in FY 2022 and <u>below</u> 1.5x in 2024.

FY 2021 FPFTY	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
1.71x	1.59	1.65	1.46x	1.35x

Again, coverages below 1.5x constitutes a default on PGW's bonds. However, the rating agencies calculate PGW coverage differently than in the Bond Ordinance, accurately treating the $18.0 million City Payment as a fixed obligation. When the Company's debt service coverage is calculated to include the $18.0 million as a fixed obligation, PGW's debt service coverage falls to 1.54x in the FPFTY and drops to below 1.50x for the entire the Forecast Period:

FY 2021 FPFTY	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
1.54x	1.43	1.48	1.30x	1.20x

Since these coverage levels are materially below the 2.0 times that Moody's has observed for PGW in FY 2017 and FY 2018, they would very likely cause a downgrade by Moody's, followed by similar negative ratings action by the other bond rating agencies. PGW Witness Hartman (PGW St. 3) discusses this in detail in his testimony.

Debt To Equity Ratio; Short-Term Borrowing Capacity

Q. AT PRESENT RATES, WHAT IS PGW'S PROJECTED DEBT TO EQUITY RATIO FOR THE FULLY PROJECTED FUTURE TEST YEAR?

A. At present rates, PGW's debt to equity capitalization ratio in the FPFTY (FY 2021) is approximately 78.15%. That percentage is below the level in the HTY (FY 2019), 84.78%. The Forecast Period shows marginal reductions in this ratio. PGW would be very concerned about increasing its debt burden, resulting in even higher levels of debt, if it were required to do so to compensate for reduced levels of available IGF. Recall that

PGW has had a goal of reducing its debt to equity level to under 60% of total capitalization, and the Commission Staff has opined that a level of 70% was not unreasonable.[11]

Q. WHY HAS PGW CHOSEN A FINANCING STRATEGY FOR CAPITAL SPENDING COMPRISED OF 50 PERCENT OF FUNDS FROM IGF AND 50 PERCENT OF FUNDS FROM DEBT?

A. PGW has chosen the financing strategy for capital spending comprised of 50 percent of funds from IGF and 50 percent of funds from debt in order to spread out some payments over time rather than have the ratepayers finance all capital improvements on a "pay-go" basis. This combination financing strategy allows PGW to use long-term debt, its tax-exempt commercial paper program, and IGF to finance the improvements to its infrastructure.

Q. IF PGW WERE FORCED TO UTILIZE DEBT FINANCING RATHER THAN IGF FOR THE NEXT FOUR YEARS WHAT WOULD THE IMPACT BE ON PROJECTED DEBT SERVICE AND THE DEBT SERVICE COVERAGE RATIO REQUIREMENT?

A. PGW would experience a decrease in its debt service coverage ratio for an incremental increase in debt service. Debt service on a bond issuance of $100.0 million at a composite rate of approximately 4% would be approximately $7.0 million per year. The bond covenant that mandates a 1.5x debt service coverage would require additional revenues of $10.5 million per year to take account of this requirement. After several bond issuances the debt service coverage requirement would exceed a "pay as you go" financing strategy. This significant savings to ratepayers over time is also why PGW does not finance its construction program using entirely long-term bonds. In addition, any increase

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11 Pennsylvania Public Utility Commission, Staff Report: Inquiry into the Philadelphia Gas Works' Pipeline Replacement Program, dated April 21, 2015, p. 6, 44, 50.

in the level of debt PGW is already projecting will drive its debt to total capitalization ratio to unacceptable levels.

Q. HOW DOES PGW CURRENTLY USE ITS COMMERCIAL PAPER?

A. Currently PGW utilizes its commercial paper for "bridge" capital financing. This strategy allows PGW to delay the issuance of long-term debt, thus putting off the associated costs, and also so that it can issue bonds at the optimal time relative to the long-term bond market. Such optimal market timing can also reduce the costs of long-term borrowing.

Bond Ratings

Q. WHY IS IT IMPORTANT FOR PGW TO MAINTAIN ITS CURRENT BOND RATINGS?

A. Credit ratings are important because PGW, like most utilities, is required to make significant capital infrastructure improvements each year for new and replacement assets. As explained by Mr. Hartman, credit ratings are a critical component in determining the cost of debt as the ratings signal PGW's ability and willingness to meet financial obligations in full and on time. A downgrade of the credit ratings for PGW's Bonds would result in an increase in PGW's borrowing costs and necessitate higher rate increases over time.

Q. WHAT WOULD HAPPEN IF PGW WERE TO EXPERIENCE THE FINANCIAL RESULTS, AT PRESENT RATES, PROJECTED FOR THE FY 2021 FPFTY?

A. PGW would be in serious risk of not being able to meet its cash obligations—and absent some timely rate relief—having its debt service coverage levels fall below the level mandated in the Bond Ordinance. If either of these events occurred, it would be entirely realistic for the rating agencies to downgrade or put a negative outlook on PGW's bonds. Such adverse actions by the rating agencies would add to PGW's borrowing costs and could trigger increased rates on PGW's variable rate debt (the Fifth Series A-2 Bonds and the Eighth Series B, C, D and E Bonds). The increased costs and/or the Company's liquidity profile would also limit PGW's reasonable access to capital markets. More importantly, the projected level of cash is not an adequate level for PGW with over $600.0 million in revenues and $500.0 million in operating expenses. If actual expenses were to exceed "normal" levels because of abnormally cold weather or an unanticipated spike in gas prices, PGW could be left having to rely on its limited short-term commercial paper for liquidity. Although PGW has the ability to issue up to $120.0 million of commercial paper on a short-term basis, this approach would add costs to customers and remove PGW's only source of short-term protection against a failure to be able to pay its bills when due.

Q. WHAT EVENTS, OTHER THAN DEFAULTING ON THE BOND COVENANTS, COULD RESULT IN A DOWNGRADING OF THESE BOND RATINGS?

A. There are a number of different metrics that the rating agencies monitor, as well as the regulatory environment in which PGW operates. In the most recent rating reports, the rating agencies specifically cite a number of variables or results that could lead to a rating downgrade. These triggers include a less support from the Commission related to rate increases, deteriorating debt service coverage levels from recent levels, increased leverage and reliance on debt funding, materially lower liquidity levels, and weaker collection rates. While there is no specific guidance from the rating agencies on the tipping point that would result in a rating downgrade, PGW carefully monitors all of the metrics identified to ensure that its financial plan would maintain or improve its bond ratings.

C. Rate Increase Request

Q. WHAT ARE YOUR CONCLUSIONS BASED ON THE FINANCIAL RESULTS AT PRESENT RATES FOR THE FPFTY AND THE FORECAST PERIOD?

A. As demonstrated, it is crucially important that PGW obtain rate relief in order to maintain these financial indicators at adequate levels, as well as to have sufficient cash in order to prudently operate the Company. A failure to improve these results with additional revenues would almost certainly result in a bond rating downgrade, which would raise the costs of borrowing and limit PGW's access to capital markets.

Q. WHAT LEVEL OF RATE RELIEF DOES PGW REQUIRE TO MAINTAIN ITS FINANCIAL INDICATORS AT THE APPROPRIATE LEVELS AND HAVE SUFFICIENT CASH TO PRUDENTLY OPERATE THE COMPANY?

A. PGW has determined that an increase of $70.0 million would provide sufficient additional revenues to enable it to maintain its financial metrics at adequate levels and maintain its existing bond rating.

Q. HAVE YOU CALCULATED PGW'S FINANCIAL RESULTS IN THE FPFTY AS WELL AS IN THE FORECAST PERIOD IF ITS PROPOSED $70.0 MILLION RATE INCREASE IS GRANTED?

A. Yes, those results are shown on Exhibit JFG-2. At $70.0 million, PGW would have debt service coverage that exceeds 2.0.x in the FPFTY and in the Forecast Period. This would be consistent with S&P's expectation that coverage will be maintained at or above 1.90x through FY 2025. Including the City Payment as an expense, PGW's debt service coverage for the FPFTY would meet or exceed 1.9x through FY 2025. As I indicated above, debt service coverage at this level is required to permit PGW to have the funds it needs throughout the year to satisfy all of its obligations.

The proposed rate increase would also produce about $113.3 million in year-end cash, or about 85.1 days of cash on hand at the end of the FPFTY. This is slightly lower than the level that Moody's observed for PGW for FY 2018 (98 days of cash on hand by Moody's calculation), but remains in the range (70 to 100 days) that Moody's has indicated it expects for a company rated at A3. This is consistent with Moody's June 2019 Credit Opinion.

Q. HOW WOULD THE RATE INCREASE AFFECT PGW'S FINANCIAL PERFORMANCE DURING THE FORECAST PERIOD?

A. In the FPFTY, it would similarly keep PGW nearer to the levels it was experiencing in the HTY (FY 2019) and the levels on which the rating agencies have commented favorably. For example, cash on hand would improve in FY 2021 to $113.3 million (85.1 days on hand) and then slowly decrease to $87.7 million (61 days on hand) in FY 2025. Debt service coverage (Ordinance Calculation) would stay above 2.0x in the Forecast Period until FY 2025 where it would fall to 1.92x. PGW's debt to capitalization ratio would slowly modulate to 60.66% in FY 2025. This highlights the fact that any Commission rate increase granted in 2020 will make steady improvement in PGW's financials because 100% of the excess over costs incurred is retained by the Company and used to finance construction and operations. This is essentially what is shown by the improved cash flow and debt service numbers.

Q. ARE THERE CIRCUMSTANCES THAT COULD MATERIALLY AFFECT THE FINANCIAL INDICATORS THAT YOU HAVE PROJECTED?

A. Yes, PGW's *pro forma* income statement is calculated assuming a 4% bad debt expense rate and a 96% collection rate. These projections do not assume any material change in PGW's collection practices.

Q. PLEASE PROVIDE YOUR OVERALL CONCLUSIONS CONCERNING THE NEED FOR AND REASONABLENESS OF PGW'S $70.0 MILLION RATE INCREASE REQUEST.

A. It is crucially important that PGW obtain the requested rate relief in order to maintain these financial indicators, as well as to provide sufficient cash to prudently operate the Company. A failure to achieve these results with additional revenues would almost certainly result in a bond rating downgrade, which would raise the costs of borrowing and limit PGW's access to capital markets.

VI. COMMITMENTS FROM PGW'S 2017 RATE CASE SETTLEMENT

Q. ARE YOU ADDRESSING ANY OF THE COMPANY'S COMMITMENTS IN THE JOINT PETITION FOR PARTIAL SETTLEMENT IN PGW'S LAST BASE RATE CASE AT DOCKET NO. R-2017-2586783[12] ("2017 PARTIAL SETTLEMENT")?

A. Yes. I will discuss the commitments under Paragraph 14 of the 2017 Partial Settlement. The commitment set forth in Paragraph 13 of the Partial Settlement is discussed by Mr. Moser.

Q. PLEASE DISCUSS THE COMMITMENTS UNDER PARAGRAPH 14 OF THE 2017 PARTIAL SETTLEMENT.

A. Paragraph 14 of the 2017 Partial Settlement requires PGW to prepare a comparison of its actual expenditures and financial results for FY 2018 compared to the FPFTY (FY 2018) amounts presented in the last case.

Q. WHAT DATA ARE YOU SUBMITTING IN COMPLIANCE WITH THIS SETTLEMENT OBLIGATION?

A. In satisfaction of that commitment, I am attaching Exhibit JFG-4. Exhibit JFG-4 is an exhibit I presented in my rebuttal testimony in PGW's last base rate proceeding. The column marked "Revised 10-year HDD Forecast 2017-18" on each page of that exhibit

[12] http://www.puc.state.pa.us/pcdocs/1529631.pdf.

represents the set of projected results for PGW in the fully projected future test year at proposed rates submitted in that proceeding. The financial statements I am presenting in this case (Exhibits JFG-1 and JFG-2) show PGW's actual expenses and financial results for FY 2018. Please note that PGW's last rate case was settled on a "black box" basis, so no PUC-approved FPFTY financials exist. Moreover, the financials that appear in JFG-4 hereto are calculated: 1) assuming PGW's originally requested $70.0 million rate increase, rather than the $42.0 million that was ultimately implemented as a result of the Settlement; and 2) using pro forma revenues normalized on the basis of a 10-year average of experienced degree days, while the Settlement rates were based on a twenty year average. Accordingly, the two sets of financials are not comparable without additional adjustments.

VII. CONCLUSION

Q. DOES THAT COMPLETE YOUR DIRECT TESTIMONY?

A. Yes.

VERIFICATION

I, Joseph F. Golden, Jr., hereby state that: (1) I am the Executive Vice President and Acting Chief Financial Officer for Philadelphia Gas Works ("PGW"); (2) the facts set forth in my testimony are true and correct to the best of my knowledge, information and belief; and (3) I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

February 28, 2020
Dated

Joseph F. Golden, Jr.
Executive Vice President
Acting Chief Financial Officer
Philadelphia Gas Works

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	R-2020-3017206
	:	
	:	
Office of Consumer Advocate	:	C-2020-3019161
Office of Small Business Advocate	:	C-2020-3019100
Philadelphia Industrial and Commercial	:	
Gas User Group	:	C-2020-3019430
	:	
v.	:	
	:	
Philadelphia Gas Works	:	

<u>ERRATA TO TESTIMONY OF PHILADELPHIA GAS WORKS</u>

Philadelphia Gas Works ("PGW") respectfully submits the following errata to its testimony in the above-captioned proceeding.

Testimony	Reference	Reads	Should Read
Direct Testimony of Joseph F. Golden, PGW St. No. 2	Page 25, line 5	"The financials that appear in JFG-5…."	"The financials that appear in JFG-4…."

PGW has attached the relevant page with this correction, which will be substituted in the copies of testimony submitted for the record.

WHEREFORE, PGW respectfully requests that the Commission and the parties to this proceeding note the above errata to PGW's testimony.

Respectfully submitted,

/s/ Daniel Clearfield

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Graciela.Christlieb@pgworks.com

Dated: July 27, 2020

Exhibit JFG-1

Exhibit JFG-1
Present Rates

PHILADELPHIA GAS WORKS
STATEMENT OF INCOME
(Dollars in Thousands)

LINE NO.		Actual 2017-18	HTY Actual 2018-19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	LINE NO.
	OPERATING REVENUES									
1.	Non-Heating	$ 23,492	$ 25,065	$ 24,026	$ 21,466	$ 20,547	$ 19,683	$ 18,889	$ 18,031	1.
2.	Gas Transport Service	51,682	63,565	66,378	67,767	69,251	70,578	71,981	73,328	2.
3.	Heating	588,624	603,521	579,656	576,418	575,835	576,884	580,122	580,938	3
4	Revenue Adjustment (TED/BUS Rate)	-	-	270	400	531	662	792	922	4.
5	Weather Normalization Adjustment	(3,806)	1,596	92	-	-	-	-	-	5.
6.	Appropriation for Uncollectible Reserve	(30,826)	(29,983)	(30,927)	(29,951)	(29,289)	(29,355)	(29,524)	(29,582)	6.
7.	Unbilled Adjustment	(912)	320	617	(36)	(25)	14	13	38	7.
8.	Total Gas Revenues	628,254	664,084	640,112	636,064	636,850	638,466	642,273	643,675	8.
9.	Appliance Repair & Other Revenues	8,121	7,908	7,910	7,964	8,044	8,125	8,207	8,290	9.
10.	LNG Project Revenues	-	-	-	-	-	1,550	2,000	3,000	10.
11.	Other Operating Revenues	11,124	12,736	11,264	11,164	11,166	11,187	11,242	11,261	11
12.	Total Other Operating Revenues	19,245	20,644	19,174	19,128	19,210	20,862	21,449	22,551	12
13.	**Total Operating Revenues**	647,499	684,728	659,286	655,192	656,060	659,328	663,723	666,227	13
	OPERATING EXPENSES									
14	Natural Gas	186,254	206,801	195,397	191,548	189,544	191,040	194,269	196,115	14.
15.	Other Raw Material	11	24	10	10	10	10	10	10	15.
16.	Sub-Total Fuel	186,265	206,825	195,407	191,558	189,554	191,050	194,279	196,125	16.
17	**CONTRIBUTION MARGINS**	**461,234**	**477,903**	**463,879**	**463,634**	**466,506**	**468,278**	**469,444**	**470,102**	17
18.	Gas Processing	21,644	22,028	22,512	21,740	22,918	22,291	22,917	23,545	18
19	Field Services	39,291	-	-	-	-	-	-	-	19.
20	Distribution	47,762	-	-	-	-	-	-	-	20.
19	Field Operations	-	79,341	85,188	86,412	88,554	90,765	93,041	95,367	19.
20	Collection	4,097	4,212	4,383	4,430	4,541	4,654	4,771	4,889	20.
21	Customer Service	13,904	13,983	15,248	15,751	16,145	16,549	16,962	17,385	21
22	Account Management	7,878	8,277	9,206	9,245	9,476	9,712	9,954	10,202	22.
23.	Marketing	3,751	4,232	4,999	4,916	5,040	5,167	5,297	5,430	23.
24.	Administrative & General	69,179	69,631	84,074	86,167	85,521	86,768	90,163	90,559	24
25.	Health Insurance	22,242	22,080	25,340	27,151	29,091	31,171	33,402	35,794	25.
26.	Environmental	-	-	792	1,059	2,862	1,012	972	993	26
27.	Capitalized Fringe Benefits	(10,767)	(9,786)	(13,716)	(8,969)	(9,546)	(9,921)	(10,347)	(10,200)	27
28.	Capitalized Administrative Charges	(16,396)	(14,276)	(16,793)	(22,707)	(21,788)	(20,247)	(19,722)	(20,129)	28.
29.	Amortization of Restructuring Costs	-								29.
30.	Pensions	43,159	30,268	29,844	23,577	25,808	30,287	28,655	27,429	30.
31	Taxes	8,758	8,705	9,280	9,435	9,539	9,731	9,925	9,856	31.
32	Other Post Employment Benefits	32,889	28,351	24,732	25,422	31,592	20,795	24,446	22,197	32.
33	Proposed Bond Refunding Savings	-	-	(1,437)	(589)	(588)	(590)	(588)	(220)	33.
34.	Cost / Labor Savings	-	-	144	(164)	-	-	-	-	34.
35.	Sub-Total Other Operating & Maintenance	287,391	267,046	283,796	282,876	299,165	298,144	309,848	313,097	35.
36.	Depreciation	57,583	63,686	65,602	67,934	73,264	76,516	71,157	71,142	36.
37.	Cost of Removal	6,387	4,500	4,500	4,500	4,500	4,500	4,500	4,500	37.
38.	To Clearing Accounts	(7,516)	-	-	-	-	-	-	-	38.
39.	Net Depreciation	56,454	68,186	70,102	72,434	77,764	81,016	75,657	75,642	39
40.	**Sub-Total Other Operating Expenses**	343,845	335,232	353,898	355,310	376,929	379,160	385,505	388,739	40
41.	**TOTAL OPERATING EXPENSES**	530,110	542,057	549,305	546,868	566,483	570,210	579,784	584,864	41.
42.	OPERATING INCOME	117,389	142,671	109,981	108,324	89,577	89,117	83,939	81,363	42.
43.	**Interest Gain / (Loss) and Other Income**	4,634	10,787	4,369	7,400	6,706	5,897	7,473	7,098	43.
44.	INCOME BEFORE INTEREST	122,023	153,458	114,350	115,724	96,284	95,015	91,411	88,461	44.
45.	**INTEREST**									45.
46.	Long-Term Debt	48,351	46,136	50,520	54,442	51,549	48,512	57,937	54,824	46.
47.	Other	(10,618)	(10,523)	(11,337)	(9,612)	(6,980)	(1,543)	(5,690)	(5,280)	47.
48.	AFUDC	(1,353)	(1,295)	(1,718)	(2,212)	(2,504)	(2,091)	(1,922)	(1,956)	48.
49.	Loss From Extinguishment of Debt	5,560	5,278	4,845	4,460	4,047	3,615	3,348	2,972	49.
50.	**Total Interest**	41,940	39,596	42,310	47,078	46,112	48,493	53,673	50,560	50.
51.	**NET INCOME**	**80,083**	**113,862**	**72,040**	**68,646**	**50,172**	**46,522**	**37,738**	**37,900**	51.
52.	City Payment	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	52.
53.	**NET EARNINGS**	**$ 62,083**	**$ 95,862**	**$ 54,040**	**$ 50,646**	**$ 32,172**	**$ 28,522**	**$ 19,738**	**$ 19,900**	53.

PHILADELPHIA GAS WORKS
CASH FLOW STATEMENT
(Dollars In Thousands)

LINE NO.		Actual 2017-18	HTY Actual 2018-19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	LINE NO.
	SOURCES									
1.	Net Income	$ 80,083	$ 113,862	$ 72,040	$ 68,646	$ 50,172	$ 46,522	$ 37,738	$ 37,900	1.
2	Depreciation & Amortization	51,717	57,048	60,396	63,079	68,808	72,473	67,400	67,558	2.
3.	Earnings on Restricted Funds Withdrawal/(No Withdrawal)	(2,898)	(5,102)	(3,491)	(4,708)	(3,988)	(3,159)	(4,715)	(4,320)	3
	Elimination of Accrued Interest on Refunded Debt	-	-	-	-	-	-	-	-	.
	Equity Bond / Debt Reduction	-	-	-	-	-	-	-	-	
4.	Proceeds from Bond Refunding to Pay Cost of Issuance	-	-	2,600	-	-	-	2,350	-	4
5	Increased/(Decreased) Other Assets/Liabilities	(1,282)	(20,376)	(27,609)	(37,907)	(26,891)	(21,985)	(35,039)	(39,027)	5
6	Available From Operations	127,619	145,431	103,935	89,109	88,100	93,851	67,734	62,111	6.
7	Drawdown of Bond Proceeds	55,000	45,000	65,009	78,084	88,177	74,039	66,418	67,892	7.
	Grant Income	-	-	-	-	-	-	-	-	.
	Lease Funds Debt Service	-	-	-	-	-	-	-	-	.
	Capitalized Interest	-	-	-	-	-	-	-	-	.
8.	Release of Restricted Fund Asset	-	-	-	-	-	-	-	-	8
9	Release of Bond Proceeds to Pay Temporary Financing	-	-	-	-	-	-	-	-	9.
10	Temporary Financing	-	-	-	-	-	-	-	-	10.
11.	TOTAL SOURCES	$ 182,619	$ 190,431	$ 168,944	$ 167,193	$ 176,277	$ 167,890	$ 134,152	$ 130,003	11.
	USES									
12.	Net Construction Expenditures	$ 123,427	$ 110,523	$ 119,673	$ 154,084	$ 174,477	$ 145,691	$ 133,918	$ 136,292	12.
13.	Funded Debt Reduction	-	-	-	-	-	-	-	-	13
13.	Revenue Bonds	38,425	51,820	52,870	54,956	55,433	59,165	61,253	64,756	13
	Revenue Bond Subordinate Debt	-	-	-	-	-	-	-	-	
	Capital Lease	-	-	-	-	-	-	-	-	.
	Equity Bond Contribution/ Debt Reduction	-	-	-	-	-	-	-	-	.
14.	Temporary Financing Repayment	-	-	-	-	-	-	-	-	14
15.	Changes in City Equity	-	-	-	-	-	-	-	-	15.
16	Distribution of Earnings	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	16.
	Additions To (Reductions of)									
17.	Non-Cash Working Capital	(39,749)	16,994	742	(3,202)	1,181	(879)	3,555	218	17.
18.	Cash Needs	140,103	197,337	191,285	223,838	249,091	221,977	216,726	219,266	18
19.	Cash Surplus (Shortfall)	42,516	(6,906)	(22,341)	(56,644)	(72,814)	(54,087)	(82,574)	(89,263)	19.
20.	TOTAL USES	$ 182,619	$ 190,431	$ 168,944	$ 167,193	$ 176,277	$ 167,890	$ 134,152	$ 130,003	20.
21.	Cash - Beginning of Period	88,535	131,051	124,146	101,805	45,160	(27,653)	(81,740)	(164,314)	21
22.	Cash - Surplus (Shortfall)	42,516	(6,906)	(22,341)	(56,644)	(72,814)	(54,087)	(82,574)	(89,263)	22.
23	**ENDING CASH**	**$ 131,051**	**$ 124,146**	**$ 101,805**	**$ 45,160**	**$ (27,653)**	**$ (81,740)**	**$ (164,314)**	**$ (253,577)**	23.
24	**Outstanding Commercial Paper**	-	-	-	-	-	-	-	-	24.
25.	**Outstanding Commercial Paper - Capital**	-	-	-	-	-	-	-	-	25.
26.	**DSIC Spending**	50,440	35,641	33,000	35,000	37,000	37,000	37,000	37,000	26.
27.	**Internally Generated Funds**	17,987	29,882	21,664	41,000	49,300	34,652	30,500	31,400	27.
28.	**TOTAL IGF + Incremental DSIC Spending**	68,427	65,523	54,664	76,000	86,300	71,652	67,500	68,400	28

Exhibit JFG-1
Present Rates

PHILADELPHIA GAS WORKS
DEBT SERVICE COVERAGE
(Dollars In Thousands)

LINE NO.		Actual 2017-18	HTY Actual 2018-19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	LINE NO.
	FUNDS PROVIDED									
1	Total Gas Revenues	$ 659,080	$ 664,084	$ 640,112	$ 636,064	$ 636,850	$ 638,466	$ 642,273	$ 643,675	1.
2	Other Operating Revenues	(11,581)	20,644	19,174	19,128	19,210	20,862	21,449	22,551	2.
3.	Total Operating Revenues	647,499	684,728	659,286	655,192	656,060	659,328	663,723	666,227	3.
4.	Other Income Incr. / (Decr) Restricted Funds	4,634	10,787	878	2,692	2,718	2,738	2,758	2,777	4
5.	City Grant	-	-	-	-	-	-	-	-	5
5.	AFUDC (Interest)	1,353	1,295	1,718	2,212	2,504	2,091	1,922	1,956	5
6.	TOTAL FUNDS PROVIDED	653,486	696,810	661,882	660,095	661,282	664,157	668,402	670,960	6.
	FUNDS APPLIED									
7.	Fuel Costs	186,265	206,825	195,407	191,558	189,554	191,050	194,279	196,125	7
8.	Other Operating Costs	343,757	335,232	353,898	355,310	376,929	379,160	385,505	388,739	8
9.	Total Operating Expenses	530,110	542,057	549,305	546,868	566,483	570,210	579,784	584,864	9.
10.	Less Non-Cash Expenses	82,843	74,552	73,083	69,157	76,765	84,545	77,603	76,412	10.
11.	TOTAL FUNDS APPLIED	447,267	467,505	476,222	477,711	489,718	485,666	502,181	508,452	11.
12.	Funds Available to Cover Debt Service	206,219	229,305	185,659	182,384	171,565	178,491	166,221	162,509	12
13.	1975 Ordinance Bonds Debt Service	-	-	-	-	-	-	-	-	13.
14.	**Debt Service Coverage 1975 Bonds**	-	-	-	-	-	-	-	-	14
13.	Net Available after Prior Debt Service	206,219	229,305	185,659	182,384	171,565	178,491	166,221	162,509	13
14.	Equipment Leasing Debt Service	-	-	-	(47,075)	-	-	-	-	14.
15.	Net Available after Prior Capital Leases	206,219	229,305	185,659	229,459	171,565	178,491	166,221	162,509	15
16.	1998 Ordinance Bonds Debt Service	87,690	98,417	100,784	106,790	107,718	108,452	113,799	120,191	16
17.	1999 Ordinance Subordinate Bonds Debt Service - (TXCP)	-	-	-	-	-	-	-	-	17
18.	Total 1998 Ordinance Debt Service	87,690	98,417	100,784	106,790	107,718	108,452	113,799	120,191	18.
19.	**Debt Service Coverage 1998 Bonds**	**2.35**	**2.33**	**1.84**	**2.16**	**1.59**	**1.65**	**1.46**	**1.35**	19.
20.	Net Available after 1998 Debt Service	118,529	130,888	84,875	122,669	63,847	70,039	52,422	42,318	20
	1998 Ordinance Subordinate Bond Debt Service	-	-	-	-	-	-	-	-	.
	Debt Service Coverage Subordinate Bonds	-	-	-	-	-	-	-	-	.
21.	Aggregate Debt Service	87,690	98,417	100,784	106,790	107,718	108,452	113,799	120,191	21.
22	Debt Service Coverage (Combined liens)	2.35	2 33	1 84	1.71	1.59	1 65	1 46	1.35	22
23.	Debt Service Coverage (Combined liens with $18.0 City Fee)	**2.15**	**2.15**	**1.66**	**1.54**	**1.43**	**1.48**	**1.30**	**1.20**	23.

Exhibit JFG-1
Present Rates

PHILADELPHIA GAS WORKS
BALANCE SHEET
(Dollars In Thousands)

NO.		ACTUAL 8/31/18	HTY ACTUAL 8/31/19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	NO.
	ASSETS									
1.	Utility Plant Net	$ 1,403,956	$ 1,451,470	$ 1,505,541	$ 1,591,691	$ 1,692,904	$ 1,762,079	$ 1,824,840	$ 1,889,990	1.
2.	Leasehold Asset	-	-	-	852	36,088	34,324	33,695	31,932	2.
3.	Sinking Fund Reserve	103,255	106,509	125,588	127,803	130,058	132,352	150,539	153,195	3.
4.	Capital Improvement Fund - Current	61,000	68,634	78,084	88,177	74,039	10,125	67,892	82,740	4.
5.	Capital Improvement Fund - Long-Term	50,815	-	167,333	81,621	9,288	-	94,965	13,861	5.
6.	Workers' Compensation Fund									6.
7.	& Health Insurance Escrow	2,646	2,711	2,731	2,759	2,786	2,814	2,843	2,871	7.
8.	Cash	131,051	124,146	101,805	45,160	(27,653)	(81,740)	(164,314)	(253,577)	8.
9.	Accounts Receivable:									9.
10.	Gas	141,346	146,018	144,249	140,752	137,949	135,139	132,313	129,481	10.
11.	Other	2,964	1,775	1,800	1,825	1,850	1,875	1,900	1,925	11.
12.	Accrued Gas Revenues	4,628	4,947	5,564	5,528	5,503	5,517	5,530	5,568	12.
13.	Reserve for Uncollectible	(66,328)	(66,751)	(67,015)	(65,657)	(64,324)	(62,985)	(61,637)	(60,284)	13
14.	Total Accounts Receivable:	82,610	85,989	84,598	82,448	80,978	79,546	78,106	76,690	14.
15.	Materials & Supplies	52,368	51,691	51,546	50,851	51,308	52,191	53,267	54,028	15.
16.	Other Current Assets	2,501	3,258	3,000	3,160	3,165	3,170	3,175	3,180	16.
17.	Deferred Debits	15,499	14,885	12,867	12,940	12,525	12,502	12,481	12,452	17.
18.	Unamortized Bond Issuance Expense	290	258	232	209	189	173	159	146	18.
19.	Unamortized Loss on Reacquired Debt	42,054	36,776	31,931	27,471	23,424	19,808	16,461	13,489	19.
20.	Deferred Environmental	31,593	37,102	48,168	47,108	44,246	43,234	42,262	41,290	20.
21.	Deferred Pension Outflows	24,943	14,421	12,560	8,590	7,775.00	6,716.00	6,559.00	6,402.00	21.
22.	Deferred OPEB Outflows	81,048	91,175	71,633	52,091	32,548 00	25,282.00	25,282.00	25,282.00	22.
23.	Other Assets	9,650	16,387	29,174	28,934	31,610	33,319	33,057	35,797	23.
24.	**TOTAL ASSETS**	$ 2,095,279	$ 2,105,410	$ 2,326,791	$ 2,251,864	$ 2,205,277	$ 2,135,894	$ 2,281,268	$ 2,189,767	24.
	EQUITY & LIABILITIES									
25.	City Equity	$ 111,700	$ 207,562	$ 261,603	$ 312,249	$ 344,421	$ 372,942	$ 392,682	$ 412,580	25
26.	Revenue Bonds	1,016,300	964,476	1,171,606	1,116,650	1,061,217	1,002,052	1,175,799	1,111,043	26.
27.	Unamortized Discount	(64)	(56)	(52)	(48)	(44)	(40)	(36)	(32)	27.
28.	Unamortized Premium	109,237	98,000	87,919	78,577	70,050	62,371	55,247	48,675	28.
29.	Long Term Debt	1,125,473	1,062,420	1,259,473	1,195,179	1,131,223	1,064,383	1,231,010	1,159,686	29.
30.	Lease Obligations	-	-	-	852	36,088	34,324	33,695	31,932	30.
31.	Notes Payable	-	-	-	-	-	-	-	-	31.
32.	City Loan	-	-	-	-	-	-	-	-	32.
32.	Accounts Payable	72,620	67,530	68,782	68,769	68,676	68,537	68,292	68,068	32.
33.	Customer Deposits	2,644	3,090	2,956	2,828	2,707	2,592	2,482	2,378	33.
34.	Other Current Liabilities	5,942	4,207	3,733	4,647	3,208	2,869	4,501	3,134	34.
35.	Pension Liability	261,261	247,246	244,136	244,675	244,919	244,177	242,469	235,033	35.
36.	OPEB Liability	378,888	336,079	316,130	293,105	266,991	237,796	205,133	169,348	36.
37.	Deferred Credits	16,494	8,284	3,848	4,013	2,154	2,105	2,096	2,090	37.
38.	Deferred Pension Inflows	13,266	18,230	18,166	6,344	693	664	1,260	6,719	38.
39.	Deferred OPEB Inflows	36,134	69,874	45,987	22,099	5,942	6,979	6,979	6,979	39.
40.	Accrued Interest	8,080	8,326	7,601	7,073	7,809	8,584	3,194	3,805	40.
41.	Accrued Taxes & Wages	3,889	4,080	4,042	4,222	4,394	4,573	4,760	4,954	41.
42.	Accrued Distribution to City	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	42.
43.	Other Liabilities	55,888	65,482	87,334	82,810	83,053	82,369	79,714	80,062	43.
44.	**TOTAL EQUITY & LIABILITIES**	$ 2,095,279	$ 2,105,410	$ 2,326,791	$ 2,251,864	$ 2,205,277	$ 2,135,894	$ 2,281,268	$ 2,189,767	44.
	CAPITALIZATION									
45.	Total Capitalization	1,237,173	1,253,628	1,521,076	1,507,428	1,475,643	1,437,325	1,623,692	1,572,266	45.
46.	Total Long Term Debt	1,125,473	1,062,772	1,259,473	1,195,179	1,131,223	1,064,383	1,231,010	1,159,686	46.
47.	Debt to Equity Ratio	90.97%	84.78%	82.80%	79.29%	76.66%	74.05%	75.82%	73.76%	47.
48.	Capitalization Ratio	10.08	5.57	4.81	3.83	3.28	2.85	3.13	2.81	48.

Exhibit JFG-2

PHILADELPHIA GAS WORKS
STATEMENT OF INCOME
(Dollars in Thousands)

LINE NO.		HTY Actual 2018-19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	LINE NO.
	OPERATING REVENUES								
1.	Non-Heating	$ 25,065	$ 24,026	$ 21,466	$ 20,547	$ 19,683	$ 18,889	$ 18,031	1.
2.	Gas Transport Service	63,565	66,378	67,767	69,251	70,578	71,981	73,328	2.
3.	Heating	603,521	579,656	576,418	575,835	576,884	580,122	580,938	3.
4	Revenue Adjustment (TED/BUS Rate)	-	270	400	531	662	792	922	4.
5.	Revenue Enhancement / Cost Reduction - FY2021	-	-	70,000	70,000	70,000	70,000	70,000	5
6	Weather Normalization Adjustment	1,596	92	-	-	-	-	-	6
7	Appropriation for Uncollectible Reserve	(29,983)	(30,927)	(33,101)	(32,369)	(32,435)	(32,604)	(32,662)	7.
8.	Unbilled Adjustment	320	617	(36)	(25)	14	13	38	8
9.	Total Gas Revenues	664,084	640,112	702,914	703,770	705,386	709,193	710,595	9.
10.	Appliance Repair & Other Revenues	7,908	7,910	7,964	8,044	8,125	8,207	8,290	10.
11.	LNG Project Revenues	-	-	-	-	1,550	2,000	3,000	11.
12.	Other Operating Revenues	12,736	11,264	12,161	12,162	12,184	12,239	12,257	12.
13.	Total Other Operating Revenues	20,644	19,174	20,125	20,206	21,859	22,446	23,547	13
14.	**Total Operating Revenues**	684,728	659,286	723,039	723,976	727,245	731,640	734,143	14.
	OPERATING EXPENSES								
15.	Natural Gas	206,801	195,397	191,548	189,544	191,040	194,269	196,115	15.
16.	Other Raw Material	24	10	10	10	10	10	10	16
17.	Sub-Total Fuel	206,825	195,407	191,558	189,554	191,050	194,279	196,125	17
18.	**CONTRIBUTION MARGINS**	**477,903**	**463,879**	**531,481**	**534,422**	**536,195**	**537,361**	**538,018**	18.
19	Gas Processing	22,028	22,512	21,740	22,918	22,291	22,917	23,545	19
20	Field Services	-	-	-	-	-	-	-	20.
21	Distribution	-	-	-	-	-	-	-	21.
20	Field Operations	79,341	85,188	86,412	88,554	90,765	93,041	95,367	20.
21.	Collection	4,212	4,383	4,430	4,541	4,654	4,771	4,889	21.
22.	Customer Service	13,983	15,248	15,751	16,145	16,549	16,962	17,385	22.
23.	Account Management	8,277	9,206	9,245	9,476	9,712	9,954	10,202	23.
24.	Marketing	4,232	4,999	4,916	5,040	5,167	5,297	5,430	24.
25.	Administrative & General	69,631	84,074	86,167	85,521	86,768	90,163	90,559	25.
26.	Health Insurance	22,080	25,340	27,151	29,091	31,171	33,402	35,794	26
27	Environmental	-	792	1,059	2,862	1,012	972	993	27.
28.	Capitalized Fringe Benefits	(9,786)	(13,716)	(8,969)	(9,546)	(9,921)	(10,347)	(10,200)	28
29.	Capitalized Administrative Charges	(14,276)	(16,793)	(22,707)	(21,788)	(20,247)	(19,722)	(20,129)	29.
30.	Amortization of Restructuring Costs								30
31.	Pensions	30,268	29,844	23,577	25,808	30,287	28,655	27,429	31.
32.	Taxes	8,705	9,280	9,435	9,539	9,731	9,925	9,856	32.
33.	Other Post Employment Benefits	28,351	24,732	25,422	31,592	20,795	24,446	22,197	33.
34.	Proposed Bond Refunding Savings	-	(1,437)	(589)	(588)	(590)	(588)	(220)	34.
35.	Cost / Labor Savings	-	144	(164)	-	-	-	-	35.
36.	Sub-Total Other Operating & Maintenance	267,046	283,796	282,876	299,165	298,144	309,848	313,097	36.
37.	Depreciation	63,686	65,602	67,934	73,264	76,516	71,157	71,142	37.
38.	Cost of Removal	4,500	4,500	4,500	4,500	4,500	4,500	4,500	38.
39.	To Clearing Accounts	-	-	-	-	-	-	-	39.
40.	Net Depreciation	68,186	70,102	72,434	77,764	81,016	75,657	75,642	40.
41	**Sub-Total Other Operating Expenses**	335,232	353,898	355,310	376,929	379,160	385,505	388,739	41.
42.	**TOTAL OPERATING EXPENSES**	542,057	549,305	546,868	566,483	570,210	579,784	584,864	42.
43	OPERATING INCOME	142,671	109,981	176,171	157,493	157,034	151,856	149,279	43.
44	**Interest Gain / (Loss) and Other Income**	10,787	4,369	7,400	6,706	5,897	7,473	7,098	44.
45.	INCOME BEFORE INTEREST	153,458	114,350	183,571	164,200	162,932	159,328	156,377	45
46	**INTEREST**								46.
47.	Long-Term Debt	46,136	50,520	54,442	51,549	48,512	57,937	54,824	47
48.	Other	(10,523)	(11,337)	(9,612)	(6,980)	(1,543)	(5,690)	(5,280)	48.
49.	AFUDC	(1,295)	(1,718)	(2,212)	(2,504)	(2,091)	(1,922)	(1,956)	49
50.	Loss From Extinguishment of Debt	5,278	4,845	4,460	4,047	3,615	3,348	2,972	50.
51.	**Total Interest**	39,596	42,310	47,078	46,112	48,493	53,673	50,560	51.
52.	**NET INCOME**	**113,862**	**72,040**	**136,493**	**118,088**	**114,439**	**105,655**	**105,816**	52.
53.	City Payment	18,000	18,000	18,000	18,000	18,000	18,000	18,000	53
54.	**NET EARNINGS**	**$ 95,862**	**$ 54,040**	**$ 118,493**	**$ 100,088**	**$ 96,439**	**$ 87,655**	**$ 87,816**	54.

PHILADELPHIA GAS WORKS
CASH FLOW STATEMENT
(Dollars in Thousands)

LINE NO.		HTY Actual 2018-19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	LINE NO.
	SOURCES								
1	Net Income	$ 113,862	$ 72,040	$ 136,493	$ 118,088	$ 114,439	$ 105,655	$ 105,816	1.
2	Depreciation & Amortization	57,048	60,396	63,079	68,808	72,473	67,400	67,558	2
3.	Earnings on Restricted Funds Withdrawal/(No Withdrawal)	(5,102)	(3,491)	(4,708)	(3,988)	(3,159)	(4,715)	(4,320)	3.
	Elimination of Accrued Interest on Refunded Debt	-	-	-	-	-	-	-	.
	Equity Bond / Debt Reduction	-	-	-	-	-	-	-	.
4	Proceeds from Bond Refunding to Pay Cost of Issuance	-	2,600	-	-	-	2,350	-	4.
5.	Increased/(Decreased) Other Assets/Liabilities	(20,376)	(27,609)	(37,907)	(26,891)	(21,985)	(35,039)	(39,027)	5
6	Available From Operations	145,431	103,935	156,956	156,016	161,768	135,651	130,027	6.
7	Drawdown of Bond Proceeds	45,000	65,009	78,084	88,177	74,039	66,418	67,892	7.
	Grant Income	-	-	-	-	-	-	-	.
	Lease Funds Debt Service	-	-	-	-	-	-	-	.
	Capitalized Interest	-	-	-	-	-	-	-	
8.	Release of Restricted Fund Asset	-	-	-	-	-	-	-	8.
9	Release of Bond Proceeds to Pay Temporary Financing	-	-	-	-	-	-	-	9.
10.	Temporary Financing	-	-	-	-	-	-	-	10.
11.	TOTAL SOURCES	**$ 190,431**	**$ 168,944**	**$ 235,040**	**$ 244,193**	**$ 235,807**	**$ 202,069**	**$ 197,919**	11.
	USES								
12.	Net Construction Expenditures	$ 110,523	$ 119,673	$ 154,084	$ 174,477	$ 145,691	$ 133,918	$ 136,292	12.
13	Funded Debt Reduction	-	-	-	-	-	-	-	13.
13.	Revenue Bonds	51,820	52,870	54,956	55,433	59,165	61,253	64,756	13.
	Revenue Bond Subordinate Debt	-	-	-	-	-	-	-	.
	Capital Lease	-	-	-	-	-	-	-	.
	Equity Bond Contribution/ Debt Reduction	-	-	-	-	-	-	-	.
14	Temporary Financing Repayment	-	-	-	-	-	-	-	14
15	Changes in City Equity	-	-	-	-	-	-	-	15.
16.	Distribution of Earnings	18,000	18,000	18,000	18,000	18,000	18,000	18,000	16
	Additions To (Reductions of)								
17.	Non-Cash Working Capital	16,994	742	(3,470)	983	(1,077)	3,357	19	17.
18	Cash Needs	197,337	191,285	223,570	248,893	221,779	216,528	219,067	18.
19	Cash Surplus (Shortfall)	(6,906)	(22,341)	11,471	(4,699)	14,028	(14,459)	(21,149)	19.
20.	TOTAL USES	**$ 190,431**	**$ 168,944**	**$ 235,040**	**$ 244,193**	**$ 235,807**	**$ 202,069**	**$ 197,919**	20
21	Cash - Beginning of Period	131,051	124,146	101,805	113,276	108,576	122,604	108,146	21.
22	Cash - Surplus (Shortfall)	(6,906)	(22,341)	11,471	(4,699)	14,028	(14,459)	(21,149)	22.
23.	**ENDING CASH**	**$ 124,146**	**$ 101,805**	**$ 113,276**	**$ 108,576**	**$ 122,604**	**$ 108,146**	**$ 86,997**	23
24	**Outstanding Commercial Paper**	-	-	-	-	-	-	-	24.
25.	**Outstanding Commercial Paper - Capital**	-	-	-	-	-	-	-	25
26.	**DSIC Spending**	35,641	33,000	35,000	37,000	37,000	37,000	37,000	26
27.	**Internally Generated Funds**	29,882	21,664	41,000	49,300	34,652	30,500	31,400	27.
28.	**TOTAL IGF + Incremental DSIC Spending**	65,523	54,664	76,000	86,300	71,652	67,500	68,400	28.

PHILADELPHIA GAS WORKS
DEBT SERVICE COVERAGE
(Dollars in Thousands)

LINE NO.		HTY Actual 2018-19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	LINE NO.
	FUNDS PROVIDED								
1.	Total Gas Revenues	$ 664,084	$ 640,112	$ 702,914	$ 703,770	$ 705,386	$ 709,193	$ 710,595	1
2.	Other Operating Revenues	20,644	19,174	20,125	20,206	21,859	22,446	23,547	2.
3.	Total Operating Revenues	684,728	659,286	723,039	723,976	727,245	731,640	734,143	3
4.	Other Income Incr / (Decr.) Restricted Funds	10,787	878	2,692	2,718	2,738	2,758	2,777	4.
5.	City Grant	-	-	-	-	-	-	-	5.
5.	AFUDC (Interest)	1,295	1,718	2,212	2,504	2,091	1,922	1,956	5.
6.	TOTAL FUNDS PROVIDED	696,810	661,882	727,942	729,198	732,074	736,319	738,876	6.
	FUNDS APPLIED								
7.	Fuel Costs	206,825	195,407	191,558	189,554	191,050	194,279	196,125	7
8.	Other Operating Costs	335,232	353,898	355,310	376,929	379,160	385,505	388,739	8
9.	Total Operating Expenses	542,057	549,305	546,868	566,483	570,210	579,784	584,864	9
10.	Less Non-Cash Expenses	74,552	73,083	69,157	76,765	84,545	77,603	76,412	10.
11.	TOTAL FUNDS APPLIED	467,505	476,222	477,711	489,718	485,666	502,181	508,452	11.
12.	Funds Available to Cover Debt Service	229,305	185,659	250,231	239,481	246,408	234,138	230,425	12.
13.	1975 Ordinance Bonds Debt Service	-	-	-	-	-	-	-	13
14	**Debt Service Coverage 1975 Bonds**	-	-	-	-	-	-	-	14.
13.	Net Available after Prior Debt Service	229,305	185,659	250,231	239,481	246,408	234,138	230,425	13
14.	Other Cash Requirements	-	-	-	-	-	-	-	14
15.	Net Available after Prior Capital Leases	229,305	185,659	250,231	239,481	246,408	234,138	230,425	15.
16.	1998 Ordinance Bonds Debt Service	98,417	100,784	106,790	107,718	108,452	113,799	120,191	16.
17.	1999 Ordinance Subordinate Bonds Debt Service - (TXCP)	-	-	-	-	-	-	-	17
18.	Total 1998 Ordinance Debt Service	98,417	100,784	106,790	107,718	108,452	113,799	120,191	18.
19.	**Debt Service Coverage 1998 Bonds**	**2.33**	**1.84**	**2.34**	**2.22**	**2.27**	**2.06**	**1.92**	19
20.	Net Available after 1998 Debt Service	130,888	84,875	143,441	131,763	137,956	120,339	110,234	20
	1998 Ordinance Subordinate Bond Debt Service	-	-	-	-	-	-	-	
	Debt Service Coverage Subordinate Bonds	-	-	-	-	-	-	-	
21.	Aggregate Debt Service	98,417	100,784	106,790	107,718	108,452	113,799	120,191	21.
22.	Debt Service Coverage (Combined liens)	2.33	1.84	2.34	2.22	2.27	2.06	1.92	22.
23.	Debt Service Coverage (Combined liens with $18.0 City Fee)	**2.15**	**1.66**	**2.17**	**2.06**	**2.11**	**1.90**	**1.77**	23.

Exhibit JFG-2
Requested Rates

PHILADELPHIA GAS WORKS
BALANCE SHEET
(Dollars in Thousands)

NO.		HTY ACTUAL 8/31/19	FTY ESTIMATE 2019-20	FPFTY BUDGET 2020-21	FORECAST 2021-22	FORECAST 2022-23	FORECAST 2023-24	FORECAST 2024-25	NO.
	ASSETS								
1.	Utility Plant Net	$ 1,451,470	$ 1,505,541	$ 1,591,691	$ 1,692,904	$ 1,762,079	$ 1,824,840	$ 1,889,990	1.
2.	Leasehold Asset	-	-	852	36,088	34,324	33,695	31,932	2.
3.	Sinking Fund Reserve	106,509	125,588	127,803	130,058	132,352	150,539	153,195	3.
4.	Capital Improvement Fund - Current	68,634	78,084	88,177	74,039	10,125	67,892	82,740	4.
5.	Capital Improvement Fund - Long-Term	-	167,333	81,621	9,288	-	94,965	13,861	5.
6.	Workers' Compensation Fund								6.
7.	& Health Insurance Escrow	2,711	2,731	2,759	2,786	2,814	2,843	2,871	7.
8	Cash	124,146	101,805	113,276	108,576	122,604	108,146	86,997	8.
9.	Accounts Receivable:								9.
10.	Gas	146,018	144,249	140,392	137,300	134,202	131,088	127,968	10.
11.	Other	1,775	1,800	1,825	1,850	1,875	1,900	1,925	11.
12.	Accrued Gas Revenues	4,947	5,564	5,528	5,503	5,517	5,530	5,568	12.
13.	Reserve for Uncollectible	(66,751)	(67,015)	(65,565)	(64,142)	(62,713)	(61,275)	(59,832)	13.
14.	Total Accounts Receivable	85,989	84,598	82,180	80,511	78,881	77,243	75,629	14.
15.	Materials & Supplies	51,691	51,546	50,851	51,308	52,191	53,267	54,028	15.
16.	Other Current Assets	3,258	3,000	3,160	3,165	3,170	3,175	3,180	16.
17.	Deferred Debits	14,885	12,867	12,940	12,525	12,502	12,481	12,452	17.
18.	Unamortized Bond Issuance Expense	258	232	209	189	173	159	146	18.
19.	Unamortized Loss on Reacquired Debt	36,776	31,931	27,471	23,424	19,808	16,461	13,489	19.
20.	Deferred Environmental	37,102	48,168	47,108	44,246	43,234	42,262	41,290	20.
21.	Deferred Pension Outflows	14,421	12,560	8,590	7,775.00	6,716.00	6,559.00	6,402.00	21.
22.	Deferred OPEB Outflows	91,175	71,633	52,091	32,548.00	25,282.00	25,282.00	25,282.00	22.
23.	Other Assets	16,387	29,174	28,934	31,610	33,319	33,057	35,797	23.
24.	TOTAL ASSETS	$ 2,105,410	$ 2,326,791	$ 2,319,711	$ 2,341,040	$ 2,339,574	$ 2,552,865	$ 2,529,280	24.
	EQUITY & LIABILITIES								
25.	City Equity	$ 207,562	$ 261,603	$ 380,096	$ 480,184	$ 576,622	$ 664,279	$ 752,093	25.
26.	Revenue Bonds	964,476	1,171,606	1,116,650	1,061,217	1,002,052	1,175,799	1,111,043	26.
27.	Unamortized Discount	(56)	(52)	(48)	(44)	(40)	(36)	(32)	27.
28.	Unamortized Premium	98,000	87,919	78,577	70,050	62,371	55,247	48,675	28.
29.	Long Term Debt	1,062,420	1,259,473	1,195,179	1,131,223	1,064,383	1,231,010	1,159,686	29.
30.	Lease Obligations	-	-	852	36,088	34,324	33,695	31,932	30.
31.	Notes Payable	-	-	-	-	-	-	-	31.
32.	City Loan	-	-	-	-	-	-	-	32.
32.	Accounts Payable	67,530	68,782	68,769	68,676	68,537	68,292	68,068	32.
33.	Customer Deposits	3,090	2,956	2,828	2,707	2,592	2,482	2,378	33.
34.	Other Current Liabilities	4,207	3,733	4,647	3,208	2,869	4,501	3,134	34.
35.	Pension Liability	247,246	244,136	244,675	244,919	244,177	242,469	235,033	35.
36.	OPEB Liability	336,079	316,130	293,105	266,991	237,796	205,133	169,348	36.
37.	Deferred Credits	8,284	3,848	4,013	2,154	2,105	2,096	2,090	37.
38.	Deferred Pension Inflows	18,230	18,166	6,344	693	664	1,260	6,719	38.
39.	Deferred OPEB Inflows	69,874	45,987	22,099	5,942	6,979	6,979	6,979	39.
40.	Accrued Interest	8,326	7,601	7,073	7,809	8,584	3,194	3,805	40.
41.	Accrued Taxes & Wages	4,080	4,042	4,222	4,394	4,573	4,760	4,954	41.
42.	Accrued Distribution to City	3,000	3,000	3,000	3,000	3,000	3,000	3,000	42.
43.	Other Liabilities	65,482	87,334	82,810	83,053	82,369	79,714	80,062	43.
44.	TOTAL EQUITY & LIABILITIES	$ 2,105,410	$ 2,326,791	$ 2,319,711	$ 2,341,040	$ 2,339,574	$ 2,552,865	$ 2,529,280	44.
	CAPITALIZATION								
45.	Total Capitalization	1,253,628	1,521,076	1,575,275	1,611,406	1,641,005	1,895,289	1,911,779	45.
46.	Total Long Term Debt	1,062,772	1,259,473	1,195,179	1,131,223	1,064,383	1,231,010	1,159,686	46.
47.	Debt to Equity Ratio	84.78%	82.80%	75.87%	70.20%	64.86%	64.95%	60.66%	47.
48.	Capitalization Ratio	5.57	4.81	3.14	2.36	1.85	1.85	1.54	48.

Exhibit JFG-3 (Part 1 of 3)

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
10 June 2019

Rate this Research

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Philadelphia (City of) PA Gas Works

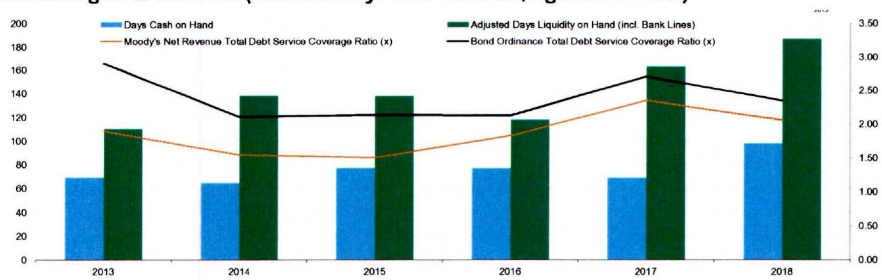
Update to Credit Analysis

Summary

Philadelphia Gas Works' ("PGW", A3, stable) credit profile reflects its credit supportive regulatory environment that has increased the utility's asset base and supported its main replacement program; a stable and predictable leverage, financial and operating profile that is expected to be maintained; a sizeable low income and modestly growing customer base; and the utility's position as a supplier of last resort, which yields consistently above average retail rates. The rating also incorporates the utility's sound management that has enhanced PGW's operating efficiencies resulting in recurring cost savings. PGW's state rate regulation constrains its cost recovery framework in comparison to the majority of municipally owned gas utilities in the US, which benefit from local unregulated rate setting. Thus, our credit view heavily considers the constructive relationship PGW has with the Pennsylvania Public Utility Commission (PUC) and the fact that the PUC must approve rates sufficient for PGW to satisfy its indenture required 1.5x debt service coverage ratio (DSCR) rate covenant.

Exhibit 1

Liquidity and coverage ratios have improved in recent years but will moderate when new debt service begins to amortize (Left axis: Days Cash on Hand, right axis: DSCR)



Source: PGW Audited Financial Statements, and Moody's Investors Service

Credit strengths

» Credit supportive rate regulatory environment and history of an effective working relationship with the PUC and the City of Philadelphia (A2, Stable)

» Strong 1.5x DSCR indenture required rate covenant and The Public Utility Code requires Pennsylvania's PUC to establish rates that meet bond ordinance requirements

» Ongoing operating improvements contain costs and support PGW's financial improvement

» Low natural gas prices, strategic location of its LNG assets, and significant storage capacity allow for effective gas cost management and opportunities

» Aggressive strategy for collections of receivables has yielded strong and stable collection rates above 95% on average, supported in recent years by lower natural gas prices

» City can only increase the $18 million city payment by 10% or $1.8 million without PUC approval, anything over 10% requires PUC approval

Credit challenges

» Sizable low income residential population contributes to delinquencies that may grow if federal assistance programs are cut and low income residents face higher monthly bills

» Customer base growth to remain modest, especially as the city's economic growth moderates

» Above average retail rates compared to peers

» High system leverage has been stable and predictable, but is forecast to decline over time given increased cash funded capital expenditures

» Maintaining sufficient available liquidity to balance exposures to gas prices, variable rate debt liquidity risks, high receivable levels and other general liquidity needs

Rating outlook

The stable outlook reflects Moody's view that PGW's sound fiscal management and credit supportive regulatory environment will continue to yield stable and relatively predictable financial and operating results.

Factors that could lead to an upgrade

» Material reduction in outstanding debt.

» Notable expansion of the customer base.

» Notable growth in the revenue base due to PUC support of capital program.

Factors that could lead to a downgrade

» A less credit supportive rate regulatory environment, including any notable changes to the recently announced base rate settlement by the PUC.

» Financial metrics narrow due to higher than expected costs and/or weaker revenue collections.

» Increased leverage without sufficient cost recovery or a material decline in liquidity.

Key indicators

Exhibit 2
Key Financial Metrics for Philadelphia Gas Works

	2014	2015	2016	2017	2018
Operating Revenues ($'000)	759,136	697,247	591,237	636,203	678,325
Debt Outstanding ($'000)	1,015,920	915,175	837,830	1,054,725	1,016,300
Debt to Operating Revenue (x)	1.34	1.31	1.42	1.66	1.50
Days Cash on Hand	65	77	77	69	98
Adjusted Days Liquidity on Hand (incl. Bank Lines)	138	138	118	163	187
Moody's Net Revenue Total Debt Service Coverage Ratio (x)	1.55	1.51	1.83	2.35	2.06
Bond Ordinance Total Debt Service Coverage Ratio (x)	2.11	2.14	2.13	2.71	2.35

Source: PGW Audited Financial Statements and Moody's Investors Service

Profile

PGW is a municipally owned regulated gas distribution utility that supplies and transports natural gas to 515,000 primarily residential customers within the City of Philadelphia. PGW has a distribution monopoly in the City and serves as the supplier of last resort given there is gas supplier choice in Pennsylvania. If customers use another gas supplier, PGW is paid a transportation fee for the use of its lines. PGW's gas distribution system consists of approximately 3,042 miles of gas mains, 476,938 service lines, and 192 regulator stations. Approximately 44% (by length) of the gas mains are cast iron, 33% are steel, 4% are ductile iron and 19% are plastic. Of the steel lines, 52% are wrapped, coated and cathodically protected. About 26% of the service lines are steel and 74% are plastic. PGW also operates two LNG facilities for liquefaction, storage, and regasification of natural gas, which is used during the winter in addition to the utility's firm take from two interstate pipelines. The utility has laddered firm gas supply contracts and has a relatively balanced gas supply mix with half coming from the Spectra pipeline and the other half coming from the Transco-Williams pipeline.

Detailed credit considerations

LNG Expansion would expand PGW capacity and provide a stable revenue source

After a public Request for Proposal (RFP) for LNG plant optimization, PGW entered into a Memorandum of Understanding with two RFP respondents in regard to the development of new LNG facilities at PGW's Richmond and Passyunk plants. The approval for development at the Passyunk Plant has been approved by the PFMC board, Philadelphia Gas Commission, and the City Council Transportation and Utilities Committee. A final vote, and approval from the full City Council is expected this summer (2019). Negotiations for the Richmond plant are on-going with the proposal respondent. To establish rates for LNG sales and ancillary services at the plants, PGW has filed for approval of an LNG Gas Service Tariff with the PUC.

Revenue Generating Base

PGW serves approximately 515,000 customers in the Philadelphia area by supplying, storing and transporting natural gas. As the largest municipally owned regulated gas distribution utility in the US, PGW has a distribution monopoly, yet their residents have the ability to choose their gas supplier. If customers use another gas supplier, PGW is paid a transportation fee for the use of its lines. PGW is also the regional supplier of last resort.

Per moodyseconomy.com, Philadelphia's economy had a strong performance in 2018, with job growth at near record levels and payrolls expanding at 2.6% from a year earlier, helping push the unemployment rate down to the lowest levels for the first time in over 15 years. The city's economy is expected to continue to grow at a modest pace in the near term, but job growth is expected to slow and weak demographics among other factors will constrain the city to a below average socio-economic profile.

Philadelphia is the economic center of a large, multi-state region, and the tax base has begun to grow after decades of decline. With a population of roughly 1.6 million, Philadelphia is the sixth-largest city in the US by population, and is at the center of the sixth-largest metropolitan area. The city's socioeconomic profile is below average: poverty is among the highest of any large US city at 26%, the median family income is equal to 71% of the US median, and unemployment, at 5.2% as of January 2019, was higher than the US rate of 4.4% for the same period.

However, the past half-decade has shown more positive economic trends. The population is growing and becoming better-educated, and personal income has increased 21% since 2009. We attribute the city's growth to national demographic trends, as well as the appeal of the city's substantial mix of universities, hospitals, and other employers. The city's strong nonprofit sector provides some underlying strength to the economy that is not reflected in tax base valuation or socioeconomic statistics.

CREDIT SUPPORTIVE REGULATORY ENVIRONMENT SOLIDIFIED RATE STRUCTURE OVER SEVERAL YEARS

The PUC has historically supported the multi-year improvement in PGW's rate structure that is a key driver of PGW's credit profile and evidenced by the approved increase to base rates in December 2017 of about $42 million per year with the PUC also approving surcharges increasing Gas Cost Rates ("GCR") varying with Heating Degree Days ("HDD"). This support is expected to continue as PGW's five year forecast includes filing for an increase to base rates of about $45 million in February 2020 for December 2020 implementation.

PGW's credit supportive rate regulatory history and PGW's current rate structure is considered to be satisfactory, enabling full cost recovery and cash flow generation to fund capital reinvestment. The improved rate structure will also help PGW fund future capital investments with approximately 45% debt and 55% from internally generated cash, which will help reduce the utility's leverage profile over time while also benefiting from additions to its asset base.

Favorably, PGW's weather normalization adjustment (WNA) mechanism has helped keep margins stable. The weather normalization adjustment is key to the utility's financial stability. While the WNA tempers PGW's revenue upside during cold periods, it also limits the downside risk during warm years. For FY 2018, the adjustment resulted in a decrease in billings of $3.8 million, a notable change from the increase in billings of $29.6 million for FY 2017. We view the WNA as a favorable driver of credit stability for it provides sound downside protection due to weather fluctuations.

The PUC's support of PGW increased after 2000 when the PUC and PGW settled an appeal and the PUC adopted a new provision when setting PGW's rates. The provision requires the PUC to allow PGW to charge sufficient rates to satisfy its bond covenants, including the 1.5x DSCR rate covenant. Moody's calculation of net revenue debt service coverage treats the $18 million annual payment to the city as an operating expense, which results in a lower DSCR than the bond ordinance calculation.

Operational and Financial Performance

FY 2018 (ended August 31, 2018) operating revenues increased 6.6% compared to FY 2017 as a result of the increase to base rates implemented in December 2017 and a higher natural gas send out which was approximately 9% higher in FY 2018 compared to FY 2017. Combined, net revenues only increased by about 14% year-over-year, resulting in a Moody's calculated DSCR of 2.06x, a slight decline from the FY 2017 DCSR of 2.35x given the 30% increase in debt service for the year, but higher than the FY 2016 DSCR of 1.83x. Moody's expects the FY 2019 DSCR to be in a similar range as both revenues and debt service rise in step. Moody's calculated DSCR includes the $18 million payment to the city as an operating expense, which lowers Moody's DSCR compared to the bond ordinance DSCR of 2.35x in FY 2018, 2.71x in FY 2017, and 2.13x in FY 2016.

PGW's five year collective bargaining agreement (CBA) expires in 2020 and includes a key modification to allow PGW to hire outside contractors to perform work to replace the steel and cast iron mains. Outside contractors may also be used to perform service abandonment projects regulated by the PUC. This change coupled with the PUC's approval of the Distribution System Improvement Charge (DSIC) at the higher 7.5% has enabled PGW to accelerate its cast iron main line replacement program. Cost saving measures referenced above plus the future consolidation of operations into fewer locations will enable PGW to manage expense growth. However, rising pension costs offset some of these positive expense reductions in other areas.

LIQUIDITY

Days cash on hand increased in FY 2018 to 98 days from 69 days in FY 2017, as a result of an increase in the unrestricted cash balance. The unrestricted cash balance for FY 2018 was $131 million a modest increase of 48% compared to FY 2017 which had an unrestricted cash balance of $88 million. Days cash on hand is forecast to remain in the 70-100 days range for the next several years.

Moody's adjusted days liquidity on hand, which includes available commercial paper backed by an undrawn credit facility, is a stronger 187 days cash on hand for FY 2018 and 163 days cash on hands for FY 2017. As of FY 2018, PGW does not have any commercial paper outstanding. PGW expects to issue commercial paper in the future to partially fund its capital expenditures.

The commercial paper program is currently supported by a $120 million line of credit with TD Bank, N.A. (A1 (cr), stable) that expires on December 1, 2021. There are no material conditions to fund, so Moody's includes any available amounts in our calculations of adjusted days liquidity on hand.

Debt and Other Liabilities

Outstanding debt declined slightly in FY 2018 as PGW did not issue any new debt or commercial paper as it continues to have funds from its 2017 debt issuance with about $61 million forecast to be available for capital projects in FY 2020. PGW expects to issue long term debt in FY 2022 of approximately $320 million to finance multiple years of capital projects, which is manageable as PGW's debt is fully amortizing and is forecast to decline over time with more cash funded capital expenditures. Over the next several years, PGW is expected to use a combination of internal funds, debt, and commercial paper to fund its capital expenditure program.

The majority of PGW's $840 million capital plan from FY 2020 to FY 2025 is dedicated to the distribution system, which is primarily the cast iron main replacement program. Less than half of the current capital plan will be financed with debt while the balance will be directly funded from internally generated funds provided in large part by the collection of the DSIC in rates.

DEBT STRUCTURE

The majority of PGW's outstanding debt is fully amortizing and fixed rate with variable rate demand bonds accounting for about 15% of outstanding debt. PGW's debt service repayment schedule is declining overall with a final maturity in FY 2047. This amortization profile provides PGW with the flexibility to layer in new debt service payments for new debt without notably raising annual debt service costs that would require a rate increase.

As of the end of FY 2018, PGW had about $152.8 million of variable rate demand obligation bonds outstanding, or 15% of total debt outstanding, a notable decline from FY 2015 when 26% of outstanding debt was variable rate. PGW's variable rate debt consists of $122.8 million of Series 8B, 8C, 8D and 8E bonds that are fully swapped to fixed and $30 million of Series 5A-2 bonds that are not swapped and expose PGW to modest interest rate risk.

DEBT-RELATED DERIVATIVES

PGW currently has one outstanding floating-to-fixed rate swap with JP Morgan Chase Bank, N.A. (Aa2(cr), stable) for a $122.8 million notional amount that synthetically fixes the variable interest rate on $122.8 million of outstanding variable rate demand bonds. Under the swap agreement, PGW pays JP Morgan semiannual fixed rate payments of 3.6745% and receives floating payments based on 70% of 1-month LIBOR. The mark-to-market value on the swap was a negative $14.8 million as of August 31, 2018. PGW has no collateral posting requirement and the swap is insured by Assured Guaranty Municipal Corp (A2, stable), whose rating is considered under the swap's additional termination events should the insurer's rating fall below A2/A and PGW's rating would also have to fall below Baa2/BBB.

PENSIONS AND OPEB

Moody's adjusted net pension liability (ANPL) in FY 2018 for PGW was about $593 million, compared to its reported net pension liability of $261 million. However, unfunded pension liabilities have a modest incremental negative impact on PGW's financial metrics given PGW's sizeable total debt outstanding of over $1 billion and a strong revenue base. Moody's adjusts the reported pension liabilities of entities that report under governmental accounting standards, to enhance comparability across rated issuers. Under governmental pension accounting, liabilities are discounted using an assumed rate of investment return on plan assets. Under our adjustments, we value liabilities using a market discount rate for high quality taxable bonds, a proxy for the risk of pension benefits. PGW continues to pay its annual actuarial required contribution (ARC).

The City of Philadelphia sponsors PGW's single employer defined-benefit pension plan, the Philadelphia Gas Works Pension plan. In December 2011, the City passed an ordinance to offer all new PGW employees a one-time option of entering into a deferred compensation plan with an employer contribution equal to 5.5% of applicable wages or the defined-benefit pension plan with an employee contribution of 6% of applicable wages.

PGW continues to annually improve the funding of its outstanding OPEB liabilities with both the PUC approved OPEB rate surcharge and cash on hand. We expect the OPEB funding levels to continue to annually improve given the PUC's approval to extend the OPEB surcharge, which would correspondingly lower the annual OPEB costs to the utility. PGW's OPEB plan includes healthcare and life insurance benefits in accordance with their retiree medical program.

Management and Governance

PGW is municipally owned by the City of Philadelphia, but unlike other municipally owned utilities, PGW's rates are regulated by the state's PUC. PGW has a monopoly over gas distribution in its 134 square mile service territory.

PGW is responsible for the day-to-day operation, management and maintenance of the gas system, yet several other entities have oversight over PGW's operations, including budgetary and rate approval.

The state's PUC regulates PGW's rates, services and safety, while the seven member board of the Philadelphia Facilities Management Corporation (PFMC) is the executive management and operational director of PGW.

The Philadelphia Gas Commission (PGC) is a five member oversight board who approves PGW's operating budget and some PFMC personnel, as well as reviewing the capital budget, real estate transactions and gas supply contracts for approval by the City Council. The five member PGC board is made up of the City Controller, two mayoral appointees, and two city council appointees.

The City Council enacts legislation to approve PGW's capital budget and gas supply contracts, as well as other material operating changes, real estate transactions and capital investments.

Exhibit 3

PGW's key counterparty relationships and general responsibilities

Organization	Function
City of Philadelphia	• The City owns PGW property. • The City Administrator reviews certain transactions and processes (chiefly through the Director of Finance). • City Council enacts legislation for the functioning of PGW (e.g., the capital budget, real estate transactions, pension modifications and certain gas supply contracts).
Philadelphia Gas Commission	• The Commission consists of the City Controller, two members appointed by the City Council and two members appointed by the Mayor. • Responsibilities include: • Approval of certain executive personnel provided by PFMC. • Review of gas supply contracts for approval by City Council. • Approval of PGW's operating budget. • Review of PGW's capital budgets for approval by City Council. • Review of real estate transactions for approval by City Council.
PFMC	• Incorporated by the City in 1972 for the specific purpose of operating PGW. • Is governed by a seven member board of directors. • Provides executive management for PGW. • Directs operation of PGW facilities and operations.
PGW	• Manages construction, operation and maintenance of the gas system on a day-to-day basis. • PGW executive management is responsible for hiring PGW staff.
PUC	• Regulates rates, customer service and safety.

Source: PGW Fifteenths Series Preliminary Offering Statement

Rating methodology and scorecard factors

The principal methodology used in this rating was US Municipal Utility Revenue Debt published in October 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

REPORT NUMBER 1179015

MOODY'S
INVESTORS SERVICE

Exhibit JFG-3 (Part 2 of 3)

S&P Global
Ratings

RatingsDirect®

Philadelphia; Gas; Joint Criteria

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Philadelphia; Gas; Joint Criteria

Credit Profile		
Philadelphia gas wks (1998 Gen Ordinance)		
Long Term Rating	A/Stable	Affirmed
Philadelphia gas wks (1998 General Ordinance)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed

Rationale

S&P Global Ratings affirmed its 'A' long-term rating and underlying rating (SPUR) on Philadelphia's gas works (PGW) revenue bonds outstanding, issued under its 1998 general ordinance. The outlook is stable.

S&P Global Ratings also affirmed the following ratings on issues rated under our joint support criteria (low correlation):

- 'AA+/A-1' rating on the 1998 ordinance, eighth series B bonds, jointly supported by a letter of credit (LOC) from Wells Fargo Bank N.A.;
- 'AA/A-1' rating on the 1998 ordinance, eighth series C bonds, jointly supported by a LOC from Barclays Bank PLC;
- 'AA+/A-1+' rating on the 1998 ordinance, eighth series D bonds, jointly supported by a LOC from Royal Bank of Canada; and
- 'AA/A-1' rating on the 1998 ordinance eighth series E bonds, jointly supported by a LOC from PNC Bank N.A.

We understand that PGW intends to replace both of the existing LOCs supporting the eighth series B and E bonds with LOCs provided by TD Bank N.A. later this month. A report will follow to reflect that substitution, once effective.

The bonds are secured by gas works revenue net of operating expenses. At fiscal year-end Aug. 31, 2018, PGW had $1 billion in debt outstanding (exclusive of premiums and discounts).

The rating also reflects the application of our "U.S. Municipal Retail Electric And Gas Utilities: Methodology And Assumptions" criteria, published Sept. 27, 2018 on RatingsDirect.

The rating reflects our opinion of PGW's strong enterprise risk profile and very strong financial risk profile. The strong enterprise risk profile reflects our view of PGW's strong operational management assessment and very strong economic fundamentals, offset by our view of PGW's vulnerable market position. The very strong financial risk profile reflects our view of PGW's extremely strong coverage partly offset by its very high debt and liabilities position. We have applied a one-notch holistic negative adjustment from the initial indicative rating to arrive at the final rating based on our view that PGW's debt burden is extremely high, and that, given its very large capital plan, above-average rates, and below-average income levels, its financial flexibility is constrained.

The strong enterprise risk profile reflects our view of PGW's:

- Strong operational and management assessment, highlighted by strong operational assets, environmental regulation and compliance, very strong management, policies and planning, and strong rate setting practices

- Very strong service area economic fundamentals, reflecting the stability provided by a broad and mostly residential revenue base of almost 500,000 customer accounts with minimal customer concentration, partly offset by low income levels
- Vulnerable market position, as a result of very high rates versus those of other regional providers and PGW's dependence on the Pennsylvania Public Utility Commission (PAPUC) for approval for base-rate increases, with a mixed history of support for filings, although this has improved recently. Although PGW is subject to rate regulation and does not benefit from the flexibility we typically associate with municipal utilities that have autonomous rate setting authority, recent years' regulatory decisions provided rate relief that supports extremely strong debt service coverage metrics. Moreover, the regulator has authorized the utility's use of several surcharges that support capital improvements and postemployment benefits. Also available to the utility are a weather normalization adjustment that insulates margins from weather variability and a gas cost rate adjustor that automatically passes on gas costs to ratepayers on a quarterly basis
- Extremely strong industry risk relative to other industries and sectors

The very strong financial risk profile reflects our view of the PGW's:

- Extremely strong coverage, evidenced by very robust coverage of fixed costs (debt service payments after the annual transfer to the City of Philadelphia's general fund) averaging 1.9x over fiscal years 2014 through 2018, reaching 2.1x in fiscal 2018 (management estimates fixed-cost coverage in fiscal years 2019 to 2024 in a range of 1.9x to 2.4x under what we view as reasonable assumptions);
- Very strong liquidity and reserves, reflecting $131 million in unrestricted cash as of audited fiscal 2018, (measuring a strong 106 days of operating expenses), which management projects will remain near current levels (in addition, a $120 million commercial paper (CP) program that the utility can use to provide working capital, as well as use for capital purposes, bolsters liquidity); and
- Highly vulnerable debt and liabilities position, suggested by a very high debt-to-capitalization ratio of 91% as of fiscal 2018, although the ratio is projected to decline to 54% by fiscal 2025, and with a large capital plan of $830 million over the next six years as PGW addresses its main replacement program.

The 1998 ordinance bonds, although rated as working-lien bonds, were subordinate to the closed senior-lien 1975 ordinance debt. They are now effectively senior-lien obligations because the 1975 ordinance bonds have been refunded and the lien extinguished.

PGW is the nation's largest municipally owned gas utility, serving approximately 500,000 customers in Philadelphia.

Outlook

The stable outlook reflects our view of PGW's extremely strong coverage over the past several years and projections that this trend will continue, mainly as a result of PGW's several cost adjustment mechanisms in place, its desire to generate significant internal funds for capital needs, and its need to maintain liquidity targets.

Upside scenario

Over the next two years, rating upside is unlikely given limitations of the service area economy (highlighted by low income levels and above-average unemployment), high rates, substantial capital needs, and heavy debt burden.

Downside scenario

Given PGW's very robust coverage and myriad of available pass-through mechanisms, in our view rating pressure is limited.

Enterprise Risk Profile: Strong

Operational Management Assessment: Strong

In our opinion, operational management is strong, highlighted by strong operational assets, strong environmental regulation and compliance, very strong management, policies and planning, and strong rate setting practices.

PGW's overall operational assets are strong, in our view. The system purchases its gas under a variety of contracts with about a dozen counterparties, including four prepaid gas contracts at a 30- to 40-cent discount to index. These prepaid gas contracts represent about 10% of total PGW supply and act as a hedge to natural gas cost spikes. PGW has access to multiple pipelines, providing the utility with flexibility to procure favorable pricing. The use of storage (and, to a lesser extent, liquefied natural gas, or LNG) gives PGW the ability to shave costs during peak demand periods. PGW obtains natural gas through nine city gates and two interstate natural gas pipeline companies. PGW purchases natural gas from suppliers at costs based on national index prices with PGW's total supply broken down as follows: 47% baseload/daily (with 10% from discount from index), 30% swing supply, 17% bundled offsite storage/LNG including transportation, and 6% LNG.

We view the district's positioning regarding environmental regulations and compliance as strong, as the district is not subject to any materially strenuous environmental regulations.

We view the management team as very strong, deep, and experienced, with policies in place that reduce operating and financial risk. We also view positively the district's policies and planning practices, which include a gas procurement strategy, annually updated long-term financial and capital plans, an internal debt service coverage target of 1.8x, a 60% debt-to-equity target, and a liquidity target of $100 million or more. Management has been relatively successful in recent years at improving communication and relations with the PAPUC, and this has resulted in a better understanding of PGW's not-for-profit model and a better record of gaining approval for rate and surcharge requests.

In our opinion, rate setting practices are strong. Base rates are regulated by the PAPUC, which is obligated to use the cash flow methodology to determine PGW's "just and reasonable" rates. Nevertheless, all gas cost rate adjustments (adjusted quarterly) have been received in full and on time. PGW has a credit-supportive rate structure that includes a number of dedicated surcharges that support capital improvements and other postemployment benefits, and a weather normalization adjustment that insulates margins from weather variability.

Economic fundamentals: Very strong

We view PGW's economic fundamentals as very strong, reflecting the stability provided by a broad and mostly residential revenue base (and no customer concentration), partly offset by low income levels with median household effective buying income at just 74% of the national level. PGW's broad customer base of almost half a million customer accounts, however, is credit positive, given the stability and economics of scale it provides. The city, with an estimated population of 1.6 million, is coterminous with Philadelphia County in southeastern Pennsylvania. It is the sixth-largest city in the U.S. in terms of population. Philadelphia's economy is comparatively diverse with strong health care and higher education sectors, with a historically more moderate employment growth base, and a higher unemployment rate when compared with state and national levels. The city's population has recently experienced growth, after declines through 2006.

Market position: Vulnerable

We consider PGW's market position to be vulnerable, reflecting very high rates versus other regional providers and PGW's dependence on the PAPUC for approval for base-rate increases, with a mixed history of support for filings, although this has improved recently. However, we view positively PGW's credit-supportive rate structure that includes a number of dedicated surcharges. In December 2017, the PAPUC approved a settlement agreement for a $42 million general rate increase, which was less than the $70 million that the filing sought. We believe that despite the lower settlement, PGW's financial metrics will continue to support the 'A' rating. An additional rate increase of a proposed $45 million is planned in fiscal 2021.

PGW's rates are much higher than those of other regional utilities. We believe this is a function of historically weak collections, sizable bad debt expense, and customer responsibility and senior citizen discount programs. Similar disparities exist among other customer classes as well. These disproportionate shifts in revenue-raising burden between customer classes or segments impair financial flexibility. Thus, much of the utility's growth is for unbundled service, with alternative sources supplying about 40% of load.

Industry risk: Extremely strong

Consistent with "Methodology: Industry Risk," published Nov. 19, 2013, we consider industry risk for municipal retail electric and gas utilities covered under these criteria very low, and therefore extremely strong as compared with that for other industries and sectors.

Financial Risk Profile: Very Strong

Coverage metrics: Extremely strong

We view PGW's coverage metrics as extremely strong, with fixed-charge coverage maintained at an average of 1.9x over the five years through fiscal 2018 and forecast to remain so through 2025, even after the annual $18 million city transfer. We believe the forecast relies on reasonable and conservative assumptions, evidenced by relatively flat gas sales, modest interest earnings at 2% annually, and a 96% collection rate. Coverage has improved steadily, and is at levels that we consider both supportive of the rating and sustainable. S&P Global Ratings evaluates PGW's financial metrics assuming the annual $18 million city payment is made, treating it as an operating expense. PGW estimates FCC at a range of 1.90x to 2.24x through 2025.

In our opinion, PGW has an interdependent relationship with Philadelphia. Historically, the city has received an $18 million annual payment from the utility, but with PGW facing cash flow problems, the city forgave the payment in 2004, and annually granted the payment back to the utility from 2005 through 2010. In fiscal years 2011 to 2018, Philadelphia retained the payment, partly in recognition of PGW's improved financial condition.

Low collection rates had plagued PGW for several years, although this has improved over the past decade. We believe the improvement resulted from lower customer bills and reduced delinquencies, both stemming from low natural gas prices and lower demand associated with generally warmer weather. We also believe that the general improvement in collection rates is partly the result of stricter enforcement on delinquent accounts.

Liquidity and reserves: Very strong

We consider PGW's liquidity and reserves very strong, reflecting about $131 million in unrestricted cash and investments, providing 106 days of operating expenses. A $120 million CP program that can fund working capital purposes supplements this. Management's projections suggest that liquidity should be fairly stable over the next five years.

Debt and liabilities: Highly vulnerable

In our opinion, PGW's debt and liabilities are highly vulnerable, suggested by a debt-to-capitalization ratio of 91% as of fiscal 2018 (although this is projected to decline to 54% by fiscal 2025) and a large capital plan of $830 million over the next six years as PGW accelerates its main replacement program. PGW plans to issue $320 million in bonds in 2022 to take out its CP draws that it expects to be outstanding that year. We understand that PGW is increasing its liquefaction capabilities at its existing LNG facilities. Previous plans contemplated about $120 million in capital costs, $110 million of which would be debt-financed and amortized over 25 to 30 years. However, we understand that management is planning to shift financing costs to another party. We believe the project would provide some operational benefits (creating redundancies and providing a possible replacement to its aging liquefier, for example), and that the shifting of financing to another party reduces risk.

Ratings Detail (As Of May 8, 2019)		
Philadelphia gas wks rev rfdg bnds (1998 Gen Ordiance) ser 8TH D due 08/01/2031		
Long Term Rating	AA+/A-1+	Affirmed
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia gas wks (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia gas wks (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia gas wks (AGM) (SEC MKT)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia gas (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia gas (BAM) (SECMKT)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia JOINTCRIT		
Long Term Rating	AA+/A-1	Affirmed
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia JOINTCRIT		
Long Term Rating	AA/A-1	Affirmed

Ratings Detail (As Of May 8, 2019) (cont.)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Philadelphia (BAM)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
City of Philadelphia, Pennsylvania, Gas Works Revenue Refunding Bonds, Eighth Series C (1998 General Ordinance)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Long Term Rating	AA/A-1	Affirmed
City of Philadelphia, Pennsylvania, Gas Works Revenue Refunding Bonds, Eighth Series D (1998 General Ordinance)		
Unenhanced Rating	A(SPUR)/Stable	Affirmed
Long Term Rating	AA+/A-1+	Affirmed

Many issues are enhanced by bond insurance.

Exhibit JFG-3 (Part 3 of 3)

FITCH AFFIRMS PHILADELPHIA PA'S GAS WORKS REV BONDS AT 'BBB+'; OUTLOOK STABLE

Fitch Ratings-New York-05 July 2018: Fitch Ratings has affirmed the 'BBB+' rating on approximately $1,041.8 million of outstanding revenue bonds issued by the city of Philadelphia on behalf of the Philadelphia Gas Works (PGW).

The Rating Outlook is Stable.

SECURITY

The 1998 general ordinance bonds are secured by net revenues of the gas works utility.

KEY RATING DRIVERS

LARGE GAS DISTRIBUTION SYSTEM: PGW is the largest municipally owned gas distribution utility in the nation, serving approximately 505,000 accounts located entirely within the city of Philadelphia (IDR A-/Stable). The system provides natural gas on a retail basis to a considerably diverse and largely residential customer base exhibiting no concentration among users.

STABLE FINANCIAL METRICS; HIGH LEVERAGE: Prior rate relief, greater cost recovery, historically low natural gas prices, and a healthier collection rate has led to stability in financial performance. The December 2017 base rate increase should further improve financial performance. Fitch calculated debt service coverage (including unamortized premium amounts) has averaged a solid 1.67x over the prior five years. Liquidity continued at an acceptable level in fiscal 2017, equal to 66 days of cash on hand. However, leverage remains high, with debt to funds available for debt service (FADs) of 8.05x.

RATE REGULATED UTILITY: PGW's ability to establish its rates is subject to oversight by the Pennsylvania Public Utility Commission (PUC), potentially limiting needed rate increases and overall financial flexibility. Positively, the utility's relationship with the PUC has remained constructive and supportive in recent years, evidenced by an approximate 6.8% base rate increase that was approved and became effective December 2017, in addition to the approval of various surcharges in the recent past.

WEAK BUT STABLE DEMOGRAPHICS: The city's economy continues to strengthen somewhat and is well anchored by several large healthcare and higher education institutions. However, wealth indicators throughout the service area remain weak, contributing to chronically weak collections and sizeable write-offs, and compounding PGW's high rates.

RATING SENSITIVITIES

LIMITED FINANCIAL FLEXIBILITY: Fitch expects Philadelphia Gas Works' high rates, the service area's low income levels and a regulatory environment that includes state and local oversight will continue to limit financial flexibility, despite the overall improvement in PGW's credit quality in recent years. A return to weaker collection rates, diminished cash flow and an inability to recover costs would exert downward pressure on the ratings.

SUCCESSFUL RATE RELIEF: Failure to secure appropriate rate relief to support capital investment and related borrowings would likely have negative rating ramifications.

REDUCED LEVERAGE: A significant reduction in PGW's leverage and an improved cost structure due in part to further rate increases and/or other revenue enhancements could lead to positive rating action.

CREDIT PROFILE

PGW is the largest municipally owned gas distribution utility in the nation, providing natural gas through a diverse mix of supply arrangements, as well as its own storage and natural gas liquefaction facilities. Ample storage capacity allows the system to procure and store a sizeable portion of its winter supply during the less expensive summer months.

The utility's operations and ability to establish rates are subject to oversight and regulation at both the state and local level, thereby limiting the utility's overall flexibility. However, operating performance remains much improved over the prior decade.

DIVERSE CUSTOMER BASE WITH A STABLE SERVICE AREA

PGW provides gas distribution to a diverse and stable service area consisting entirely of the city of Philadelphia (IDR A-/Stable), with the top 10 customers accounting for less than 3% of revenues. In 2017 there were a total of 505,000 customers and approximately 95% of customers were classified as residential.

Indicative of the weaker socioeconomic characteristics of the customers base, as of Aug. 31, 2017, there were approximately 49,000 customers participating in the Customer Responsibility Program, which assists low-income residential customers (those who are below 150% of the federal poverty level) with forgiving a portion of their bill.

Unemployment (for Philadelphia County) continues to trend downward but remains elevated relative to the state and nation. In 2017 the county unemployment rate was 6.2%, compared to the 6.8% registered in 2016. The county's poverty rate of 25.9% is significantly above the state and national averages, 13.3% and 15.1%, respectively.

SYSTEM ASSETS

PGW manages its gas supply through a combination of flowing pipeline supplies, off-system underground storage and two City-owned/PGW-operated liquefied natural gas (LNG) facilities used for the liquefaction, storage, and vaporization of natural gas.

Term contracts, spot market purchases and storage facilities are used to provide the vast majority of PGW's supply requirements, while LNG facilities provide the balance. The use of the PGW's off-system storage and LNG capability allow for the purchase of excess gas that can be stored during off-peak months, thereby reducing the amount of capacity needed to be reserved during higher cost winter months.

PGW is presently reviewing its LNG portfolio and researching various options in order to maximize LNG operations and the associated benefits to the utility.

RATE SETTING AND CHARGES

Per U.S. Energy Information Administration data, natural gas prices in the State of Pennsylvania are above the U.S. average, with the residential charge (as of March 2018) in the state at $10.41/ Mcf) versus the national average of $9.79/Mcf. The Philadelphia/Camden/Wilmington average was about 13% higher, shown at $11.80/Mcf.

These higher rates limit flexibility in Fitch's view, particularly when coupled with the PUC's oversight and the service area's income levels, historically weak collections, and sizeable write-offs. Favorably, though, the PUC has recently approved a base rate increase and accounts receivable level appears to be moderating.

Rates and charges are set by the PUC to ensure that all costs are recovered, bond covenants are satisfied and an $18 million below the line annual utility payment continues to be made to the city. PGW's rate structure incorporates a base rate, gas cost rate (GCR), distribution charge and numerous surcharges imposed to recover costs associated with social programs, capital projects, other post-employment benefits and efficiency programs. A weather normalization adjustment is also deployed to compensate for lower heating demand and to stabilize cash flow.

RECENT RATE ACTION

On Feb. 27, 2017, PGW filed for an increase in the distribution base rates with the PUC. The filing requested an increase that would produce $70 million (11.6%) in additional operating revenue based on a 10 year normal weather assumption. The filing also included a request to increase the fixed customer charge component, as well as the volumetric delivery charge component of the base rates. Subsequently, in July 2017, PGW filed a petition for partial settlement associated with the Feb. 27 filing. The settlement agreement provided PGW with a general rate increase of $42 million in annual operating revenues calculated using a 20 year normal weather assumption.

PGW determined the estimated pro forma revenue impact from the change from 10-year normal weather to 20, approximating an additional $17 million per year over the forecast period.

In November 2017 the PUC approved the Settlement Agreement and the new rates became effective on Dec. 1, 2017. In addition, PGW was granted a change in its heating degree day (HDD) average from a 30-year HDD average to a 20-year HDD average.

PGW anticipates filing for a base rate increase in February 2020 which will support the expected additional debt issuance. Preliminarily, management anticipates that the request will be in the $40 million-$60 million range, though a rough estimate. PGW assumes that a rate adjustment, if submitted in February 2020, would be approved in November 2020 and become effective in December 2020 (fiscal 2021).

Overall, Fitch views the approval of the rates favorably; however, the rate regulated environment does limit flexibility given the time it may take to implement necessary changes.

STABLE FINANCIAL PERFORMANCE

Over the past few years there has been greater stability in financial performance. Fitch calculated debt service coverage (including unamortized premium amounts) has averaged a solid 1.67x over the past five years, as compared against the average 1.1x achieved during 2006 through 2009 period.

PGW's liquidity is somewhat low but still adequate. In 2017, days cash on hand was about 66, and day liquidity was a stronger 155. However, leverage remains high, with debt to funds available for debt service at about 8.05x in 2017. Leverage is expected to remain somewhat elevated, as there are additional debt plans in addition to funding some projects on a pay go basis.

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A January 2018 district court ruling that dismissed claims regarding payment of Puerto Rico Highways and Transportation Authority debt has raised questions about the scope of protections provided by Chapter 9 of the U.S. bankruptcy code to bonds secured by pledged special revenues. Fitch's rating criteria treat special revenue obligations as independent from the related municipality's general credit quality. The outcome of the litigation could result in modifications to Fitch's approach. For more information, see "What Investors Want to Know: The Impact of the Puerto Rico Ruling on Special Revenue Debt" available at www.fitchratings.com.

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Additional information is available on www.fitchratings.com

Applicable Criteria
Rating Criteria for Public-Sector, Revenue-Supported Debt (pub. 26 Feb 2018)
https://www.fitchratings.com/site/re/10020113
U.S. Public Power Rating Criteria (pub. 18 May 2015)
https://www.fitchratings.com/site/re/864007

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Exhibit JFG-4

Proposed Rates
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PGW
Exhibit
JFG-4

PHILADELPHIA GAS WORKS
STATEMENT OF INCOME
(Dollars in Thousands)

LINE NO.		ACTUAL 2014-15	HTY 2015-16	30-YR HDD FTY 2016-17	10-YR HDD FPFTY 2017-18	ADJUST	REVISED 10-YR HDD FPFTY 2017-18	10-YR HDD FORECAST 2018-19
	OPERATING REVENUES							
1.	Non- Heating	$ 30,753	$ 21,873	$ 26,425	$ 26,230	$ -	$ 26,230	$ 25,378
2.	Gas Transport Service	39,962	38,550	45,674	44,614	-	44,614	46,222
3.	Heating	618,164	472,275	524,234	534,832	-	534,832	543,666
4.	Revenue Enhancement / Cost Reduction	-	-	-	70,000	-	70,000	70,000
4-A	Health Escrow FundSurcharge	-	-	-	-	1,167	1,167	
5.	Weather Normalization Adjustment	(10,747)	41,479	5,905	-	-	-	-
6.	Unbilled Adjustment	(2,105)	(1,830)	1,673	315	-	315	104
7.	Total Gas Revenues	676,027	572,347	603,911	675,991	1,167	677,158	685,370
8.	Appliance Repair & Other Revenues	8,727	7,962	8,182	8,265	-	8,265	8,347
9.	Other Operating Revenues	12,493	10,928	13,023	12,757	-	12,757	12,903
10.	Total Other Operating Revenues	21,220	18,890	21,205	21,022	-	21,022	21,250
11.	Total Operating Revenues	697,247	591,237	625,116	697,013	1,167	698,180	706,620
	OPERATING EXPENSES							
12.	Natural Gas	252,158	146,515	176,731	184,960	-	184,960	191,471
13.	Other Raw Material	11	9	10	10	-	10	10
14.	Sub-Total Fuel	252,169	146,524	176,741	184,970	-	184,970	191,481
15.	**CONTRIBUTION MARGINS**	445,078	444,713	448,375	512,043	1,167	513,210	515,139
16.	Gas Processing	18,180	17,948	17,666	17,521	-	17,521	17,837
17.	Field Services	36,874	36,276	39,369	40,340	-	40,340	41,299
18.	Distribution	38,629	37,173	41,690	42,562	-	42,562	43,528
19.	Collection	3,457	3,341	4,354	4,420	-	4,420	4,519
20.	Customer Service	12,262	12,432	13,503	13,807	-	13,807	14,126
21.	Account Management	7,735	7,571	8,399	8,487	-	8,487	8,671
22.	Bad Debt Expense	34,833	27,133	30,654	30,073	-	30,073	30,784
23.	Marketing	6,956	3,671	4,355	4,439	-	4,439	4,538
24.	Administrative &General	60,253	67,139	69,025	66,334	(365)	65,969	66,160
25.	Health Insurance	51,051	53,370	58,305	30,811	-	30,811	33,641
26.	Environmental	-	-	-	-	-	-	2,045
27.	Capitalized Fringe Benefits	(8,860)	(10,077)	(11,537)	(11,620)	-	(11,620)	(12,238)
28.	Capitalized Administrative Charges	(9,097)	(10,778)	(15,791)	(12,945)	-	(12,945)	(13,738)
29.	Pensions	43,748	62,336	65,022	51,800	-	51,800	40,308
30.	Taxes	7,823	7,521	8,232	8,437	-	8,437	8,647
31.	Other Post Employment Benefits	6,726	9,929	6,632	31,028	-	31,028	29,663
32.	Cost / Labor Savings	-	-	(2,073)	-	-	-	-
33.	Sub-Total Other Operating & Maintenance	310,570	324,985	337,805	325,494	(365)	325,129	319,790
34.	Depreciation	46,474	47,894	48,842	50,596	-	50,596	52,436
35.	Cost of Removal	2,897	3,785	4,100	4,100	-	4,100	4,100
36.	To Clearing Accounts	(5,584)	(6,231)	(6,771)	(7,516)	-	(7,516)	(7,562)
37.	Net Depreciation	43,787	45,448	46,171	47,180	-	47,180	48,974
38.	Sub-Total Other Operating Expenses	354,357	370,433	383,976	372,674	(365)	372,309	368,764
39.	**TOTAL OPERATING EXPENSES**	606,526	516,957	560,717	557,644	(365)	557,279	560,245
40.	**OPERATING INCOME**	90,721	74,280	64,399	139,369	1,532	140,901	146,375
41.	Interest Gain / (Loss) and Other Income	3,784	1,393	2,898	3,031	-	3,031	2,684
42.	**INCOME BEFORE INTEREST**	94,505	75,673	67,297	142,400	1,532	143,932	149,059
	INTEREST							
43.	Long-Term Debt	45,756	40,295	44,834	49,160	-	49,160	46,807
44.	Other	7,448	3,966	(4,059)	(6,893)	-	(6,893)	(6,252)
45.	AFUDC	(781)	(1,120)	(1,136)	(920)	-	(920)	(985)
46.	Loss From Extinguishment ofDebt	4,100	4,478	6,081	5,666	-	5,666	5,300
47.	Total Interest	56,523	47,619	45,720	47,013	-	47,013	44,870
48.	**NET INCOME**	37,982	28,054	21,577	95,387	1,532	96,919	104,189
49.	City Payment	18,000	18,000	18,000	18,000	-	18,000	18,000
50.	**NET EARNINGS**	$ 19,982	$ 10,054	$ 3,577	$ 77,387	$1,532	$ 78,919	$ 86,189

LINE NO.		ADJUST	REVISED 10-YR HDD FORECAST 2018-19	10-YR HDD FORECAST 2019-20	ADJUST	REVISED 10-YR HDD FORECAST 2019-20	10-YR HDD FORECAST 2020-21	ADJUST	REVISED 10-YR HDD FORECAST 2020-21	10-YR HDD FORECAST 2021-22	ADJUST	REVISED 10-YR HDD FORECAST 2021-22	LINE NO.
	OPERATING REVENUES												
1.	Non- Heating	$ -	$ 25,378	$ 24,494	$ -	$ 24,494	$ 23,651	$ -	$ 23,651	$ 22,873	$ -	$ 22,873	1.
2.	Gas Transport Service	-	46,222	47,594	-	47,594	48,853	-	48,853	50,055	-	50,055	2.
3.	Heating	-	543,666	552,484	-	552,484	561,520	-	561,520	571,396	-	571,396	3.
4.	Revenue Enhancement / Cost Reduction	-	70,000	70,000	-	70,000	70,000	-	70,000	70,000	-	70,000	4.
4-A	Health Escrow FundSurcharge	1,167	1,167		1,167	1,167		-	-		-		4-A
5.	Weather Normalization Adjustment	-	-	-	-	-	-	-	-	-	-	-	5.
6.	Unbilled Adjustment	-	104	83	-	83	119	-	119	109	-	109	6.
7.	Total Gas Revenues	1,167	686,537	694,655	1,167	695,822	704,143	-	704,143	714,433	-	714,433	7.
8.	Appliance Repair & Other Revenues	-	8,347	8,431	-	8,431	8,515	-	8,515	8,601	-	8,601	8.
9.	Other Operating Revenues	-	12,903	13,044	-	13,044	13,186	-	13,186	13,339	-	13,339	9.
10.	Total Other Operating Revenues	-	21,250	21,475	-	21,475	21,701	-	21,701	21,940	-	21,940	10.
11.	Total Operating Revenues	1,167	707,787	716,130	1,167	717,297	725,844	-	725,844	736,373	-	736,373	11.
	OPERATING EXPENSES												
12.	Natural Gas	-	191,471	197,808	-	197,808	204,518	-	204,518	211,904	-	211,904	12.
13.	Other Raw Material	-	10	10	-	10	10	-	10	10	-	10	13.
14.	Sub-Total Fuel	-	191,481	197,818	-	197,818	204,528	-	204,528	211,914	-	211,914	14.
15.	**CONTRIBUTION MARGINS**	1,167	516,306	518,312	1,167	519,479	521,316	-	521,316	524,459	-	524,459	15.
16.	Gas Processing	-	17,837	18,216	-	18,216	18,457	-	18,457	18,857	-	18,857	16.
17.	Field Services	-	41,299	42,096	-	42,096	42,611	-	42,611	43,456	-	43,456	17.
18.	Distribution	-	43,528	44,358	-	44,358	44,925	-	44,925	45,824	-	45,824	18.
19.	Collection	-	4,519	4,609	-	4,609	4,651	-	4,651	4,695	-	4,695	19.
20.	Customer Service	-	14,126	14,408	-	14,408	14,627	-	14,627	14,919	-	14,919	20.
21.	Account Management	-	8,671	8,844	-	8,844	8,977	-	8,977	9,157	-	9,157	21.
22.	Bad Debt Expense	-	30,784	31,524	-	31,524	31,984	-	31,984	31,967	-	31,967	22.
23.	Marketing	-	4,538	4,625	-	4,625	4,694	-	4,694	4,785	-	4,785	23.
24.	Administrative &General	(115)	66,045	67,162	(115)	67,047	67,518	-	67,518	68,595	-	68,595	24.
25.	Health Insurance	-	33,641	36,627	-	36,627	39,880	-	39,880	43,424	-	43,424	25.
26.	Environmental	-	2,045	1,696	-	1,696	927	-	927	997	-	997	26.
27.	Capitalized Fringe Benefits	-	(12,238)	(12,937)	-	(12,937)	(13,744)	-	(13,744)	(14,613)	-	(14,613)	27.
28.	Capitalized Administrative Charges	-	(13,738)	(13,409)	-	(13,409)	(14,032)	-	(14,032)	(15,579)	-	(15,579)	28.
29.	Pensions	-	40,308	39,678	-	39,678	22,691	-	22,691	20,383	-	20,383	29.
30.	Taxes	-	8,647	8,821	-	8,821	8,997	-	8,997	9,177	-	9,177	30.
31.	Other Post Employment Benefits	-	29,663	28,023	-	28,023	26,045	-	26,045	23,683	-	23,683	31.
32.	Cost / Labor Savings	-	-	-	-	-	-	-	-	-	-	-	32.
33.	Sub-Total Other Operating & Maintenance	(115)	319,675	324,341	(115)	324,226	309,208	-	309,208	309,727	-	309,727	33.
34.	Depreciation	-	52,436	54,244	-	54,244	56,019	-	56,019	57,827	-	57,827	34.
35.	Cost of Removal	-	4,100	4,100	-	4,100	4,100	-	4,100	4,100	-	4,100	35.
36.	To Clearing Accounts	-	(7,562)	(7,516)	-	(7,579)	(7,219)	-	(7,219)	(7,186)	-	(7,186)	36.
37.	Net Depreciation	-	48,974	50,765	-	50,765	52,900	-	52,900	54,741	-	54,741	37.
38.	Sub-Total Other Operating Expenses	(115)	368,649	375,106	(115)	374,991	362,108	-	362,108	364,468	-	364,468	38.
39.	**TOTAL OPERATING EXPENSES**	(115)	560,130	572,924	(115)	572,809	566,636	-	566,636	576,382	-	576,382	39.
40.	**OPERATING INCOME**	1,282	147,657	143,206	1,282	144,488	159,208	-	159,208	159,991	-	159,991	40.
41.	Interest Gain / (Loss) and Other Income	-	2,684	2,879	-	2,879	3,291	-	3,291	2,890	-	2,890	41.
42.	**INCOME BEFORE INTEREST**	1,282	150,341	146,085	1,282	147,367	162,499	-	162,499	162,881	-	162,881	42.
	INTEREST												
43.	Long-Term Debt	-	46,807	48,738	-	48,738	50,601	-	50,601	47,766	-	47,766	43.
44.	Other	-	(6,252)	(5,519)	-	(5,519)	(4,784)	-	(4,784)	(4,004)	-	(4,004)	44.
45.	AFUDC	-	(985)	(964)	-	(964)	(997)	-	(997)	(1,030)	-	(1,030)	45.
46.	Loss From Extinguishment ofDebt	-	5,300	4,894	-	4,894	4,490	-	4,490	4,072	-	4,072	46.
47.	Total Interest	-	44,870	47,149	-	47,149	49,310	-	49,310	46,804	-	46,804	47.
48.	**NET INCOME**	1,282	105,471	98,936	1,282	100,218	113,189	-	113,189	116,077	-	116,077	48.
49.	City Payment	-	18,000	18,000	-	18,000	18,000	-	18,000	18,000	-	18,000	49.
50.	**NET EARNINGS**	$1,282	$ 87,471	$ 80,936	$1,282	$ 82,218	$ 95,189	$ -	$ 95,189	$ 98,077	$ -	$ 98,077	50.

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PHILADELPHIA GAS WORKS
CASH FLOW STATEMENT
(Dollars in Thousands)

LINE NO.		ACTUAL 2014-15	HTY 2015-16	30-YR HDD FTY 2016-17	10-YR HDD FPFTY 2017-18	ADJUST	REVISED 10-YR HDD FPFTY 2017-18	10-YR HDD FORECAST 2018-19	ADJUST
	SOURCES								
1.	Net Income	$ 37,982	$ 28,054	$ 21,577	$ 95,387	$ 1,532	$ 96,919	$ 104,189	$1,282
2.	Depreciation & Amortization	53,258	50,371	45,049	47,000	-	47,000	49,114	-
3.	Earnings on Restricted Funds Withdrawal/(No Withdrawal)	7,051	23	(1,663)	(1,324)	-	(1,324)	(958)	-
4.	Proceeds from Bond Refunding to Pay Cost of Issuance	-	-	2,700	-	-	-	-	-
5.	Increased/(Decreased) Other Assets/Liabilities	23,696	28,209	29,078	(5,274)	-	(5,274)	(18,246)	-
6.	Available From Operations	121,987	106,657	96,741	135,789	1,532	137,321	134,099	1,282
7.	Drawdown of Bond Proceeds	-	-	65,000	52,000	-	52,000	57,000	-
8.	Release of Restricted Fund Asset	8,562	6,673	-	-	-	-	-	-
9.	Release of Bond Proceeds to Pay Temporary Financing	-	-	71,000	-	-	-	-	-
10.	Temporary Financing	30,000	41,000	-	-	-	-	-	-
11.	TOTAL SOURCES	160,549	154,330	232,741	187,789	1,532	189,321	191,099	1,282
	USES								
12.	Net Construction Expenditures	85,499	100,333	132,632	109,010	-	109,010	115,628	-
2-A	Deposit into Restricted Health Escrow Fund	-	-	-	-	1,167	1,167	-	1,167
13.	Funded Debt Reduction:	13,503	-	-	-	-	-	-	-
14.	Revenue Bonds	62,190	53,825	34,790	51,834	-	51,834	47,747	-
15.	Temporary Financing Repayment	-	-	71,000	-	-	-	-	-
						-			-
16.	Distribution of Earnings	18,000	18,000	18,000	18,000	-	18,000	18,000	-
	Additions To (Reductions of)					-			-
17.	Non-Cash Working Capital	(27,236)	4,756	(37,738)	188	-	188	886	-
18.	Cash Needs	151,956	176,914	218,684	179,032	1,167	180,199	182,261	1,167
19.	Cash Surplus (Shortfall)	8,593	(22,584)	14,057	8,757	365	9,122	8,838	115
20.	TOTAL USES	160,549	154,330	232,741	187,789	1,532	189,321	191,099	1,282
21.	Cash - Beginning of Period	105,734	114,327	91,743	105,800	-	105,800	114,557	365
22.	Cash - Surplus (Shortfall)	8,593	(22,584)	14,057	8,757	365	9,122	8,838	115
23.	ENDING CASH	$ 114,327	$ 91,743	105,800	$ 114,557	$ 365	$ 114,922	$ 123,395	$ 480
24.	Outstanding Commercial Paper	-	-	-	-	-	-	-	-
25.	Outstanding Commercial Paper - Capital	30,000	71,000	-	-	-	-	-	-
26.	DSIC Revenue	13,764	26,253	32,541	30,579	-	30,579	30,895	-
27.	Internally Generated Funds	31,735	33,080	35,091	26,431	-	26,431	27,733	-
28.	TOTAL IGF + Incremental DSIC Revenue	45,499	59,333	67,632	57,010	-	57,010	58,628	-

LINE NO.		REVISED 10-YR HDD FORECAST 2018-19	10-YR HDD FORECAST 2019-20	ADJUST	REVISED 10-YR HDD FORECAST 2019-20	10-YR HDD FORECAST 2020-21	ADJUST	REVISED 10-YR HDD FORECAST 2020-21	10-YR HDD FORECAST 2021-22	ADJUST	REVISED 10-YR HDD FORECAST 2021-22	LINE NO.
	SOURCES											
1.	Net Income	$ 105,471	$ 98,936	$1,282	$ 100,218	$ 113,189	$ -	$ 113,189	$ 116,077	$ -	$ 116,077	1.
2.	Depreciation & Amortization	49,114	51,246	-	51,246	53,350	-	53,350	55,518	-	55,518	2.
3.	Earnings on Restricted Funds Withdrawal/(No Withdrawal)	(958)	(1,133)	-	(1,133)	(1,224)	-	(1,224)	(1,104)	-	(1,104)	3.
4.	Proceeds from Bond Refunding to Pay Cost of Issuance	-	500	-	500	-	-	-	-	-	-	4.
5.	Increased/(Decreased) Other Assets/Liabilities	(18,246)	(31,091)	-	(31,091)	(46,024)	-	(46,024)	(53,725)	-	(53,725)	5.
6.	Available From Operations	135,381	118,458	1,282	119,740	119,291	-	119,291	116,766	-	116,766	6.
7.	Drawdown of Bond Proceeds	57,000	55,000	-	55,000	57,000	-	57,000	59,000	-	59,000	7.
8.	Release of Restricted Fund Asset	-	-	-	-	-	-	-	-	-	-	8.
9.	Release of Bond Proceeds to Pay Temporary Financing	-	-	-	-	-	-	-	-	-	-	9.
10.	Temporary Financing	-	-	-	-	-	-	-	-	-	-	10.
11.	TOTAL SOURCES	192,381	173,458	1,282	174,740	176,291	-	176,291	175,766	-	175,766	11.
	USES											
12.	Net Construction Expenditures	115,628	113,149	-	113,149	117,009	-	117,009	120,996	-	120,996	12.
2-A	Deposit into Restricted Health Escrow Fund	1,167	-	1,167	1,167	-	-	-	-	-	-	12-A
13.	Funded Debt Reduction:	-	-	-	-	-	-	-	-	-	-	13.
14.	Revenue Bonds	47,747	62,905	-	62,905	44,084	-	44,084	57,749	-	57,749	14.
15.	Temporary Financing Repayment	-	-	-	-	-	-	-	-	-	-	15.
				-			-			-		
16.	Distribution of Earnings	18,000	18,000	-	18,000	18,000	-	18,000	18,000	-	18,000	16.
	Additions To (Reductions of)			-			-			-		
17.	Non-Cash Working Capital	886	(3,078)	-	(3,078)	(862)	-	(862)	(76)	-	(76)	17.
18.	Cash Needs	183,428	190,976	1,167	192,143	178,231	-	178,231	196,669	-	196,669	18.
19.	Cash Surplus (Shortfall)	8,953	(17,518)	115	(17,403)	(1,940)	-	(1,940)	(20,903)	-	(20,903)	19.
20.	TOTAL USES	192,381	173,458	1,282	174,740	176,291	-	176,291	175,766	-	175,766	20.
21.	Cash - Beginning of Period	114,922	123,395	480	123,875	105,877	595	106,472	103,937	595	104,532	21.
22.	Cash - Surplus (Shortfall)	8,953	(17,518)	115	(17,403)	(1,940)	-	(1,940)	(20,903)	-	(20,903)	22.
23.	ENDING CASH	$ 123,875	$ 105,877	$ 595	$ 106,472	$ 103,937	$ 595	$ 104,532	$ 83,035	$ 595	$ 83,630	23.
24.	Outstanding Commercial Paper	-	-	-	-	-	-	-	-	-	-	24.
25.	Outstanding Commercial Paper - Capital	-	-	-	-	-	-	-	-	-	-	25.
26.	DSIC Revenue	30,895	31,214	-	31,214	31,518	-	31,518	31,846	-	31,846	26.
27.	Internally Generated Funds	27,733	26,935	-	26,935	28,491	-	28,491	30,150	-	30,150	27.
28.	TOTAL IGF + Incremental DSIC Revenue	58,628	58,149	-	58,149	60,009	-	60,009	61,996	-	61,996	28.

PHILADELPHIA GAS WORKS
DEBT SERVICE COVERAGE
(Dollars in Thousands)

LINE NO.		ACTUAL 2014-15	HTY 2015-16	30-YR HDD FTY 2016-17	10-YR HDD FPFTY 2017-18	ADJUST	REVISED 10-YR HDD FPFTY 2017-18	10-YR HDD FORECAST 2018-19	ADJUST	REVISED 10-YR HDD FORECAST 2018-19	10-YR HDD FORECAST 2019-20	ADJUST	REVISED 10-YR HDD FORECAST 2019-20	10-YR HDD FORECAST 2020-21	ADJUST	REVISED 10-YR HDD FORECAST 2020-21	10-YR HDD FORECAST 2021-22	ADJUST	REVISED 10-YR HDD FORECAST 2021-22	LINE NO.
	FUNDS PROVIDED																			
1.	Total Gas Revenues	$ 676,027	$ 572,347	$ 603,911	$ 675,991	$ 1,167	$ 677,158	$ 685,370	$1,167	$ 686,537	$ 694,655	$1,167	$ 695,822	$ 704,143	$ -	$ 704,143	$ 714,433	$ -	$ 714,433	1.
2.	Other Operating Revenues	21,220	18,890	21,205	21,022	-	21,022	21,250	-	21,250	21,475	-	21,475	21,701	-	21,701	21,940	-	21,940	2.
3.	Total Operating Revenues	697,247	591,237	625,116	697,013	1,167	698,180	706,620	1,167	707,787	716,130	1,167	717,297	725,844	-	725,844	736,373	-	738,373	3.
4.	Other Income Incr. / (Decr.) Restricted Funds	10,835	1,416	1,235	1,707	-	1,707	1,726	-	1,726	1,746	-	1,746	2,067	-	2,067	1,786	-	1,786	4.
5.	City Grant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.
6.	AFUDC (Interest)	781	1,120	1,136	920	-	920	985	-	985	964	-	964	997	-	997	1,030	-	1,030	6.
7.	TOTAL FUNDS PROVIDED	708,863	593,773	627,487	699,640	1,167	700,807	709,331	1,167	710,498	718,840	1,167	720,007	728,908	-	728,908	739,169	-	739,169	7.
	FUNDS APPLIED																			
8.	Fuel Costs	252,169	146,524	176,741	184,970	-	184,970	191,481	-	191,481	197,818	-	197,818	204,528	-	204,528	211,914	-	211,914	8.
9.	Other Operating Costs	354,357	370,433	383,976	372,674	(365)	372,309	368,764	(115)	368,649	375,106	(115)	374,991	362,108	-	362,108	364,468	-	364,468	9.
10.	Total Operating Expenses	606,526	516,957	560,717	557,644	(365)	557,279	560,245	(115)	560,130	572,924	(115)	572,809	566,636	-	566,636	576,382	-	576,382	10.
11.	Less: Non-Cash Expenses	74,535	89,059	92,630	78,214	1,971	80,185	68,463	1,554	70,017	69,770	1,141	70,911	55,503	613	56,116	55,924	97	56,021	11.
12.	TOTAL FUNDS APPLIED	531,991	427,898	468,087	479,430	(2,336)	477,094	491,782	(1,669)	490,113	503,154	(1,256)	501,898	511,133	(613)	510,520	520,458	(97)	520,361	12.
13.	Funds Available to Cover Debt Service	176,872	165,875	159,400	220,210	3,503	223,713	217,549	2,836	220,385	215,686	2,423	218,109	217,775	613	218,388	218,731	97	218,828	13.
14.	1975 Ordinance Bonds Debt Service	26,904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.
15.	**Debt Service Coverage 1975 Bonds**	**6.57**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15.
16.	Net Available after Prior Debt Service	149,968	165,875	159,400	220,210	3,503	223,713	217,549	2,836	220,385	215,686	2,423	218,109	217,775	613	218,388	218,731	97	218,828	16.
17.	Equipment Leasing Debt Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.
18.	Net Available after Prior Capital Leases	149,968	165,875	159,400	220,210	3,503	223,713	217,549	2,836	220,385	215,686	2,423	218,109	217,775	613	218,388	218,731	97	218,828	18.
19.	1998 Ordinance Bonds Debt Service	70,139	77,867	66,868	101,720	-	101,720	95,276	-	95,276	97,858	-	97,858	95,459	-	95,459	106,342	-	106,342	19.
20.	1999 Ordinance Subordinate Bonds Debt Service - (TXCP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.
21.	Total 1998 Ordinance Debt Service	70,139	77,867	66,868	101,720	-	101,720	95,276	-	95,276	97,858	-	97,858	95,459	-	95,459	106,342	-	106,342	21.
22.	**Debt Service Coverage 1998 Bonds**	**2.14**	**2.13**	**2.38**	**2.16**	**0.03**	**2.20**	**2.28**	**0.03**	**2.31**	**2.20**	**0.02**	**2.23**	**2.28**	**0.01**	**2.29**	**2.06**	**0.00**	**2.06**	22.
23.	Net Available after 1998 Debt Service	79,829	88,008	92,532	118,490	3,503	121,993	122,273	2,836	125,109	117,828	2,423	120,251	122,316	613	122,929	112,389	97	112,486	23.
	1998 Ordinance Subordinate Bond Debt Service	-	-	-	-		-	-		-	-		-	-		-	-		-	
25.	Debt Service Coverage (Combined liens)	1.82	2.13	2.38	2.16	0.03	2.20	2.28	0.03	2.31	2.20	0.02	2.23	2.28	0.01	2.29	2.06	0.00	2.06	25.
26.	Debt Service Coverage (Combined liens with $18.0 City Fee	1.64	1.90	2.11	1.99	0.03	2.02	2.09	0.03	2.12	2.02	0.02	2.04	2.09	0.01	2.10	1.89	0.00	1.89	26.

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PHILADELPHIA GAS WORKS
BALANCE SHEET
(Dollars in Thousands)

LINE NO.		ACTUAL 8/31/15	HTY 8/31/16	30-YR HDD FTY 8/31/17	10-YR HDD FPFTY 8/31/18	ADJUST	REVISED 10-YR HDD FPFTY 8/31/18	10-YR HDD FORECAST 8/31/19	ADJUST	REVISED 10-YR HDD FORECAST 8/31/19
	ASSETS									
1.	Utility Plant Net	1,232,370	1,284,810	1,368,600	1,427,014		1,427,014	1,490,206		1,490,206
2.	Sinking Fund Reserve	90,141	86,652	105,196	106,253		106,253	107,320		107,320
3.	Capital Improvement Fund	-	-	113,603	61,864		61,864	4,742		4,742
	Workers' Compensation Fund									
4.	& Health Insurance Escrow	5,820	2,603	2,610	2,616	1,167	3,783	2,629	2,334	4,963
5.	Cash	114,327	91,743	105,800	114,557	365	114,922	123,395	480	123,875
	Accounts Receivable:									
6.	Gas	182,433	142,435	136,100	132,838		132,838	128,969		128,969
7.	Other	1,250	2,046	1,500	1,525		1,525	1,550		1,550
8.	Accrued Gas Revenues	5,199	3,368	5,041	5,358		5,356	5,460		5,460
9.	Reserve for Uncollectible	(102,029)	(74,286)	(71,890)	(70,389)		(70,389)	(68,586)		(68,585)
10.	Total Accounts Receivable:	86,853	73,563	70,751	69,330		69,330	67,393		67,393
11.	Materials & Supplies	50,908	47,891	47,005	49,220		49,220	50,734		50,734
12.	Other Current Assets	460	1,642	455	459		459	463		463
13.	Deferred Debits	13,135	29,376	4,782	4,987		4,987	4,489		4,489
14.	Unamortized Bond Issuance Expense	3,473	512	393	341		341	303		303
15.	Unamortized Loss on Reacquired Debt	30,953	53,946	47,865	42,199		42,199	36,899		36,899
16.	Deferred Environmental	29,609	28,425	28,767	28,767		28,767	26,722		26,722
17.	Deferred Pension Outflows	78,129	88,043	41,908	13,952		13,952	-		-
18.	Other Assets	35,503	24,357	39,720	40,604		40,604	42,007		42,007
19.	**TOTAL ASSETS**	1,771,681	1,813,563	1,977,455	1,962,163	1,532	1,963,695	1,957,302	2,814	1,960,116
	EQUITY & LIABILITIES									
20.	City Equity	277,984	288,038	30,427	107,814	1,532	109,346	194,003	2,814	196,817
21.	Revenue Bonds	915,175	837,830	1,073,041	1,021,208		1,021,208	973,460		973,460
22.	Unamortized Discount	(787)	(110)	(875)	(825)		(825)	(778)		(778)
23.	Unamortized Premium	43,360	88,703	78,667	69,303		69,303	60,595		60,595
24.	Long Term Debt	957,748	926,423	1,150,833	1,089,686		1,089,686	1,033,277		1,033,277
25.	Notes Payable	30,000	71,000	-	-		-	-		-
26.	Accounts Payable	56,027	55,870	56,084	57,221		57,221	57,434		57,434
27.	Customer Deposits	2,858	3,308	3,000	2,870		2,870	2,747		2,747
28.	Other Current Liabilities	6,196	7,792	4,830	4,932		4,932	4,936		4,936
29.	Pension Liability	239,869	296,093	291,253	285,870		285,870	280,051		280,051
30.	Deferred Credits	7,895	5,999	2,091	4,497		4,497	2,791		2,791
31.	Deferred Pension Inflows	11,653	-	-	-		-	2,813		2,813
32.	Accrued Interest	6,709	2,808	15,564	14,839		14,839	14,117		14,117
33.	Accrued Taxes & Wages	3,342	3,609	5,975	4,100		4,100	4,631		4,631
34.	Accrued Distribution to City	3,000	3,000	3,000	3,000		3,000	3,000		3,000
35.	Other Liabilities	168,400	149,623	414,298	387,334		387,334	357,502		357,502
36.	**TOTAL EQUITY & LIABILITIES**	1,771,681	1,813,563	1,977,455	1,962,163	1,532	1,963,695	1,957,302	2,814	1,960,116
	CAPITALIZATION									
37.	Total Capitalization	1,235,732	1,214,461	1,181,260	1,187,500	1,532	1,189,032	1,227,280	2,814	1,230,094
38.	Total Long Term Debt	957,748	926,423	1,150,833	1,089,686		1,089,686	1,033,277		1,033,277
39.	Debt to Equity Ratio	77.50%	76.28%	97.42%	91.00%	-0.12%	90.88%	84.19%	-0.19%	84.00%
40.	Capitalization Ratio	3.45	3.22	37.82	10.11	(0 14)	9.97	5.33	(0.06)	5.25

	10-YR HDD FORECAST 8/31/20	ADJUST	REVISED 10-YR HDD FORECAST 8/31/20	10-YR HDD FORECAST 8/31/21	ADJUST	REVISED 10-YR HDD FORECAST 8/31/21	10-YR HDD FORECAST 8/31/22	ADJUST	REVISED 10-YR HDD FORECAST 8/31/22	LINE NO.
ASSETS										
Utility Plant Net	1,549,111		1,549,111	1,610,101		1,610,101	1,673,270		1,673,270	1.
Sinking Fund Reserve	120,248		120,248	121,456		121,456	122,676		122,676	2.
Capital Improvement Fund	117,435		117,435	60,431		60,431	1,295		1,295	3.
Workers' Compensation Fund										
& Health Insurance Escrow	2,642	3,501	6,143	2,662	3,501	6,163	2,682	3,501	6,183	4.
Cash	105,877	595	106,472	103,937	595	104,532	83,035	595	83,630	5.
Accounts Receivable:										
Gas	125,516		125,516	121,461		121,461	117,870		117,870	6.
Other	1,575		1,575	1,600		1,600	1,625		1,625	7.
Accrued Gas Revenues	5,543		5,543	5,662		5,662	5,771		5,771	8.
Reserve for Uncollectible	(67,550)		(67,550)	(65,979)		(65,979)	(64,428)		(64,428)	9.
Total Accounts Receivable:	65,084		65,084	62,744		62,744	60,838		60,838	10.
Materials & Supplies	52,002		52,002	53,509		53,509	54,872		54,872	11.
Other Current Assets	467		467	471		471	475		475	12.
Deferred Debits	4,464		4,464	4,348		4,348	4,311		4,311	13.
Unamortized Bond Issuance Expense	270		270	241		241	215		215	14.
Unamortized Loss on Reacquired Debt	32,005		32,005	27,515		27,515	23,443		23,443	15.
Deferred Environmental	25,026		25,026	24,099		24,099	23,102		23,102	16.
Deferred Pension Outflows	-		-	-		-	-		-	17.
Other Assets	43,378		43,378	44,799		44,799	46,216		46,216	18.
TOTAL ASSETS	2,118,009	4,096	2,122,105	2,116,313	4,096	2,120,409	2,096,430	4,096	2,100,526	19.
EQUITY & LIABILITIES										
City Equity	274,939	4,096	279,035	370,128	4,096	374,224	468,205	4,096	472,301	20.
Revenue Bonds	1,090,557		1,090,557	1,046,473		1,046,473	988,724		988,724	21.
Unamortized Discount	(732)		(732)	(686)		(686)	(641)		(641)	22.
Unamortized Premium	52,623		52,623	45,389		45,389	38,938		38,938	23.
Long Term Debt	1,142,448		1,142,448	1,091,176		1,091,176	1,027,021		1,027,021	24.
Notes Payable	-		-	-		-	-		-	25.
Accounts Payable	56,011		56,011	56,216		56,216	56,144		56,144	26.
Customer Deposits	2,630		2,630	2,519		2,519	2,413		2,413	27.
Other Current Liabilities	4,941		4,941	4,946		4,946	4,922		4,922	28.
Pension Liability	274,416		274,416	267,534		267,534	260,380		260,380	29.
Deferred Credits	2,018		2,018	2,084		2,084	2,080		2,080	30.
Deferred Pension Inflows	11,120		11,120	12,290		12,290	12,302		12,302	31.
Accrued Interest	17,903		17,903	17,129		17,129	16,303		16,303	32.
Accrued Taxes & Wages	5,170		5,170	5,696		5,696	6,228		6,228	33.
Accrued Distribution to City	3,000		3,000	3,000		3,000	3,000		3,000	34.
Other Liabilities	323,413		323,413	283,595		283,595	237,432		237,432	35.
TOTAL EQUITY & LIABILITIES	2,118,009	4,096	2,122,105	2,116,313	4,096	2,120,409	2,096,430	4,096	2,100,526	36.
CAPITALIZATION										
Total Capitalization	1,417,387	4,096	1,421,483	1,461,304	4,096	1,465,400	1,495,226	4,096	1,499,322	37.
Total Long Term Debt	1,142,448		1,142,448	1,091,176		1,091,176	1,027,021		1,027,021	38.
Debt to Equity Ratio	80.60%	-0.23%	80.37%	74.67%	-0.21%	74.46%	68.69%	-0.19%	68.50%	39.
Capitalization Ratio	4.16	(0.06)	4.09	2.95	(0.03)	2.92	2.19	(0.02)	2.17	40.