Pennsylvania Public Utility Commission

Sixth Report to the General Assembly and the Governor pursuant to section 1415

Implementation of Chapter 14

January 30, 2020

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Executive Summary

Act 201 of 2004, the Responsible Utility Consumer Protection Act, amended Title 66 of the Public Utility Code by establishing new provisions to help public utilities reduce uncollectible customer debt and contain costs. The requirements contained in Chapter 14 of the Public Utility Code at 66 Pa. C.S. §§ 1401-1418 are applicable to electric distribution utilities, water distribution utilities, and natural gas distribution utilities operating in Pennsylvania.

The Act requires the Public Utility Commission (Commission or PUC) to submit a report to the Governor and the General Assembly every five years to evaluate implementation of the law. This evaluation must include an assessment of the law's effectiveness in reducing uncollectible debt levels while preserving access to utility services by residential customers, including low-income customers. The law also requires the Commission to assess the effect of the law on the level of informal consumer complaints and payment arrangement requests filed with and adjudicated by the Commission.

This report presents data and trends this Commission relied upon to evaluate the effectiveness of the law, including amendments that were passed in 2014 to reauthorize the law for an additional ten years. While the report shows evidence that Pennsylvania's utilities comply with the provisions of Chapter 14, review of collections variables and data indicate that utilities are not fully or effectively using all of the tools provided them by Chapter 14. Inadequate use of those provisions by utilities to fully collect customer debt should be considered in the evaluation of petitions for rate increases.

Several of the key collections performance variables for the electric industry show mixed improvement since the passage of Chapter 14. Billings and the Total Dollars in Debt (Active and Inactive) increased slightly since 2004, but the Percentage of Billings in Debt decreased. The Total Customers in Debt (Active and Inactive) also increased, as did the Gross Write-Offs (Dollars), but the Percentage of Customers in Debt and the Gross Write-Offs Ratio decreased. Universal Service Program Costs for the electric industry have increased when compared to 2004.

The key collections performance variables for the gas industry show overall improvement when compared to 2004. This improvement reflects the continuation of a trend that began in the pre-Chapter 14 period, likely attributable to the decrease in the cost of natural gas. The categories of Billings, Total Dollars in Debt (both Active and Inactive), Percentage of Billings in Debt, Total Customers in Debt (Active), Percentage of Customers in Debt, Gross Write-Offs (Dollars) and the Gross Write-offs Ratio all decreased when compared to 2004. The only categories where the gas industry showed an increase in key variables were in the Total Customers in Debt (Inactive) and Universal Service Program Costs.

The water industry began reporting data in 2012. The key collections performance variables all show increases since 2012, but several more years of data are required to evaluate long-term collections performance. The categories of Billings, Total Dollars in Debt (Active and Inactive), the Percentage of Billings in Debt, Total Customers in Debt (Active and Inactive), the Percentage of Customers in Debt, the Gross Write-Offs (Dollars), and the Gross Write-off Ratio have all increased when compared to 2012. Billings for the water industry have also increased. The water utilities are not required to have universal service programs.

Despite increases in several collection performance variables, data show that Chapter 14 provisions appear successful in improving customer access to utility services, including access to utility services for low-income customers. For example, since the passage of Chapter 14 in 2004, enrollment in universal service programs has increased.[1] Although increased participation in these programs results in higher universal service costs, these costs are recoverable by the utilities and represent a pre-emptive alternative to the traditional costs of collections by helping the utilities manage customer debt. See Table 62 – Summary of Key Collections Variables – Percent Changes – on page 129.

Analysis also indicates that while the number of informal consumer complaints to the Commission declined between 2004 and 2018, the complexity of consumer complaint investigations has increased considerably, primarily due to liability disputes. The number of Payment Arrangement Requests (PARs)[2] received by the Commission decreased and remain well below the 2004 level primarily due to payment arrangement limitations imposed on the Commission through Chapter 14. However, the percentage of PARs to overall informal complaint activity has continued to increase. In 2018, PARs accounted for 54% of the Commission's Bureau of Consumer Services' (BCS) informal complaint activity and 42% of inquiries to BCS. See Section IV – The Effect Upon the Level of Consumer Complaints and Payment Arrangements (PARs) Filed with and Adjudicated by the Commission – starting on page 179.

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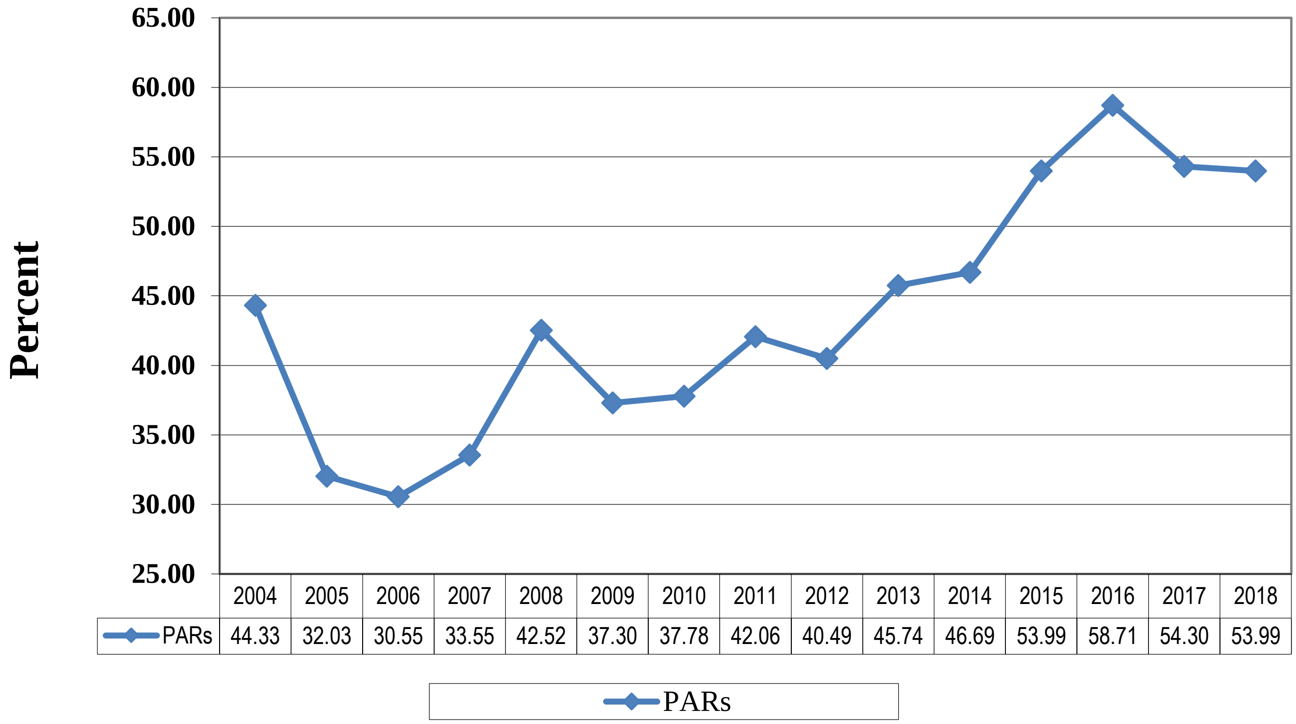
[1] *Report on Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies & Natural Gas Distribution Companies* – http://www.puc.state.pa.us/filing_resources/universal_service_reports.aspx.

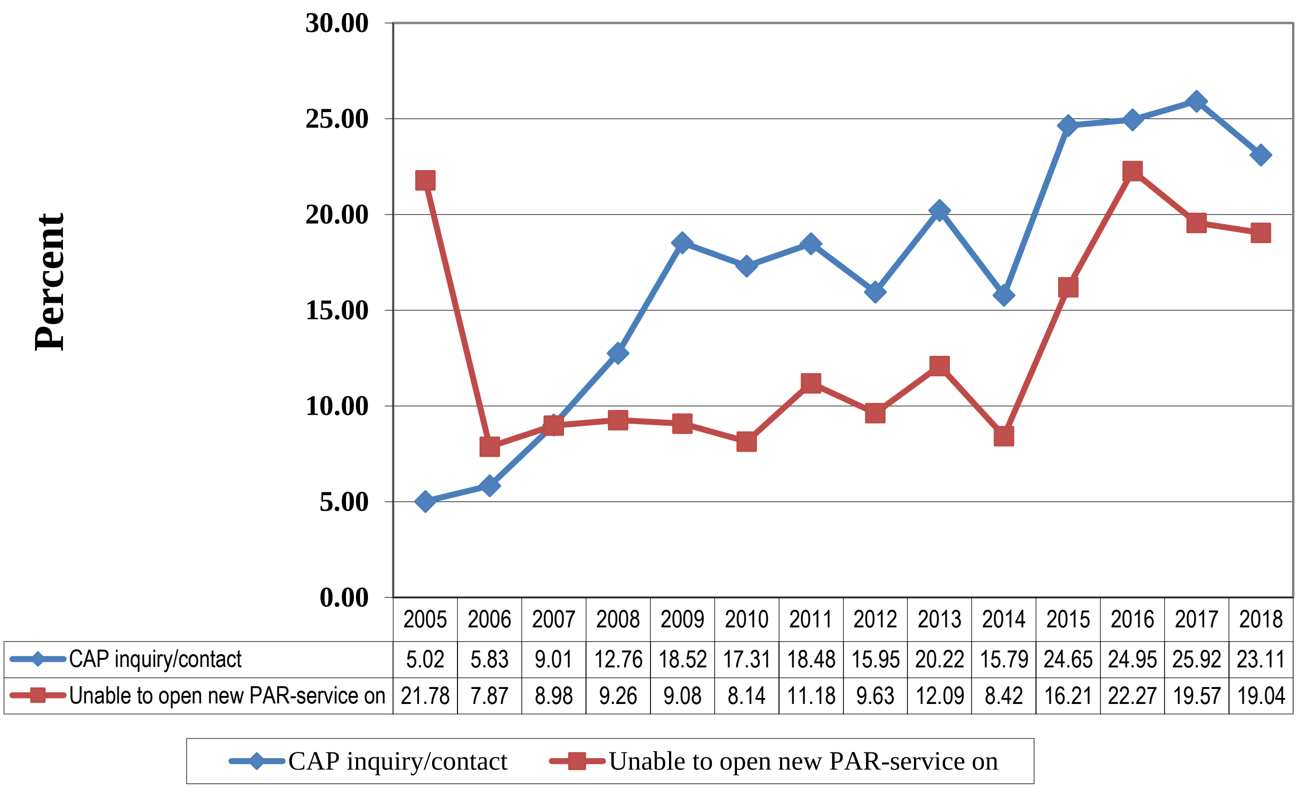
[2] PARs principally include contacts to BCS involving requests for payment terms in one of the following situations: suspension/termination of service is pending; service has been terminated and the customer needs payment terms to have service restored; or the customer wants to eliminate a debt or a past-due balance. All of the measures pertaining to PARs are based on assessments of contacts to BCS from individual customers. As with consumer complaints, customers contacted the utility prior to contacting BCS.

Percentage of BCS Activity - PARs



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
PARs	44.33	32.03	30.55	33.55	42.52	37.30	37.78	42.06	40.49	45.74	46.69	53.99	58.71	54.30	53.99

Top Reasons for Inquiries (shown as a percentage)



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CAP inquiry/contact	5.02	5.83	9.01	12.76	18.52	17.31	18.48	15.95	20.22	15.79	24.65	24.95	25.92	23.11
Unable to open new PAR-service on	21.78	7.87	8.98	9.26	9.08	8.14	11.18	9.63	12.09	8.42	16.21	22.27	19.57	19.04

Through analysis of informal case investigations, evaluations, and utility collection data for the years 2004 through 2018, trends have been identified that show opportunities to clarify Chapter 14 and strengthen utility collection practices. The Commission puts forth the following recommendations:

1. Since the passage of Chapter 14 through the end of 2018 data, the Commission has turned away a total of 265,265 callers requesting a payment arrangement. In 2018, the Commission turned away 18,214 callers requesting a payment arrangement.

   Data in this report show increases in a number of key collection variables including the total number of customers with utility debt and the total amount of debt for inactive accounts for the electric and gas industries and the dollar amount of gross write-offs for the electric industry. Additionally, the majority of customer debt is not on a payment arrangement. Debt on a payment arrangement is less likely to become uncollectible.

   The passage of Chapter 14 significantly restricted the Commission's ability to issue payment arrangements. Section 1405 of Chapter 14 authorizes the Commission to establish a payment arrangement between a utility and its customers and applicants within the limits established by the chapter; however, Section 1405(b) provides very restrictive limits as to how the Commission may establish those arrangements. Additionally, Section 1405(d) states:

   > ***Number of payment arrangements*.--*Absent a change in income, the commission shall not establish or order a public utility to establish a second or subsequent payment arrangement if a customer has defaulted on a previous payment arrangement established by a commission order or decision. A public utility may, at its discretion, enter into a second or subsequent payment arrangement with a customer.***

   As shown in Section II, the majority of customer debt is not on a payment arrangement. Debt on a payment arrangement is less likely to become uncollectible. Section IV shows that BCS PAR-related informal complaint activity is increasing. Therefore, the Commission recommends amending Section 1405(d) to allow the Commission, at its discretion, to grant a second payment arrangement. Currently this is prohibited unless the household has a change in income or a significant change in circumstance as defined in Chapter 14. The Commission will identify other circumstances that may warrant additional consideration to establish a second payment arrangement.

   The following proposed change may increase customer access to utility service and reduce uncollectible customer debt:

Amend Section 1405(d) to allow the Commission, at its discretion, to grant a second payment arrangement. Currently this is prohibited unless the household has a change in income or a significant change in circumstance as defined in Chapter 14. The Commission will identify other circumstances that may warrant additional consideration.

2. In this and other Commission reports related to consumer collections reporting the term "cash working capital" is interpreted and treated as arrears or arrearages. Cash working capital is a measurement of the days between when service is rendered and when revenue is received (and conversely, when a utility receives a service and when it pays its invoice). For the residential class the days between utility service and payment of the bill are measured as a residential class average. The number of days is then multiplied by the matching operation and maintenance expense or revenue category to find a dollar value that a utility would need to have on hand. The dollar value is included in rate base so that the utility can earn a return on the capital required to bridge the gap between service rendered and revenue collected. The Commission recommends the following revision to Chapter 14:

    Amend Section 1415(2) to replace the phrase "cash working capital" with "arrears or arrearages."

To conclude, the following amendments may strengthen utility collection practices, and lead to lower infraction rates. These recommendations are further explained with supporting data throughout this report.

1. Amend Section 1405(d) to allow the Commission, at its discretion, to grant a second payment arrangement.

2. Amend Section 1415(2) to replace the phrase "cash working capital" with "arrears or arrearages."

Introduction

On Nov. 30, 2004, Senate Bill 677, also known as Act 201, the Responsible Utility Consumer Protection Act, was signed into law. The Act went into effect on Dec. 14, 2004, and amended Title 66 by adding Chapter 14 (66 Pa. C.S. §§ 1401-1418) (*Responsible Utility Customer Protection Act*). Chapter 14 is applicable to electric distribution utilities, water distribution utilities, and natural gas distribution utilities operating within the Commonwealth. This report presents data from the larger utilities.[3]

Initially, Chapter 14 required the PUC to provide a report to the General Assembly and Governor every two years (Section 1415). The first report was due no later than Dec. 14, 2006, and the final report was due in December 2014. The reports evaluate the implementation of Chapter 14 including a review of utility complaint data to assess effectiveness. The report must include:

1. The degree to which the Chapter's requirements have been successfully implemented;

2. The effect upon the cash working capital or cash flow, uncollectible levels, and collections of the affected public utilities;

3. The level of access to utility services by residential customers including low-income customers; and

4. The effect upon the level of consumer complaints and mediations filed with and adjudicated by the Commission. (Mediations are currently classified as payment arrangement requests under Section 1415.)

Chapter 14 directs public utilities to provide data to the Commission in order to comprehensively evaluate Chapter 14 implementation.

The entities that must comply with Chapter 14 includes the Philadelphia Gas Works (PGW), a city natural gas distribution operation, within the category of natural gas distribution utilities. While the statute specifically excludes natural gas distribution utilities with operational revenues of less than $6 million per year, the exception is where the public utility voluntarily petitions the Commission to be included or where the public utility seeks to provide natural gas supply services to retail gas customers outside its service territory. Natural gas distribution utilities that are not connected to an interstate gas pipeline are similarly excluded from the provisions of Chapter 14 under Section 1403.

[3] Larger utilities, subject to full reporting to the Commission pursuant to Section 1415, are electric, gas and water distribution utilities with annual operating revenues greater than or equal to $200 million. Order entered July 24, 2006 at Docket No. M-00041802F0003.

On Oct. 22, 2014, Governor Corbett signed House Bill 939, also known as Act 155 of 2014, to reauthorize Chapter 14 for another ten years. In this reauthorization, the General Assembly revised the law by:

- Expanding the scope to cover small gas utilities, steam heating, and wastewater utilities.
- Prohibiting termination of utility service on Fridays.
- Allowing physician assistants, along with physicians and nurse practitioners, to file medical certificates.
- Allowing all customers and applicants to pay security deposits in installments over 90 days. CAP-eligible consumers are exempt from security deposit requirements.
- Adding new utility reporting requirements to include data pertaining to medical certificates and high-arrearage accounts (over $10,000).

The 2014 reauthorization of Chapter 14 requires the PUC to provide Chapter 14 implementation reports to the General Assembly and Governor every five years (Section 1415). This is the first Commission update since those revisions were passed.

Section I - The Degree to Which the Chapter's Requirements Have Been Successfully Implemented

The following section contains a summary of the Chapter 14 implementation process by both the Commission and the utilities. It outlines the verified informal infractions of Chapter 14 by utilities, as determined through a random sampling of informal complaints before the Commission's Bureau of Consumer Services (BCS) and possible violations of Chapter 14 from informal PUC investigations resolved in the last 14 calendar years.[4]

Commission Regulations

In order to comply with the reauthorized Chapter 14 revisions, the Commission updated the "Standards and Billing Practices for Residential Utility Service" regulations at 52 Pa. Code Chapter 56 (Docket No. L-2015-2508421). These revised regulations went into effect following publication in the *Pennsylvania Bulletin* on June 1, 2019, at 49 Pa.B. 2815. In the final rulemaking, the Commission announced it deferred three issues for discussion and deliberation by interested parties. Those issues relate to the amendments to 66 Pa. C.S. §§ 1403, 1406, and 1417, concerning Medical Certificates, Court Orders addressing domestic violence, and privacy guidelines. The Commission convened a working group in October 2019 to discuss these issues, which resulted in the Commission gaining valuable insight and recommendations from the parties.[5] It is anticipated these issues will be addressed through implementation orders by the Commission in 2020.

In addition to formally updating the regulations, BCS continues to work in a collaborative manner with utilities and consumer representatives on implementation issues as they arise. This included revising the "Rights and Responsibilities" educational pamphlet that offers consumers a plain-language explanation of their rights and responsibilities as utility customers under the new regulations. Utilities make this document available to the public and it also is available on the Commission's website and distributed at certain community education events and seminars.[6]

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[4] The random sampling consists of a statistically valid sample, with a reasonable margin of error, of informal complaints opened within the calendar year. An automated process that sorts through the cases as they are closed and is intended to produce a representative sample of BCS informal complaint activity selects the sample. The selected sample is then reviewed for evaluative and compliance purposes. Utilities whose activity with BCS is insufficient to produce a valid sample are excluded from sampling. For those utilities all cases are reviewed for evaluative and compliance purposes.

[5] Parties to this working group include: Disability Rights Pennsylvania; Community Justice Project; PECO Energy Company; Consumer Advisory Council; Philadelphia Gas Works; Aqua Pennsylvania; Homeless Advocacy Project; Columbia Gas of Pennsylvania; PPL Services Corp; Independent Regulatory Review Commission; PCADV; Pennsylvania Coalition Against Domestic Violence; HELP: MLP; Philadelphia Nurse-Family Partnership; Eckert Seamans Cherin & Mellott LLC.; Center for Hunger Free Communities; Health, Education, and Legal Assistance Project; The Women's Resource Center; Pennsylvania Health Law Project; Energy Association of PA; The Housing Alliance of Pennsylvania; Office of Consumer Advocate; Community Legal Services Inc; National Fuel Gas Distribution Corporation; FirstEnergy Corp.; The Women's Center, Inc. of Columbia and Montour Counties; PA Utility Law Project; Pennsylvania American Water Company.

[6] http://www.puc.state.pa.us/General/consumer_ed/pdf/Consumer_Rights_Responsibilities.pdf

Informal Complaint Infractions

BCS's informal compliance process remains its primary compliance effort. This process gives each utility specific examples of informal infractions of Chapter 14 and 52 Pa Code Chapters 56, 63 and 64. The informal compliance process uses consumer complaints to identify, document, and notify utilities of apparent deficiencies. The utilities use the information to pinpoint and voluntarily correct deficiencies in their customer-service operations. The process begins by BCS notifying a utility of an infraction. A utility that receives notification of an infraction has an opportunity to respond. If the information about the infraction is accurate, BCS expects the utility to take action to correct the problem or address any deficiencies that led to the infraction. Corrective actions may entail modifying a computer program; revising utility procedures or the text of a notice, bill or letter; or providing additional staff training to ensure the proper use of a procedure. When a utility fails to take voluntary corrective action, BCS staff meets with the utility to help develop a plan to correct the systemic issue. Further non-compliance results in a referral to the Commission's Bureau of Investigation and Enforcement (BIE).

As mentioned in the above section regarding Commission Regulations, Chapter 56 of the Commission's regulations was revised to comply with Chapter 14; therefore, the equivalent sections of Chapter 56 are included in the Chapter 14 infraction data presented in this report.

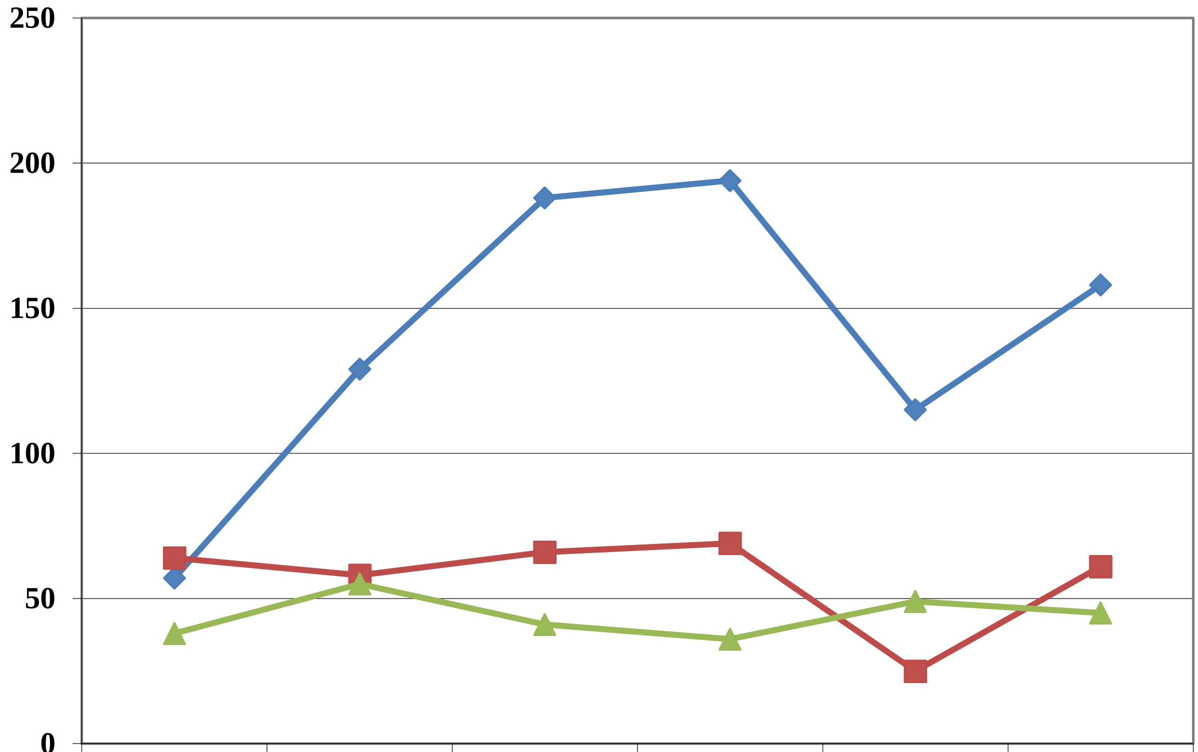
The chart below shows the verified informal infractions of 66 Pa. C.S. Chapter 14 recorded by BCS between 2013 and 2018:

Table 1 – Summary of Chapter 14 Infractions 2013-2018

Section of 66 Pa. C.S. Chapter 14	Equivalent Section(s) of 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	172	96	33	**301**
§ 1403 Definitions	§ 56.2 Def. of Applicant, § 56.2 Def. of Customer	10	8	2	**20**
§ 1404 Credit and Deposits	§ 56.32-37, § 56.41, § 56.42, § 56.51, and § 56.53	383	106	44	**533**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	95	57	102	**254**
§ 1406(b) Notice of Termination	§ 56.91 and § 56.93	15	8	30	**53**
§ 1406(d) Timing of Termination	§ 56.82	2	1	3	**6**
§ 1406(e) Winter Termination	§ 56.100 and § 56.340	53	0	6	**59**
§ 1406(f) Medical Certification	§ 56.111-112, § 56.114-115	23	8	1	**32**
§ 1407(a) Reconnection Fee	§ 56.191(a)	3	1	2	**6**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b) and § 56.421	32	24	15	**71**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	25	14	7	**46**
§ 1407(d)(e) Payment of Outstanding Balance at Premise	§ 56.191(d)(e)	2	2	0	**4**
§ 1409 Late Payment Charge Waiver	§ 56.22	8	7	19	**34**
§ 1410 Complaints Filed with the Commission	§ 56.181	2	1	0	**3**
§ 1410.1(2) Referral to Universal Services Program	n/a	15	9	0	**24**
§ 1417 Non-applicability - Protection From Abuse	§ 56.285	1	1	0	**2**
Total		**841**	**343**	**264**	**1,448**

Across the industries, the highest number of infractions during 2013-2018 were related to credit standards and the collection of security deposits (Section 1404), the overall obligation of good faith, honesty, and fair dealing (Section 1402), and unauthorized terminations (Section 1406(a)). A yearly breakdown of the Chapter 14 infractions can be found in Appendices 1-6.

2013 - 2018 Chapter 14 Infractions



	2013	2014	2015	2016	2017	2018
Electric	57	129	188	194	115	158
Gas	64	58	66	69	25	61
Water	38	55	41	36	49	45

Electric Gas Water

As referenced in the graph above and in Appendices 1-6, the total number of informally verified infractions of Chapter 14 increased between 2013 and 2018.

There are a variety of reasons for the increase in infractions for 2013-2018, including the number of informal complaints BCS received, the number of informal complaints BCS analysts evaluated, and changes made by BCS regarding internal complaint evaluation procedures. Since the passage of Chapter 14, the subject of consumer complaints has increased in complexity. Although there are a variety of reasons for the increase in consumer complaint complexity, most lead to liability issues, as seen by the infraction data in Table 1.

Initially some of the public utilities did not comply with certain changes to Chapter 14. For example, for 2004-2014, utilities collected security deposits in full before providing utility service. After Chapter 14 was reauthorized, revisions to Section 1404 permitted an applicant or customer to pay a security deposit within 90 days. Some public utilities were slow to respond to this change and BCS identified the issue through the infraction process.

Once identified, BCS worked with utilities to bring their procedures into compliance with Chapter 14.

Infractions of Section 1402 Declaration of Policy (Section 56.1 Statement of Purpose and Policy) are used by BCS to identify when a utility failed to manage customer debt or failed to use good faith, honesty, and fair dealing when interacting with customers.

Formal Commission Actions

Pursuant to 66 Pa. C.S. § 331(a), 506 and 52 Pa. Code § 3.113, the Commission's BIE and BCS continue to conduct investigations into alleged Chapter 14 infractions. These investigations have resulted in the Commission's approval of settlement agreements reached between utilities and BIE staff to resolve these matters. It can take six months or longer to bring an investigation to resolution. Regardless of settlement, these investigations may indicate systemic problems that need to be corrected.

In the First, Second, Third, and Fourth Biennial Reports submitted pursuant to Section 1415, the Commission reported on 16 settlements related to alleged Chapter 14 violations.[1] For this reporting period, the Commission acted on the following settlement that involved alleged violations of Chapter 14:

On Feb. 7, 2019, the Commission finalized a $10,000 civil penalty with PECO Energy Company to resolve allegations of improper terminations of service to low-income customers during the winter moratorium of 2015-2016. (Docket No. M-2018-2531404). Under the settlement, PECO increased the amount available for matching contributions to its Energy Assistance Fund in the amount to $20,000. HELP Hardship Fund, which helps low-income customers maintain service. The utility also committed to retraining some of

[1] (i) Pennsylvania Public Utility Commission Prosecutory Staff v. PECO Energy Company, Public Meeting of Dec. 1, 2005. M-00051904; (ii) PUC Prosecutory Staff Informal Investigation of the Pennsylvania Electric Company Service Terminations in Hastings and Erie, Pennsylvania. Public Meeting of Dec. 15, 2005. M-00051906; (iii) PUC Prosecutory Staff Informal Investigation of the PPL Electric Utilities Corporation Residential Service Terminations. Public Meeting of Aug. 17, 2006. M-00061942; (iv) Settlement Agreement Between PUC Prosecutory Staff and West Penn Power Co., t/d/b/a Allegheny Power, Public Meeting of Oct. 19, 2006. M-00061952; (v) Pennsylvania Public Utility Commission Prosecutory Staff v. PECO Energy Company, Public Meeting of June 24, 2008. M-00072051; (vi) Pennsylvania Public Utility Commission, Prosecutory Staff v. PPL Electric Utilities Corporation, Public Meeting of March 26, 2009, M-2008-2057562; (vii) Pennsylvania Public Utility Commission Law Bureau Prosecutory Staff v. Philadelphia Gas Works, Public Meeting of December 18, 2008, M-00072017; (viii) Pennsylvania Public Utility Commission; (ix) Pennsylvania Public Utility Commission Law Bureau Prosecutory Staff v. Metropolitan Edison Company, Public Meeting held April 22, 2010, M-2009-2035436; (x) Pennsylvania Public Utility Commission Law Bureau Prosecutory Staff v. PPL Electric Utilities Corporation, Public Meeting held November 19, 2009, M-2009-2058182; (xi) Pennsylvania Public Utility Commission Law Bureau Prosecutory Staff, Public Meeting held November 19, 2009, M-2009-2059414; (xii) Pennsylvania Public Utility Commission Prosecutory Staff v. Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company d/b/a FirstEnergy, Public Meeting held December 3, 2009, M-2009-2112849; (xiii) Re: Informal Investigation of Pennsylvania-American Water Company, Public Meeting held March 26, 2009, M-2008-2066530; (xiv) Law Bureau Prosecutory Staff v. Pennsylvania Electric Company, Public Meeting of March 12, 2009, M-2008-2027681; (xv) Pennsylvania Public Utility Commission, Law Bureau Prosecutory Staff v. Peoples Natural Gas Company LLC f/k/a Dominion Peoples Natural Gas Company, Public Meeting held January 27, 2011, M-2010-2147821;.

its customer service personnel, provided copies of its monthly call monitoring reports, and provided for direct monitoring of calls by Commission staff.

On Feb. 7, 2019, the Commission finalized a $10,000 civil penalty with PECO Energy Company to resolve allegations of improper terminations of service to low-income customers during the winter moratorium[7] of 2015-2016. (Docket No. M-2018-2531404). Under the settlement, PECO increased the amount available for matching contributions to its Energy Assistance Fund in the amount to $20,000.00.

Conclusion: Section I – The Degree to Which the Chapter's Requirements Have Been Successfully Implemented

During the 15 years that Chapter 14 has been in effect, the Commission has worked to implement the statute to improve utility account collections and to eliminate the subsidization of bad debt costs by paying customers, while ensuring that service remains available to all customers on reasonable terms and conditions. The Commission revised the Chapter 56 regulations to make them consistent with the mandates of Chapter 14.

Overall, utilities have generally complied with Chapter 14, though in recent years 2013-2018 there has been an increase in related infractions. While some compliance issues are apparent, BCS continues to work informally with utilities to correct compliance issues identified through the complaint and reporting process. When necessary, BCS refers systemic non-compliance issues to BIE for further investigation and corrective action.

The Commission continues to be concerned with unlawful or erroneous terminations, which present serious issues of health and safety for both the individuals directly involved and the surrounding community. While many of these instances of non-compliance are isolated occurrences, the Commission takes such matters seriously and works diligently to address these issues with utilities on a case-by-case basis.

While the report shows evidence that Pennsylvania's utilities comply with the provisions of Chapter 14, review of collections variables and data indicate that utilities are not fully or effectively using all of the tools provided by Chapter 14.

Noteworthy findings related to liability disputes:

As shown in Table 1 – Summary of Chapter 14 Infractions 2013-2018 – on page 10, verified informal infractions of Section 1407 – Credit and Deposits – represent 37% of infractions cited between 2013 and 2018. These infractions indicate that utilities are not exhausting the tools available through Chapter 14 to determine credit worthiness or liability at the time of application. Adopting some additional practices may allow utilities to better

[7] 52 Pa. Code § 56.100(b).

identify applicants, customers, and occupants responsible for payment of utility bills and help pursue timely collection of customer debt:

First, a utility should use public records or other methods, as may be defined in the utility's tariff, to determine responsibility for any outstanding balance when an applicant is unable to furnish a written mortgage, deed, or lease.[8] The denial of service based solely on the ability of an applicant to provide a written lease delays applicants' receipt of needed utility services and may impede timely collection of utility balances.

Second, utilities should modify their customer information systems to ensure all responsible parties receiving utility service are properly billed and are provided adequate notice of liability for any outstanding balance. Where the utility has clear evidence of an adult occupant whose name is not on the mortgage, deed, or lease transacting against and accepting responsibility for that service, ensure proper billing and notice by placing that occupant's name on the bill and acknowledging him/her as a customer of record. This may allow the utility to collect that portion of the debt and ensure consistency between the definition of customer at Section 1403 and occupant responsibilities at Section 1407. Additionally, this may provide more clarity when resolving issues of liability.

[8] 68 P.S. § 250.201 pertaining to leases for not more than three years provides that "[r]eal property . . . may be leased for a term of not more than three years by a landlord or his agent to a tenant or his agent, by oral or written agreement."

Section II - The Effect Upon the Cash Working Capital or Cash Flow, Uncollectible Levels, and Collections of the Affected Public Utilities

This section provides detailed information on the effects of Chapter 14 on cash working capital or cash flow, uncollectible levels, and residential collections of the affected utilities.

Overview of the Collections Process

The collections process begins when a customer does not pay his/her bill in full and on time and accrues overdue balances called arrearages. Accounts with arrearages that maintain utility service or for which the service is on are considered active accounts. Active accounts are reported in two categories depending on the type of arrearage: Debt on Arrangements and Debt not on Arrangements.[9] The utilities report both the number of customers in debt and the corresponding dollar amounts for that debt in both categories for active accounts.

For collection purposes, inactive accounts in this section are accounts without service that have outstanding balances or arrearages. Inactive accounts will be provided a final bill, which will either be paid by the customer or written-off by the utility as uncollectible and reported as part of Gross Write-Offs.

Utilities move accounts from inactive status to write-offs on differing timelines, varying from two months to one year following termination or discontinuance of service, according to individual utility accounting strategies. Appendix 9 presents the information.

Collections Data

Chapter 14 reporting requirements include:
The complete list of collections data variables appears in Appendix 7

- Applicability of the reporting requirements;
- Content of the list of collections data variables to be included under the reporting requirements;
- Frequency of utility reporting under the requirements;
- Due dates for the utility reporting under the requirements;
- Establishment of the Collaborative Process Working Group;
- Transfer of historical data from the Commission to the utilities;
- Collections Reporting Requirements;
- Collections data available to the public.

[9] Those customers who have debt that is on a utility-granted or Commission-granted payment arrangement is considered "on arrangement".

Applicability

Large Utilities - Electric

The electric distribution companies (EDCs) subject to full Chapter 14 reporting requirements included in this report: Duquesne Light Co. (Duquesne), Metropolitan Edison Co. (Met-Ed), PECO Energy Company (PECO Electric), Pennsylvania Electric Co. (Penelec), Pennsylvania Power Co. (Penn Power), PPL Electric Utilities Corp. (PPL), and West Penn Power Co. (West Penn).

Large Utilities – Natural Gas

The natural gas distribution companies (NGDCs) subject to full Chapter 14 reporting requirements included in this report: Columbia Gas of Pennsylvania (Columbia Gas), Peoples-Equitable Division (Peoples-Equitable), National Fuel Gas Distribution Corp. (NFG), Peoples Natural Gas Co. (Peoples), PECO Energy Company (PECO Gas), Philadelphia Gas Works (PGW), UGI Utilities, Inc. (UGI-Gas), and UGI Penn Natural Gas (UGI Penn Natural).

Large Utilities – Water

The non-municipal water utilities subject to full Chapter 14 reporting requirements included in this report: Aqua Pennsylvania Inc. (Aqua), Audubon Water Co. (Audubon), Columbia Water Co. (Columbia Water), Newtown Artesian Water Co. (Newtown Artesian), Pennsylvania American Water Co. (PAWC), SUEZ Water Bethel f/k/a United Water Bethel (SUEZ Bethel), SUEZ Water PA f/k/a United Water of Pennsylvania Inc. (SUEZ PA), and York Water Co. (York).

Number of Years Included in the Report

Residential collections data used to evaluate implementation of Chapter 14 in this report covers the years 2004 (base year) and 2013 through 2018 for the electric and gas industries. Data for the years 2002, 2003, and 2005 through 2012 are excluded from this report but can be found in the four previously issued reports. Water utilities began reporting residential data beginning in 2012, so the historical reporting period for water data in this report is 2012 through 2018. According to Commission regulations at 52 Pa. Code § 56.202 (Record Maintenance), utilities are required to maintain written or recorded disputes and complaints for a minimum of four years.

Frequency of Utility Reporting

In 2011, the Commission revised the "Standards and Billing Practices for Residential Utility Service" regulations at 52 Pa. Code Chapter 56 to comply with Chapter 14. In the Chapter 56 rulemaking, the Commission revised Section 56.231 to incorporate the Interim

Guidelines for collections data reporting. Utilities must now report data to the Commission on an annual basis.

Utility Reporting Due Dates

The Commission set Sept. 1, 2006, as the initial reporting deadline. For subsequent reporting, the Commission established April 1 as the due date for the previous year's information (*i.e.*, 2018 data was due April 1, 2019). Annual reporting will continue through April 1, 2024, which will cover the year 2023.

Collections Data Available to the Public

Collections data is available on the Commission website at www.puc.pa.gov. The Commission posts annual utility data submissions to the Commission website by May 31 of each year. Data for the period 2002-18 can be found at:
http://www.puc.pa.gov/filing_resources/biennial_report_pursuant_to_section_1415.aspx

Residential Collections Data 2004–2018

All residential collections data tables presented in this report are based on utility-validated data submitted to the Commission. The utility validation process was outlined in the Commission's Final Order at Docket No. M-00041802F0003.[10] The historical data set for this report covers 2004-2018 for electric and gas industry data, and 2012-2018 for the water industry. Data were recently validated and updated by the utilities during 2019 for this report. In some cases, data were revised after publication and corrected data are presented herein.

Treatment of Industry Totals and Averages

All electric, gas, and water industry totals shown throughout the tables in this report are based on industry totals and do not represent an average of utility scores. This rule applies to all tables, regardless of whether the table shows total lines that are simple additions or whether the table shows totals that are derived from calculated variables, which are based on equations using at least two input variables. Industry averages shown throughout this report may be calculated based on category totals and may not represent an average of rates shown in the tables.

In addition to the statistics for the two largest utilities, Pennsylvania American Water Company (PAWC) and Aqua, the individual statistics for the "Other Class A" utilities are being presented; however, the "Other Class A" rates are presented as a whole and the water industry averages are presented based on the individual rates of PAWC, Aqua, and the "Other Class A" utilities as a whole. Water utilities are only required to report residential data, so confirmed low-income data is not presented for the water utilities.

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[10] *Biennial Report to the General Assembly and Governor Pursuant to Section 1415* (Order entered July 24, 2006).

Collections Performance Measures and Data

The Commission believes that specific collections performance measures such as the percent of customers in debt, the percent of billings (revenues) in debt, the average arrearage, and the percent of billings written-off (gross write-offs) provide an overall indication of collections performance. These primary collections measures appear in this section, along with additional data variables and annual universal service program costs. Universal service costs are included because universal service programs provide a safety net for low-income customers and, as such, represent a preemptive part of the utilities' overall collections strategy.

It is important to note that many of the key collections performance variables and data presented in this report do not include CAP accounts, consistent with the Commission's historical treatment of CAP accounts. For ratemaking purposes, CAP costs are recovered as a Universal Service Program Cost and not as a collections expense. The increase in the enrollment in CAP since the passage of Chapter 14 is, however, a factor in the overall collections trend line. The net effect in the growth of the CAP programs is that the customer arrearages are removed from the amount of reported arrearages. Therefore, reductions in those collection costs have partially offset the increase in CAP costs.

Additional collections data appear in the appendices of this report. The Commission views these data as supplementary to the performance measures presented in this section but considers the data important enough to include in this report, as they are used to calculate several of the average metrics. The appendices include: the dollars in gross write-offs, the number of active accounts in debt, the total dollars in debt for active accounts, average arrearages, annual utility collections operating expenses, collections costs as a percentage of billings, universal service program costs as a percentage of billings, CAP costs, Low Income Usage Reduction Program (LIURP) costs, summaries of select collections and universal service costs, monthly average bills, the number of accounts and dollars in debt for inactive accounts, and the number of accounts and total dollars in security deposits on hand.

Treatment of Confirmed Low-Income Data in the Collections Performance Data

A low-income customer is defined as one whose household income is at or below 150% of the federal poverty income guidelines (FPIG). A confirmed low-income customer is one where the EDC/NGDC has verified gross household income or obtained information that would reasonably place the customer within this FPIG level. This information may include receipt of LIHEAP funds (Low-Income Home Energy Assistance Program), self-certification by the customer, income source or information obtained in Section 56.97(b) (relating to procedures upon rate-payer or occupant contact prior to termination). We have included collection data about confirmed low-income customers for only a select number of collections performance measures in order to provide additional context to the residential and universal service program data. The utilities have no standardized methodology for counting confirmed low-income customers, however, the data is useful to provide context to several key collections variables in this report. The confirmed low-income data tables are always subsets of the residential data tables appearing throughout the report and are sourced from the Universal Service Reporting Requirements in 52 Pa. Code §§ 54.71–54.78 and §§ 62.1-62.8. Confirmed low-income data are only available for the electric and gas industries.

The number of residential customers shown below represents an average of the 12 months of month-end data reported by the utilities for calendar years 2004 and 2013-2018. This includes all residential customers, including universal service program recipients.

Table 2 – Number of Residential Customers – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	525,858	526,814	527,390	525,714	526,283	532,204	535,487
Met-Ed	459,171	488,375	490,059	492,501	495,698	499,192	502,110
PECO*	1,394,250	1,435,241	1,445,054	1,455,425	1,466,107	1,478,817	1,492,306
Penelec	504,114	504,543	503,597	502,415	501,820	501,533	501,456
Penn Power	137,514	141,147	141,745	142,591	143,536	144,286	145,285
PPL	1,161,098	1,218,734	1,221,960	1,226,583	1,231,155	1,223,076	1,227,683
West Penn	600,419	619,531	621,020	622,404	623,830	624,914	626,454
Total	**4,782,424**	**4,934,385**	**4,950,825**	**4,967,633**	**4,988,429**	**5,004,022**	**5,030,781**

*PECO's data includes electric and gas.

The number of residential customers for the electric industry increased by 14.9% from 2004 as compared to 2018. Met-Ed showed the largest increase since 2004, at 9.4%. Penelec was the only electric utility to show a decrease in the number of residential customers by 0.5%.

Table 3 – Number of Residential Customers – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	357,006	384,213	386,150	387,782	390,394	393,410	396,835
NFG	195,022	198,763	198,681	199,061	197,992	196,950	197,108
Peoples	323,513	330,123	330,459	331,587	331,814	333,761	334,790
Peoples-Equitable	233,784	242,632	243,602	245,930	243,371	247,930	248,408
UGI-Gas	270,327	324,576	331,582	338,929	345,693	352,720	361,789
UGI Penn Natural	139,964	149,097	150,495	151,648	152,761	154,319	156,554
Total w/out PGW	***1,519,616***	***1,629,404***	***1,640,969***	***1,654,937***	***1,662,025***	***1,679,090***	***1,695,484***
PGW	476,662	468,943	469,283	470,788	473,019	474,960	477,533
Total w/PGW	**1,996,278**	**2,098,347**	**2,110,252**	**2,125,725**	**2,135,044**	**2,154,050**	**2,173,017**

The number of residential customers for the gas industry increased by 8.9% from 2004 as compared to 2018. UGI-Gas showed the largest increase since 2004, by 33.8%. PGW showed the smallest increase at 0.2%.

Table 4 – Number of Residential Customers – Water

Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	2,586	2,588	2,588	2,587	2,603	2,560	2,728
Columbia Water	8,292	8,317	9,312	9,435	9,500	9,597	9,663
Newtown Artesian	9,411	9,359	9,412	9,477	9,546	9,573	9,373
Superior*	3,415	3,510	3,620	3,766	N/A	N/A	N/A
SUEZ Bethel	2,346	2,367	2,389	2,410	2,413	2,215	2,432
SUEZ PA	51,791	52,280	52,804	53,269	53,805	49,878	54,936
York	57,222	57,805	58,225	60,027	59,943	60,957	61,603
Other Class A Total	***135,063***	***136,226***	***138,350***	***140,971***	***137,810***	***134,780***	***140,735***
Aqua	384,716	387,504	391,768	390,310	396,150	398,536	401,219
PAWC	589,738	591,405	596,302	597,114	598,988	606,453	608,928
Total	**1,109,517**	**1,115,135**	**1,126,420**	**1,128,395**	**1,132,948**	**1,139,769**	**1,150,882**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The number of residential customers for the water industry increased by 3.7% from 2012 as compared to 2018. Columbia Water and York showed the largest increases, with 16.5% and 7.7%, respectively. Newtown Artesian was the only water utility to show a decrease by 0.4%.

The number of confirmed low-income accounts shown below for electric and gas industries represents an average of the 12 months of month-end data reported by the utilities for calendar years 2004 and 2013-2018. A confirmed low-income customer is one where the EDC/NGDC has verified gross household income or obtained information that would reasonably place the customer at or below the 150% FPIG level. Confirmed low-income data is not available for the water industry.

Table 5 – Number of Confirmed Low-Income Customers – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	32,458	58,171	58,792	51,374	45,065	48,500	49,346
Met-Ed	31,231	61,672	63,377	65,425	67,415	68,787	72,200
PECO*	208,789	195,708	206,745	206,579	201,533	183,587	171,804
Penelec	49,908	78,117	80,030	81,896	84,466	88,036	90,502
Penn Power	14,665	18,518	18,617	18,848	19,344	19,695	20,087
PPL	115,412	166,536	171,171	173,806	176,938	181,782	189,826
West Penn	30,180	45,004	52,185	58,606	64,026	68,644	72,291
Total	**482,643**	**623,726**	**650,917**	**656,534**	**658,787**	**659,031**	**666,056**

*PECO's data includes electric and gas.

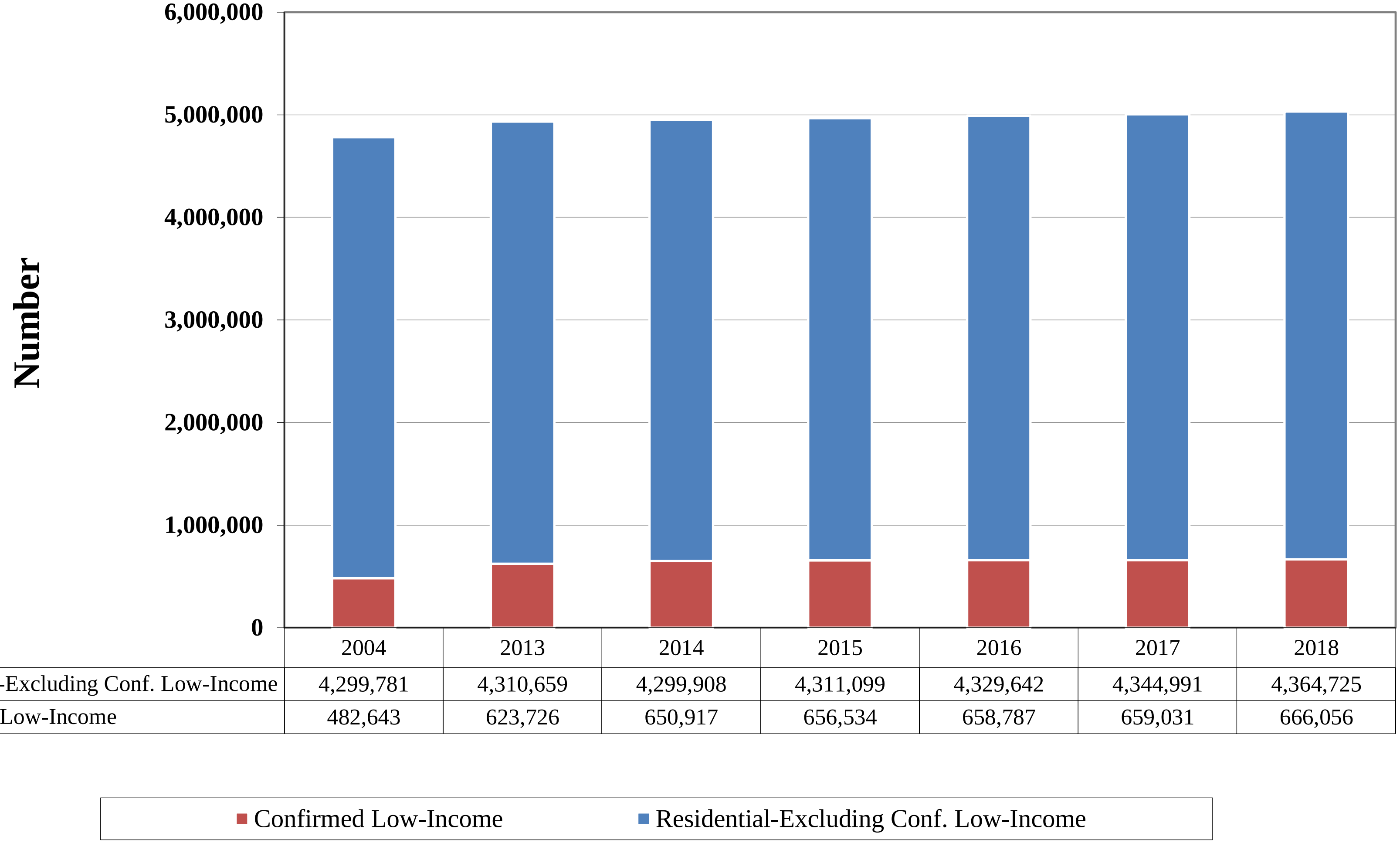
The number of confirmed low-income customers for the electric industry increased 38% from 2004 as compared to 2018. Met-Ed and West Penn showed the largest increases, with 131.2% and 139.5%, respectively. PECO was the only electric utility to show a decrease in the number of confirmed low-income customers by 17.7%.

Table 6 – Number of Confirmed Low-Income Customers – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	70,038	67,711	68,418	68,877	68,178	67,959	67,590
NFG	24,491	29,680	28,759	27,932	26,030	25,612	22,423
Peoples	59,768	57,217	59,483	59,708	59,727	60,077	69,212
Peoples-Equitable	32,360	43,201	43,112	44,173	43,807	44,627	42,427
UGI-Gas	20,541	39,571	41,639	38,489	34,269	33,508	34,802
UGI Penn Natural	25,148	25,967	26,433	24,956	23,061	21,973	21,958
Total w/out PGW	***232,346***	***263,347***	***267,844***	***264,135***	***255,072***	***253,756***	***258,412***
PGW	153,707	157,320	144,696	161,961	148,995	146,488	149,217
Total w/PGW	**386,053**	**420,667**	**412,540**	**426,096**	**404,067**	**400,244**	**407,629**

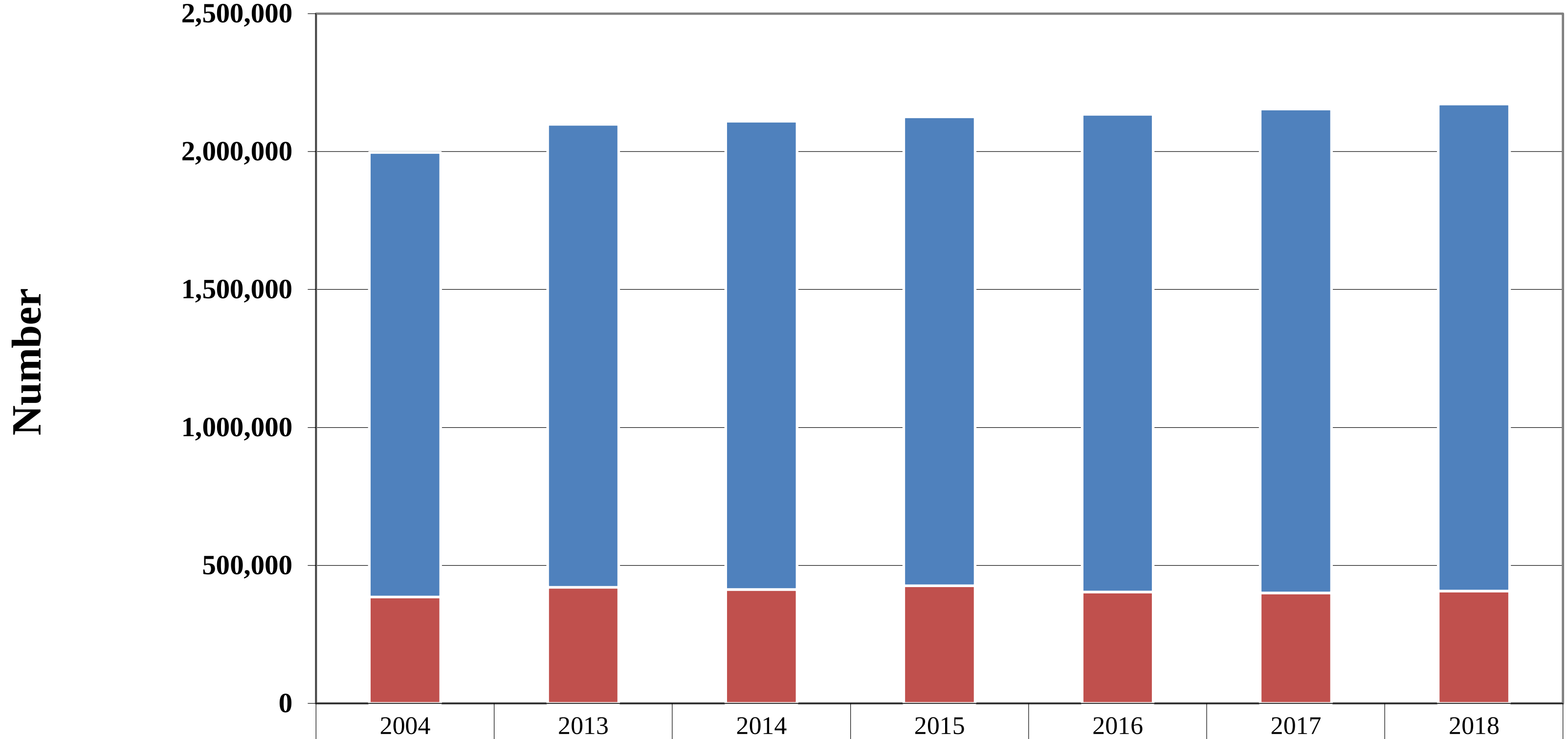
The number of confirmed low-income customers for the gas industry increased by 5.6% from 2004 as compared to 2018. Peoples-Equitable and UGI-Gas showed the largest increases, with 31.1% and 69.4%, respectively. UGI Penn Natural showed the largest decrease, with 12.7%.

Total Number of Residential Customers - Electric
(Residential + Confirmed Low-Income)



	2004	2013	2014	2015	2016	2017	2018
Residential-Excluding Conf. Low-Income	4,299,781	4,310,659	4,299,908	4,311,099	4,329,642	4,344,991	4,364,725
Confirmed Low-Income	482,643	623,726	650,917	656,534	658,787	659,031	666,056

Total Number of Customers - Gas (including PGW) (Residential + Confirmed Low-Income)



	2004	2013	2014	2015	2016	2017	2018
Residential-Excluding Conf. Low-Income	1,610,225	1,677,680	1,697,712	1,699,629	1,730,977	1,753,806	1,765,388
Confirmed Low-Income	386,053	420,667	412,540	426,096	404,067	400,244	407,629

The annual residential billings (revenues) shown below for the electric and gas industries represents the total amount of the residential billings for the calendar years 2004 and 2013-2018. This includes normal tariff billings and late payment fees. Water industry residential billings are shown from 2012-2018.

Table 7 – Annual Residential Billings – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$314,096,238	$409,064,999	$436,291,950	$517,693,491	$530,859,408	$513,411,625	$565,825,977
Met-Ed	$459,899,488	$566,265,092	$529,337,151	$580,097,486	$575,062,397	$600,897,860	$631,235,520
PECO*	$1,957,092,865	$2,453,433,203	$2,557,743,306	$2,538,411,191	$2,407,004,518	$2,293,767,700	$2,477,620,946
Penelec	$375,076,999	$472,447,505	$450,755,455	$501,135,992	$528,498,042	$556,183,104	$591,507,790
Penn Power	$139,365,836	$139,707,141	$137,113,260	$173,081,319	$184,157,994	$177,401,888	$195,071,468
PPL	$1,119,311,100	$1,749,163,222	$1,927,958,763	$2,027,064,362	$2,042,218,145	$1,971,162,280	$2,076,233,183
West Penn	$461,441,708	$499,171,103	$519,121,754	$612,001,071	$660,819,787	$671,511,234	$715,500,920
Total	**$4,826,284,234**	**$6,289,252,265**	**$6,558,321,639**	**$6,949,484,912**	**$6,928,620,291**	**$6,784,335,691**	**$7,252,995,804**

*PECO's data includes electric and gas.

The residential billings for the electric industry increased by 50.3% from 2004 as compared to 2018. Duquesne and PPL showed the largest increases, with 80.1% and 85.5%, respectively. PECO had the smallest increase, with 26.6%.

Table 8 – Annual Residential Billings – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$334,443,294	$329,063,560	$383,636,645	$382,178,953	$339,157,621	$392,397,339	$441,253,741
NFG	$244,711,222	$158,170,597	$170,339,225	$134,831,811	$112,921,146	$135,825,959	$153,674,403
Peoples	$290,778,050	$299,632,543	$329,285,085	$288,744,126	$233,686,044	$268,489,281	$315,638,063
Peoples-Equitable	$283,893,176	$246,031,060	$266,937,177	$204,966,830	$164,798,640	$189,938,343	$230,033,115
UGI-Gas	$260,933,261	$219,614,215	$231,393,035	$205,051,789	$189,045,405	$251,118,904	$269,363,627
UGI Penn Natural	$184,696,814	$166,532,193	$177,507,142	$164,358,415	$131,594,611	$143,466,246	$163,406,878
Total w/out PGW	***$1,599,455,817***	***$1,419,044,168***	***$1,559,098,309***	***$1,380,131,924***	***$1,171,203,467***	***$1,381,236,072***	**$1,573,369,827**
PGW	$572,312,071	$474,805,698	$517,468,283	$486,111,491	$408,208,547	$489,888,426	$548,304,433
Total w/PGW	**$2,171,767,888**	**$1,893,849,866**	**$2,076,566,592**	**$1,866,243,415**	**$1,579,412,014**	**$1,871,124,498**	**$2,121,674,260**

The residential billings for the gas industry decreased by 2.3% from 2004 as compared to 2018. NFG showed the largest decrease since 2004, with 37.2%. Columbia Gas showed the largest increase in the residential billings by 31.9%.

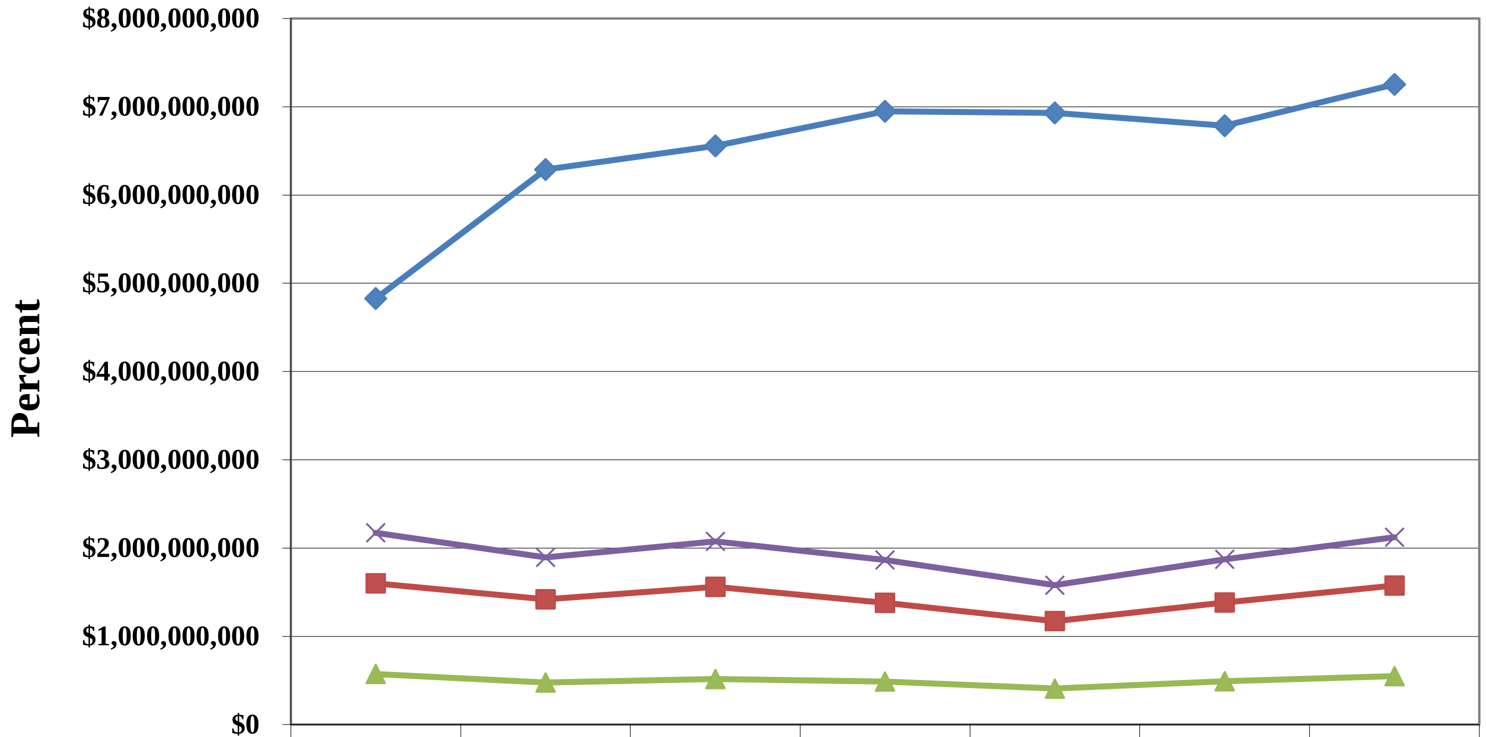
Table 9 – Annual Residential Billings – Water

Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$1,198,085	$1,336,220	$1,329,163	$1,323,542	$1,339,783	$1,298,750	$1,243,480
Columbia Water	$3,199,295	$3,380,440	$3,746,126	$4,654,304	$4,645,610	$4,621,134	$4,019,836
Newtown Artesian	$3,730,176	$3,594,788	$3,699,544	$3,692,828	$3,714,230	$3,727,065	$3,086,758
Superior*	$2,460,161	$2,469,390	$2,550,612	$2,669,999	N/A	N/A	N/A
SUEZ Bethel	$761,642	$20,778	$759,571	$850,310	$790,189	$779,995	$765,086
SUEZ PA	$21,877,862	$20,777,832	$20,422,690	$21,371,500	$26,875,053	$26,796,924	$28,941,953
York	$26,114,000	$26,796,000	$29,078,783	$29,681,824	$29,759,907	$30,347,447	$31,302,819
Other Class A Total	***$59,341,221***	***$58,375,448***	***$61,586,489***	***$64,244,307***	***$67,124,772***	***$67,571,315***	***$69,359,932***
Aqua	$280,272,234	$261,092,882	$282,259,481	$277,995,727	$283,330,191	$274,194,787	$289,591,031
PAWC	$356,011,807	$360,167,905	$378,710,296	$381,550,172	$398,076,489	$394,629,629	$399,002,102
Total	**$695,625,262**	**$679,636,235**	**$722,556,266**	**$723,790,206**	**$748,531,452**	**$736,395,731**	**$757,953,065**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The residential billings for the water industry increased by 9% from 2012 as compared to 2018. Columbia Water and SUEZ PA showed the largest increases, with 25.6% and 32.3%, respectively. Newtown Artesian was the only water utility to show a decrease in residential billings by 17.3%.

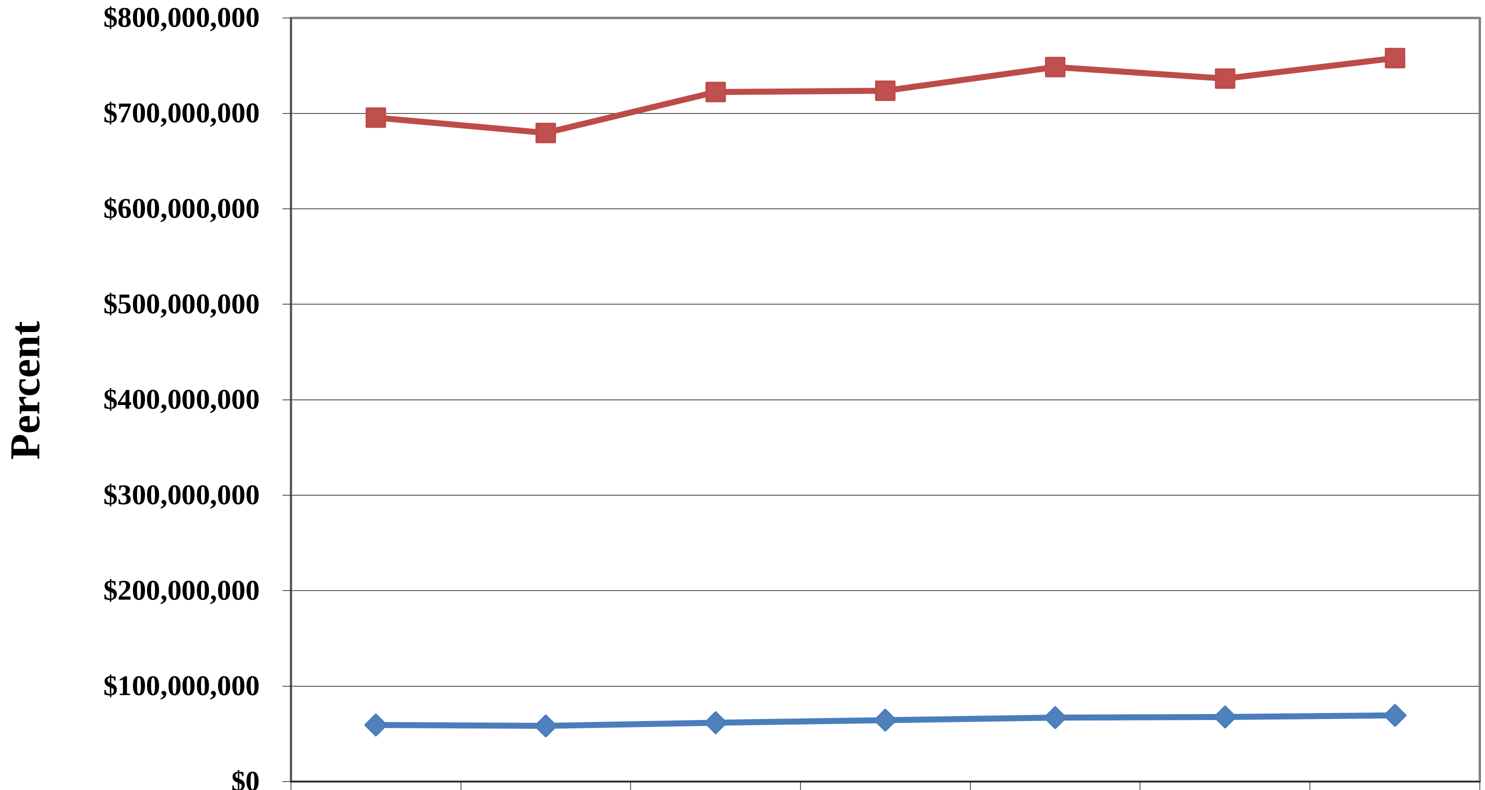
Annual Residential Billings - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	$4,826,284,23	$6,289,252,26	$6,558,321,63	$6,949,484,91	$6,928,620,29	$6,784,335,69	$7,252,995,80
Gas-Excluding PGW	$1,599,455,81	$1,419,044,16	$1,559,098,30	$1,380,131,92	$1,171,203,46	$1,381,236,07	$1,573,369,82
PGW	$572,312,071	$474,805,698	$517,468,283	$486,111,491	$408,208,547	$489,888,426	$548,304,433
Gas-Including PGW	$2,171,767,88	$1,893,849,86	$2,076,566,59	$1,866,243,41	$1,579,412,01	$1,871,124,49	$2,121,674,26

Electric　Gas-Excluding PGW　PGW　Gas-Including PGW

Annual Residential Billings - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	$59,341,221	$58,375,448	$61,586,489	$64,244,307	$67,124,772	$67,571,315	$69,359,932
All Class A	$695,625,262	$679,636,235	$722,556,266	$723,790,206	$748,531,452	$736,395,731	$757,953,065

Other Class A All Class A

The following tables show the percentage of billings (revenues) in debt for the electric and gas utilities from 2004 and 2013-2018. The percentage of billings in debt is calculated by dividing the total annual billings by the total monthly average dollars in debt. This calculated variable provides the most common metric to measure the extent of customer debt. In the tables that follow, the higher the percentage, the greater the potential collections risk. Reminder: Industry averages may be based on category totals and may not represent an average of rates shown in the tables.

Table 10 – Percentage of Billings in Debt – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	7.13	4.45	4.26	4.74	4.41	5.02	4.74
Met-Ed	5.44	6.48	7.85	6.63	5.98	4.92	5.17
PECO*	6.32	4.58	3.55	3.10	2.84	2.92	2.91
Penelec	6.62	6.65	8.01	6.94	6.32	5.56	5.93
Penn Power	5.76	5.51	6.06	5.22	5.27	4.66	4.68
PPL	5.15	6.35	6.01	5.85	4.96	4.77	4.45
West Penn	3.38	4.42	5.39	4.82	4.58	4.30	4.90
Average	**5.74**	**5.40**	**5.17**	**4.80**	**4.34**	**4.19**	**4.18**

*PECO statistics include electric and gas.

The electric industry percentage of billings in debt showed a decrease of 27.2% from 2004 as compared to 2018. West Penn is the only electric utility to show an increase in the percentage of billings in debt when comparing 2004 to 2018; however, its percentages are comparable with the percentages of the other FirstEnergy subsidiaries.

Table 11 – Percentage of Billings in Debt – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	4.78	3.86	4.15	4.22	3.60	3.09	3.14
NFG	3.54	3.65	4.03	4.87	4.74	3.66	3.32
Peoples	14.48	8.41	3.48	3.75	3.71	2.98	2.97
Peoples-Equitable	9.44	3.46	3.76	3.95	3.59	3.16	2.97
UGI-Gas	3.04	5.00	6.74	7.26	5.12	4.95	6.35
UGI Penn Natural	3.76	4.51	5.86	6.41	4.66	4.95	6.03
Average w/out PGW	***6.78***	***4.98***	***4.51***	***4.85***	***3.87***	***3.67***	***3.95***
PGW	18.33	13.04	13.66	13.03	13.39	11.20	10.59
Average w/PGW	**9.82**	**7.00**	**6.79**	**6.99**	**6.50**	**5.64**	**5.67**

The percentage of billings in debt for the gas industry, excluding PGW, showed a significant decrease of 41.7% from 2004 as compared to 2018. Peoples showed the most improvement in this metric, with an overall 79.7% decrease in the percentage of billings in debt, while UGI-Gas has more than doubled its percent of billing in debt from 3% to over 6.4%. UGI Penn Natural also showed a marked increase in the percentage of billings in debt, with over 60.4%. These increases represent substantially more collections risk for UGI-Gas and UGI Penn Natural, compared to the other gas utilities.

Table 12 – Percentage of Billings in Debt – Water

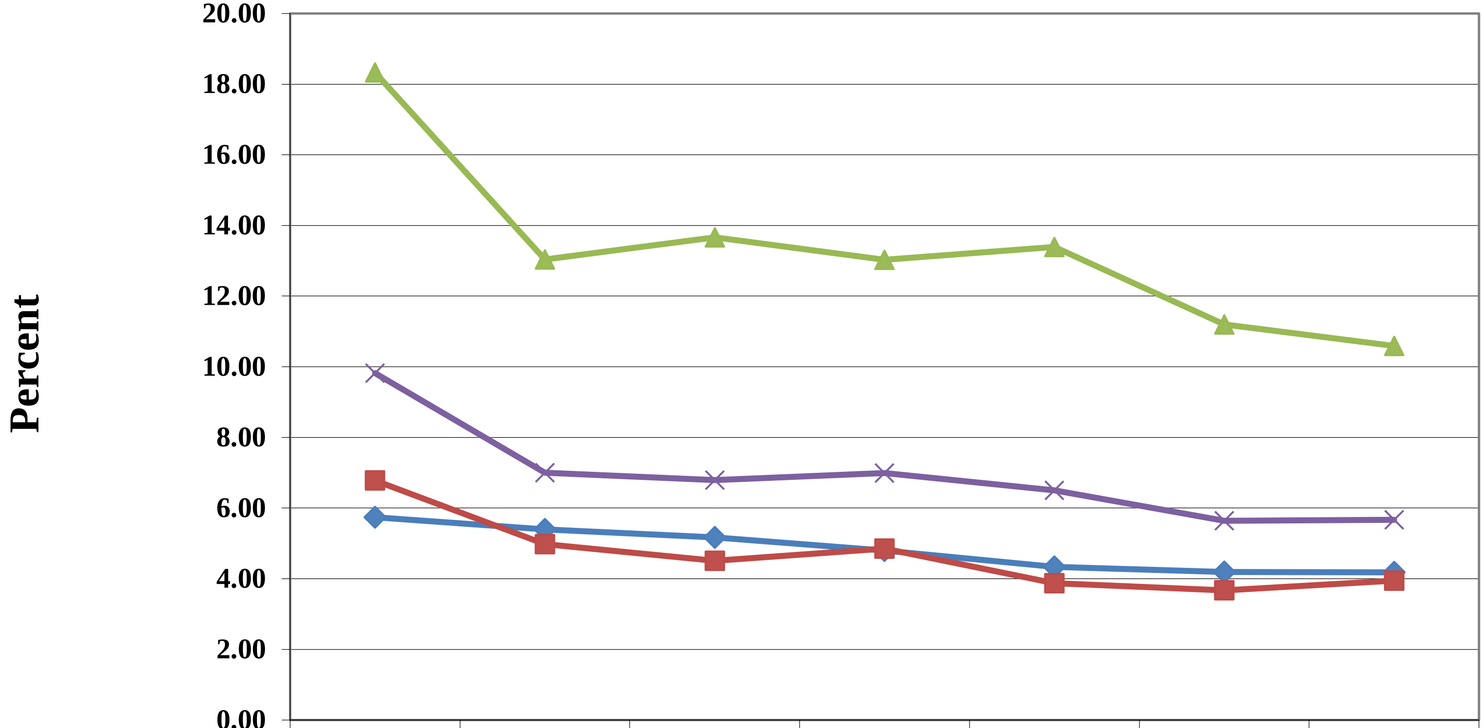
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	0.67	0.63	0.58	0.53	0.63	1.05	0.89
Columbia Water	1.92	1.96	1.66	0.93	0.84	0.67	0.69
Newtown Artesian	1.64	1.00	1.16	1.14	1.02	1.03	1.08
Superior*	0.05	0.07	0.09	0.06	N/A	N/A	N/A
SUEZ Bethel	1.17	42.04	1.11	1.32	1.32	1.70	1.35
SUEZ PA	1.51	1.37	1.45	1.35	1.13	1.28	1.28
York	1.95	1.56	1.50	1.50	1.43	1.40	2.09
Other Class A Average	***1.65***	***1.41***	***1.39***	***1.31***	***1.23***	***1.28***	***1.59***
Aqua	3.16	3.55	4.31	3.11	3.36	3.73	3.47
PAWC	3.47	3.88	4.20	3.83	3.77	4.07	4.44
Average	**3.19**	**3.54**	**4.01**	**3.33**	**3.39**	**3.69**	**3.81**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The percentage of billings in debt for the water industry showed an increase of 19.4% from 2012 as compared to 2018; however, without Aqua and PAWC, the other water utilities showed an overall decrease of 3.6%. PAWC and Audubon showed the largest individual utility increases in the percentage of billings in debt.

The following graphs show the percentage of billings in debt for the electric, gas, and water industries. The graphs provide a visual perspective to better recognize the industry trends. The water industry is shown separately, as reporting did not start until 2012.

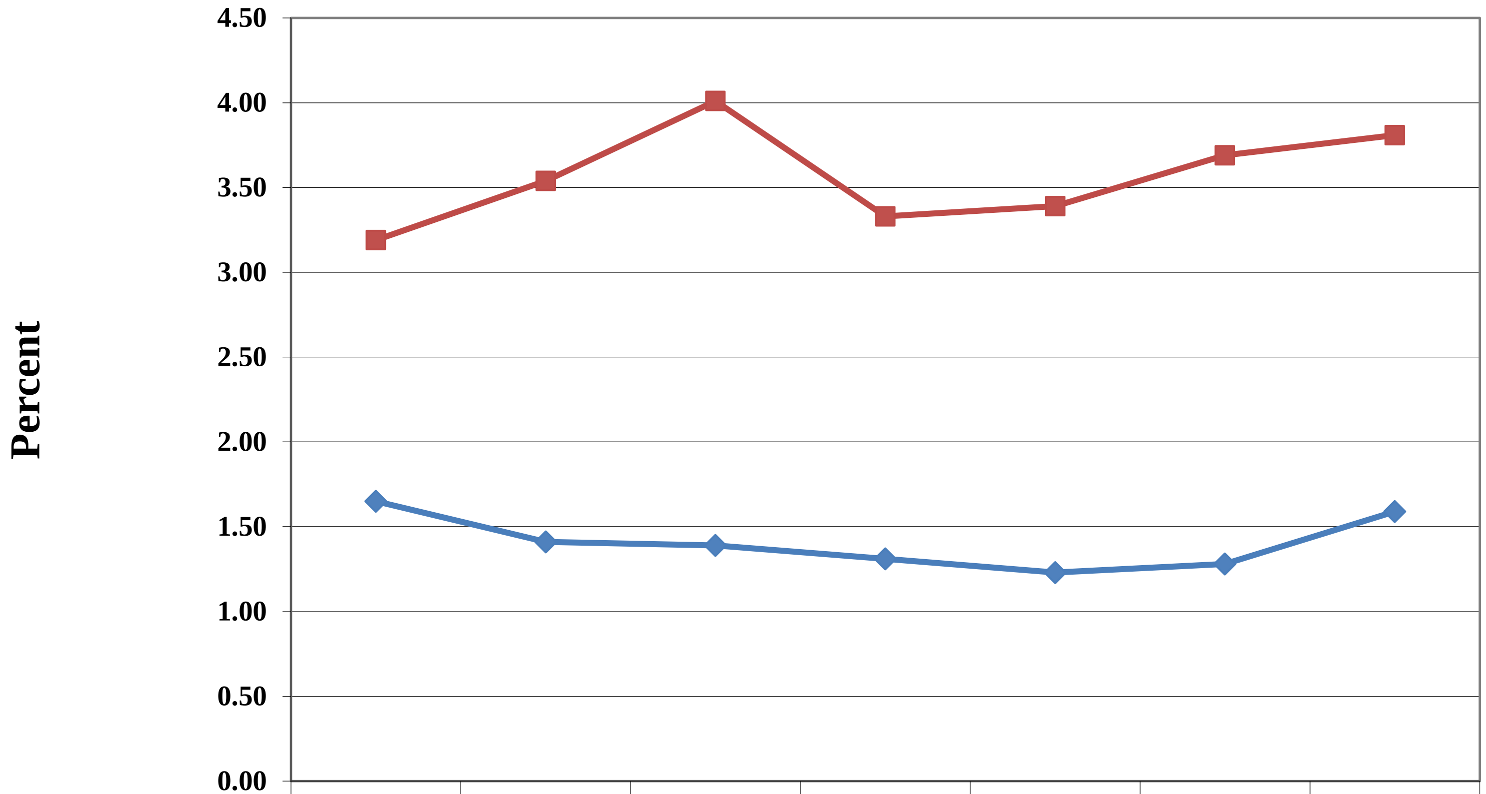
Percentage of Billings in Debt - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	5.74	5.40	5.17	4.80	4.34	4.19	4.18
Gas-Excluding PGW	6.78	4.98	4.51	4.85	3.87	3.67	3.95
PGW	18.33	13.04	13.66	13.03	13.39	11.20	10.59
Gas-Including PGW	9.82	7.00	6.79	6.99	6.50	5.64	5.67

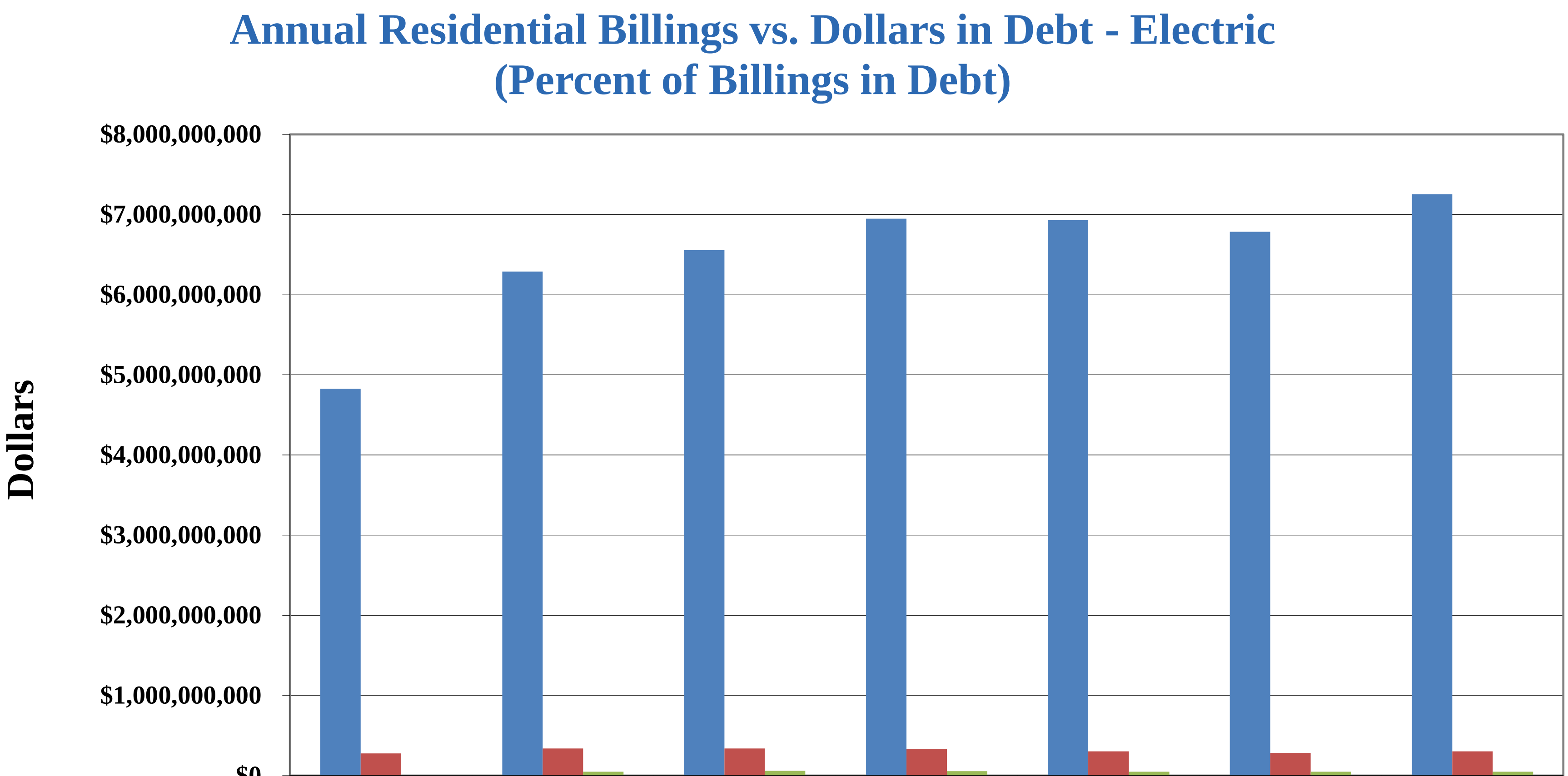
Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

Percentage of Billings in Debt - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	1.65	1.41	1.39	1.31	1.23	1.28	1.59
All Class A	3.19	3.54	4.01	3.33	3.39	3.69	3.81

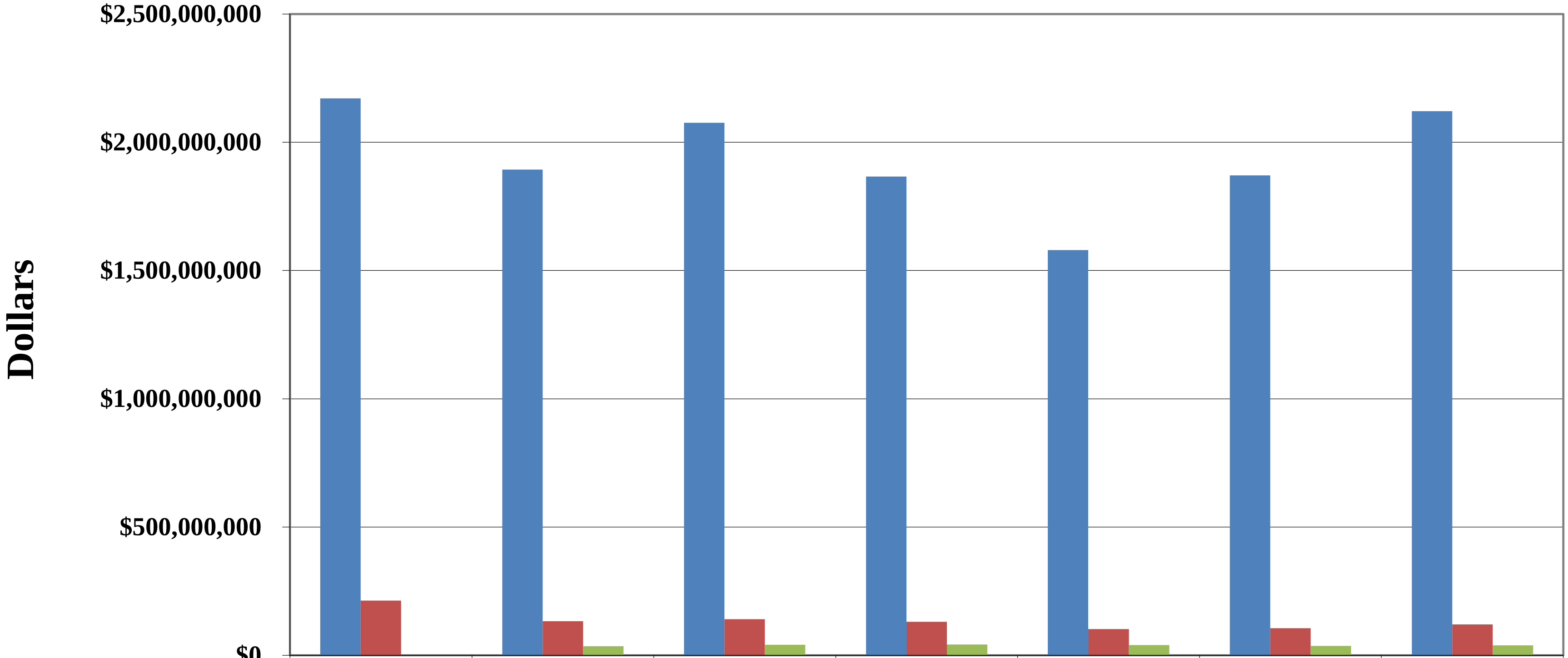
Other Class A   All Class A



	2004	2013	2014	2015	2016	2017	2018
Annual Billings	$4,826,284,234	$6,289,252,265	$6,558,321,639	$6,949,484,912	$6,928,620,291	$6,784,335,691	$7,252,995,804
Active Dollars in Debt	$277,095,065	$339,547,628	$339,022,879	$333,423,470	$301,019,745	$284,396,956	$303,153,202
Inactive Dollars In Debt		$47,691,357	$60,425,908	$54,246,792	$48,720,038	$48,411,519	$48,735,095

Annual Billings Active Dollars in Debt Inactive Dollars In Debt

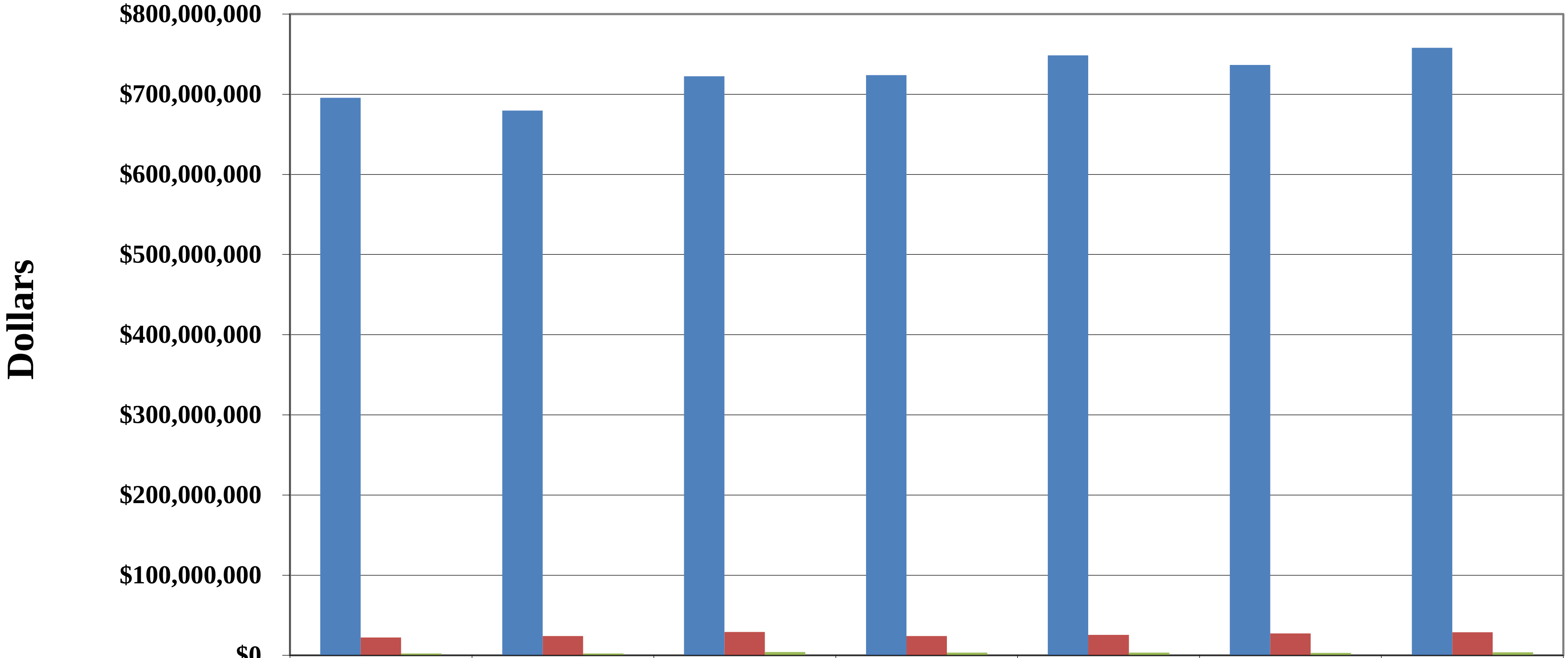
Annual Residential Billings vs. Dollars in Debt - Gas (including PGW)
(Percent of Billings in Debt)



	2004	2013	2014	2015	2016	2017	2018
Annual Billings	$2,171,767,888	$1,893,849,866	$2,076,566,592	$1,866,243,415	$1,579,412,014	$1,871,124,498	$2,121,674,260
Active Dollars in Debt	$213,365,942	$132,570,408	$140,964,854	$130,363,813	$102,616,388	$105,481,793	$120,213,975
Inactive Dollars In Debt		$35,599,640	$40,789,184	$42,152,638	$40,085,701	$36,132,056	$39,190,835

Annual Billings · Active Dollars in Debt · Inactive Dollars In Debt

Annual Residential Billings vs. Dollars in Debt - Water
(Percent of Billings in Debt)



	2012	2013	2014	2015	2016	2017	2018
Annual Billings	$695,625,262	$679,636,235	$722,556,266	$723,790,206	$748,531,452	$736,395,731	$757,953,065
Active Dollars in Debt	$22,195,302	$24,060,618	$28,940,918	$24,087,288	$25,351,108	$27,150,091	$28,855,273
Inactive Dollars In Debt	$2,130,778	$2,257,347	$4,116,997	$3,545,921	$3,491,534	$3,101,389	$3,639,735

Annual Billings   Active Dollars in Debt   Inactive Dollars In Debt

The following tables show the percentage of residential customers in debt for the electric and gas utilities from 2004 and 2013-2018. These tables show active accounts, where the customers have debt, but service is still on. The percentage of customers in debt is calculated by dividing the total number of residential customers in debt by the total number of residential customers. A utility with a low percentage of its residential customers in debt will experience better cash flow than one with a higher percentage.

Table 13 – Percentage of Residential Customers in Debt – Active Accounts – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	11.78	7.57	7.80	13.92	14.91	14.82	14.70
Met-Ed	18.79	17.87	18.96	19.56	20.40	20.13	20.30
PECO*	19.77	22.52	19.69	18.91	18.24	18.53	18.97
Penelec	19.88	16.40	17.87	18.69	20.07	20.53	20.74
Penn Power	19.23	14.42	15.31	17.07	17.97	17.60	17.93
PPL	15.97	17.45	18.13	18.15	17.49	17.35	16.85
West Penn	17.54	16.28	17.20	17.82	18.01	17.80	18.37
Average	**17.59**	**17.57**	**17.34**	**18.05**	**18.07**	**18.09**	**18.20**

*PECO statistics include electric and gas.

The percentage of residential customers in debt for the electric industry increased by 3.5% in the period from 2004 as compared to 2018. Several utilities have exceeded their 2004 percentage of customers in debt levels. Duquesne, Met Ed, Penelec, PPL, and West Penn have all exceeded the pre-Chapter 14 percentages reported in 2004 for the last several years. Duquesne showed the largest increase since 2004, at over 24.8%. These trends indicate that increasing numbers of customers are accruing debt. While these accounts are still active, the risk that the accounts will become inactive and the balances written off increases.

Table 14 – Percentage of Residential Customers in Debt – Active Accounts – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	14.14	12.13	12.18	11.64	11.11	10.93	10.94
NFG	16.54	13.02	13.90	13.15	11.33	12.06	13.59
Peoples	18.03	21.42	15.10	14.98	13.69	13.60	14.04
Peoples-Equitable	27.44	12.87	13.68	14.69	14.99	14.89	15.06
UGI-Gas	15.22	18.82	20.02	19.33	17.61	19.39	18.09
UGI Penn Natural	17.52	20.26	22.02	21.50	18.51	20.19	18.72
Average w/out PGW	***17.83***	***16.31***	***15.68***	***15.42***	***14.25***	***14.81***	***14.71***
PGW	37.95	23.88	26.94	26.00	25.57	26.98	27.06
Average w/PGW	**22.63**	**18.00**	**18.19**	**17.76**	**16.76**	**17.49**	**17.42**

The percentage of residential customers in debt for the gas industry, excluding PGW, declined by 17.5% from 2004 as compared to 2018. Peoples-Equitable showed the largest decrease in the percent of customers in debt, by 45.1% from 2004 as compared to 2018. Columbia Gas and Peoples also had significant decreases from 2004 as compared to 2018 of 22.6% and 22.1%, respectively. PGW showed a decrease of 28.7% since 2004, but the 2018 figure of 27.1% is the highest since 2013.

Table 15 – Percentage of Residential Customers in Debt – Active Accounts – Water

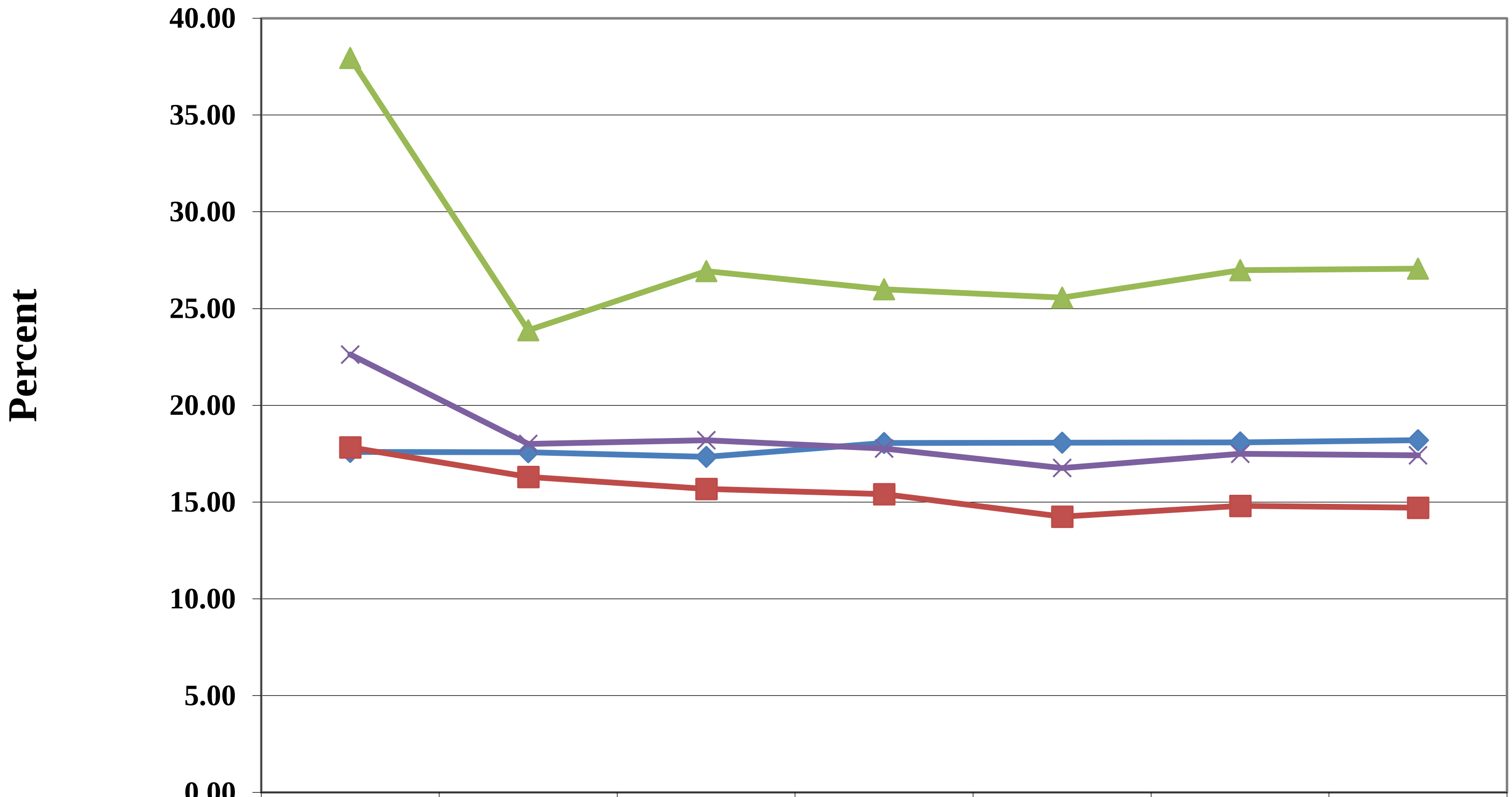
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	3.29	3.17	3.63	3.21	3.07	3.71	3.41
Columbia Water	4.90	4.88	4.88	5.00	5.66	4.86	4.80
Newtown Artesian	12.32	5.61	6.13	5.63	5.55	5.30	13.52
Superior*	0.29	0.40	0.47	0.35	N/A	N/A	N/A
SUEZ Bethel	4.05	4.44	4.56	8.46	9.20	9.98	8.76
SUEZ PA	7.53	10.31	10.06	9.96	9.60	10.08	8.88
York	14.31	12.35	12.92	12.21	12.03	12.25	13.03
Other Class A Average	***10.25***	***10.03***	***10.18***	***9.89***	***9.97***	***10.23***	***10.62***
Aqua	14.55	15.66	14.90	14.56	14.20	14.27	14.23
PAWC	12.23	13.20	19.40	17.22	17.73	17.65	18.15
Average	**12.79**	**13.67**	**16.70**	**15.38**	**15.56**	**15.59**	**15.86**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The percentage of residential customers in debt for the water industry increased overall by 24% from 2012 as compared to 2018. SUEZ Bethel and PAWC showed the largest increases, with 116.3% and 48.4%, respectively.

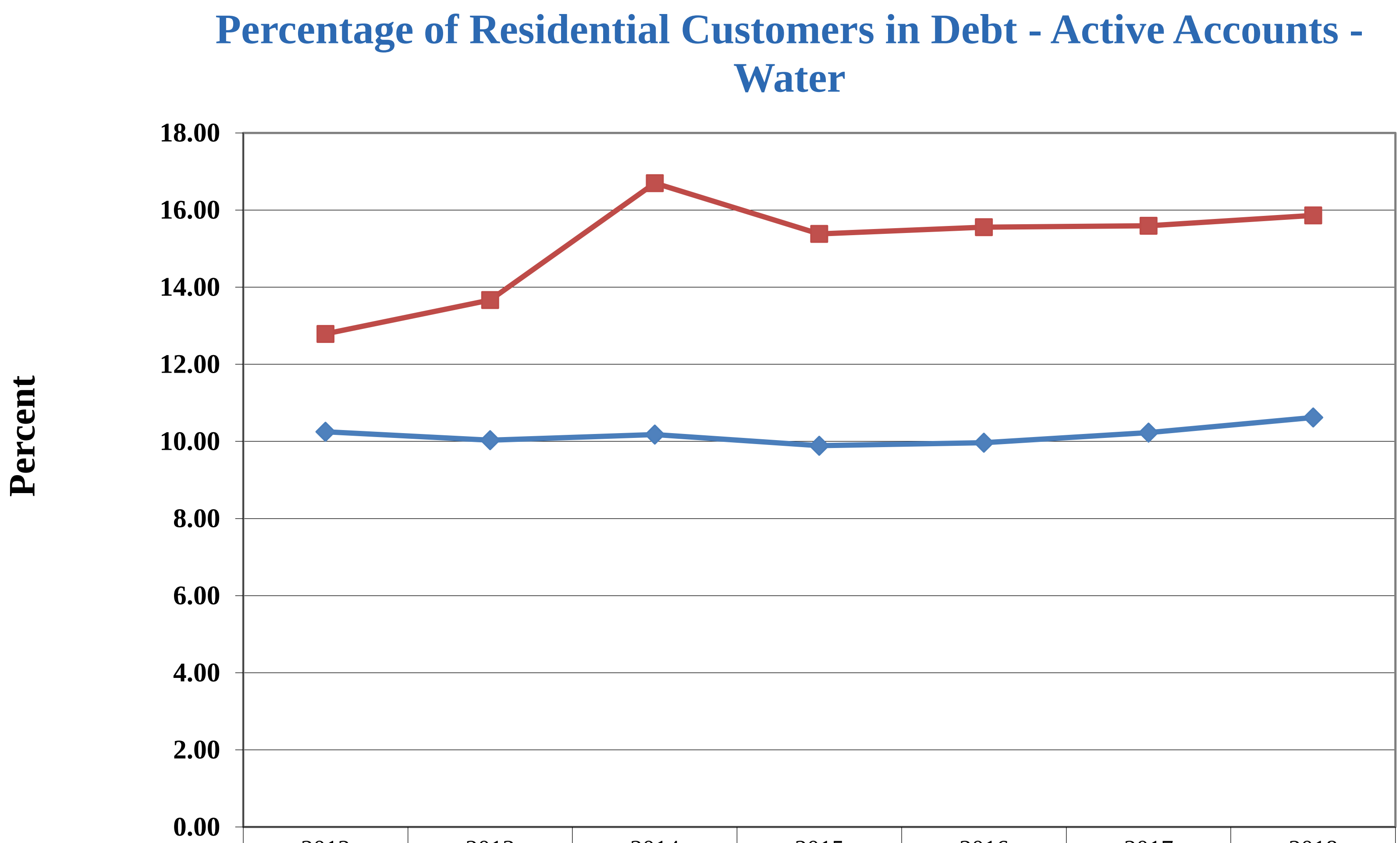
The following graphs show the percentage of residential customers in debt for the electric, gas, and water industries. The graphs provide a visual perspective to better recognize the industry trends. The water industry is shown separately since reporting did not start until 2012. Again, the collection variable residential customers in debt represents accounts where service is still active.

Percentage of Residential Customers in Debt - Active Accounts - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	17.59	17.57	17.34	18.05	18.07	18.09	18.20
Gas-Excluding PGW	17.83	16.31	15.68	15.42	14.25	14.81	14.71
PGW	37.95	23.88	26.94	26.00	25.57	26.98	27.06
Gas-Including PGW	22.63	18.00	18.19	17.76	16.76	17.49	17.42

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW



	2012	2013	2014	2015	2016	2017	2018
Other Class A	10.25	10.03	10.18	9.89	9.97	10.23	10.62
All Class A	12.79	13.67	16.70	15.38	15.56	15.59	15.86

Utilities report residential customers with debt in active accounts in two separate categories: Debt on Arrangements and Debt not on Arrangements. The following tables show the percentage of residential customers in debt that are on arrangements for electric and gas utilities from 2004 and 2013-2018. The debt on arrangements includes both Commission and utility granted payment arrangements, but does not include CAP customers. This variable is calculated by dividing the number of residential customers in debt on arrangements by the total number of residential customers in debt. Accounts with debt on arrangements have less risk of becoming uncollectible.

Table 16 – Percentage of Residential Customers in Debt on Arrangements – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	23.66	30.84	31.55	20.83	18.55	17.62	18.31
Met-Ed	27.91	34.19	39.97	35.53	29.73	24.78	24.63
PECO*	12.08	10.42	10.87	9.22	10.19	8.61	8.12
Penelec	28.63	33.71	38.77	35.21	30.16	25.80	25.37
Penn Power	27.66	30.75	34.62	31.68	30.24	25.09	24.06
PPL	27.52	23.94	24.69	22.64	21.03	36.17	35.94
West Penn	7.46	20.87	26.38	23.98	22.58	19.57	20.98
Average	**17.58**	**20.98**	**24.03**	**21.48**	**20.05**	**21.41**	**21.15**

*PECO statistics include electric and gas.

The percentage of residential customers in debt on arrangements increased by 20.3% during the period from 2004 as compared to 2018. West Penn showed the largest increase since 2004, with a 181.2% increase in its percentage of residential customers in debt on arrangements. PPL is the only other electric utility to show an increase since 2004, with 30.6%.

Table 17 – Percentage of Residential Customers in Debt on Arrangements – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	27.83	35.18	40.06	42.13	37.34	35.65	37.48
NFG	24.06	25.76	28.29	28.23	26.36	42.66	50.08
Peoples	24.38	24.70	28.66	28.48	21.07	20.61	21.99
Peoples-Equitable	16.42	31.56	31.97	24.00	15.19	17.20	20.10
UGI-Gas	10.58	8.74	9.59	7.97	8.17	19.56	18.16
UGI Penn Natural	12.69	12.34	12.39	11.31	9.89	23.08	22.37
Average w/out PGW	***24.91***	***22.37***	***24.11***	***22.77***	***19.00***	***24.83***	***26.46***
PGW	22.65	18.71	17.32	18.82	17.11	19.28	19.37
Average w/PGW	**21.03**	**21.29**	**21.88**	**21.49**	**18.36**	**22.94**	**24.04**

The percentage of residential customers in debt on arrangements for the gas industry, excluding PGW, increased slightly by 6.2% from 2004 as compared to 2018. NFG had the largest increase of over 108.2% since 2004, and UGI-Gas and UGI Penn Natural both increased over 70%. PGW's percentage of residential customers in debt on arrangements decreased 14.5% since 2004. The natural gas industry has increased 14.3% since 2004.

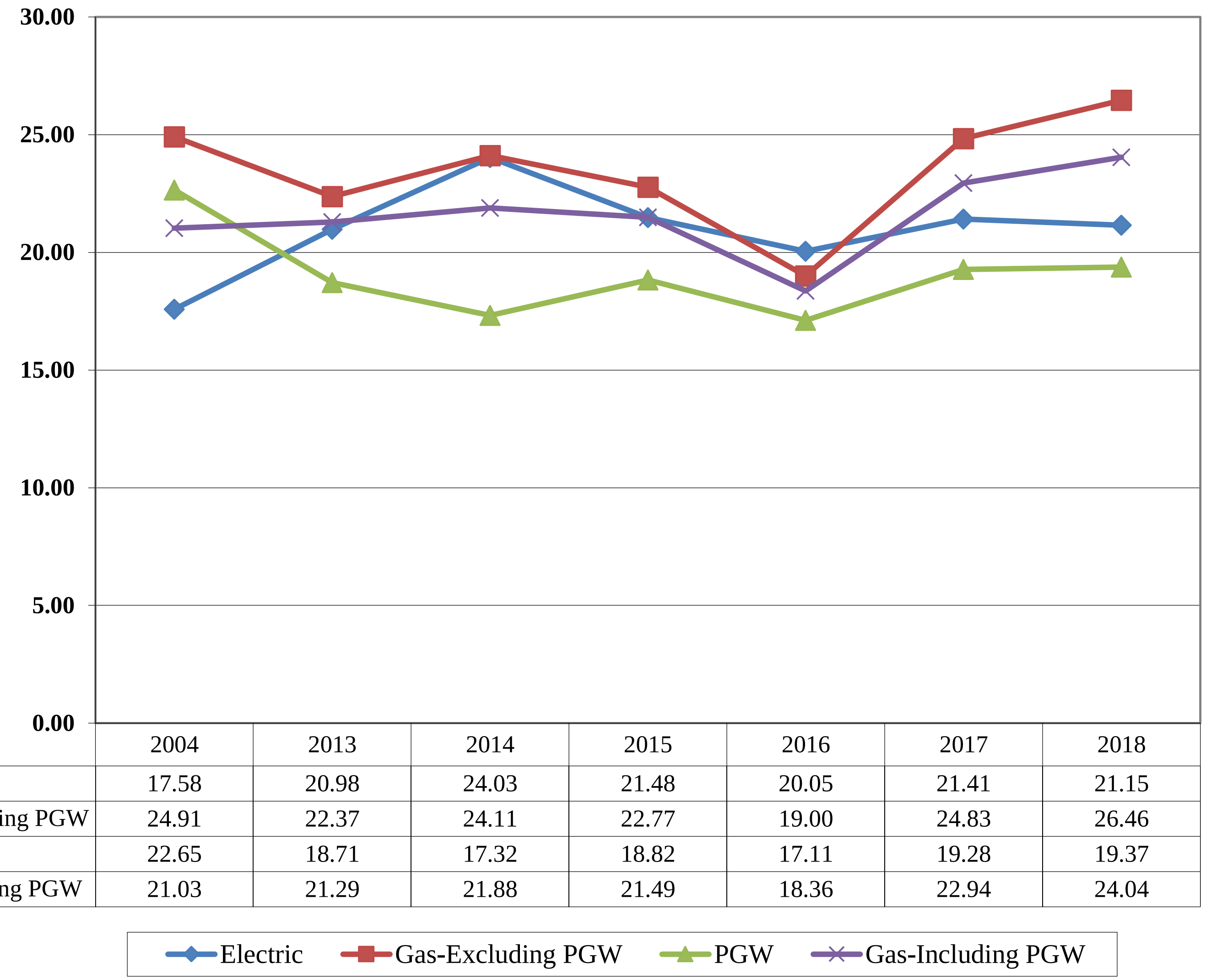
Table 18 – Percentage of Residential Customers in Debt on Arrangements – Water

Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	10.59	14.63	6.38	3.61	5.00	7.37	9.68
Columbia Water	3.94	1.48	1.54	3.39	9.48	9.66	11.85
Newtown Artesian	0.35	0.00	0.00	0.00	0.00	0.59	0.00
Superior*	40.00	50.00	47.06	46.15	N/A	N/A	N/A
SUEZ Bethel	0.00	0.00	0.92	0.49	0.45	0.90	0.47
SUEZ PA	0.23	1.54	1.56	1.22	1.05	1.43	2.07
York	8.29	7.89	6.01	7.86	8.18	8.35	8.12
Other Class A Average	***5.21***	***4.91***	***3.95***	***4.78***	***5.09***	***5.46***	***5.47***
Aqua	17.84	17.95	19.57	20.18	20.83	22.04	21.28
PAWC	12.75	11.61	13.82	16.98	13.79	13.20	12.50
Average	**14.03**	**13.53**	**14.86**	**17.05**	**15.36**	**15.43**	**14.67**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

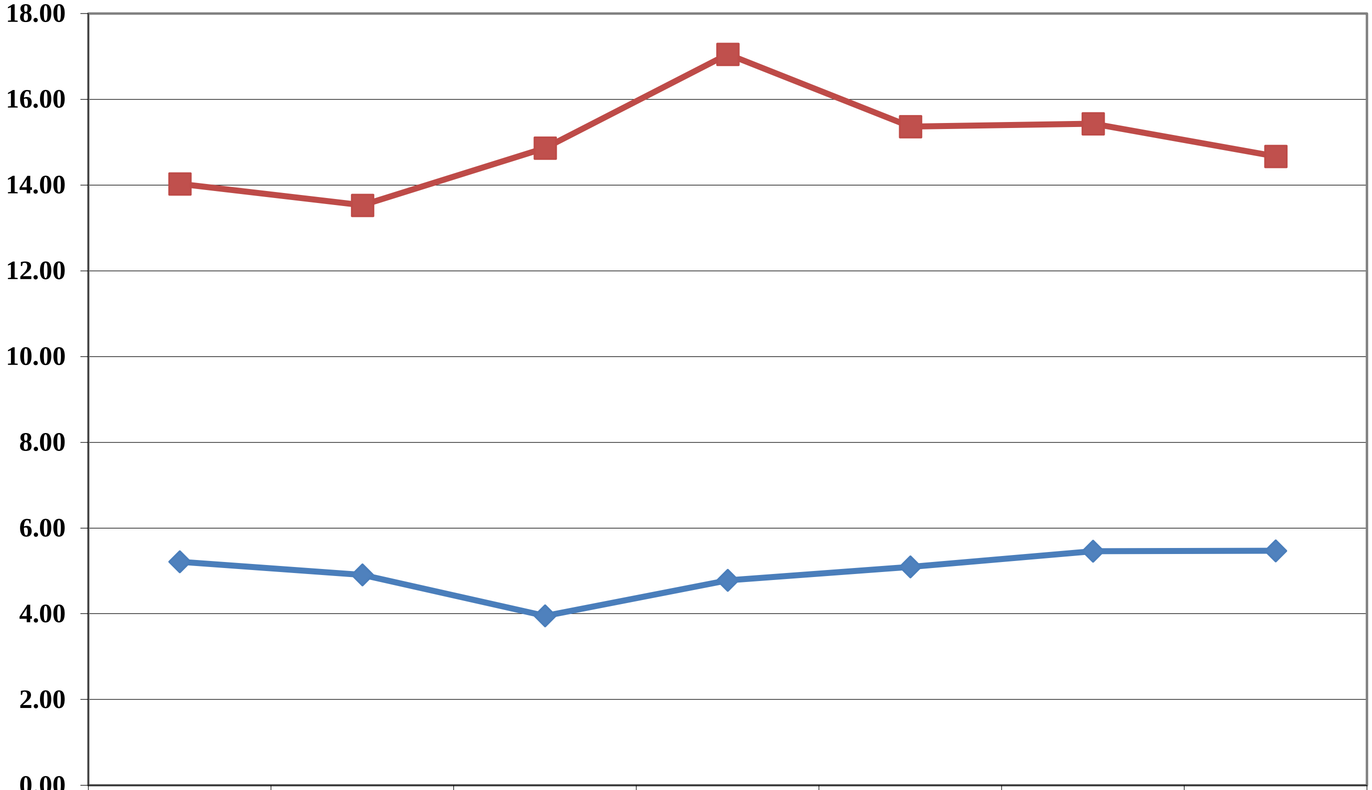
The percentage of residential customers in debt on arrangements for the water industry increased slightly by 4.6% from 2012 as compared to 2018. SUEZ PA showed the most significant increase, of over 800% since 2012. Columbia Water also showed an increase of over 200% since 2012.

Percentage of Residential Customers in Debt on Arrangements - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	17.58	20.98	24.03	21.48	20.05	21.41	21.15
Gas-Excluding PGW	24.91	22.37	24.11	22.77	19.00	24.83	26.46
PGW	22.65	18.71	17.32	18.82	17.11	19.28	19.37
Gas-Including PGW	21.03	21.29	21.88	21.49	18.36	22.94	24.04

Percentage of Residential Customers in Debt on Arrangements - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	5.21	4.91	3.95	4.78	5.09	5.46	5.47
All Class A	14.03	13.53	14.86	17.05	15.36	15.43	14.67

Other Class A   All Class A

Utilities report residential customers with debt in active accounts in two separate categories: Debt on Arrangements and Debt not on Arrangements. The following tables show the percentage of residential customers in debt that are not on arrangements for electric and gas utilities from 2004 and 2013-2018. This variable is calculated by dividing the number of residential customers in debt not on arrangements by the total number of residential customers in debt. Debt that is not on arrangements is at higher risk for becoming uncollectible.

Table 19 – Percentage of Residential Customers in Debt Not on Arrangements – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	76.34	69.16	68.45	79.17	81.45	82.38	81.69
Met-Ed	72.09	65.81	60.03	64.47	70.27	75.22	75.37
PECO*	87.92	89.58	89.13	90.78	89.81	91.39	91.88
Penelec	71.37	66.29	61.23	64.79	69.84	74.20	74.63
Penn Power	72.34	69.25	65.38	68.32	69.76	74.91	75.94
PPL	72.48	76.06	75.31	77.36	78.97	63.83	64.06
West Penn	92.54	79.13	73.62	76.02	77.42	80.43	79.02
Average	**82.42**	**79.02**	**75.97**	**78.52**	**79.95**	**78.59**	**78.85**

*PECO statistics include electric and gas.

The percentage of residential customers in debt not on arrangements for the electric industry decreased overall by 4.3% during the period from 2004 as compared to 2018. PPL and West Penn showed the largest decreases since 2004, with 11.6% and 14.6%, respectively. Duquesne showed the largest increase since 2004, with 7%.

Table 20 – Percentage of Residential Customers in Debt Not on Arrangements – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	72.17	64.82	59.94	57.87	62.66	64.35	62.52
NFG	75.94	74.24	71.71	71.77	73.64	57.34	49.92
Peoples	75.62	75.30	71.34	71.52	78.93	79.39	78.01
Peoples-Equitable	83.58	68.44	68.03	76.00	84.81	82.80	79.90
UGI-Gas	89.42	91.26	90.41	92.03	91.83	80.44	81.84
UGI Penn Natural	87.31	87.66	87.61	88.69	90.11	76.92	77.63
Average w/out PGW	***75.09***	***77.63***	***75.89***	***77.23***	***81.00***	***75.17***	***73.54***
PGW	77.35	81.29	82.68	81.18	82.89	80.72	80.63
Average w/PGW	**78.97**	**78.71**	**78.12**	**78.51**	**81.64**	**77.06**	**75.96**

The percentage of residential customers in debt not on arrangements for the gas industry decreased by 3.8% from 2004 as compared to 2018. NFG had the largest decrease since 2004, at 34.3%. PGW showed an increase in the percentage of residential customers in debt not on arrangements since 2004, at 4.2%.

Table 21 – Percentage of Residential Customers in Debt Not on Arrangements – Water

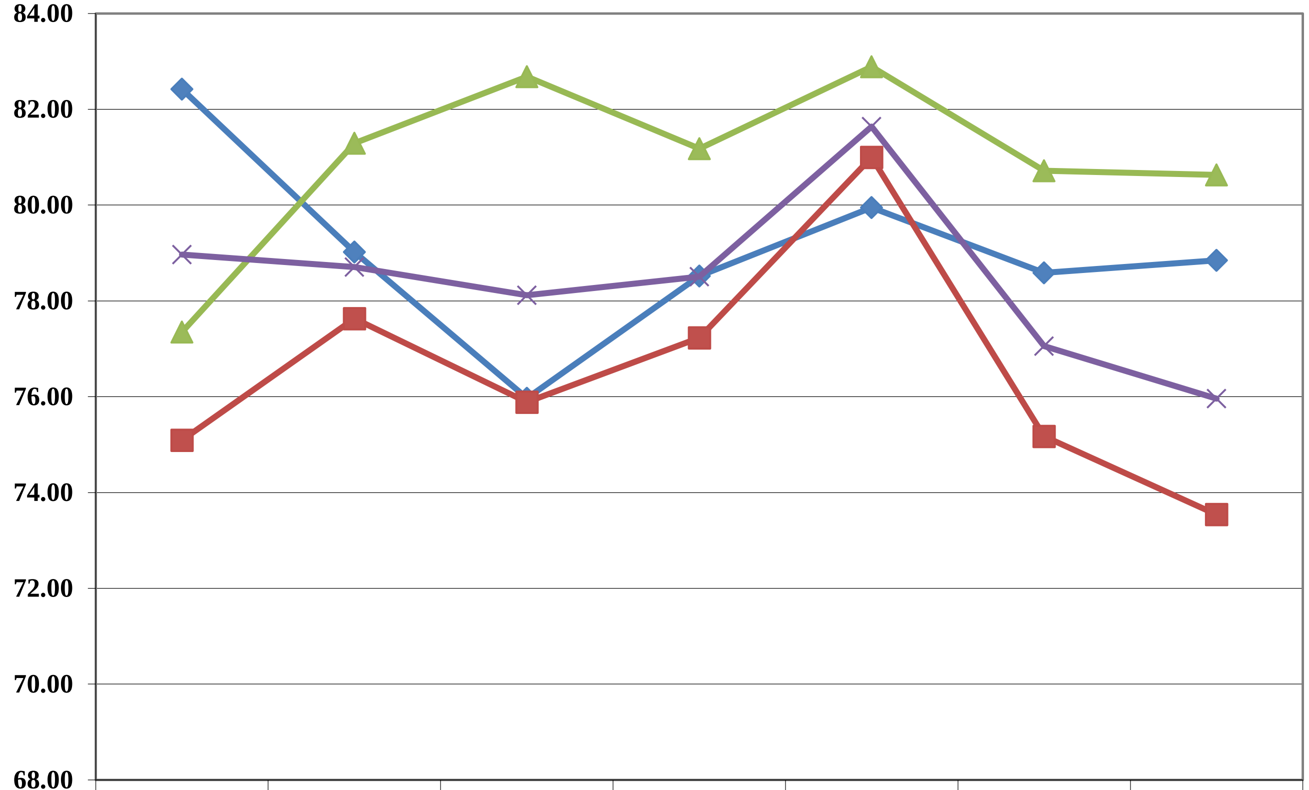
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	89.41	85.37	93.62	96.39	95.00	92.63	90.32
Columbia Water	96.06	98.52	98.46	96.61	90.52	90.34	88.15
Newtown Artesian	99.65	100.00	100.00	100.00	100.00	99.41	100.00
Superior*	60.00	50.00	52.94	53.85	N/A	N/A	N/A
SUEZ Bethel	100.00	100.00	99.08	99.51	99.55	99.10	99.53
SUEZ PA	99.77	98.46	98.44	98.78	98.95	98.57	97.93
York	91.71	92.11	93.99	92.14	91.82	91.65	91.88
Other Class A Average	***94.79***	***95.09***	***96.05***	***95.22***	***94.91***	***94.54***	***94.53***
Aqua	82.16	82.05	80.43	79.82	79.17	77.96	78.72
PAWC	87.25	88.39	86.18	83.02	86.21	86.80	87.50
Average	**85.97**	**86.47**	**85.14**	**82.95**	**84.64**	**84.57**	**85.33**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The percentage of residential customers in debt not on arrangements for the water industry decreased slightly since 2012, by 0.8%. Columbia Water showed the largest decrease, with 8.2%. Audubon showed the largest increase, at 1%.

The following graphs show the percentage of residential customers in debt not on arrangements for the electric, gas, and water industries. The graphs provide a visual perspective to better recognize the industry trends. The water industry is shown separately since reporting did not start until 2012. Again, this collection variable represents accounts where service is still active and debt is not on an arrangement. Debt that is not on arrangements is at higher risk for becoming uncollectible.

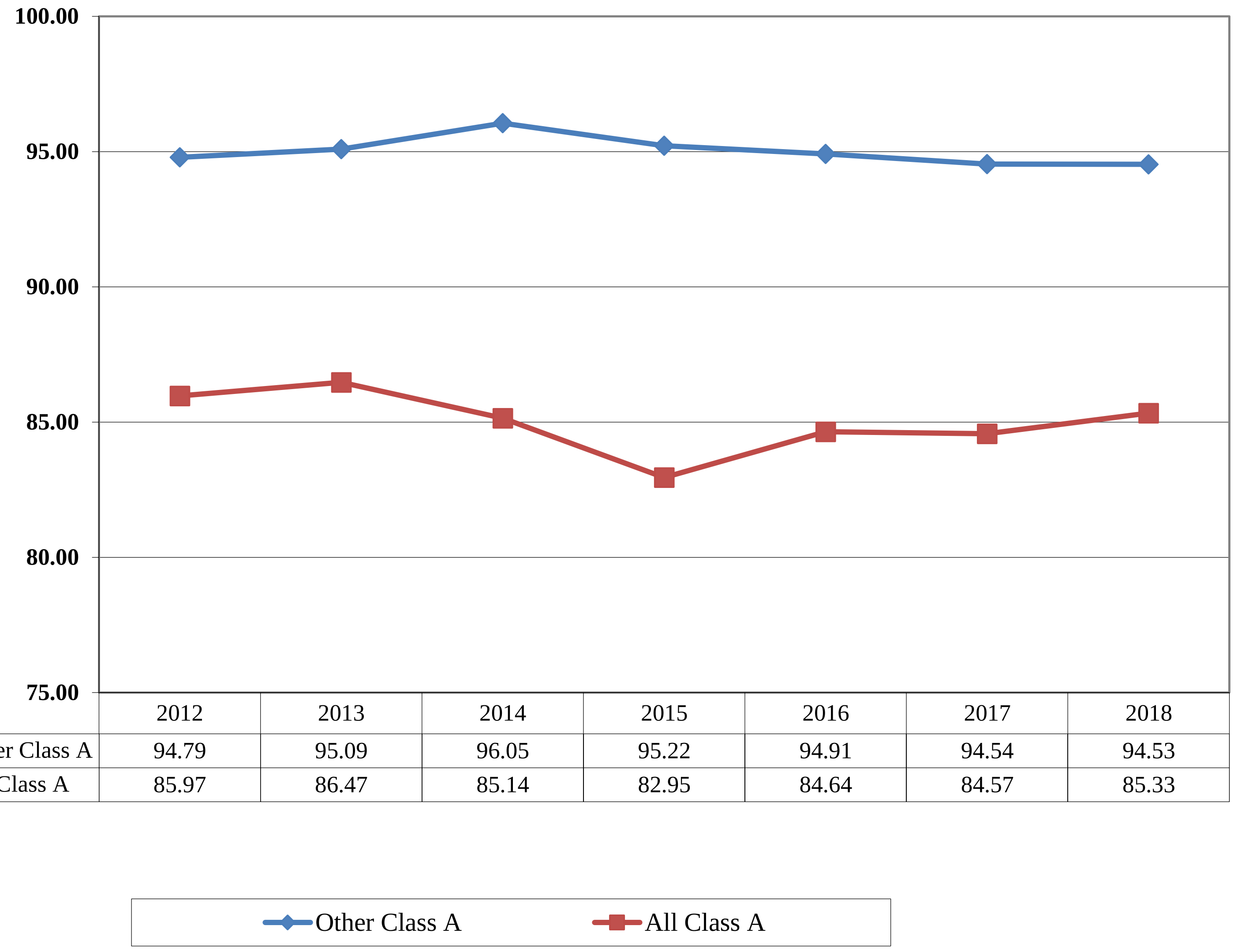
Percentage of Residential Customers in Debt Not on Arrangements - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	82.42	79.02	75.97	78.52	79.95	78.59	78.85
Gas-Excluding PGW	75.09	77.63	75.89	77.23	81.00	75.17	73.54
PGW	77.35	81.29	82.68	81.18	82.89	80.72	80.63
Gas-Including PGW	78.97	78.71	78.12	78.51	81.64	77.06	75.96

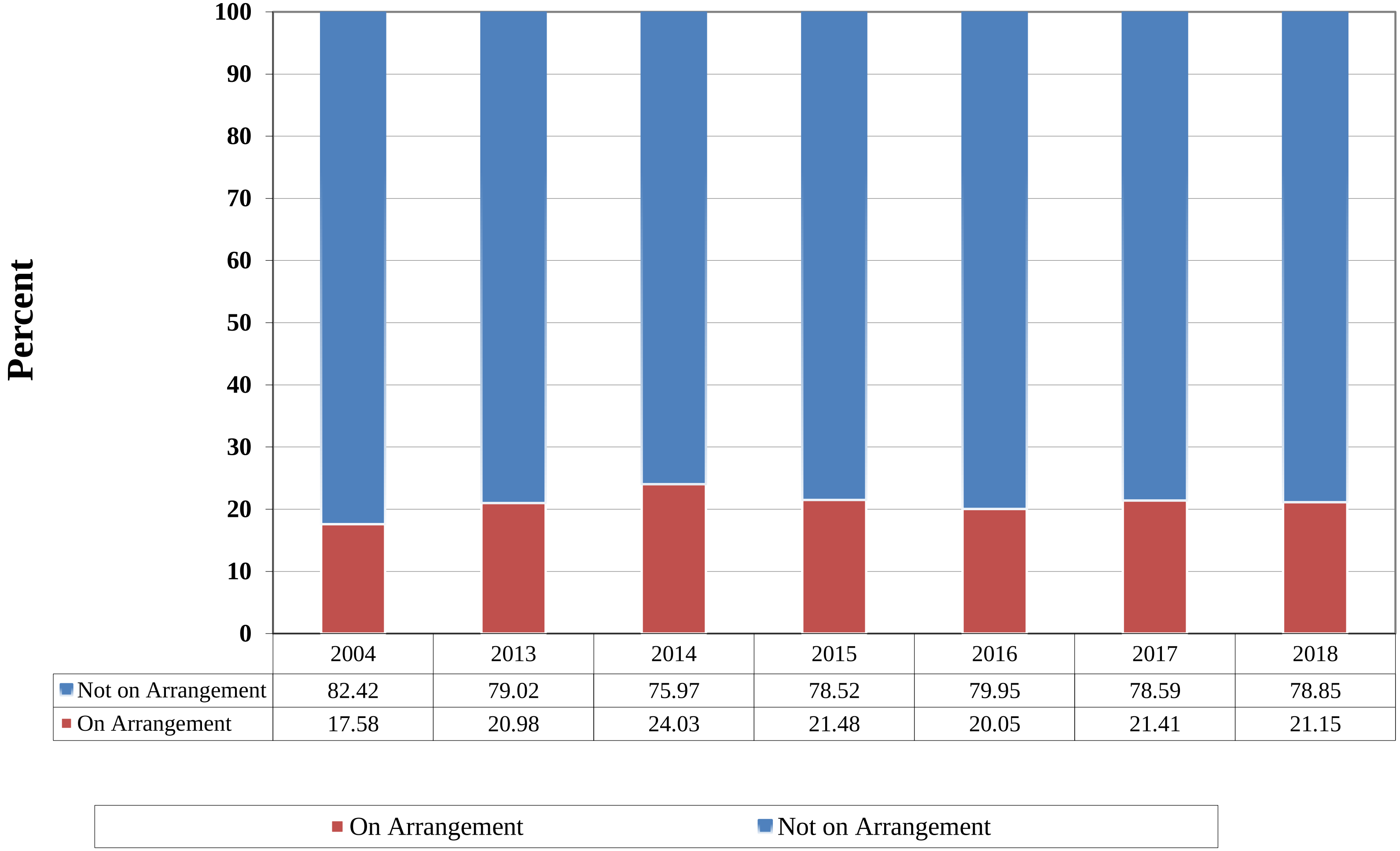
Electric　Gas-Excluding PGW　PGW　Gas-Including PGW

Percentage of Residential Customers in Debt Not on Arrangements - Water



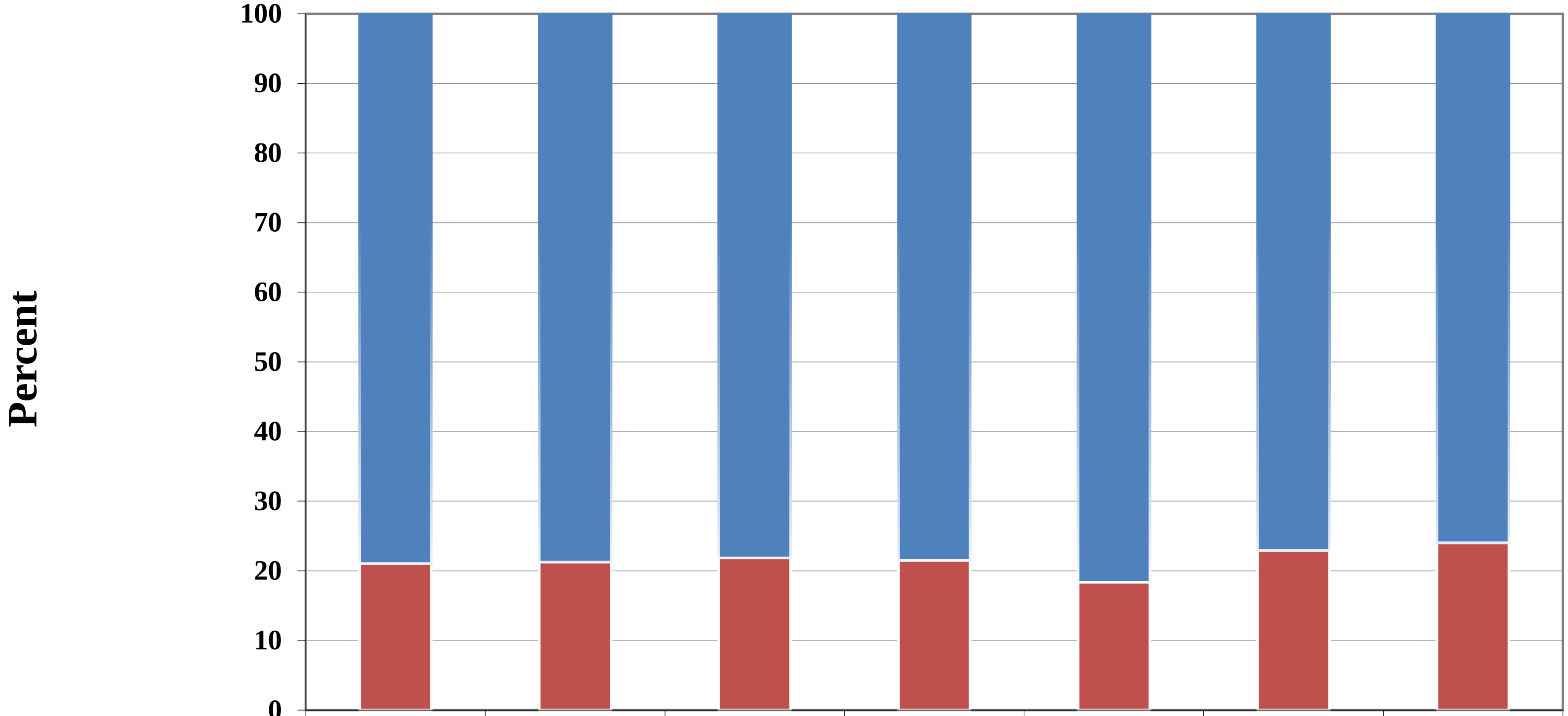
	2012	2013	2014	2015	2016	2017	2018
Other Class A	94.79	95.09	96.05	95.22	94.91	94.54	94.53
All Class A	85.97	86.47	85.14	82.95	84.64	84.57	85.33

Residential Customers in Debt - Electric
(Percentage on Arrangement vs. Not on Arrangement)



	2004	2013	2014	2015	2016	2017	2018
Not on Arrangement	82.42	79.02	75.97	78.52	79.95	78.59	78.85
On Arrangement	17.58	20.98	24.03	21.48	20.05	21.41	21.15

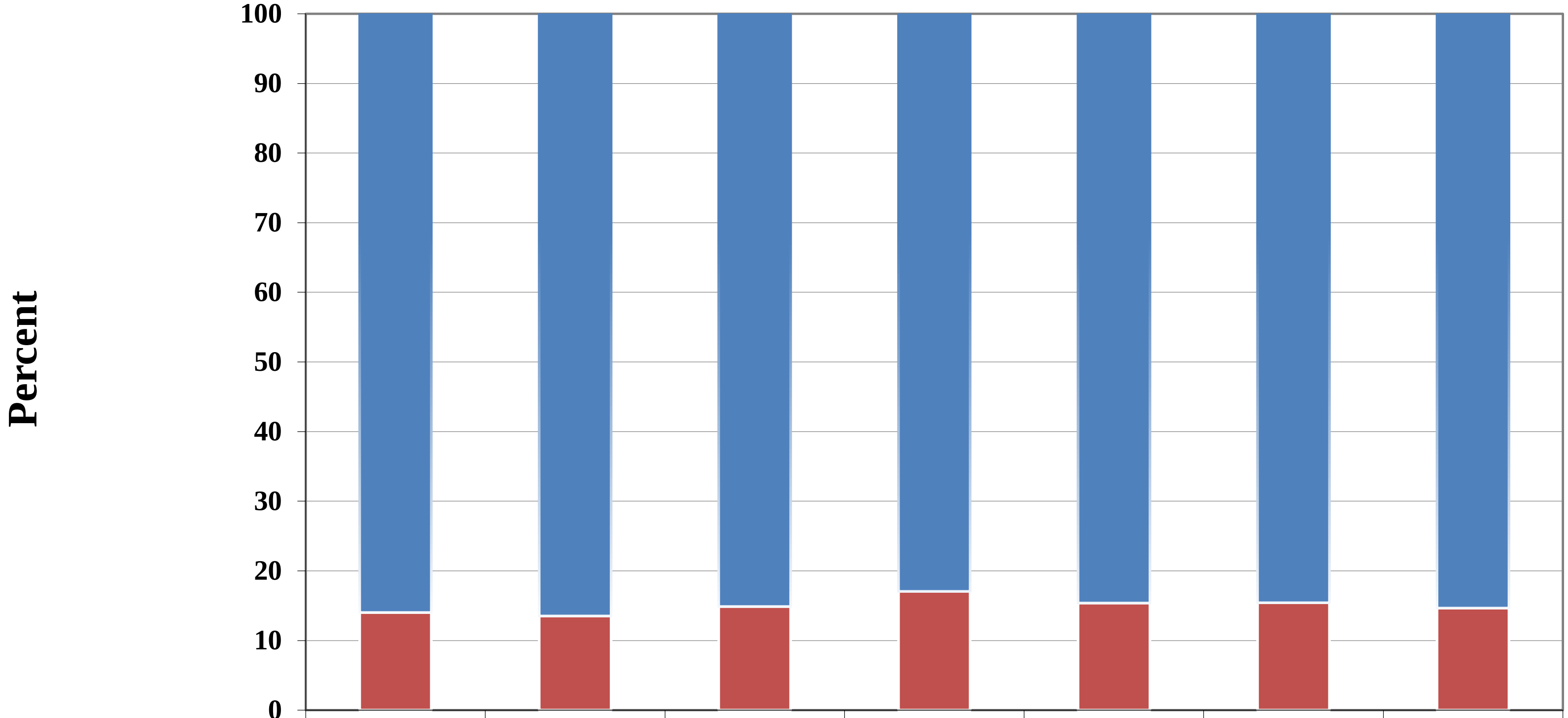
Residential Customers in Debt - Gas (including PGW)
(Percentage on Arrangement vs. Not on Arrangement)



	2004	2013	2014	2015	2016	2017	2018
Not on Arrangement	78.97	78.71	78.12	78.51	81.64	77.06	75.96
On Arrangement	21.03	21.29	21.88	21.49	18.36	22.94	24.04

On Arrangement   Not on Arrangement

Percentage of Residential Customers in Debt - Water
(Percentage on Arrangement vs. Not on Arrangement)



	2012	2013	2014	2015	2016	2017	2018
Not on Arrangement	85.97	86.47	85.14	82.95	84.64	84.57	85.33
On Arrangement	14.03	13.53	14.86	17.05	15.36	15.43	14.67

On Arrangement   Not on Arrangement

Utilities report the residential dollars in debt in active accounts in two separate categories: Dollars in Debt on Arrangements and Dollars in Debt not on Arrangements. The following tables show the percentage of residential total dollars in debt that are on arrangements for electric and gas utilities from 2004 and 2013-2018. This collection variable is calculated by dividing the dollars in debt on arrangements by the total dollars in debt. Debt that is on arrangements is a lower collection risk for the utility.

Table 22 – Percentage of Residential Total Dollars in Debt on Arrangements – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	36.30	38.61	40.60	45.64	52.99	47.97	56.04
Met-Ed	61.63	65.73	68.36	64.37	55.24	49.38	47.17
PECO*	36.95	18.29	20.33	19.51	22.07	19.01	18.85
Penelec	63.55	65.92	68.23	63.92	53.94	49.18	47.56
Penn Power	60.74	65.86	65.70	58.88	51.89	49.38	45.29
PPL	27.52	21.96	25.24	23.21	22.31	40.82	40.25
West Penn	36.73	54.48	60.16	53.27	45.73	42.61	44.24
Average	**40.22**	**33.55**	**38.51**	**36.61**	**35.23**	**38.56**	**38.76**

*PECO statistics include electric and gas.

The percentage of residential total dollars in debt on arrangements decreased for the electric industry by 3.6% during the period from 2004 as compared to 2018. PECO showed the largest decrease since 2004, with 49%. Met-Ed, Penelec, and Penn Power also showed decreases in the percentage of total dollars in debt on arrangements, at over 20%. Duquesne, PPL, and West Penn all showed increases in the percent of total dollars in debt on arrangements.

Table 23 – Percentage of Residential Total Dollars in Debt on Arrangements – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	58.04	69.12	72.98	75.67	73.65	70.56	71.53
NFG	36.08	42.43	43.74	44.72	43.71	40.21	37.48
Peoples	29.96	56.44	36.69	40.24	34.96	29.08	29.91
Peoples-Equitable	37.99	70.20	68.25	55.77	26.61	25.09	29.08
UGI-Gas	18.82	17.71	17.58	15.34	17.90	44.70	48.98
UGI Penn Natural	24.87	20.98	19.08	17.79	17.96	45.97	51.15
Average w/out PGW	***35.43***	***49.44***	***43.26***	***42.01***	***39.13***	***45.83***	***48.35***
PGW	35.87	28.20	24.82	26.19	26.32	30.50	28.66
Average w/PGW	**35.65**	**39.52**	**34.02**	**34.33**	**32.31**	**37.86**	**38.84**

The percentage of residential total dollars in debt on arrangements for the gas industry increased by 8.9% from 2004 as compared to 2018. UGI-Gas and UGI Penn Natural showed substantial increases in the percentage of total dollars in debt on arrangements since 2004, at 160.3% and 105.7%, respectively. Peoples-Equitable showed the largest decrease in the percentage of total dollars in debt on arrangements since 2004, at 23.5%.

Table 24 – Percentage of Residential Total Dollars in Debt on Arrangements – Water

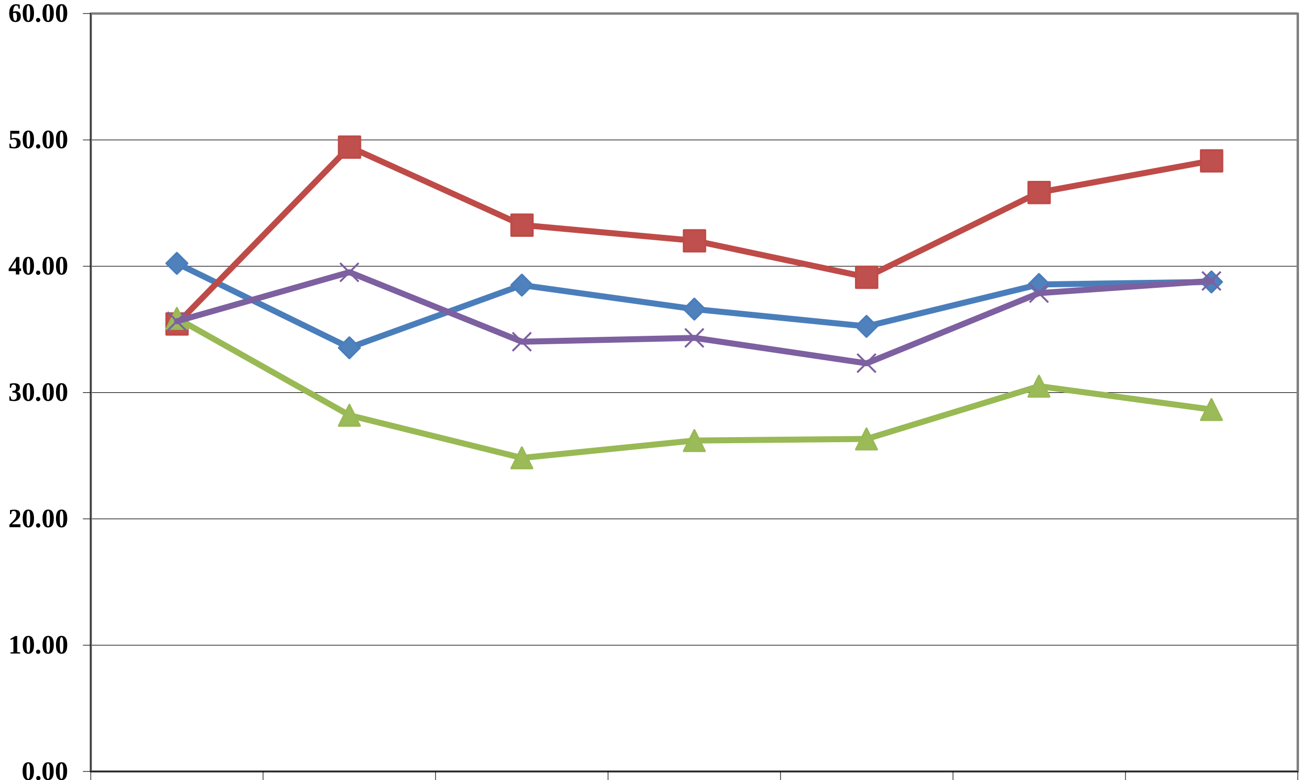
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	50.04	42.26	20.42	17.17	22.73	24.37	25.47
Columbia Water	48.89	50.56	34.27	4.43	11.11	12.65	16.00
Newtown Artesian	6.09	0.08	0.05	0.00	0.00	1.29	0.31
Superior*	42.61	51.52	47.51	50.24	N/A	N/A	N/A
SUEZ Bethel	0.60	0.27	1.34	1.58	3.15	25.00	3.22
SUEZ PA	0.89	7.62	8.11	8.62	7.13	13.72	19.09
York	54.04	46.08	38.67	42.11	41.10	39.27	29.37
Other Class A Average	***32.26***	***30.63***	***25.31***	***25.82***	***24.62***	***26.03***	***24.44***
Aqua	40.89	44.61	37.65	55.84	58.41	56.89	60.73
PAWC	21.41	20.26	44.42	51.57	51.95	51.77	47.65
Average	**29.66**	**30.00**	**41.01**	**52.20**	**53.49**	**52.88**	**51.32**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The percentage of residential total dollars in debt on arrangements for the water industry increased by 73% from 2012 as compared to 2018. SUEZ PA showed a significant increase in the total dollars in debt on arrangements since 2012, at over 2,000%. SUEZ Bethel and PAWC also showed increases in the percentage of total dollars in debt on arrangements since 2012, at 436.7% and 122.6%, respectively. Newtown Artesian showed a significant decrease in the percentage of total dollars in debt on arrangements, of 94.9%.

The following graphs show the percentage of total residential dollars in debt on arrangements for the electric, gas, and water industries. The graphs provide a visual perspective to better recognize the industry trends. The water industry is shown separately since reporting did not start until 2012. Again, this collection variable represents accounts where service is still active and debt is on an arrangement. Debt that is on arrangements is less of a collections risk to the utility.

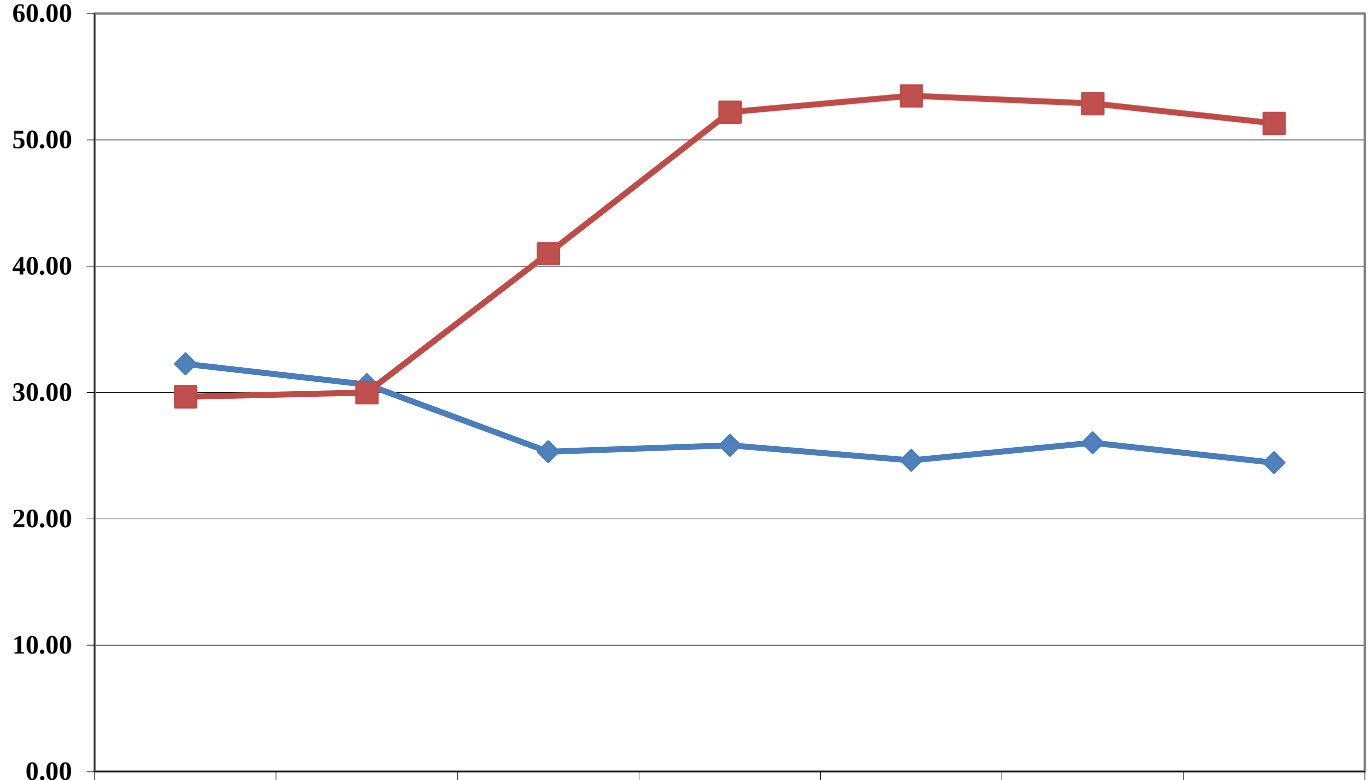
Percentage of Residential Total Dollars in Debt on Arrangements - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	40.22	33.55	38.51	36.61	35.23	38.56	38.76
Gas-Excluding PGW	35.43	49.44	43.26	42.01	39.13	45.83	48.35
PGW	35.87	28.20	24.82	26.19	26.32	30.50	28.66
Gas-Including PGW	35.65	39.52	34.02	34.33	32.31	37.86	38.84

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

Percentage of Residential Total Dollars in Debt on Arrangements - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	32.26	30.63	25.31	25.82	24.62	26.03	24.44
All Class A	29.66	30.00	41.01	52.20	53.49	52.88	51.32

Other Class A   All Class A

Utilities report the residential dollars in debt in active accounts in two separate categories: Dollars in Debt on Arrangements and Dollars in Debt not on Arrangements. The following tables show the percentage of residential total dollars in debt that are not on arrangements for electric and gas utilities from 2004 and 2013-2018. This collection variable is calculated by dividing the dollars in debt not on arrangements by the total dollars in debt. Debt that is not on arrangements is more of a collections risk for the utility.

Table 25 – Percentage of Residential Total Dollars in Debt Not on Arrangements – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	63.70	61.39	59.40	54.36	47.01	52.03	43.96
Met-Ed	38.37	34.27	31.64	35.63	44.76	50.62	52.83
PECO*	63.05	81.71	79.67	80.49	77.93	80.99	81.15
Penelec	36.45	34.08	31.77	36.08	46.06	50.82	52.44
Penn Power	39.26	34.14	34.30	41.12	48.11	50.62	54.71
PPL	72.48	78.04	74.76	76.79	77.69	59.18	59.75
West Penn	63.27	45.52	39.84	46.73	54.27	57.39	55.76
Average	**59.78**	**66.45**	**61.49**	**63.39**	**64.77**	**61.44**	**61.24**

*PECO statistics include electric and gas.

The percentage of residential total dollars in debt not on arrangements for the electric industry increased slightly, by 2.4% during the period from 2004 as compared to 2018. Penelec showed the largest increase in total dollars in debt not on arrangements since 2004, at 43.9%. Duquesne showed the largest decrease in total dollars in debt not on arrangements, at 31%.

Table 26 – Percentage of Residential Total Dollars in Debt Not on Arrangements – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	41.96	30.88	27.02	24.33	26.35	29.44	28.47
NFG	63.92	57.57	56.26	55.28	56.29	59.79	62.52
Peoples	70.04	43.56	63.31	59.76	65.04	70.92	70.09
Peoples-Equitable	62.01	29.80	31.75	44.23	73.39	74.91	70.92
UGI-Gas	81.18	82.29	82.42	84.66	82.10	55.30	51.02
UGI Penn Natural	75.13	79.02	80.92	82.21	82.04	54.03	48.85
Average w/out PGW	***64.57***	***50.56***	***56.74***	***57.99***	***60.87***	***54.17***	***51.65***
PGW	64.13	71.80	75.18	73.81	73.68	69.50	71.34
Average w/PGW	**64.35**	**60.48**	**65.98**	**65.67**	**67.69**	**62.14**	**61.16**

The percentage of residential total dollars in debt not on arrangements for the gas industry decreased overall by 5% from 2004 as compared to 2018. People-Equitable showed the largest increase in the percentage of residential total dollars in debt not on arrangements, at 14.4%. Columbia Gas, UGI-Gas, and UGI Penn Natural all showed decreases in the percentage of residential total dollars in debt not on arrangements by over 30% since 2004.

Table 27 – Percentage of Residential Total Dollars in Debt Not on Arrangements – Water

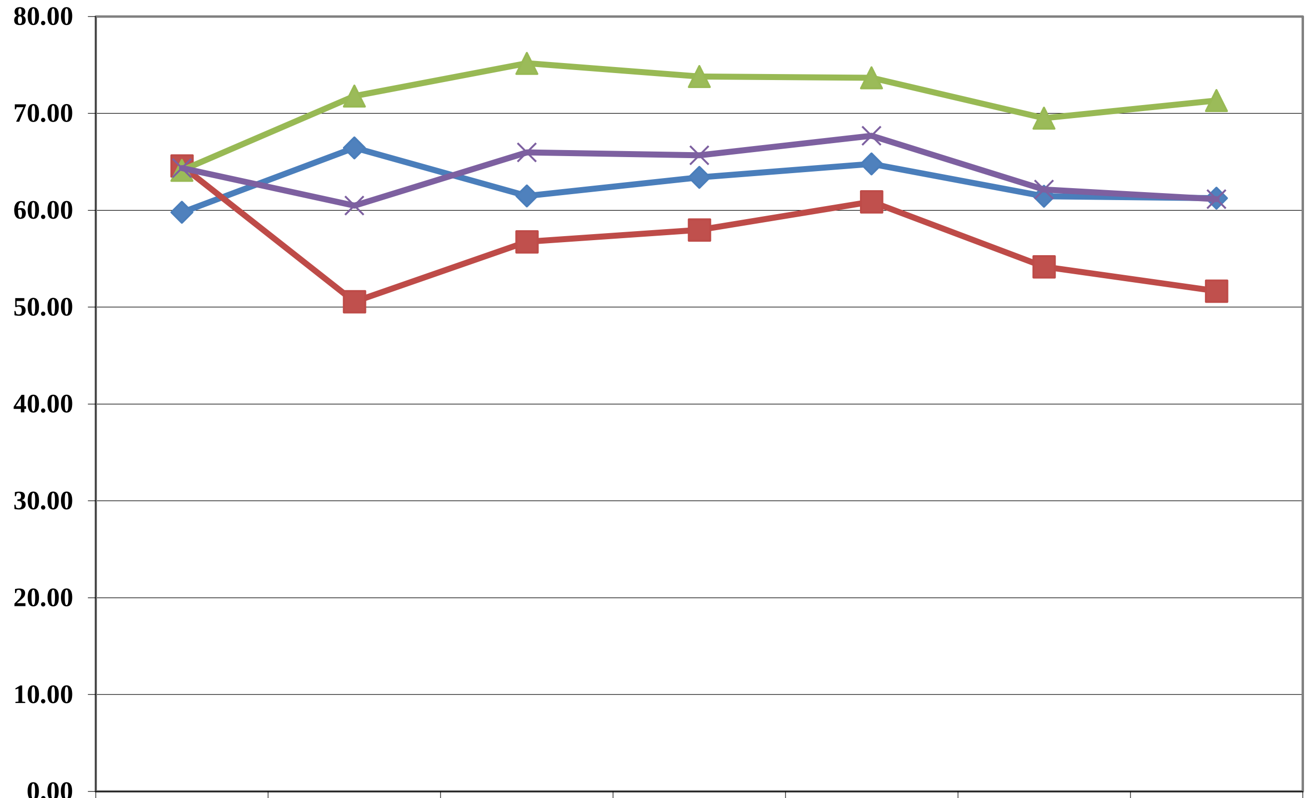
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	49.96	57.74	79.58	82.83	77.27	75.63	74.53
Columbia Water	51.11	49.44	65.73	95.57	88.89	87.35	84.00
Newtown Artesian	93.91	99.92	99.95	100.00	100.00	98.71	99.69
Superior*	57.39	48.48	52.49	49.76	N/A	N/A	N/A
SUEZ Bethel	99.40	99.73	98.66	98.42	96.85	75.00	96.78
SUEZ PA	99.11	92.38	91.89	91.38	92.87	86.28	80.91
York	45.96	53.92	61.33	57.89	58.9	60.73	70.63
Other Class A Average	***67.74***	***69.37***	***74.69***	***74.18***	***75.38***	***73.97***	***75.56***
Aqua	59.11	55.39	62.35	44.16	41.59	43.11	39.27
PAWC	78.59	79.74	55.58	48.43	48.05	48.23	52.35
Average	**70.34**	**70.00**	**58.99**	**47.80**	**46.51**	**47.12**	**48.68**

* Effective Jan. 1, 2016, Superior was acquired by Aqua, so all data was filed under Aqua from 2016 forward.

The percentage of residential total dollars in debt not on arrangements for the water industry decreased by 30.8% from 2012 as compared to 2018. Aqua and PAWC's percentage of residential total dollars in debt not on arrangements decreased by over 30% since 2012. Audubon, Columbia Water, and York all increased the percentage of residential total dollars in debt not on arrangements by over 49.2%.

The following graphs show the percentage of total residential dollars in debt not on arrangements for the electric, gas, and water industries. The graphs provide a visual perspective to better recognize the industry trends. The water industry is shown separately since reporting did not start until 2012. Again, this collection variable represents accounts where service is still active, and debt is not on an arrangement. Debt that is not on arrangements is more of a collections risk for the utility.

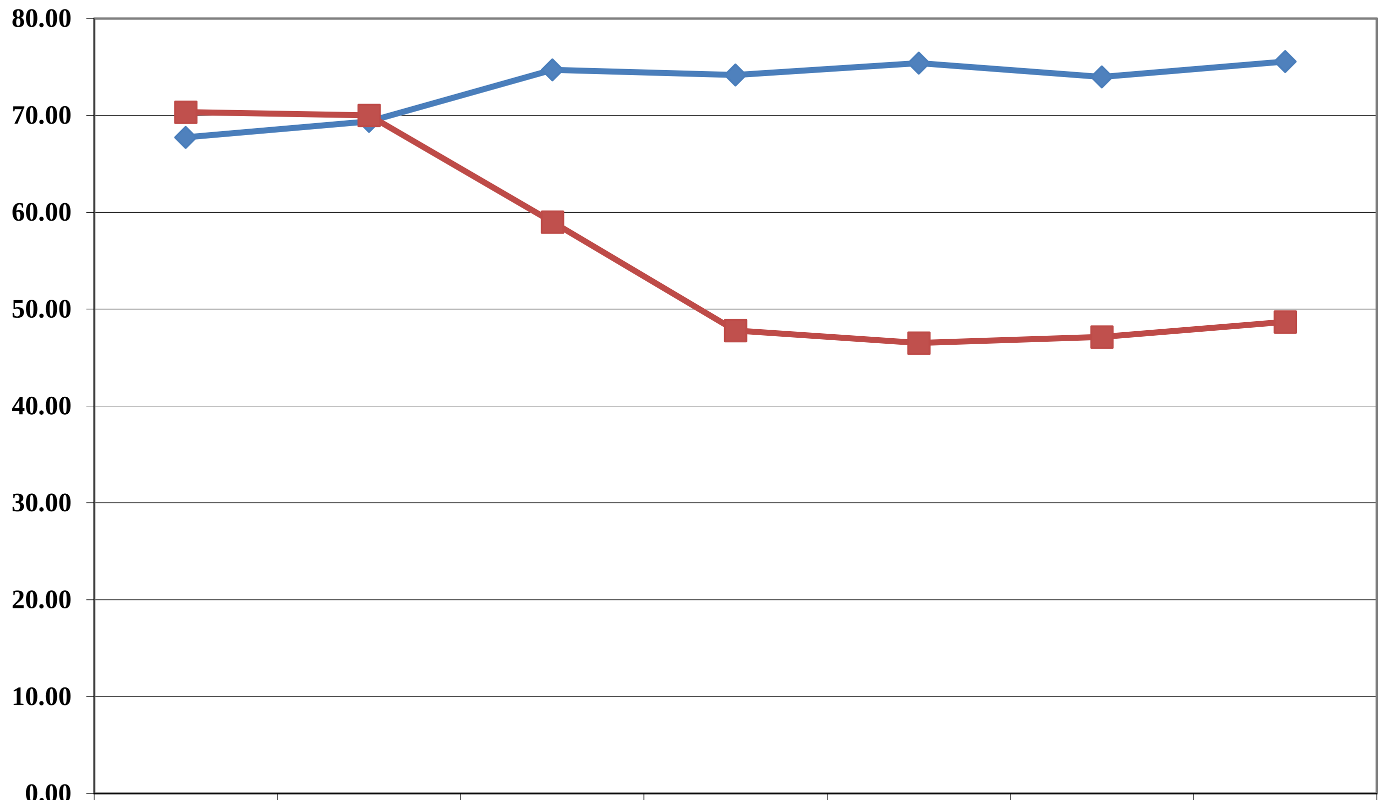
Percentage of Residential Total Dollars in Debt Not on Arrangements - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	59.78	66.45	61.49	63.39	64.77	61.44	61.24
Gas-Excluding PGW	64.57	50.56	56.74	57.99	60.87	54.17	51.65
PGW	64.13	71.80	75.18	73.81	73.68	69.50	71.34
Gas-Including PGW	64.35	60.48	65.98	65.67	67.69	62.14	61.16

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

Percentage of Residential Total Dollars in Debt Not on Arrangements - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	67.74	69.37	74.69	74.18	75.38	73.97	75.56
All Class A	70.34	70.00	58.99	47.80	46.51	47.12	48.68

Utilities report the total residential customers in debt in active accounts in two separate categories: Customers in Debt on Arrangements and Customers in Debt not on Arrangements. The total number of customers in debt is a combination of the two categories. These customers have arrearages but their service is still on and the accounts are active.

Table 28 – Total Number of Residential Customers in Debt – Active Accounts – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	61,960	39,859	41,129	73,186	78,459	78,884	78,725
Met-Ed	86,297	87,272	92,899	96,357	101,120	100,494	101,948
PECO*	275,634	323,213	284,551	275,261	267,416	274,049	283,091
Penelec	100,221	82,748	89,984	93,901	100,709	102,981	104,025
Penn Power	26,442	20,353	21,706	24,336	25,791	25,397	26,050
PPL	185,375	212,713	221,586	222,671	215,376	212,257	206,835
West Penn	105,331	100,860	106,828	110,915	112,322	111,228	115,106
Total	**841,260**	**867,018**	**858,683**	**896,627**	**901,193**	**905,290**	**915,780**

*PECO statistics include electric and gas.

The total number of residential customers in debt with active accounts for the electric industry increased by 8.9% during the period from 2004 as compared to 2018. Duquesne showed the largest increase in the total number of residential customers in debt since 2004, with a 27.1% increase. Penn Power was the only electric utility to show a decrease in the total number of residential customers, with 1.5%.

Table 29 – Total Number of Residential Customers in Debt – Active Accounts – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	50,485	46,600	47,017	45,129	43,374	42,999	43,403
NFG	32,266	25,877	27,608	26,178	22,441	23,760	26,784
Peoples	58,319	70,698	49,907	49,663	45,417	45,405	46,999
Peoples-Equitable	64,152	31,237	33,316	36,137	36,485	36,922	37,422
UGI-Gas	41,142	61,097	66,388	65,526	60,868	68,408	65,437
UGI Penn Natural	24,524	30,205	33,142	32,605	28,283	31,160	29,307
Total w/out PGW	***270,888***	***265,714***	***257,378***	***255,238***	***236,868***	***248,654***	***249,352***
PGW	180,908	111,999	126,444	122,395	120,951	128,122	129,202
Total w/PGW	**451,796**	**377,713**	**383,822**	**377,633**	**357,819**	**376,776**	**378,554**

The total number of residential customers in debt with active accounts for the gas industry, decreased overall by 16.2% from 2004 as compared to 2018. UGI-Gas had the largest increase in the total number of residential customers in debt since 2004, by 59.1%. UGI Penn Natural also showed an increase in the total number of customers in debt of 19.5%.

Table 30 – Total Number of Residential Customers in Debt – Active Accounts – Water

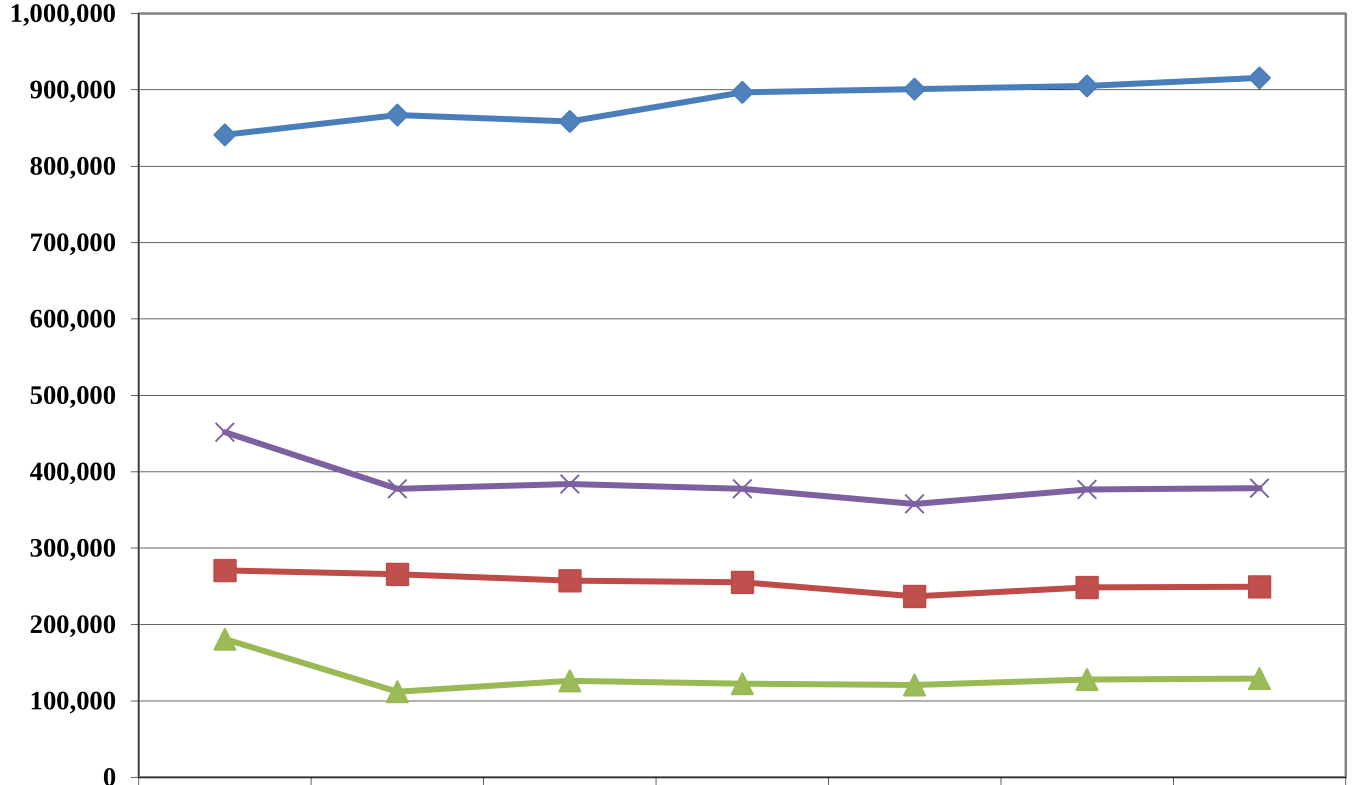
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	85	82	94	83	80	95	93
Columbia Water	406	406	454	472	538	466	464
Newtown Artesian	1,159	525	577	534	530	507	1,267
Superior*	10	14	17	13	N/A	N/A	N/A
SUEZ Bethel	95	105	109	204	222	221	213
SUEZ PA	3,902	5,388	5,311	5,308	5,163	5,029	4,878
York	8,188	7,137	7,525	7,330	7,212	7,465	8,028
Other Class A Total	***13,845***	***13,657***	***14,087***	***13,944***	***13,745***	***13,783***	***14,943***
Aqua	55,981	60,669	58,360	56,846	56,272	56,864	57,074
PAWC	72,096	78,072	115,678	102,806	106,220	107,025	110,514
Total	**141,922**	**152,398**	**188,125**	**173,596**	**176,237**	**177,672**	**182,531**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The total number of residential customers in debt with active accounts for the water industry increased overall by 28.6% from 2012 as compared to 2018. SUEZ Bethel showed the largest increase in the total number of residential customers in debt with active accounts, by 124.2% since 2012. PAWC also increased the total number of customers in debt by over 53.3%.

The following graphs show the total number of residential customers in debt for active accounts for the electric, gas, and water industries. The graphs provide a visual perspective to better recognize the industry trends. The water industry is shown separately since reporting did not start until 2012. Again, this collection variable represents accounts where service is still active and customer has debt, either on or not on an arrangement.

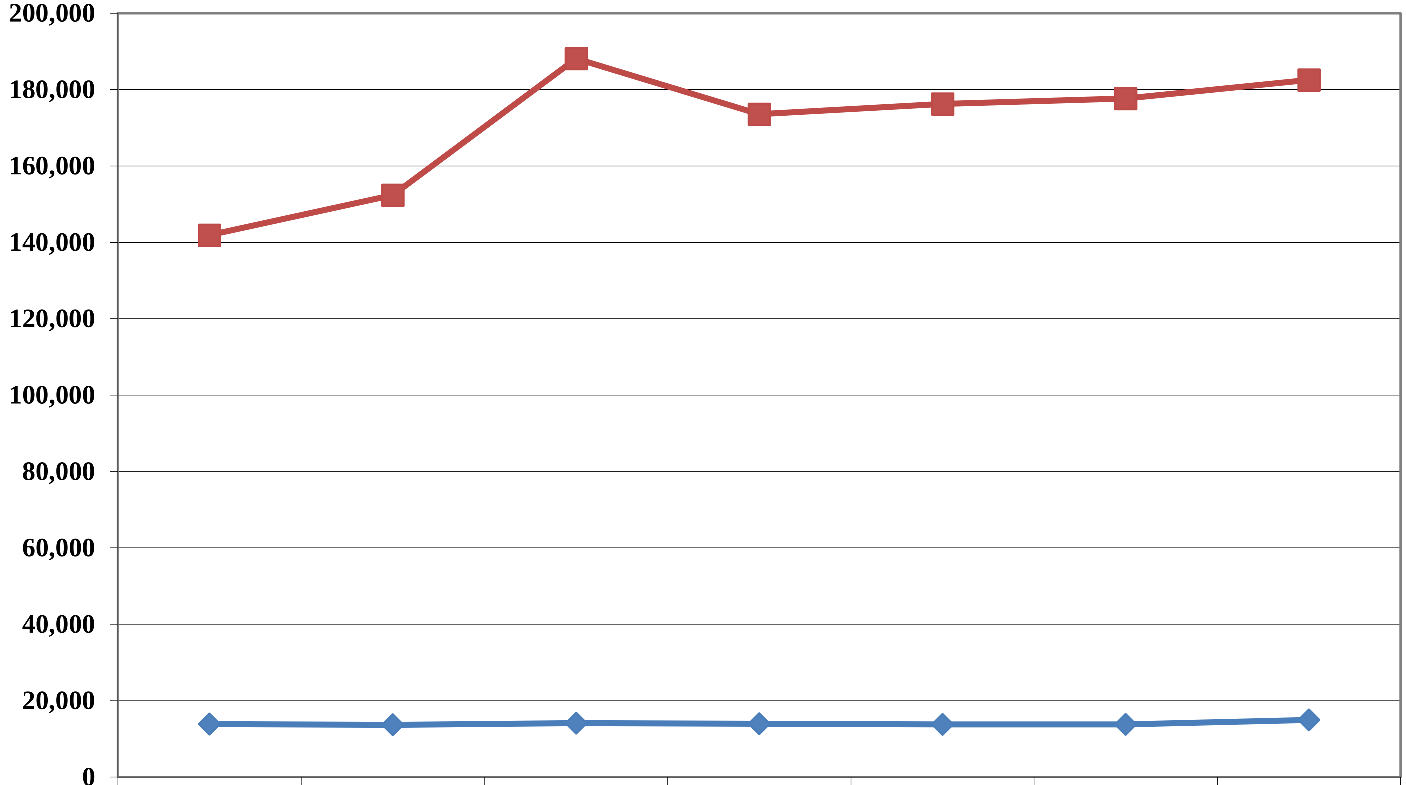
Total Number of Residential Customers in Debt - Active Accounts - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	841,260	867,018	858,683	896,627	901,193	905,290	915,780
Gas-Excluding PGW	270,888	265,714	257,378	255,238	236,868	248,654	249,352
PGW	180,908	111,999	126,444	122,395	120,951	128,122	129,202
Gas-Including PGW	451,796	377,713	383,822	377,633	357,819	376,776	378,554

Electric Gas-Excluding PGW

Total Number of Residential Customers in Debt - Active Accounts - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	13,845	13,657	14,087	13,944	13,745	13,783	14,943
All Class A	141,922	152,398	188,125	173,596	176,237	177,672	182,531

Utilities report the total residential customers in debt for inactive accounts. Inactive accounts are accounts that have service terminated or discontinued and arrears or balances not yet written-off by the utility. Inactive account balances will either be paid as a final bill by the customer or written-off as uncollectible by the utility and reported as Gross Write-Offs. Inactive accounts represent the final step in the collections cycle, generally following active accounts with debt not on arrangements. The following tables show the number of residential customers in debt with inactive accounts for electric, gas, and water utilities from 2012 through 2018. Utilities started reporting select data for Inactive Accounts in 2012.

Table 31 – Total Number of Residential Customers in Debt – Inactive Accounts – Electric

Utility	2012	2013	2014	2015	2016	2017	2018
Duquesne	10,854	11,266	12,414	7,203	6,383	7,596	5,766
Met-Ed	7,948	8,808	13,628	12,385	11,567	11,269	11,265
PECO*	16,644	2,783	22,558	16,591	15,371	15,984	15,425
Penelec	7,842	8,571	12,947	12,149	11,930	11,806	11,549
Penn Power	1,658	1,706	2,811	2,782	2,695	2,570	2,537
PPL	20,370	18,870	33,682	21,826	20,794	21,406	22,586
West Penn	5,200	6,911	10,584	10,074	10,965	10,999	11,238
Total	**70,516**	**75,130**	**108,624**	**83,010**	**79,705**	**81,630**	**80,366**

*PECO statistics include electric and gas.

The number of residential customers in debt with inactive accounts for the electric industry increased overall by 14% during the period from 2012 as compared to 2018. West Penn showed the largest increase in the number of residential customers in debt with inactive accounts since 2012, by over 166.1%. Met-Ed, Penelec, and Penn Power also showed increases of over 41.7%. Duquesne showed the largest decrease in the number of residential customers with inactive accounts, with 46.9%.

Table 32 – Total Number of Residential Customers in Debt – Inactive Accounts – Gas

Utility	2012	2013	2014	2015	2016	2017	2018
Columbia Gas	2,266	2,408	1,723	1,629	1,451	1,496	1,504
NFG	10,641	10,220	10,938	9,781	5,851	10,656	10,585
Peoples	14,057	19,323	20,096	20,131	22,032	14,202	13,772
Peoples-Equitable	903	859	917	3,511	9,891	9,725	10,367
UGI-Gas	4,187	4,426	5,105	4,980	4,883	4,415	5,739
UGI Penn Natural	1,910	2,014	2,353	2,437	2,244	1,959	2,511
Total w/out PGW	***33,964***	***39,250***	***41,132***	***42,469***	***46,352***	***42,453***	***44,478***
PGW	11,305	12,410	13,967	14,599	13,433	12,239	13,762
Total w/PGW	**45,269**	**51,660**	**55,099**	**57,068**	**59,785**	**54,692**	**58,240**

The number of residential customers in debt with inactive accounts for the gas industry increased overall by 28.7% from 2012 as compared to 2018. Peoples-Equitable showed a significant increase in the number of residential customers in debt with inactive accounts since 2012, with over 1,048.1%. Columbia Gas showed the largest decrease in the number of residential customers in debt with inactive accounts, with 33.6%.

Table 33 – Total Number of Residential Customers in Debt – Inactive Accounts – Water

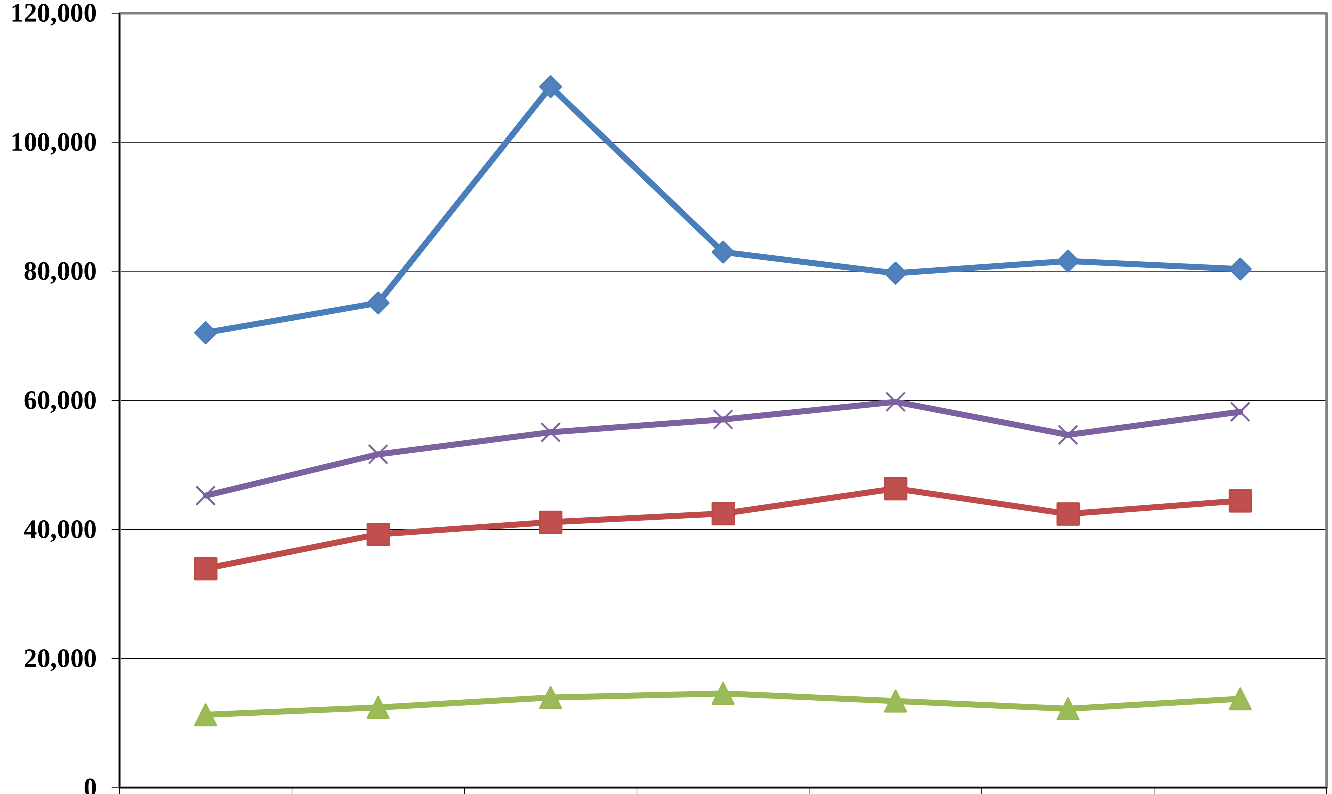
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	6	5	4	3	4	2	5
Columbia Water	68	137	123	150	143	134	141
Newtown Artesian	12	9	8	7	7	9	4
Superior*	57	300	74	63	N/A	N/A	N/A
SUEZ Bethel	11	11	8	6	8	10	13
SUEZ PA	534	404	424	406	400	490	568
York	445	457	433	432	500	443	500
Other Class A Total	***1,133***	***1,323***	***1,074***	***1,067***	***1,062***	***1,088***	***1,231***
Aqua	2,305	2,766	2,870	2,463	2,719	2,648	2,887
PAWC	6,073	6,186	10,891	11,991	10,556	9,878	9,962
Total	**9,511**	**10,275**	**14,835**	**15,521**	**14,337**	**13,614**	**14,080**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The number of residential customers in debt with inactive accounts for the water industry increased overall by 48% from 2012 as compared to 2018. Columbia Water showed the largest increase in the number of residential customers in debt with inactive accounts since 2012, with over 107.4%. Newtown Artesian had the largest decrease in the number of residential customers with inactive accounts, with 66.7%.

The following graphs show the number of residential customers in debt with inactive accounts for the electric, gas, and water industries since the utilities began reporting in 2012. The graphs provide a visual perspective to better recognize the industry trends. This collection variable represents accounts where service is no longer active and the customer had remaining debt. That debt will either be paid by the customer as a final bill or written-off by the utility as uncollectible. It is the final step in the collections cycle, generally following active debt not on arrangements.

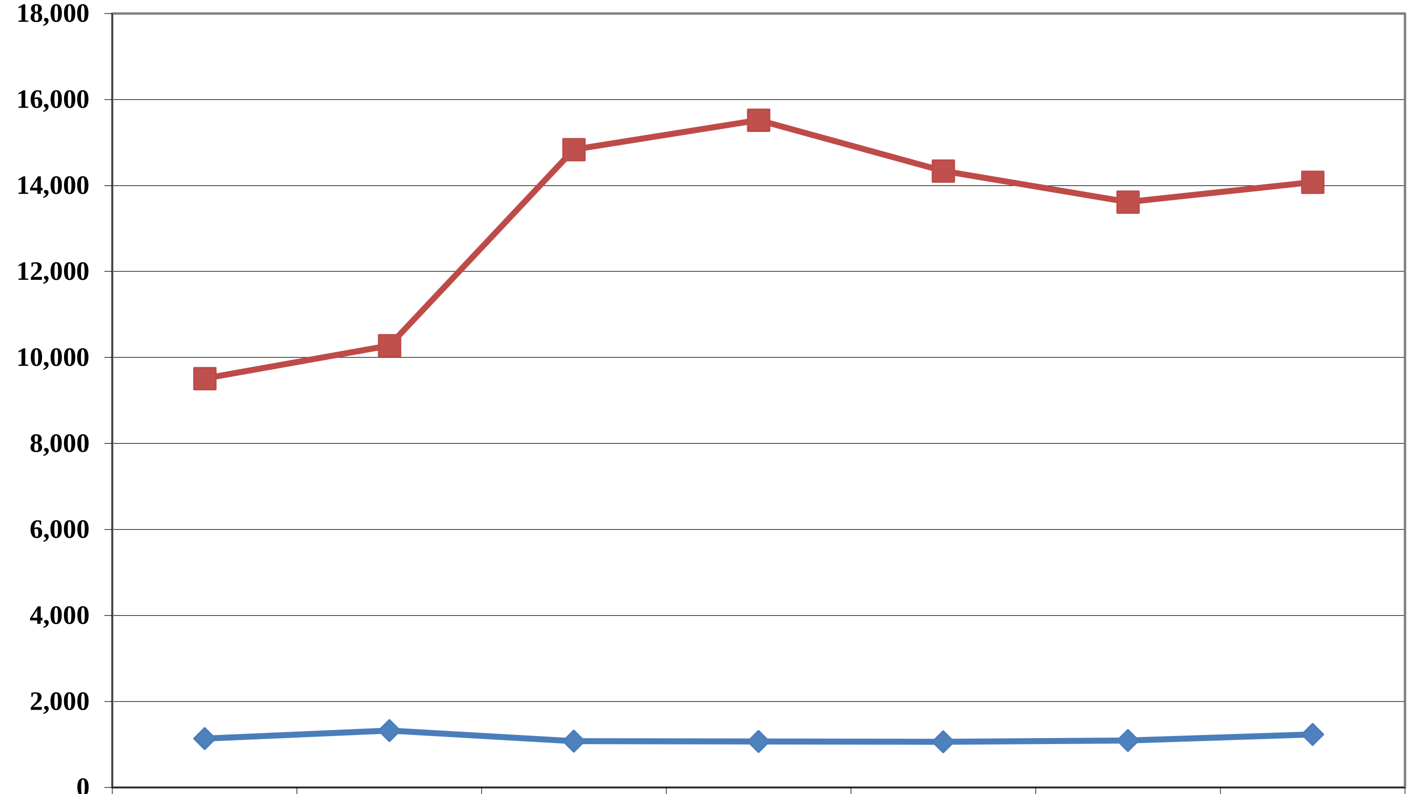
Total Number of Residential Customers In Debt - Inactive Accounts - Electric & Gas



	2012	2013	2014	2015	2016	2017	2018
Electric	70,516	75,130	108,624	83,010	79,705	81,630	80,366
Gas-Excluding PGW	33,964	39,250	41,132	42,469	46,352	42,453	44,478
PGW	11,305	12,410	13,967	14,599	13,433	12,239	13,762
Gas-Including PGW	45,269	51,660	55,099	57,068	59,785	54,692	58,240

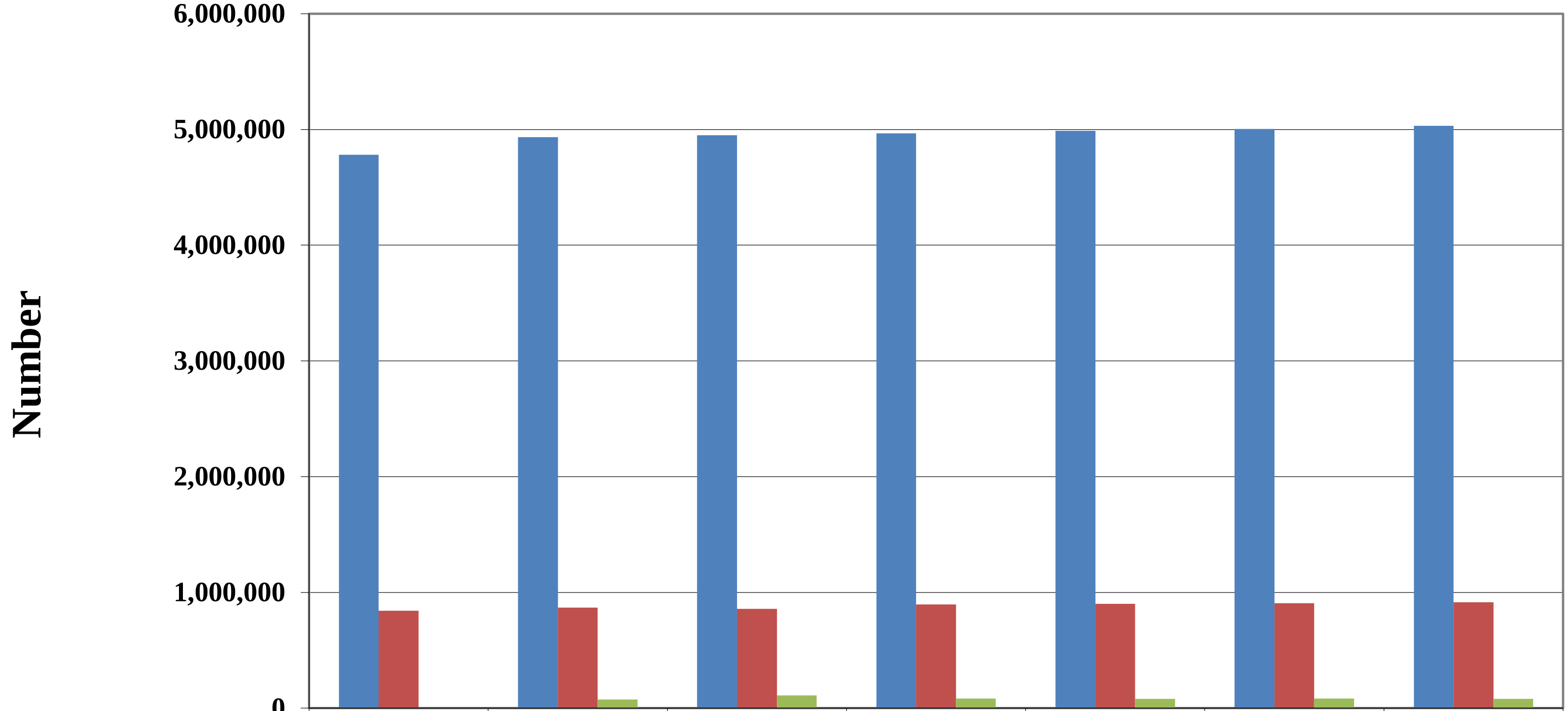
Electric   Gas-Excluding PGW

Total Number of Residential Customers In Debt - Inactive Accounts - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	1,133	1,323	1,074	1,067	1,062	1,088	1,231
All Class A	9,511	10,275	14,835	15,521	14,337	13,614	14,080

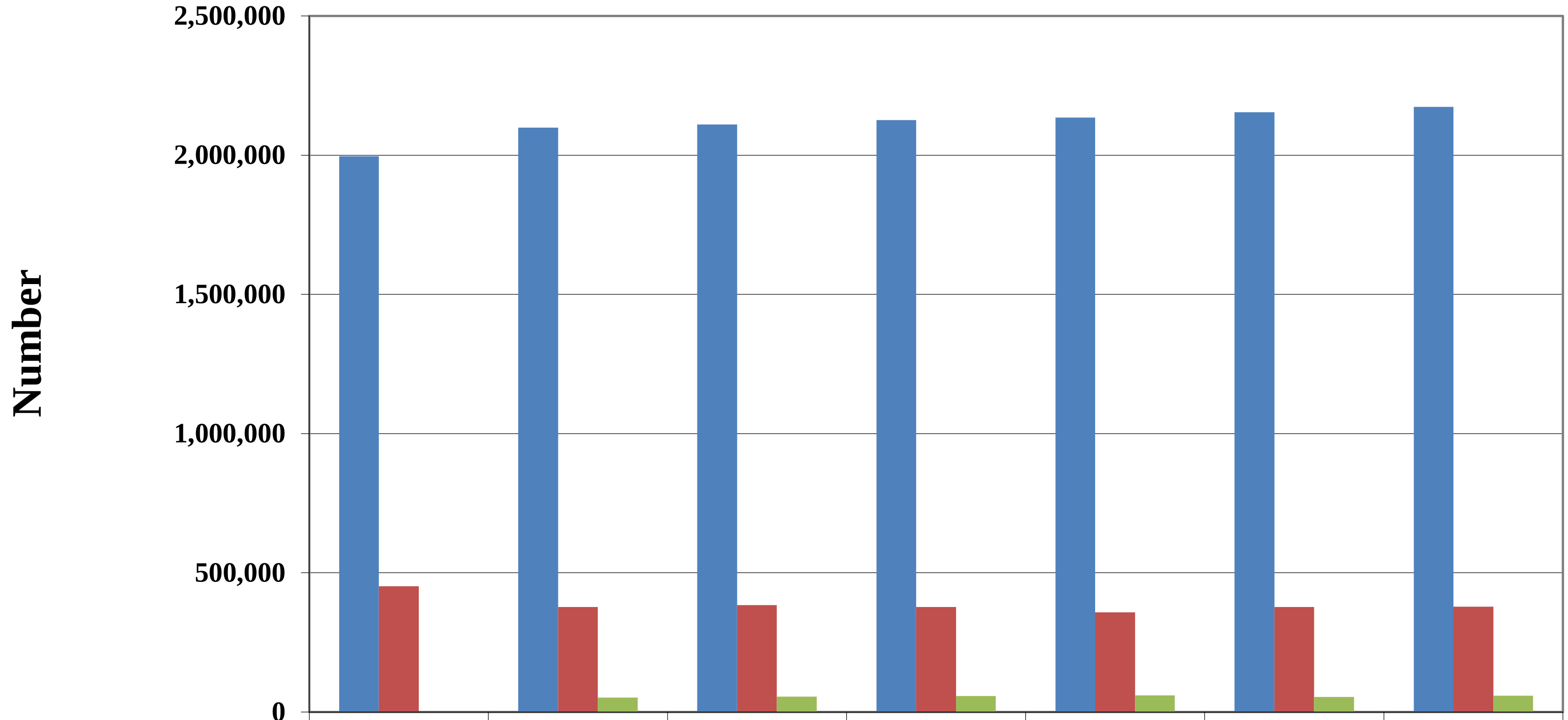
Total Residential Customers vs. Customers in Debt - Electric
(Percent of Customers in Debt)



	2004	2013	2014	2015	2016	2017	2018
Total Residential Customers	4,782,424	4,934,385	4,950,825	4,967,633	4,988,429	5,004,022	5,030,781
Customers in Debt-Active Accounts	841,260	867,018	858,683	896,627	901,193	905,290	915,780
Customers In Debt-Inactive Accounts		75,130	108,624	83,010	79,705	81,630	80,366

Total Residential Customers Customers in Debt-Active Accounts Customers In Debt-Inactive Accounts

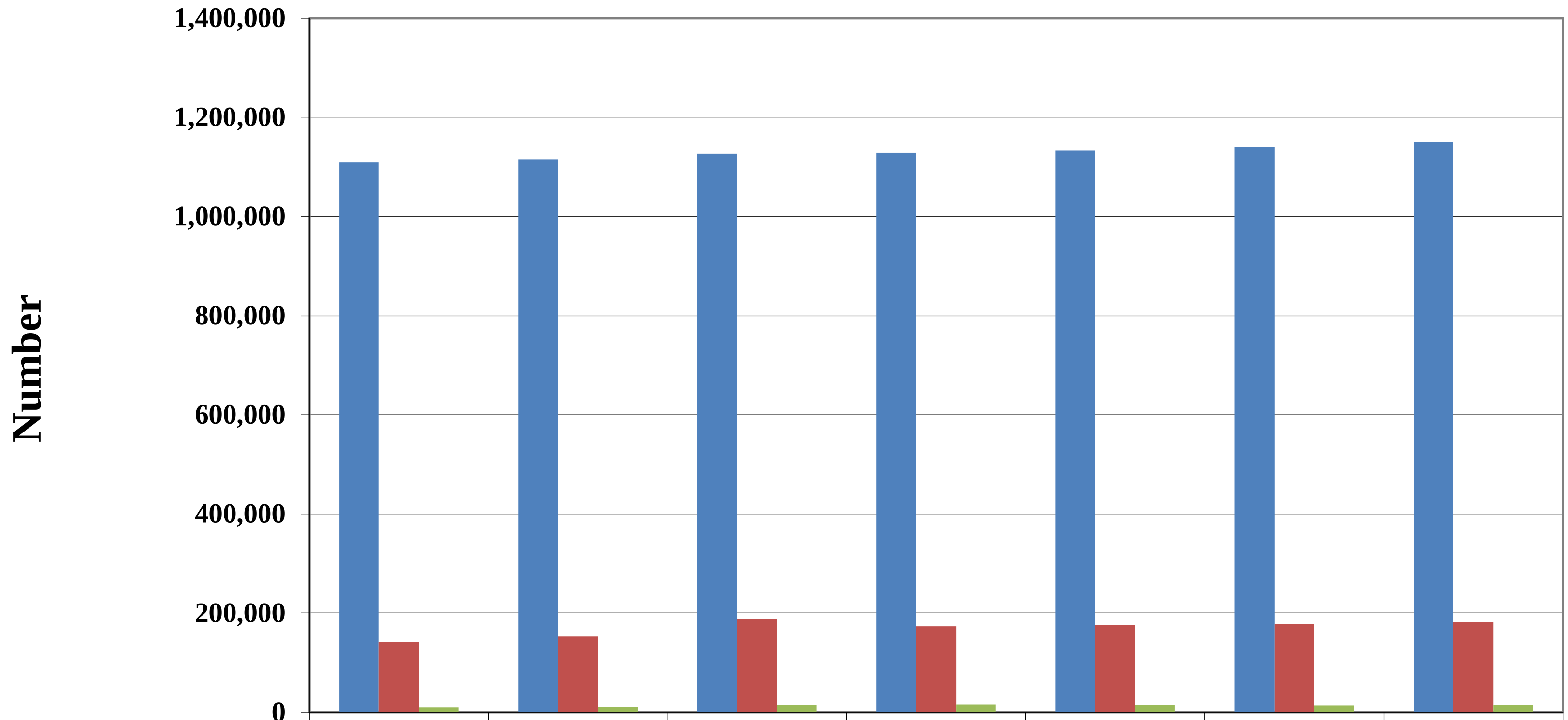
Total Residential Customers vs. Customers in Debt - Gas (Including PGW) (Percent of Customers in Debt)



	2004	2013	2014	2015	2016	2017	2018
Total Residential Customers	1,996,278	2,098,347	2,110,252	2,125,725	2,135,044	2,154,050	2,173,017
Customers in Debt-Active Accounts	451,796	377,713	383,822	377,633	357,819	376,776	378,554
Customers In Debt-Inactive Accounts		51,660	55,099	57,068	59,785	54,692	58,240

Total Residential Customers   Customers in Debt-Active Accounts   Customers In Debt-Inactive Accounts

Total Residential Customers vs. Customers in Debt - Water (Percent of Customers in Debt)



	2012	2013	2014	2015	2016	2017	2018
Total Residential Customers	1,109,517	1,115,135	1,126,420	1,128,395	1,132,948	1,139,769	1,150,882
Customers in Debt-Active Accounts	141,922	152,398	188,125	173,596	176,237	177,672	182,531
Customers In Debt-Inactive Accounts	9,511	10,275	14,835	15,521	14,337	13,614	14,080

■ Total Residential Customers ■ Customers in Debt-Active Accounts ■ Customers In Debt-Inactive Accounts

Utilities report the residential dollars in debt in active accounts in two separate categories: Dollars in Debt on Arrangements and Dollars in Debt not on Arrangements. The Total Residential Dollars in Debt is a combination of those two categories. The following tables show the total residential dollars in debt for active accounts for electric and gas utilities from 2004 and 2013-2018.

Table 34 – Residential Dollars in Debt – Active Accounts – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$22,386,725	$18,219,023	$18,599,095	$24,528,480	$23,421,163	$25,773,612	$26,837,826
Met-Ed	$24,996,155	$36,715,701	$41,543,359	$38,462,958	$34,394,296	$29,552,047	$32,624,395
PECO*	$123,606,844	$112,421,080	$90,675,126	$78,576,836	$68,409,641	$67,042,784	$72,069,551
Penelec	$24,821,329	$31,424,846	$36,125,210	$34,791,115	$33,427,322	$30,924,482	$35,089,887
Penn Power	$8,023,260	$7,700,981	$8,313,332	$9,033,895	$9,706,824	$8,275,668	$9,120,470
PPL	$57,647,458	$111,024,790	$115,795,683	$118,543,280	$101,379,527	$93,936,864	$92,356,280
West Penn	$15,613,294	$22,041,207	$27,971,074	$29,486,906	$30,280,972	$28,891,499	$35,054,793
Total	**$277,095,065**	**$339,547,628**	**$339,022,879**	**$333,423,470**	**$301,019,745**	**$284,396,956**	**$303,153,202**

*PECO statistics include electric and gas.

The residential dollars in debt for the electric industry active accounts increased overall by 9.4% during the period from 2004 as compared to 2018. West Penn showed the largest increase in residential dollars in debt since 2004, with 124.5%. PECO showed the largest decrease in residential dollars in debt, by 41.7%.

Table 35 – Residential Dollars in Debt – Active Accounts – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$15,990,488	$12,695,482	$15,912,840	$16,115,031	$12,198,776	$12,125,914	$13,855,849
NFG	$8,664,869	$5,765,958	$6,865,956	$6,569,169	$5,353,993	$4,968,503	$5,106,543
Peoples	$42,105,099	$25,193,506	$11,466,364	$10,813,958	$8,680,380	$8,011,694	$9,366,603
Peoples-Equitable	$26,808,380	$8,504,801	$10,046,235	$8,092,042	$5,921,423	$6,005,260	$6,824,107
UGI-Gas	$7,927,107	$10,987,998	$15,607,077	$14,890,951	$9,681,531	$12,425,672	$17,095,891
UGI Penn Natural	$6,952,897	$7,518,838	$10,402,606	$10,530,580	$6,138,435	$7,096,828	$9,907,205
Total w/out PGW	***$108,448,840***	***$70,666,583***	***$70,301,078***	***$67,011,731***	***$47,974,538***	***$50,633,871***	***$62,156,198***
PGW	$104,917,102	$61,903,825	$70,663,776	$63,352,082	$54,641,850	$54,847,922	$58,057,777
Total w/PGW	**$213,365,942**	**$132,570,408**	**$140,964,854**	**$130,363,813**	**$102,616,388**	**$105,481,793**	**$120,213,975**

The residential dollars in debt for active accounts for the gas industry decreased overall by 43.7% from 2004 as compared to 2018. UGI Gas showed the largest increase in the residential dollars in debt for active accounts since 2004, by 115.7%. Peoples and Peoples-Equitable had the largest decrease in the residential dollars in debt for active accounts, by 77.8% and 74.5%, respectively.

Table 36 – Residential Dollars in Debt – Active Accounts – Water

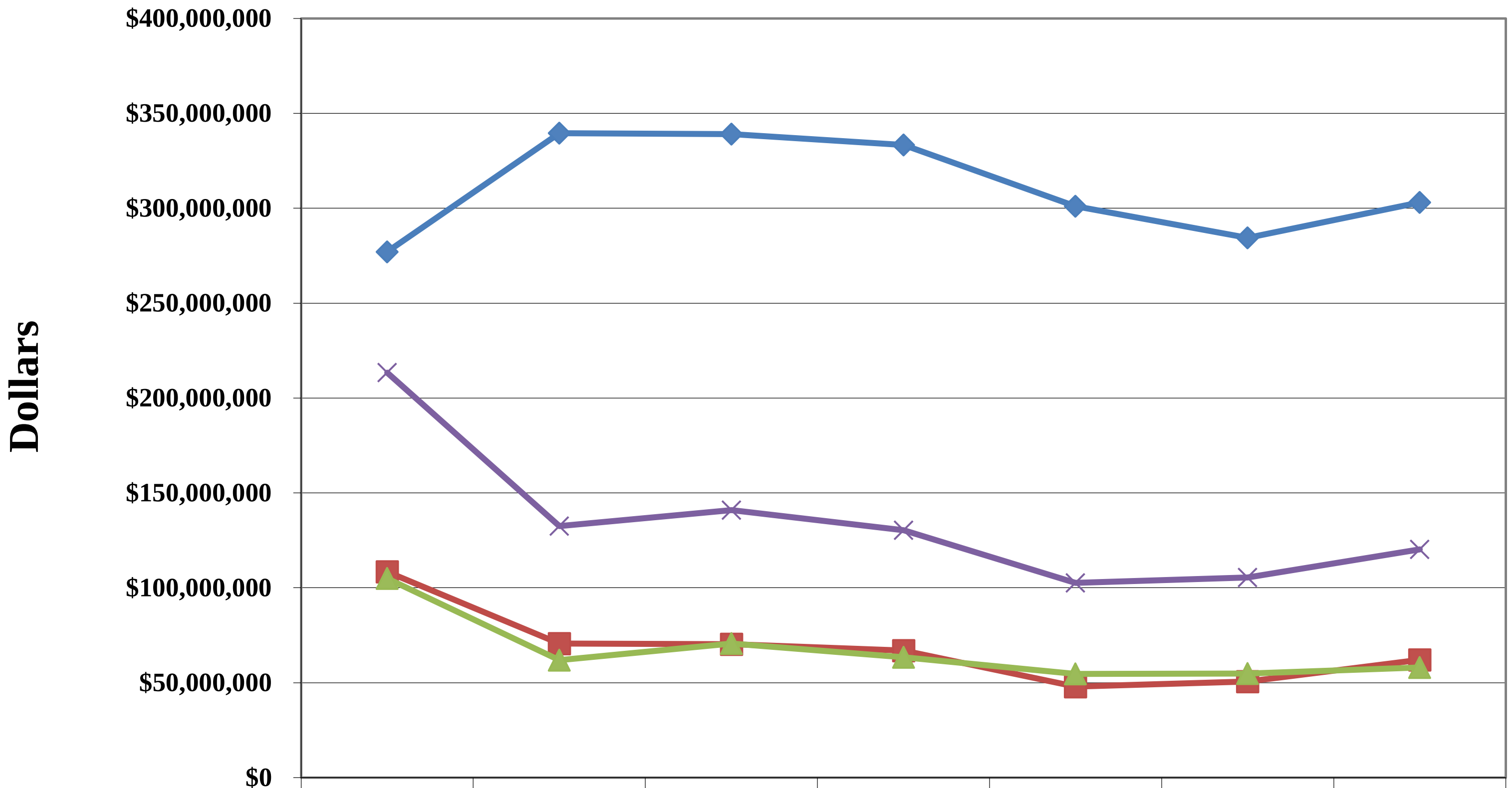
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$8,059	$8,460	$7,743	$7,034	$8,402	$13,655	$11,062
Columbia Water	$61,337	$66,345	$62,121	$43,477	$39,253	$31,127	$27,852
Newtown Artesian	$61,289	$35,829	$42,853	$42,136	$38,028	$38,250	$33,367
Superior*	$1,143	$1,609	$2,229	$1,684	N/A	N/A	N/A
SUEZ Bethel	$8,891	$8,735	$8,422	$11,265	$10,450	$13,283	$10,320
SUEZ PA	$330,282	$285,417	$297,048	$287,809	$302,837	$342,919	$369,368
York	$508,083	$419,000	$436,042	$445,842	$424,688	$424,785	$653,378
Other Class A Total	***$979,084***	***$825,395***	***$856,458***	***$839,247***	***$823,658***	***$864,019***	***$1,105,347***
Aqua	$8,849,788	$9,272,545	$12,176,183	$8,631,930	$9,520,705	$10,241,165	$10,044,760
PAWC	$12,366,430	$13,962,678	$15,908,277	$14,616,111	$15,006,745	$16,044,907	$17,705,166
Total	**$22,195,302**	**$24,060,618**	**$28,940,918**	**$24,087,288**	**$25,351,108**	**$27,150,091**	**$28,855,273**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The residential dollars in debt for active accounts for the water industry increased overall by 30% from 2012 as compared to 2018. PAWC showed the largest increase in residential dollars in debt for active accounts since 2012, by 43.2%. Columbia Water and Newtown Artesian had the largest decrease in the residential dollars in debt for active accounts, by 54.6% and 45.6%, respectively.

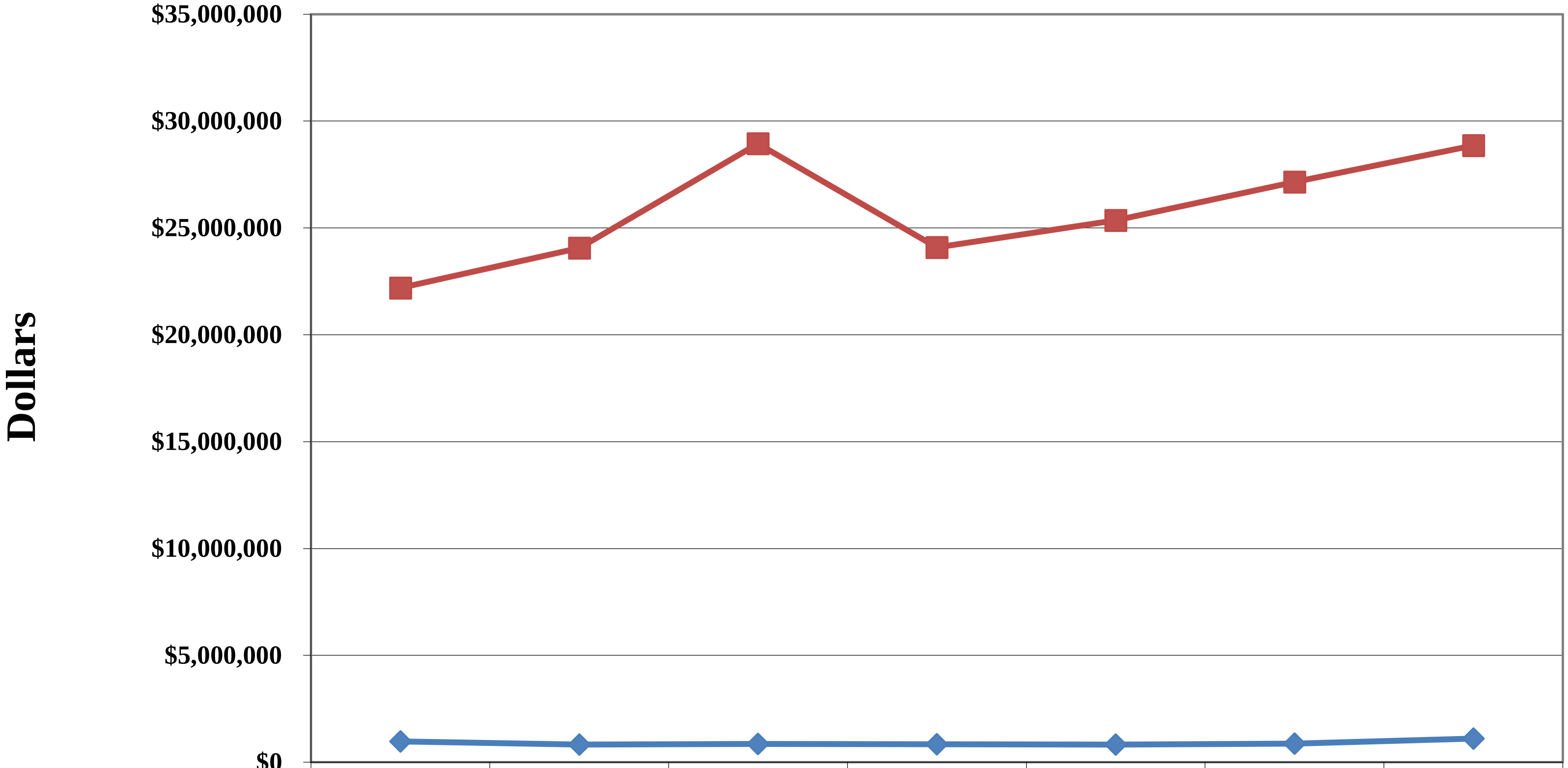
The following graphs show the total residential dollars in debt for active accounts for the electric, gas, and water industries since 2004. The total residential dollars in debt is a combination of the two categories dollars in debt on and not on arrangements. The water industry is shown separately since the utilities began reporting in 2012. The graphs provide a visual perspective to better recognize the industry trends.

Residential Dollars in Debt - Active Accounts - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	$277,095,065	$339,547,628	$339,022,879	$333,423,470	$301,019,745	$284,396,956	$303,153,202
Gas-Excluding PGW	$108,448,840	$70,666,583	$70,301,078	$67,011,731	$47,974,538	$50,633,871	$62,156,198
PGW	$104,917,102	$61,903,825	$70,663,776	$63,352,082	$54,641,850	$54,847,922	$58,057,777
Gas-Including PGW	$213,365,942	$132,570,408	$140,964,854	$130,363,813	$102,616,388	$105,481,793	$120,213,975

Residential Dollars in Debt - Active Accounts - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	$979,084	$825,395	$856,458	$839,247	$823,658	$864,019	$1,105,347
All Class A	$22,195,302	$24,060,618	$28,940,918	$24,087,288	$25,351,108	$27,150,091	$28,855,273

Utilities report the total residential dollars in debt for inactive accounts. Inactive accounts are accounts that have service terminated or discontinued and arrears or balances not yet written-off by the utility. Inactive account balances will either be paid as a final bill by the customer or written-off as uncollectible by the utility and reported as Gross Write-Offs. Inactive accounts represent the final step in the collections cycle. The following tables show the residential dollars in debt for inactive accounts for electric and gas utilities from 2012 through 2018. The total amount of money in debt has an impact on a utility's expenses. The specific expense category is called Cash Working Capital and is part of a utility's distribution charge. The utilities began reporting select data on inactive accounts in 2012.

Table 37 – Residential Dollars in Debt – Inactive Accounts – Electric

Utility	2012	2013	2014	2015	2016	2017	2018
Duquesne	$3,302,824	$2,800,222	$2,915,681	$2,719,310	$2,981,625	$4,449,825	$2,987,307
Met-Ed	$3,897,096	$4,077,739	$6,255,437	$5,493,979	$5,259,667	$4,783,682	$5,050,028
PECO*	$13,400,973	$17,486,922	$22,095,023	$15,153,362	$11,772,310	$10,876,288	$10,469,771
Penelec	$3,087,864	$3,284,068	$4,847,260	$4,801,153	$4,821,551	$4,984,278	$5,263,707
Penn Power	$655,917	$564,095	$898,392	$986,615	$1,108,939	$1,071,153	$1,107,206
PPL	$16,813,930	$17,968,350	$20,902,324	$22,430,021	$19,496,318	$18,643,803	$19,558,691
West Penn	$925,763	$1,509,961	$2,511,791	$2,662,352	$3,279,628	$3,602,490	$4,298,385
Total	**$42,084,367**	**$47,691,357**	**$60,425,908**	**$54,246,792**	**$48,720,038**	**$48,411,519**	**$48,735,095**

*PECO statistics include electric and gas.

The residential dollars in debt for inactive accounts for the electric industry increased overall by 15.8% from 2012 as compared to 2018. Penelec showed the largest increase in residential dollars in debt for inactive accounts since 2012, of 70.5%. PECO showed the largest decrease in residential dollars in debt for inactive accounts, by 21.9%.

Table 38 – Residential Dollars in Debt – Inactive Accounts – Gas

Utility	2012	2013	2014	2015	2016	2017	2018
Columbia Gas	$878,214	$956,898	$822,763	$912,016	$667,269	$689,616	$762,577
NFG	$4,299,690	$4,144,269	$4,659,570	$4,468,905	$2,396,233	$3,950,779	$4,498,510
Peoples	$8,612,993	$11,487,420	$12,549,131	$13,049,508	$13,428,982	$9,484,248	$9,889,700
Peoples-Equitable	$340,608	$330,366	$394,815	$1,413,951	$4,692,706	$4,720,259	$5,585,254
UGI-Gas	$1,356,932	$1,428,366	$2,086,488	$1,940,718	$1,466,139	$1,371,984	$2,831,512
UGI Penn Natural	$874,483	$908,147	$1,256,234	$1,345,732	$868,879	$750,941	$1,466,018
Total w/out PGW	***$16,362,920***	***$19,255,466***	***$21,769,001***	***$23,130,830***	***$23,520,208***	***$20,967,827***	***$25,033,571***
PGW	$15,323,341	$16,344,174	$19,020,183	$19,021,808	$16,565,493	$15,164,229	$14,157,264
Total w/PGW	**$31,686,261**	**$35,599,640**	**$40,789,184**	**$42,152,638**	**$40,085,701**	**$36,132,056**	**$39,190,835**

The residential dollars in debt for inactive accounts for the gas industry increased overall by 23.7% from 2012 as compared to 2018. Peoples-Equitable had the largest increase in the residential dollars in debt for inactive accounts since 2012, by 1,539.8%. UGI-Gas and UGI Penn Natural showed an increase in the residential dollars in debt for inactive accounts by 108.7% and 67.6%, respectively.

Table 39 – Residential Dollars in Debt – Inactive Accounts – Water

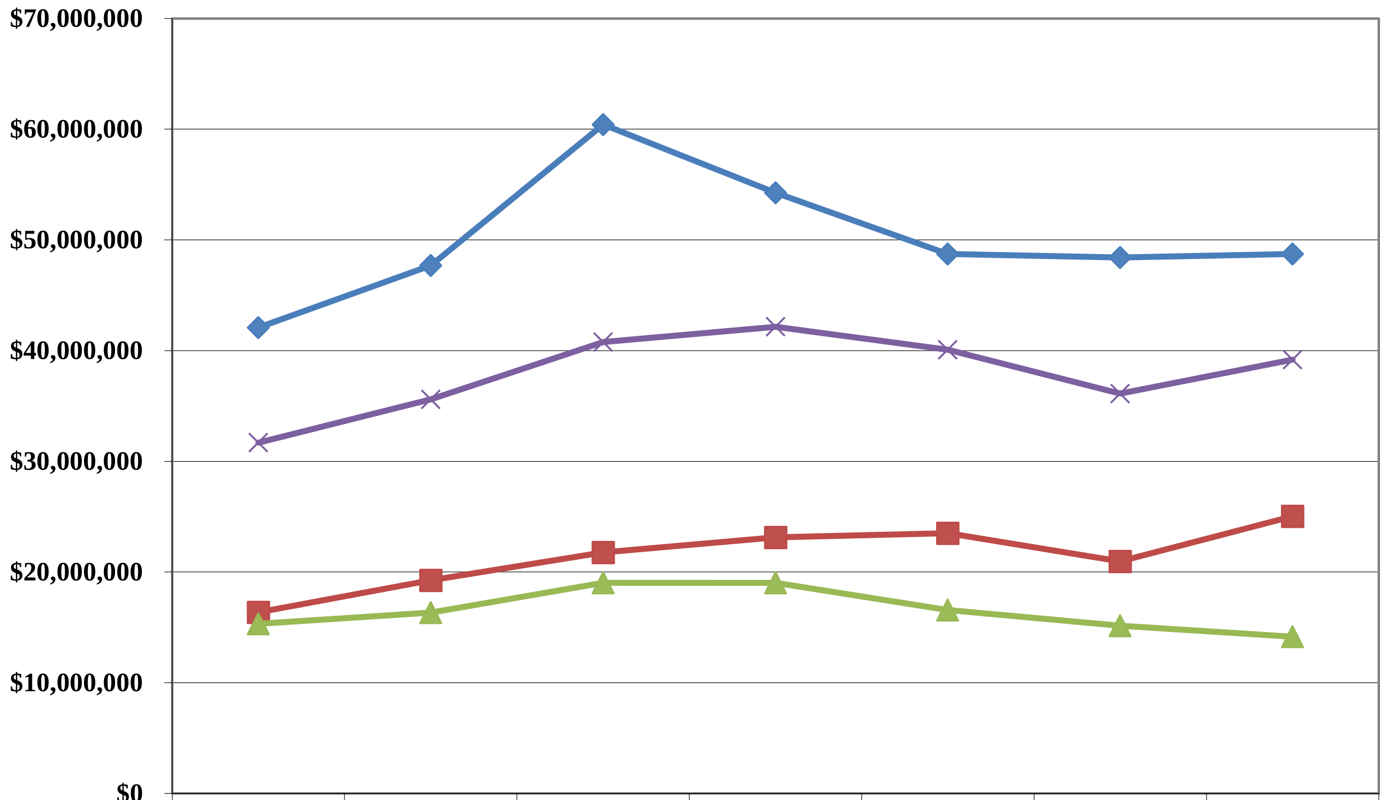
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$623	$633	$871	$2,084	$1,258	$796	$905
Columbia Water	$4,739	$9,408	$4,646	$6,298	$7,138	$5,965	$8,279
Newtown Artesian	$2,778	$2,326	$2,108	$1,788	$907	$1,148	$3,259
Superior*	$2,328	$1,996	$10,184	$10,733	N/A	N/A	N/A
SUEZ Bethel	$1,573	$812	$472	$281	$275	$613	$697
SUEZ PA	$57,009	$35,371	$40,541	$44,698	$38,268	$41,125	$55,911
York	$43,157	$46,372	$44,274	$44,252	$42,120	$40,968	$46,864
Other Class A Total	***$112,207***	***$96,918***	***$103,096***	***$110,134***	***$89,966***	***$90,615***	***$115,915***
Aqua	$559,868	$625,164	$770,843	$587,596	$645,040	$592,532	$717,557
PAWC	$1,458,703	$1,535,265	$3,243,058	$2,848,191	$2,756,528	$2,418,242	$2,806,263
Total	**$2,130,778**	**$2,257,347**	**$4,116,997**	**$3,545,921**	**$3,491,534**	**$3,101,389**	**$3,639,735**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The residential dollars in debt for inactive accounts for the water industry increased overall by 70.8% from 2012 as compared to 2018. PAWC had the largest increase in the residential dollars in debt for inactive accounts since 2012, by 92.4%. SUEZ Bethel had the largest decrease in the residential dollars in debt for inactive accounts, by 55.7%.

The following graphs show the residential dollars in debt for inactive accounts for the electric, gas, and water industries since 2012. The utilities began reporting select data on inactive accounts in 2012. The graphs provide a visual perspective to better recognize the industry trends. Inactive account balances will either be paid as a final bill by the customer or written-off as uncollectible by the utility and reported as Gross Write-Offs. Inactive accounts represent the final step in the collections cycle.

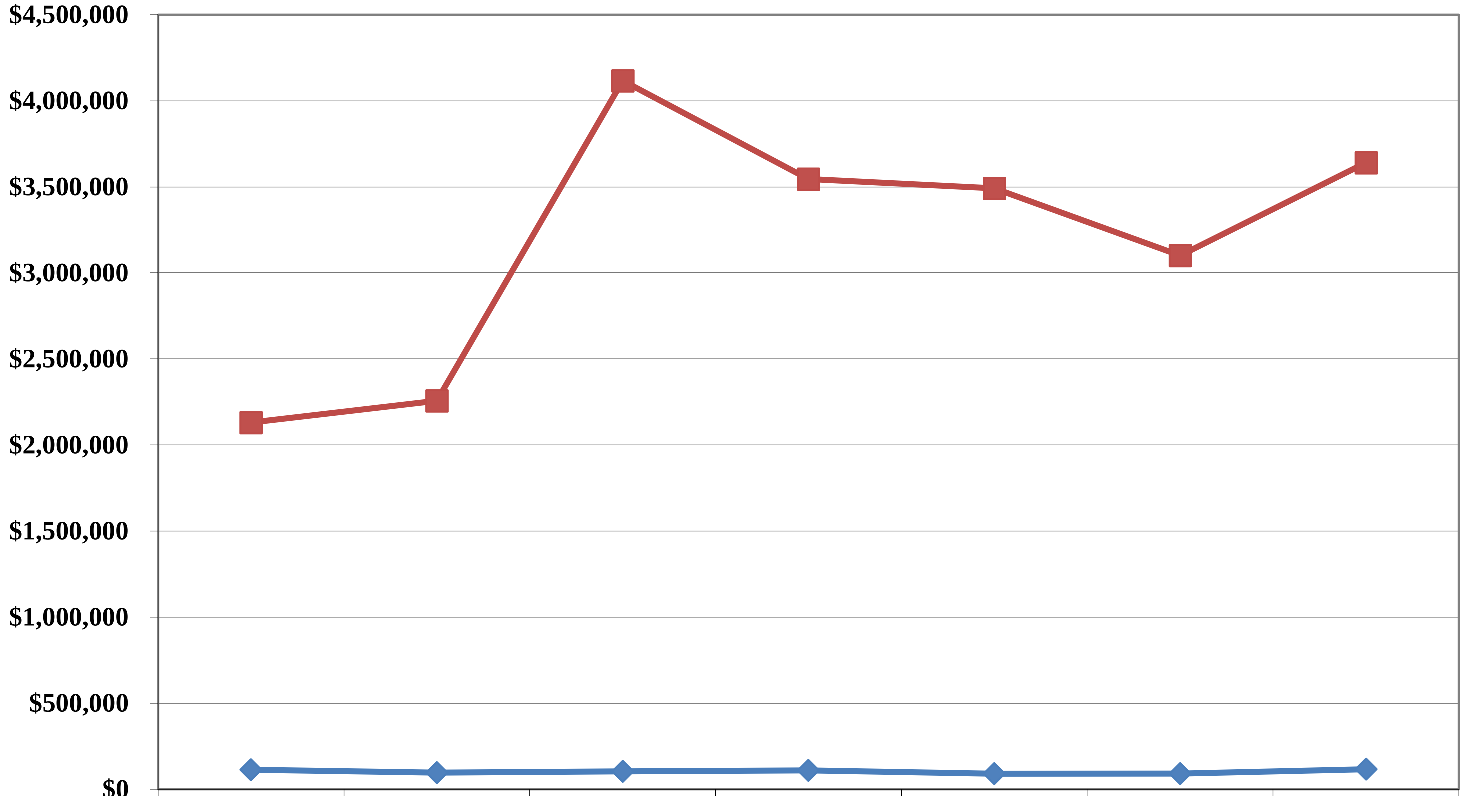
Residential Dollars in Debt - Inactive Accounts - Electric & Gas



	2012	2013	2014	2015	2016	2017	2018
Electric	$42,084,367	$47,691,357	$60,425,908	$54,246,792	$48,720,038	$48,411,519	$48,735,095
Gas-Excluding PGW	$16,362,920	$19,255,466	$21,769,001	$23,130,830	$23,520,208	$20,967,827	$25,033,571
PGW	$15,323,341	$16,344,174	$19,020,183	$19,021,808	$16,565,493	$15,164,229	$14,157,264
Gas-Including PGW	$31,686,261	$35,599,640	$40,789,184	$42,152,638	$40,085,701	$36,132,056	$39,190,835

Electric Gas-Excluding PGW

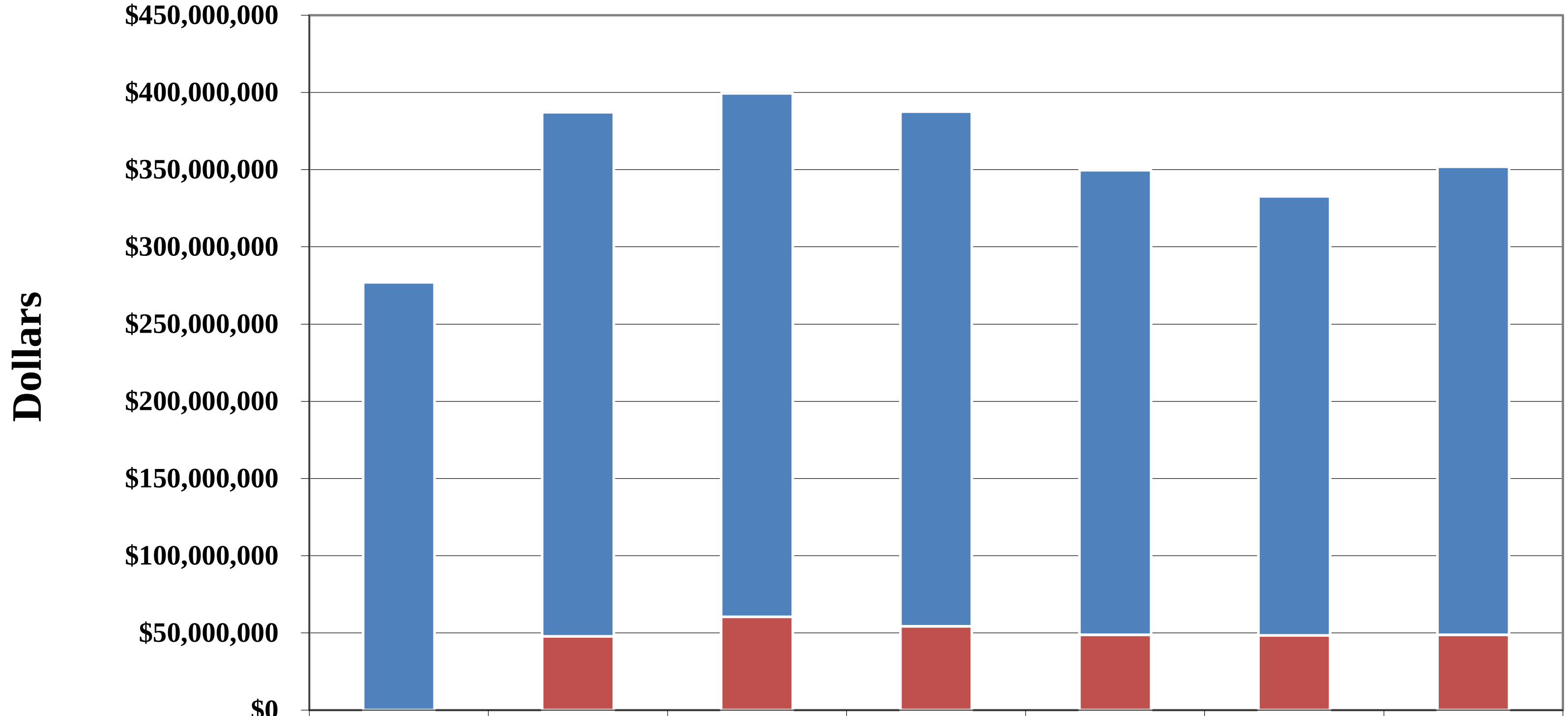
Residential Dollars in Debt - Inactive Accounts - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	$112,207	$96,918	$103,096	$110,134	$89,966	$90,615	$115,915
All Class A	$2,130,778	$2,257,347	$4,116,997	$3,545,921	$3,491,534	$3,101,389	$3,639,735

Other Class A   All Class A

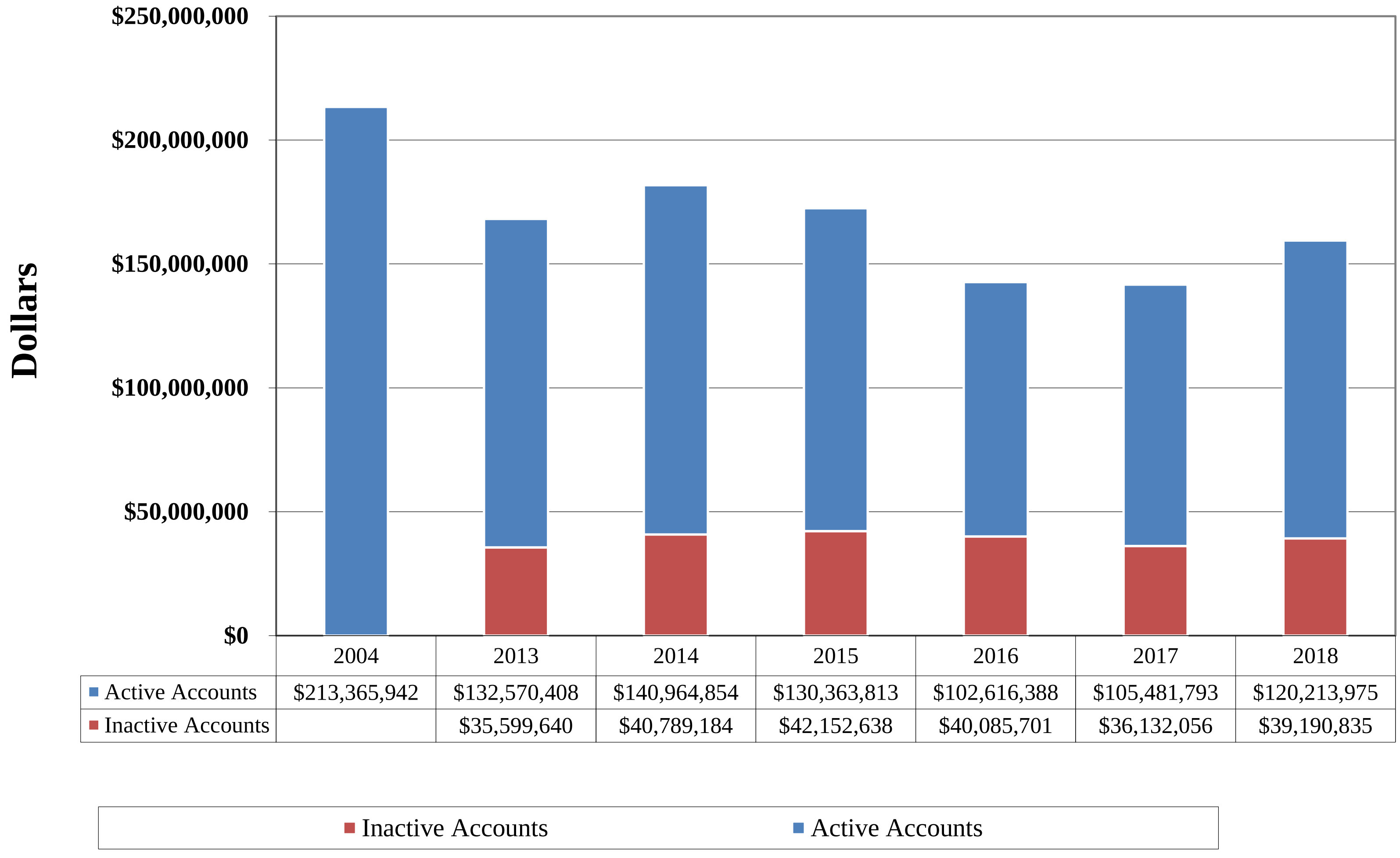
Total Residential Dollars in Debt - Electric



	2004	2013	2014	2015	2016	2017	2018
Active Accounts	$277,095,065	$339,547,628	$339,022,879	$333,423,470	$301,019,745	$284,396,956	$303,153,202
Inactive Accounts		$47,691,357	$60,425,908	$54,246,792	$48,720,038	$48,411,519	$48,735,095

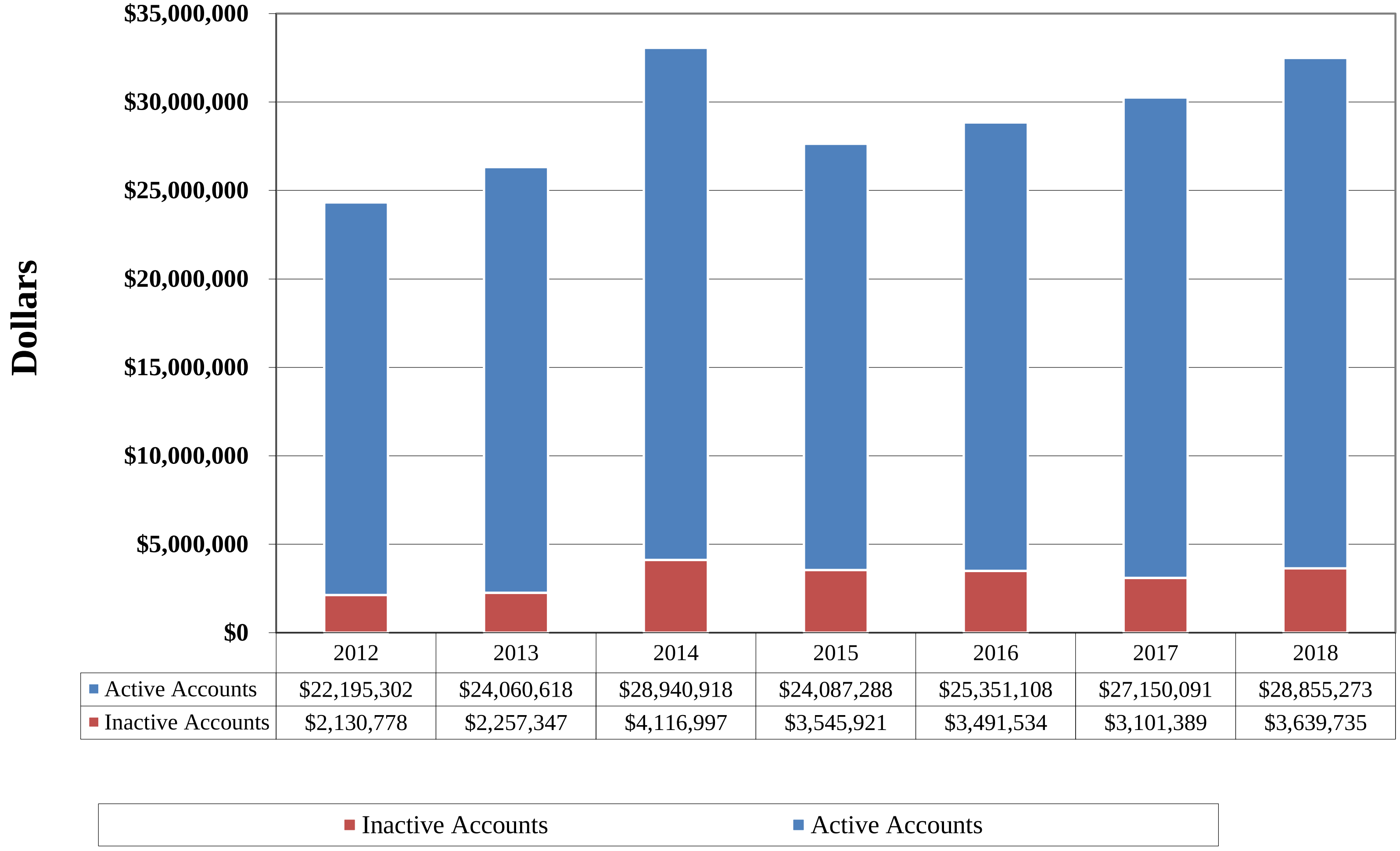
Inactive Accounts Active Accounts

Total Residential Dollars in Debt - Gas (including PGW)



	2004	2013	2014	2015	2016	2017	2018
Active Accounts	$213,365,942	$132,570,408	$140,964,854	$130,363,813	$102,616,388	$105,481,793	$120,213,975
Inactive Accounts		$35,599,640	$40,789,184	$42,152,638	$40,085,701	$36,132,056	$39,190,835

Total Residential Dollars in Debt - Water



	2012	2013	2014	2015	2016	2017	2018
Active Accounts	$22,195,302	$24,060,618	$28,940,918	$24,087,288	$25,351,108	$27,150,091	$28,855,273
Inactive Accounts	$2,130,778	$2,257,347	$4,116,997	$3,545,921	$3,491,534	$3,101,389	$3,639,735

The following tables show the residential average arrearage for active accounts for electric and gas utilities from 2004 and 2013-2018. The average arrearage is calculated by dividing the total dollars in debt by the total number of customers in debt. Larger average arrearages may take more time for customers to pay off and are more of a collections risk than smaller arrearages. Active accounts are those accounts where the customer still has service.

Table 40 – Residential Average Arrearage – Active Accounts – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$361.31	$457.09	$452.21	$335.15	$298.51	$326.73	$340.91
Met-Ed	$289.65	$420.70	$447.19	$399.17	$340.13	$294.07	$320.01
PECO*	$448.45	$347.82	$318.66	$285.46	$255.82	$244.64	$254.58
Penelec	$247.67	$379.77	$401.46	$370.51	$331.92	$300.29	$337.32
Penn Power	$303.43	$378.37	$383.00	$371.22	$376.36	$325.85	$350.11
PPL	$310.98	$521.95	$522.58	$532.37	$470.71	$442.56	$446.52
West Penn	$148.23	$218.53	$261.83	$265.85	$269.59	$259.75	$304.54
Average	**$329.38**	**$391.63**	**$394.82**	**$371.86**	**$334.02**	**$314.15**	**$331.03**

*PECO statistics include electric and gas.

The residential average arrearage for the electric industry increased slightly, by 0.5% during the period from 2004 as compared to 2018. West Penn showed the largest increase in residential average arrears since 2004, with 105.5%. PECO showed the largest decrease in residential average arrears, with 43.2%. PPL had the largest average arrears in 2018, with $446.52, nearly $100 more than the other electric utilities.

Table 41 – Residential Average Arrearage – Active Accounts – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$316.74	$272.44	$338.45	$357.09	$281.25	$282.00	$319.24
NFG	$268.54	$222.82	$248.69	$250.94	$238.58	$209.11	$190.66
Peoples	$721.98	$356.35	$229.75	$217.75	$191.13	$176.45	$199.29
Peoples-Equitable	$417.89	$272.27	$301.54	$223.93	$162.30	$162.65	$182.36
UGI-Gas	$192.68	$179.85	$235.09	$227.25	$159.06	$181.64	$261.26
UGI Penn Natural	$283.51	$248.93	$313.88	$322.97	$217.04	$227.75	$338.05
Average w/out PGW	***$366.89***	***$258.78***	***$277.90***	***$266.66***	***$208.23***	***$206.60***	***$248.48***
PGW	$579.95	$552.72	$558.85	$517.60	$451.77	$428.09	$449.36
Average w/PGW	**$472.26**	**$350.98**	**$367.27**	**$345.21**	**$286.78**	**$279.96**	**$317.56**

The residential average arrearage for the gas industry decreased 32.8% from 2004-2018. UGI Gas and UGI Penn Natural showed the largest increases in the residential average arrearage since 2004, with 35.6% and 19.2%, respectively. Peoples and Peoples-Equitable showed the largest decrease in residential average arrearages, by 72.4% and 56.4%, respectively. PGW had the largest average arrears in 2018, at $449.36, over $100 more than the other gas utilities.

Table 42 – Residential Average Arrearage – Active Accounts – Water

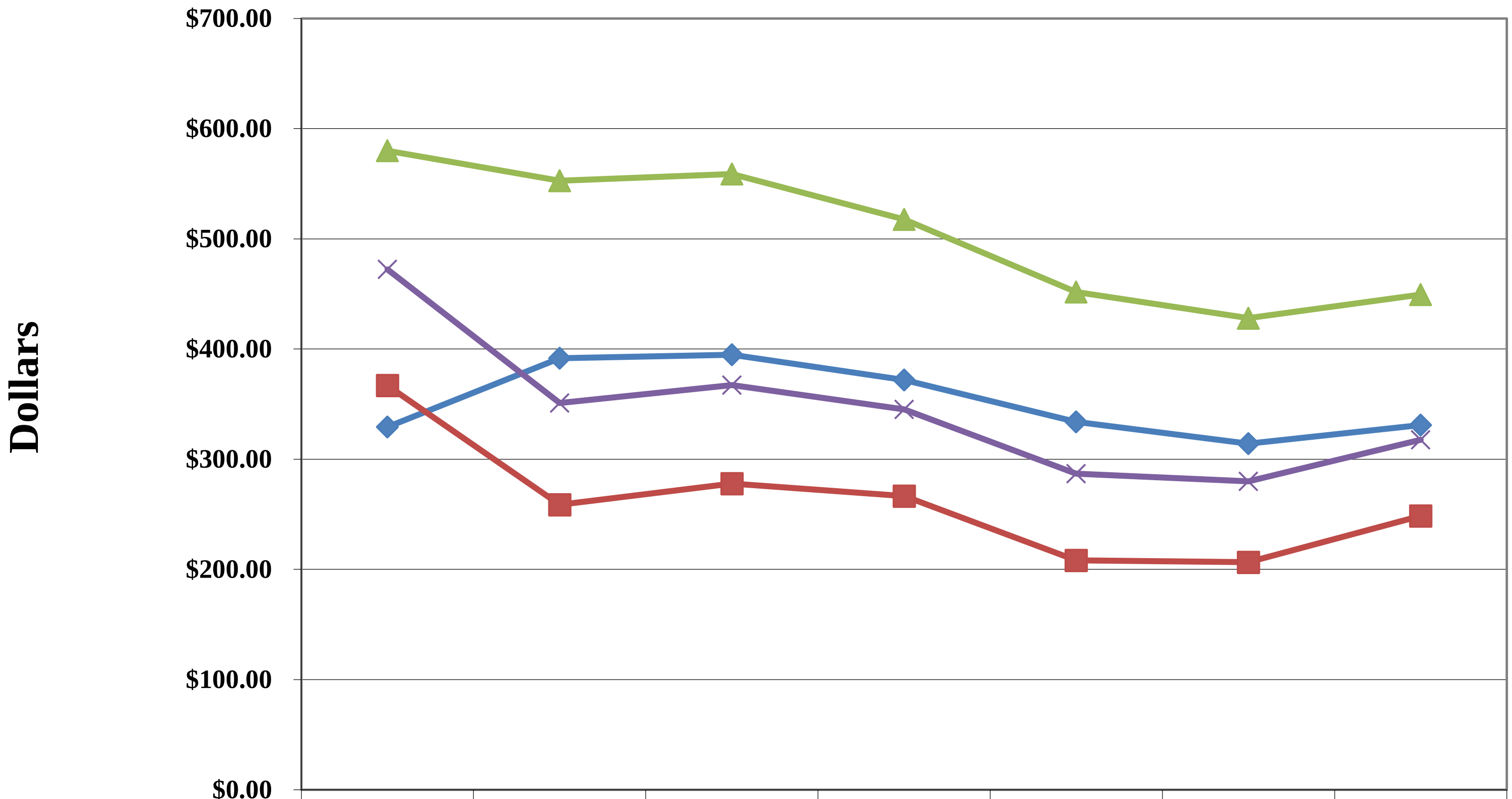
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$94.81	$103.17	$82.37	$84.75	$105.03	$143.74	$118.95
Columbia Water	$151.08	$163.41	$136.83	$92.11	$72.96	$66.80	$60.03
Newtown Artesian	$52.88	$68.25	$74.27	$78.91	$71.75	$75.44	$26.34
Superior*	$114.30	$114.93	$131.12	$129.54	N/A	N/A	N/A
SUEZ Bethel	$93.59	$83.19	$77.27	$55.22	$47.07	$60.10	$48.45
SUEZ PA	$84.64	$52.97	$55.93	$54.22	$58.66	$68.19	$75.72
York	$62.05	$58.71	$57.95	$60.82	$58.89	$56.90	$81.39
Other Class A Average	***$70.72***	***$60.44***	***$60.80***	***$60.19***	***$59.92***	***$62.69***	***$73.97***
Aqua	$158.09	$152.84	$208.64	$151.85	$169.19	$180.10	$176.00
PAWC	$171.53	$178.84	$137.52	$142.17	$141.28	$149.92	$160.21
Average	**$156.39**	**$157.88**	**$153.84**	**$138.75**	**$143.85**	**$152.81**	**$158.08**

* Effective Jan. 1, 2016, Superior was acquired by Aqua, so all data was filed under Aqua from 2016 forward.

The residential average arrearage for the water industry increased 1.1% from 2012 as compared to 2018. York had the largest increase in residential average arrearages since 2012, with 31.2%. Columbia Water had the largest decrease in average arrears, by 60.3%. Aqua had the largest residential average arrearage for 2018, at $176.00.

The following graphs show the residential average arrearage for active accounts for the electric and gas industries since 2004. The water industry is shown separately since the utilities began reporting in 2012. The graphs provide a visual perspective to better recognize the industry trends. Larger average arrearages may take more time for customers to pay off and are more of a collections risk than smaller arrearages.

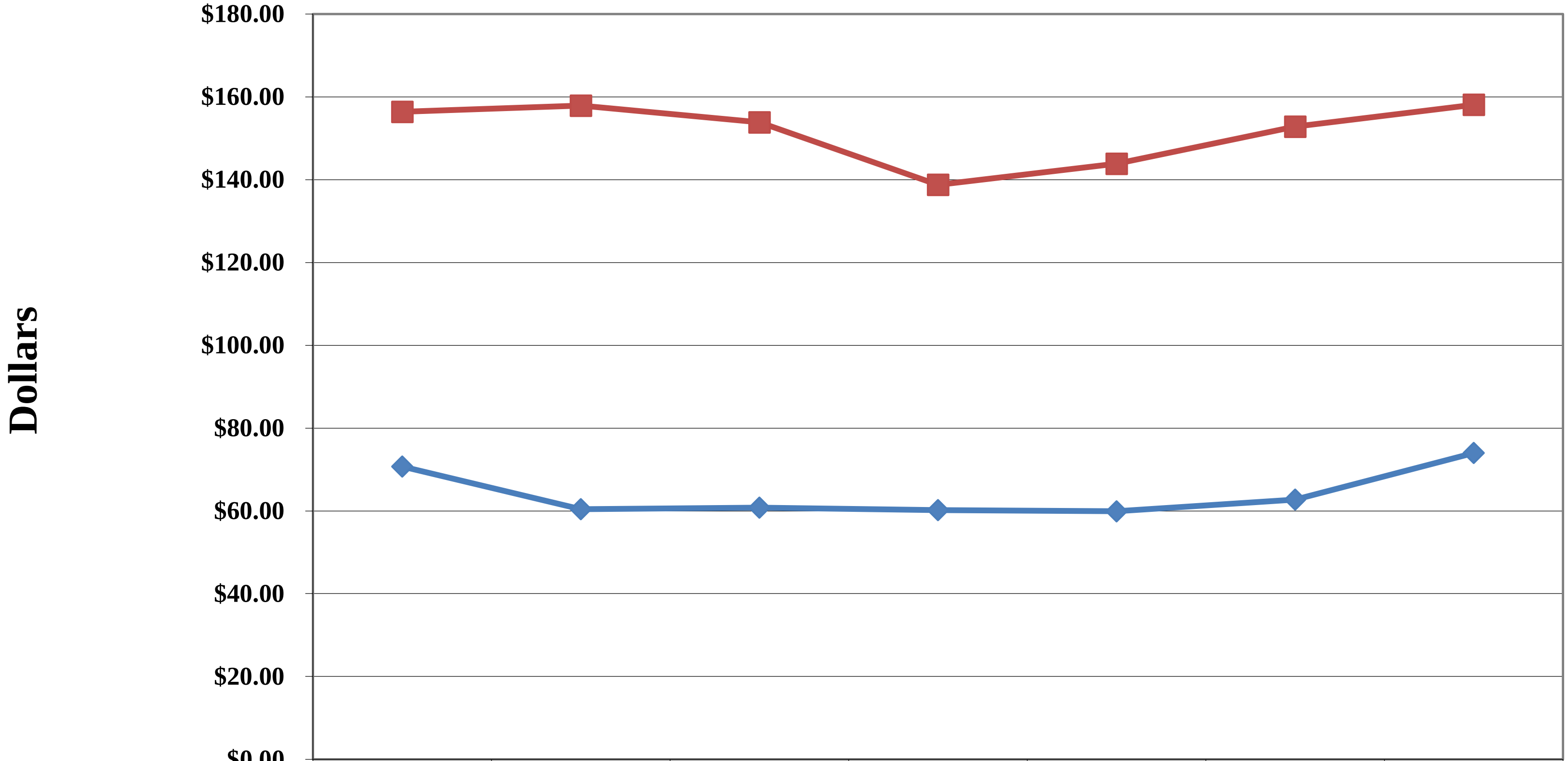
Residential Average Arrearage - Active Accounts - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	$329.38	$391.63	$394.82	$371.86	$334.02	$314.15	$331.03
Gas-Excluding PGW	$366.89	$258.78	$277.90	$266.66	$208.23	$206.60	$248.48
PGW	$579.95	$552.72	$558.85	$517.60	$451.77	$428.09	$449.36
Gas-Including PGW	$472.26	$350.98	$367.27	$345.21	$286.78	$279.96	$317.56

Electric Gas-Excluding PGW

Residential Average Arrearage - Active Accounts - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	$70.72	$60.44	$60.80	$60.19	$59.92	$62.69	$73.97
All Class A	$156.39	$157.88	$153.84	$138.75	$143.85	$152.81	$158.08

Other Class A   All Class A

The following tables show the residential average arrearage for inactive accounts for electric and gas utilities from 2012 through 2018. Average arrearage is calculated by dividing the total inactive dollars in debt by the total number of inactive customers in debt. Larger average arrearages may take more time for customers to pay off and are more of a collections risk than smaller arrearages. The utilities did not begin to report Inactive Arrears until 2012. Inactive accounts are accounts that have service terminated or discontinued and arrears or balances not yet written-off by the utility. Inactive account balances will either be paid as a final bill by the customer or written-off as uncollectible by the utility and reported as Gross Write-Offs. Inactive accounts represent the final step in the collections cycle, generally following debt not on arrangements.

Table 43 – Residential Average Arrearage – Inactive Accounts – Electric

Utility	2012	2013	2014	2015	2016	2017	2018
Duquesne	$304.30	$248.56	$234.87	$377.52	$467.12	$585.81	$518.09
Met-Ed	$490.32	$462.96	$459.01	$443.60	$454.71	$424.50	$448.29
PECO*	$805.15	$920.46	$979.48	$913.35	$765.88	$680.45	$678.75
Penelec	$393.76	$383.16	$374.39	$395.19	$404.15	$422.18	$455.77
Penn Power	$395.61	$330.65	$319.60	$354.64	$411.48	$416.79	$436.42
PPL	$825.43	$952.22	$620.58	$1,027.67	$937.59	$870.96	$865.97
West Penn	$178.03	$218.49	$237.32	$264.28	$299.10	$327.53	$382.49
Average	**$596.81**	**$634.78**	**$556.29**	**$653.50**	**$611.25**	**$593.06**	**$606.41**

*PECO statistics include electric and gas.

The residential average arrearage for inactive accounts for the electric industry increased slightly by 1.6% during the period from 2004 as compared to 2018. West Penn and Duquesne showed the largest increases since 2012, with 114.8% and 70.3%, respectively. PECO had the largest average arrearage in 2018, at $865.97, over $187 more than the other electric utilities.

Table 44 – Residential Average Arrearage – Inactive Accounts – Gas

Utility	2012	2013	2014	2015	2016	2017	2018
Columbia Gas	$387.56	$397.38	$477.52	$559.86	$459.87	$460.97	$507.03
NFG	$404.07	$405.51	$426.00	$456.90	$409.54	$370.76	$424.99
Peoples	$612.72	$594.49	$624.46	$648.23	$609.52	$667.81	$718.10
Peoples-Equitable	$377.20	$384.59	$430.55	$402.72	$474.44	$485.37	$538.75
UGI-Gas	$324.08	$322.72	$408.71	$389.70	$300.25	$310.76	$493.38
UGI Penn Natural	$457.84	$450.92	$533.89	$552.21	$387.20	$383.33	$583.84
Average w/out PGW	***$481.77***	***$490.59***	***$529.25***	***$544.65***	***$507.43***	***$493.91***	***$562.83***
PGW	$1,355.45	$1,317.02	$1,361.79	$1,302.95	$1,233.19	$1,239.01	$1,028.72
Average w/PGW	**$699.95**	**$689.11**	**$740.29**	**$738.64**	**$670.50**	**$660.65**	**$672.92**

The residential average arrearage for inactive accounts for the gas industry decreased overall by 3.9% from 2012 as compared to 2018. UGI-Gas had the largest increase in residential average arrears, at 52.2%. PGW had the only decrease in average arrears for the gas industry since 2012, with 24.1%; however, PGW had the largest average arrearage in 2018 at $1,028.72, over $310 more than the other utilities.

Table 45 – Residential Average Arrearage – Inactive Accounts – Water

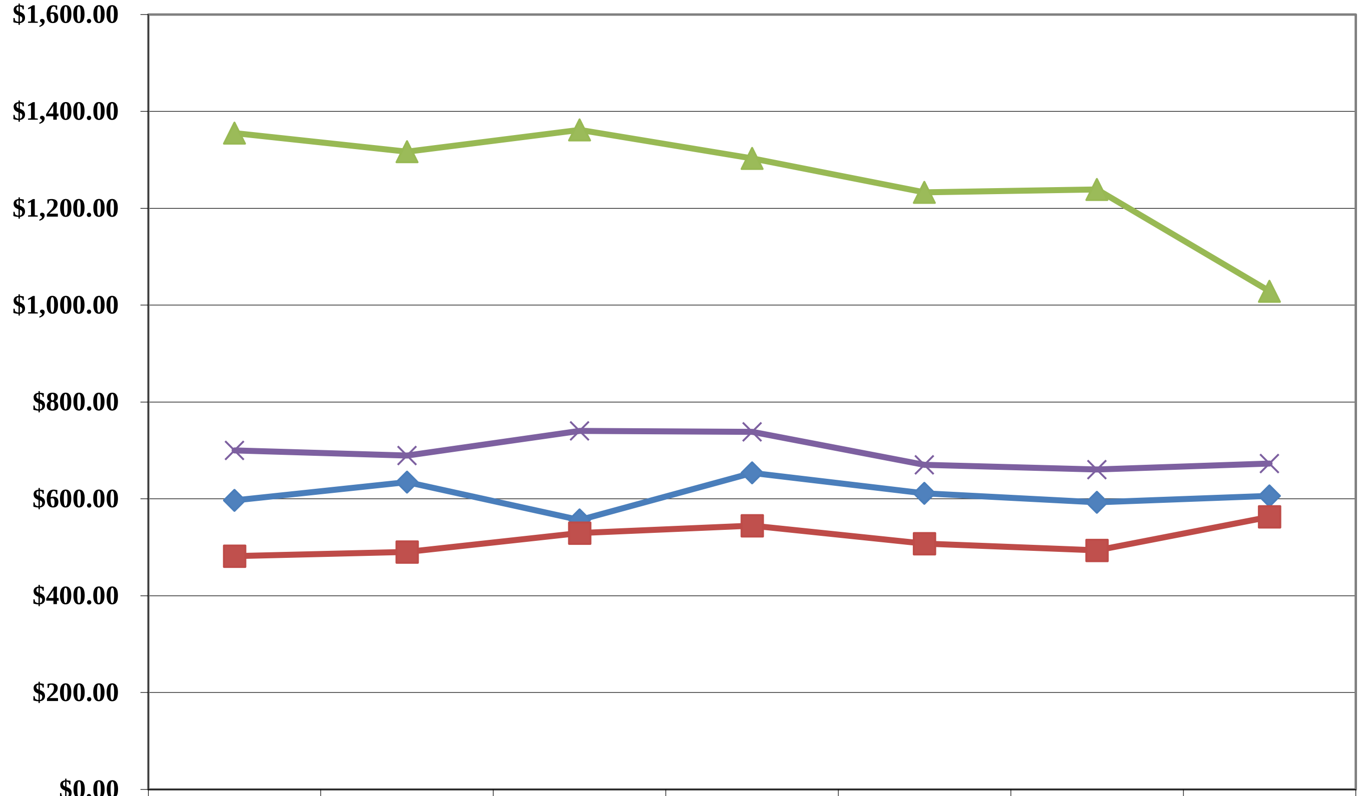
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$103.83	$126.60	$217.75	$694.67	$314.50	$398.00	$181.00
Columbia Water	$69.69	$68.67	$37.77	$41.99	$49.92	$44.51	$58.72
Newtown Artesian	$231.50	$258.44	$263.50	$255.43	$129.57	$127.56	$814.75
Superior*	$40.84	$6.65	$137.62	$170.37	N/A	N/A	N/A
SUEZ Bethel	$143.00	$73.82	$59.00	$46.83	$34.38	$61.30	$53.62
SUEZ PA	$106.76	$87.55	$95.62	$110.09	$95.67	$83.93	$98.43
York	$96.98	$101.47	$102.25	$102.44	$84.24	$92.48	$93.73
Other Class A Average	***$99.04***	***$73.26***	***$95.99***	***$103.22***	***$84.71***	***$83.29***	***$94.16***
Aqua	$242.89	$226.02	$268.59	$238.57	$237.23	$223.77	$248.55
PAWC	$240.19	$248.18	$297.77	$237.53	$261.13	$244.81	$281.70
Average	**$224.03**	**$219.69**	**$277.52**	**$228.46**	**$243.53**	**$227.81**	**$258.50**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The residential average arrearage for inactive accounts for the water industry increased overall by 15.4% from 2012 as compared to 2018. Newtown Artesian had the largest increase in residential average arrearage for inactive accounts since 2012, at 251.9%. SUEZ Bethel had the largest decrease in average arrears, by 62.5%. Newtown Artesian had the largest average arrears in 2018 at $814.75, over $533 more than any other water utility.

The following graphs show the residential average arrearage for inactive accounts for the electric, gas, and water industries since 2012. The graphs provide a visual perspective to better recognize the industry trends. Inactive accounts are accounts that have service terminated or discontinued and arrears or balances not yet written-off by the utility. Inactive account balances will either be paid as a final bill by the customer or written-off as uncollectible by the utility and reported as Gross Write-Offs.

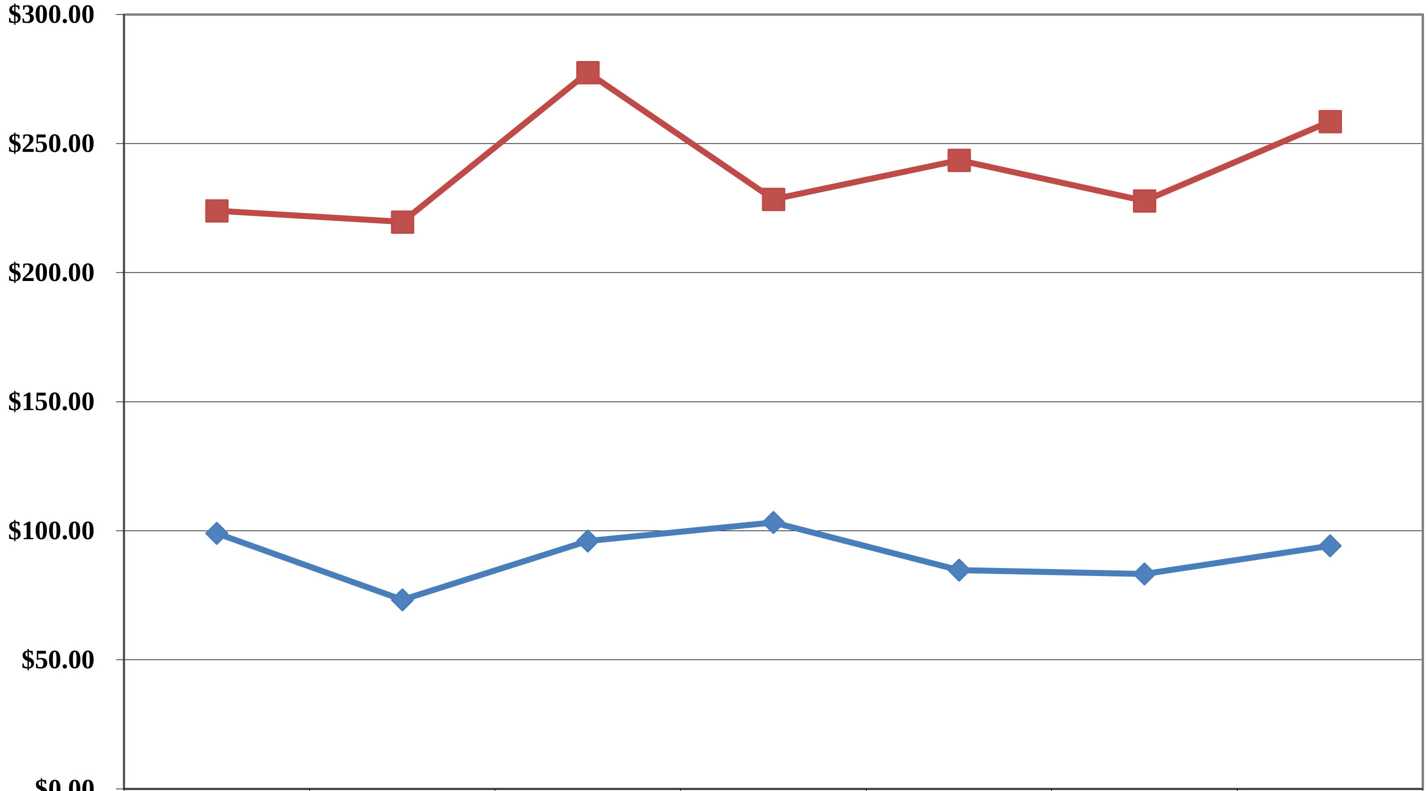
Residential Average Arrearage - Inactive Accounts - Electric & Gas



	2012	2013	2014	2015	2016	2017	2018
Electric	$596.81	$634.78	$556.29	$653.50	$611.25	$593.06	$606.41
Gas-Excluding PGW	$481.77	$490.59	$529.25	$544.65	$507.43	$493.91	$562.83
PGW	$1,355.45	$1,317.02	$1,361.79	$1,302.95	$1,233.19	$1,239.01	$1,028.72
Gas-Including PGW	$699.95	$689.11	$740.29	$738.64	$670.50	$660.65	$672.92

Electric Gas-Excluding PGW PGW Gas-Including PGW

Residential Average Arrearage - Inactive Accounts - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	$99.04	$73.26	$95.99	$103.22	$84.71	$83.29	$94.16
All Class A	$224.03	$219.69	$277.52	$228.46	$243.53	$227.81	$258.50

Other Class A   All Class A

The following tables show the gross residential write-offs ratio for electric and gas utilities from 2004 and 2013-2018. The gross residential write-offs ratio is the percentage of all billings written-off as uncollectible. The gross write-offs ratio is the most commonly used long-term measure of collections system performance. The gross write-offs ratio is calculated by dividing the annual total gross write-off dollars by the annual residential billings (revenues).

Table 46 – Residential Gross Write-Offs Ratio – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	3.15	1.29	0.73	2.17	1.64	3.63	3.46
Met-Ed	2.11	1.90	2.30	2.43	2.36	2.02	2.41
PECO*	2.12	1.64	1.40	1.29	1.05	1.28	1.19
Penelec	2.33	1.90	2.21	2.46	2.41	2.07	2.61
Penn Power	1.69	1.34	1.38	1.49	1.59	1.61	1.72
PPL	1.99	3.06	3.21	3.26	2.75	2.56	2.59
West Penn	1.86	1.22	1.58	1.72	1.88	1.89	2.17
Average	**2.14**	**2.02**	**2.03**	**2.15**	**1.90**	**2.03**	**2.10**

*PECO statistics include electric and gas.

The residential gross write-offs ratio for the electric industry declined slightly by 1.9% from 2004 as compared to 2018. PPL showed the largest increase in the gross write-off ratio since 2004, by 30.2%. PECO showed the largest decrease, by 43.9%. Overall, the gross write-offs ratio for the electric industry is at nearly the same as level as it was pre-Chapter 14 and indicates that the collections performance has not improved.

Table 47 – Residential Gross Write-Offs Ratio – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	4.81	2.02	2.18	2.47	2.18	1.97	1.93
NFG	2.45	2.19	2.08	3.33	3.23	1.93	2.82
Peoples	4.79	3.56	2.56	4.25	4.39	3.25	2.52
Peoples-Equitable	2.79	1.95	1.99	1.07	2.22	2.62	2.24
UGI-Gas	2.60	2.17	3.05	3.34	2.50	2.52	3.29
UGI Penn Natural	2.79	1.60	2.18	2.69	1.93	2.36	3.00
Average w/out PGW	***3.49***	***2.32***	***2.34***	***2.87***	***2.75***	***2.44***	***2.52***
PGW	11.52	10.44	9.03	9.96	15.03	9.69	6.38
Average w/PGW	**5.61**	**4.36**	**4.01**	**4.72**	**5.93**	**4.34**	**3.52**

The residential gross write-offs ratio for the gas industry declined overall by the 37.3% from 2004-2018. Columbia Gas showed the largest decrease since 2004, by 59.9% and had the lowest gross write-offs ratio in 2018, at 1.9%. UGI-Gas showed the largest increase in the gross write-offs ratio, by 26.5%. PGW had the highest gross write-offs ratio in 2018, at 6.3%, but the lowest figure for the utility since 2004.

Table 48 – Residential Gross Write-Offs Ratio – Water

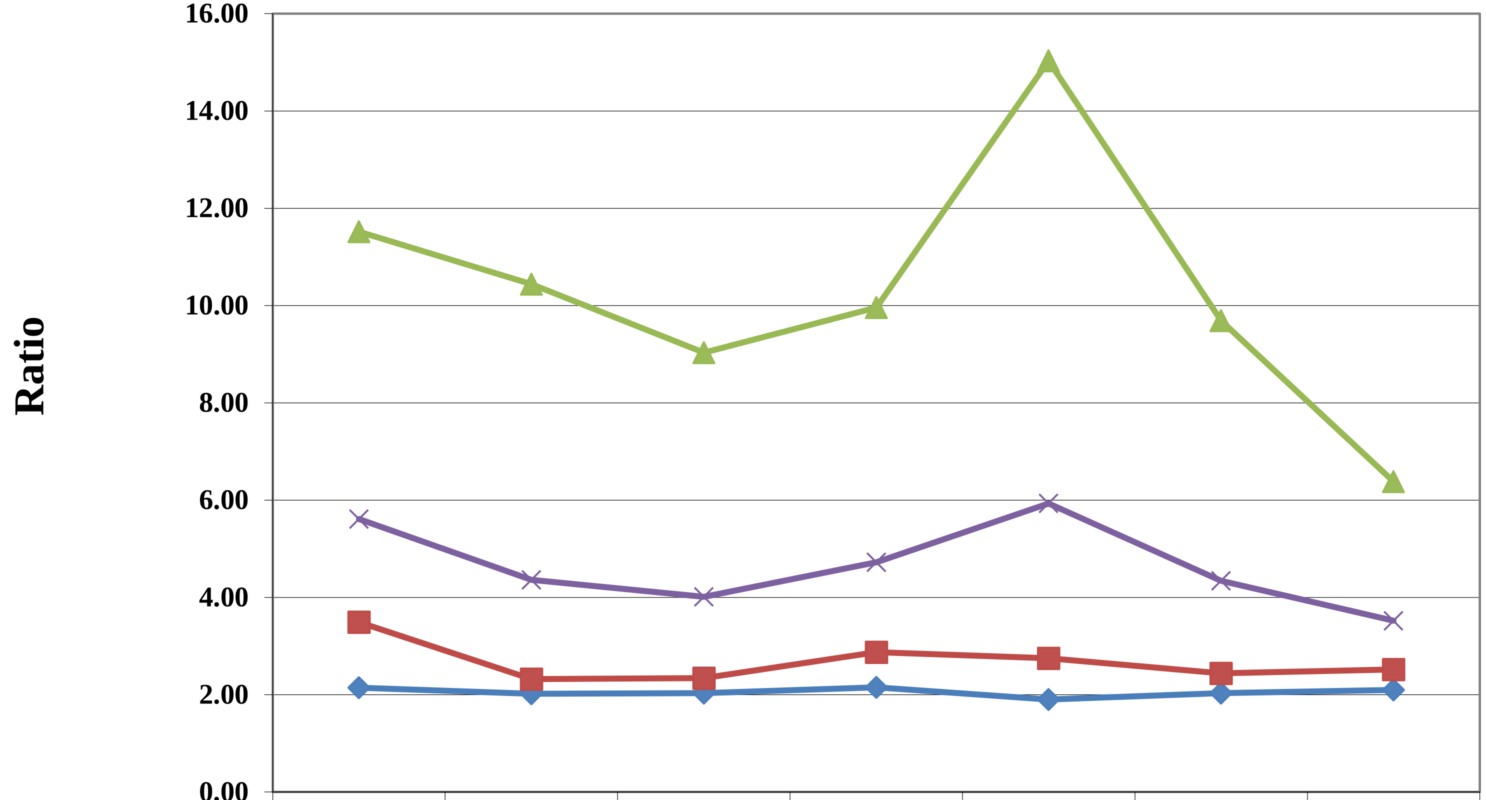
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	0.00	0.12	0.05	0.00	0.00	0.00	0.00
Columbia Water	0.33	0.27	0.33	0.20	0.31	0.37	0.41
Newtown Artesian	0.02	0.00	0.02	0.00	0.03	0.03	0.00
Superior*	0.11	0.13	0.05	0.27	N/A	N/A	N/A
SUEZ Bethel	0.54	8.15	0.47	0.38	0.10	0.16	0.35
SUEZ PA	0.81	0.64	0.94	0.90	0.52	0.69	0.69
York	1.45	1.17	1.24	1.16	1.04	1.00	0.95
Other Class A Average	***0.97***	***0.79***	***0.93***	***0.86***	***0.69***	***0.75***	***0.75***
Aqua	0.84	0.82	0.90	1.07	0.76	0.79	0.93
PAWC	1.50	1.51	2.10	2.57	2.19	1.79	2.57
Average	**1.19**	**1.18**	**1.53**	**1.84**	**1.51**	**1.32**	**1.78**

* Effective Jan. 1, 2016, Superior was acquired by Aqua, so all data were filed under Aqua from 2016 forward.

The gross residential write-offs ratio for the water industry increased overall by 49.6% from 2012-2018. PAWC showed the largest increase since 2012, by 71.3%. SUEZ Bethel and York showed the largest decreases, with 35.2% and 34.5%, respectively.

The following graphs show the residential gross write-offs ratio for the electric and gas industries since 2004. The water industry is shown separately since the reporting began in 2012. The graphs provide a visual perspective to better recognize the industry trends. The gross residential write-offs ratio is the most commonly used long-term measure of collections system performance. The gross write-offs ratio is calculated by dividing the annual total gross write-off dollars by the annual residential billings.

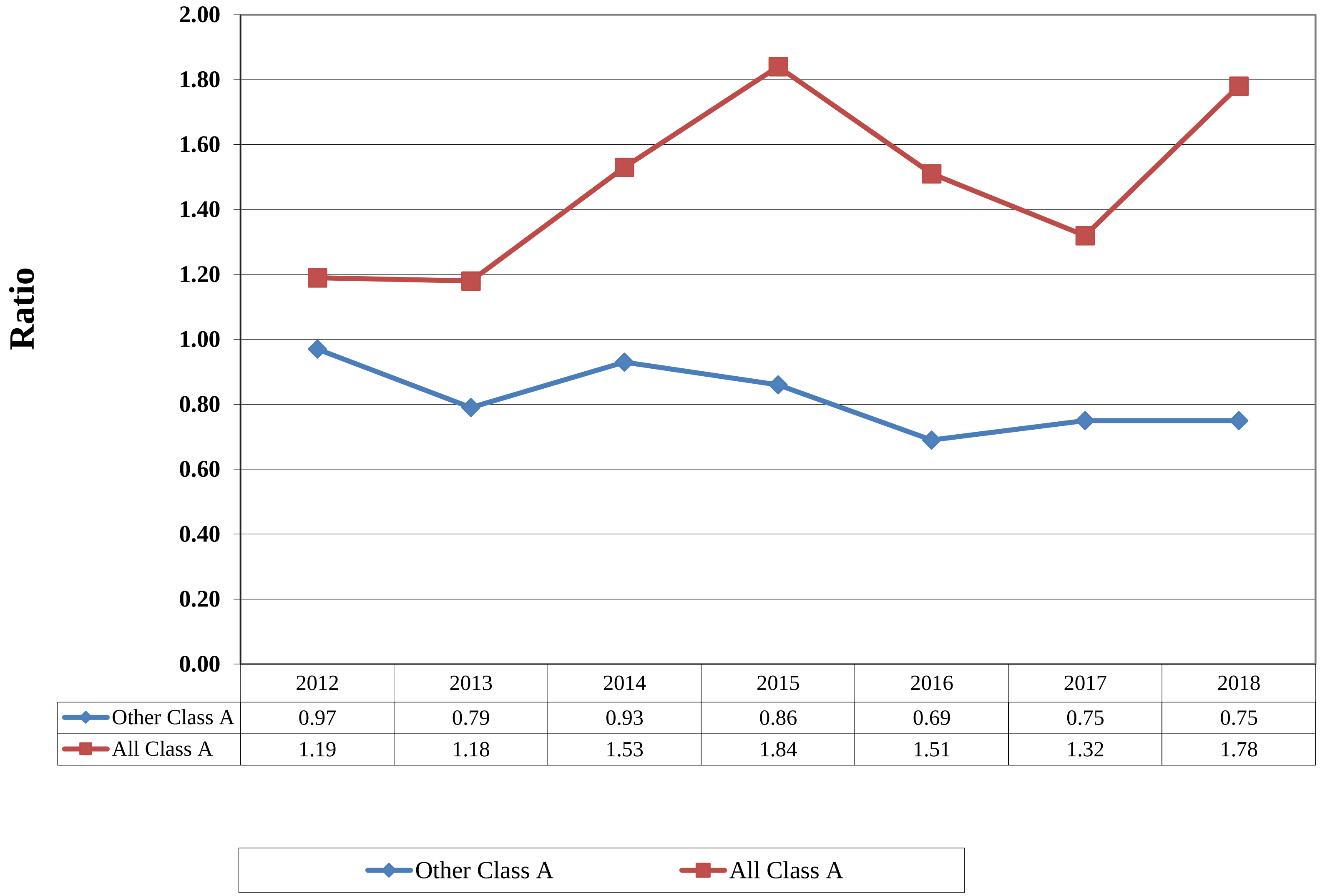
Residential Gross Write-Offs Ratio - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	2.14	2.02	2.03	2.15	1.90	2.03	2.10
Gas-Excluding PGW	3.49	2.32	2.34	2.87	2.75	2.44	2.52
PGW	11.52	10.44	9.03	9.96	15.03	9.69	6.38
Gas-Including PGW	5.61	4.36	4.01	4.72	5.93	4.34	3.52

Electric Gas-Excluding PGW PGW Gas-Including PGW

Residential Gross Write-Offs Ratio - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	0.97	0.79	0.93	0.86	0.69	0.75	0.75
All Class A	1.19	1.18	1.53	1.84	1.51	1.32	1.78

The following tables show the confirmed low-income gross write-offs ratio for electric and gas utilities from 2004 and 2013-2018. The confirmed low-income gross write-offs ratio is the percentage of confirmed low-income billings written-off as uncollectible. The gross write-offs ratio is calculated by dividing the annual total gross dollars written-off for confirmed low-income accounts by the annual total dollars of confirmed low-income billings (revenues).

Table 49 – Confirmed Low-Income Gross Write-Offs Ratio – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	16.99	2.58	1.83	3.20	3.08	13.14	10.63
Met-Ed	16.35	9.28	11.17	10.48	10.62	9.58	10.98
PECO*	3.35	6.28	5.94	5.93	4.70	4.25	4.25
Penelec	34.08	7.70	9.03	8.59	8.86	7.88	9.59
Penn Power	9.66	6.73	6.94	6.90	7.23	8.99	8.96
PPL	8.87	12.41	12.37	12.64	10.52	9.95	10.25
West Penn	34.29	7.85	10.98	9.31	10.90	10.96	11.59
Average	**8.58**	**9.08**	**9.80**	**9.79**	**8.94**	**8.87**	**9.28**

*PECO statistics include electric and gas.

The confirmed low-income gross write-offs ratio for the electric industry increased overall by the 8.2% from 2004 as compared to 2018. PECO showed the largest increase since 2004, with 26.9%. Penelec and West Penn showed the largest decreases in the confirmed low-income gross write-offs ratio, with 71.9% and 66.2%, respectively.

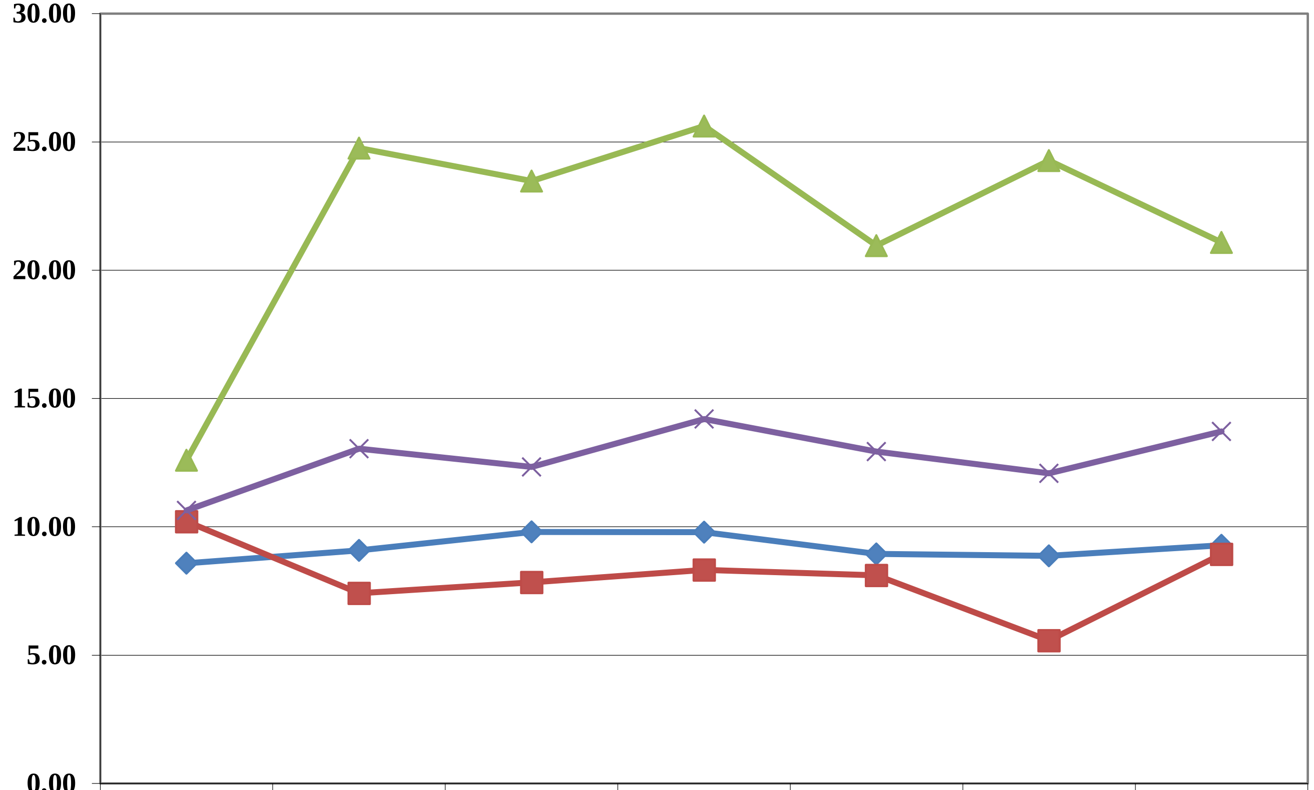
Table 50 – Confirmed Low-Income Gross Write-Offs Ratio – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	13.83	7.70	8.16	9.72	8.71	7.82	6.34
NFG	20.59	12.49	10.55	16.37	16.40	5.54	13.37
Peoples	8.02	2.60	2.56	4.25	4.39	3.25	7.71
Peoples-Equitable	2.90	10.03	11.06	1.07	2.22	2.62	4.85
UGI-Gas	13.98	11.56	12.80	15.01	16.29	9.03	12.98
UGI Penn Natural	10.53	8.35	9.97	11.83	11.33	6.93	10.97
Average w/out PGW	***10.21***	***7.41***	***7.83***	***8.32***	***8.11***	***5.57***	***8.93***
PGW	12.60	24.76	23.48	25.62	20.96	24.28	21.08
Average w/PGW	**10.64**	**13.05**	**12.33**	**14.20**	**12.93**	**12.09**	**13.72**

The confirmed low-income gross write-offs ratio for the gas industry increased overall by 28.9% from 2004 as compared to 2018. Columbia Gas showed the largest decrease since 2004, with 54.2%. PGW and Peoples-Equitable had the largest increases in the confirmed low-income gross write-offs ratio, with 67.3% and 67.2%, respectively.

The following graph shows the confirmed low-income gross write-offs ratio for the electric and gas industries since 2004. The water industry does not report confirmed low-income data. The graph provides a visual perspective to better recognize the industry trends. The gross write-offs ratio is the most commonly used long-term measure of collections system performance. The gross write-offs ratio is calculated by dividing the annual total gross write-off dollars by the annual billings (revenues).

Confirmed Low-Income
Gross Write-Offs Ratio - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	8.58	9.08	9.80	9.79	8.94	8.87	9.28
Gas-Excluding PGW	10.21	7.41	7.83	8.32	8.11	5.57	8.93
PGW	12.60	24.76	23.48	25.62	20.96	24.28	21.08
Gas-Including PGW	10.64	13.05	12.33	14.2	12.93	12.09	13.72

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

On December 22, 2014, Act 155 became effective, reauthorizing and amending Chapter 14 of the Public Utility Code (66 Pa. C.S. §§ 1401-1419), Responsible Utility Customer Protection. Act 155 implemented a new reporting requirement for the utilities to report data regarding the number of active (*i.e.*, accounts not final billed) residential accounts that exceed $10,000 in arrearages at the end of each calendar year, along with those account balances. The utilities began reporting this data in 2015 and Peoples and Peoples-Equitable report combined data for this variable.

Table 51 – Residential Total Number of Accounts over $10,000 – Electric

Utility	2015	2016	2017	2018
Duquesne	21	16	51	46
Met-Ed	78	53	34	48
PECO*	92	53	53	69
Penelec	73	63**	48	75
Penn Power	13	23	19	22
PPL	227	169	168	181
West Penn	34	93	51	73
Total	**538**	**470**	**424**	**514**

*PECO data includes electric and gas.
**In 2019, Penelec discovered an error in the 2016 data which has now been corrected.

The total number of accounts over $10,000 for the electric industry decreased overall by 4.5% from 2015 as compared to 2018. Duquesne and West Penn showed the largest increases since 2015, with 119.1% and 114.7%, respectively. Met-Ed had the largest decrease, by 38.5%.

Table 52 – Residential Total Number of Accounts over $10,000 – Gas

Utility	2015	2016	2017	2018
Columbia Gas	0	0	0	0
NFG	0	0	0	0
Peoples/ Peoples-Equitable*	68	52	27	5
UGI-Gas	0	0	2	1
UGI Penn Natural	0	0	1	2
Total w/out PGW	***68***	***52***	***30***	***8***
PGW	345	299	224	200
Total w/PGW	**413**	**351**	**254**	**208**

*Peoples and Peoples-Equitable reported combined data.

The total number of accounts over $10,000 for the gas industry decreased overall by 49.6% from 2015 as compared to 2018. Peoples/Peoples-Equitable showed the largest decrease since 2015, by 92.7%. UGI-Gas and UGI Penn Natural have both reported accounts over $10,000 in 2017 and 2018 but did not report any previously.

Table 53 – Residential Total Number of Accounts over $10,000 – Water

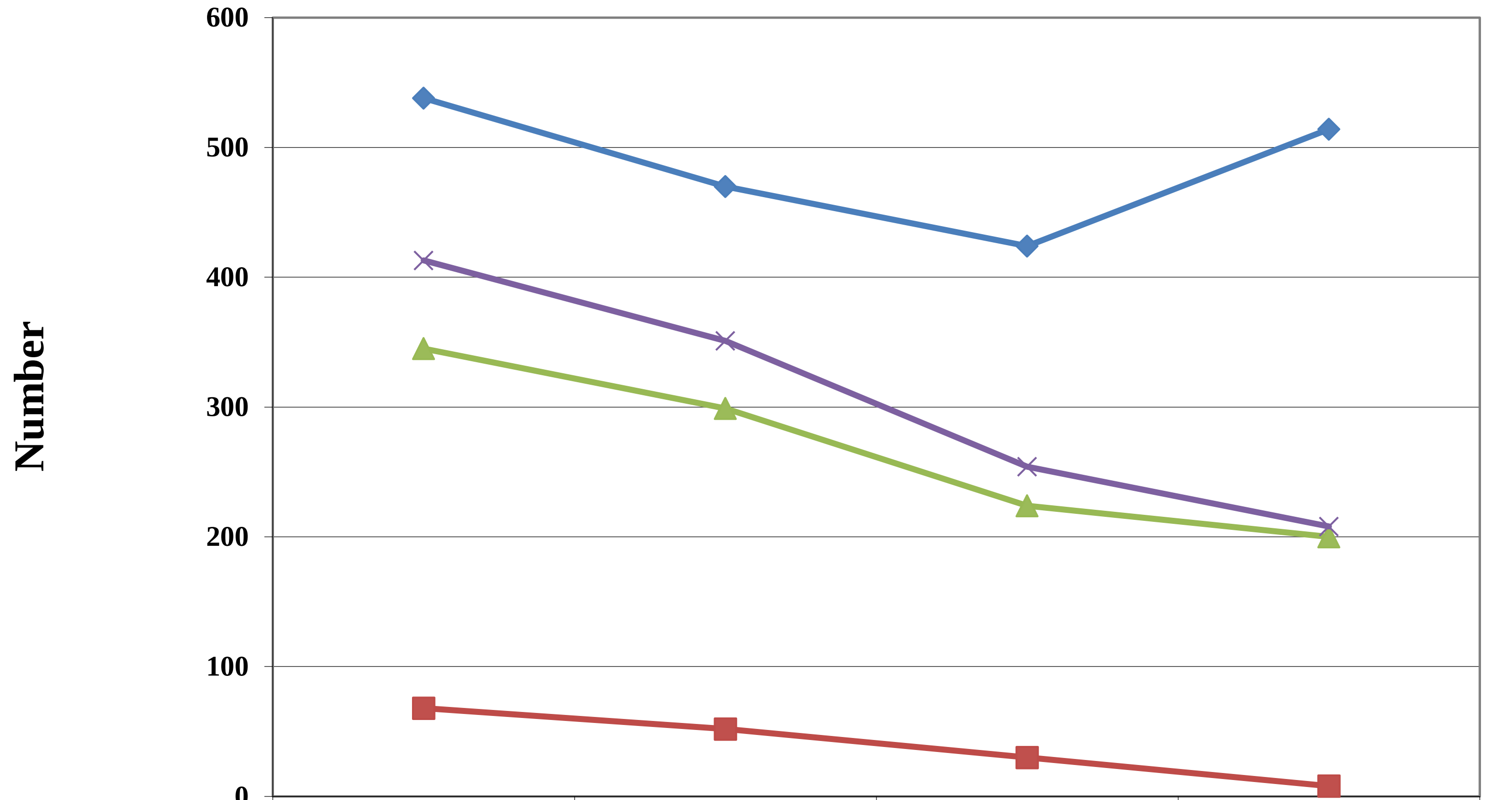
Utility	2015	2016	2017	2018
Audubon	0	0	0	0
Columbia Water	0	0	0	0
Newtown Artesian	0	0	0	0
Superior*	0	N/A	N/A	N/A
SUEZ Bethel	0	0	0	0
SUEZ PA	0	0	0	0
York	0	0	0	0
Other Class A Total	***0***	***0***	***0***	***0***
Aqua	3	0	1	2
PAWC	4	1	8	4
Total	**7**	**1**	**9**	**6**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The total number of accounts over $10,000 for the water industry decreased overall by 14.3% from 2015 as compared to 2018. Aqua showed a decrease since 2015, by 33.3%. PAWC is the only other utility to report any accounts over $10,000.

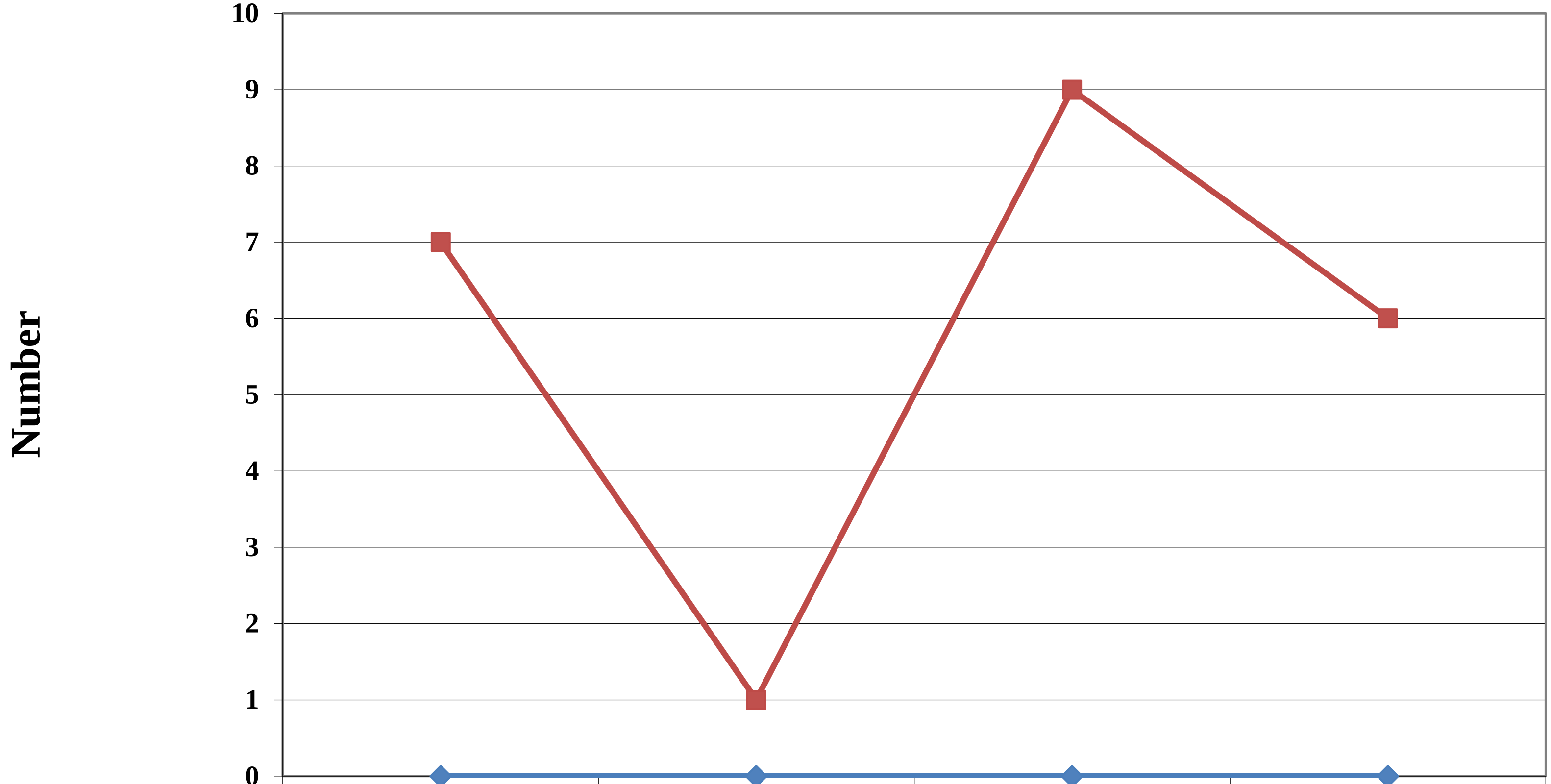
The following graphs show the number of active (*i.e.*, accounts not final billed) residential accounts that exceed $10,000 in arrearages at the end of year for the electric and gas industries, since reporting began in 2015. The graphs provide a visual perspective to better recognize the industry trends.

Residential Total Number of Accounts over $10,000 - Electric & Gas



	2015	2016	2017	2018
Electric	538	470	424	514
Gas-Excluding PGW	68	52	30	8
PGW	345	299	224	200
Gas-Including PGW	413	351	254	208

Residential Total Number of Accounts over $10,000 - Water



	2015	2016	2017	2018
Other Class A	0	0	0	0
All Class A	7	1	9	6

Other Class A   All Class A

Act 155 implemented a new reporting requirement for the utilities to report data regarding the number of active (*i.e.*, accounts not final billed) residential accounts that exceed $10,000 in arrearages at the end of each calendar year, along with those account balances. The utilities began reporting this data in 2015 and Peoples and Peoples-Equitable report combined data for this variable. The tables below report the total dollar amount of the arrearage for all accounts over $10,000.

Table 54 – Residential Total Arrearages of Accounts over $10,000 – Electric

Utility	2015	2016	2017	2018
Duquesne	$281,461	$204,390	$651,869	$632,535
Met-Ed	$960,906	$680,193	$442,146	$608,870
PECO*	$1,232,332	$687,747	$777,082	$939,150
Penelec	$931,180	$823,252**	$634,488	$1,037,115
Penn Power	$183,481	$340,016	$316,220	$298,263
PPL	$2,956,910	$2,277,802	$2,325,908	$2,555,841
West Penn	$409,396	$1,200,620	$642,126	$939,166
Total	**$6,955,666**	**$6,214,020**	**$5,789,838**	**$7,010,940**

*PECO data includes electric and gas.
**In 2019, Penelec discovered an error in the 2016 data which has now been corrected.

The total arrearages of accounts over $10,000 for the electric industry increased slightly by 0.8% from 2015 as compared to 2018. Duquesne and West Penn showed the largest increases since 2015, with 124.7% and 129.4%, respectively. Met-Ed had the largest decrease, by 36.6%.

Table 55 – Residential Total Arrearages of Accounts over $10,000 – Gas

Utility	2015	2016	2017	2018
Columbia Gas	$0	$0	$0	$0
NFG	$0	$0	$0	$0
Peoples/ Peoples-Equitable*	$877,934	$683,786	$351,534	$70,330
UGI-Gas	$0	$0	$22,305	$13,372
UGI Penn Natural	$0	$0	$10,362	$29,189
Total w/out PGW	***$877,934***	***$683,786***	***$384,201***	***$112,892***
PGW	$4,930,634	$4,122,061	$2,922,473	$2,527,459
Total w/PGW	**$5,808,568**	**$4,805,847**	**$3,306,674**	**$2,640,351**

*Peoples and Peoples-Equitable reported combined data.

The total arrearages of accounts over $10,000 for the gas industry decreased overall by 54.5% from 2015 as compared to 2018. Peoples/Peoples-Equitable showed the largest decrease since 2015, by 92%. UGI-Gas and UGI Penn Natural have both reported accounts over $10,000 with arrearages in 2017 and 2018 but did not report any previously.

Table 56 – Residential Total Arrearages of Accounts over $10,000 – Water

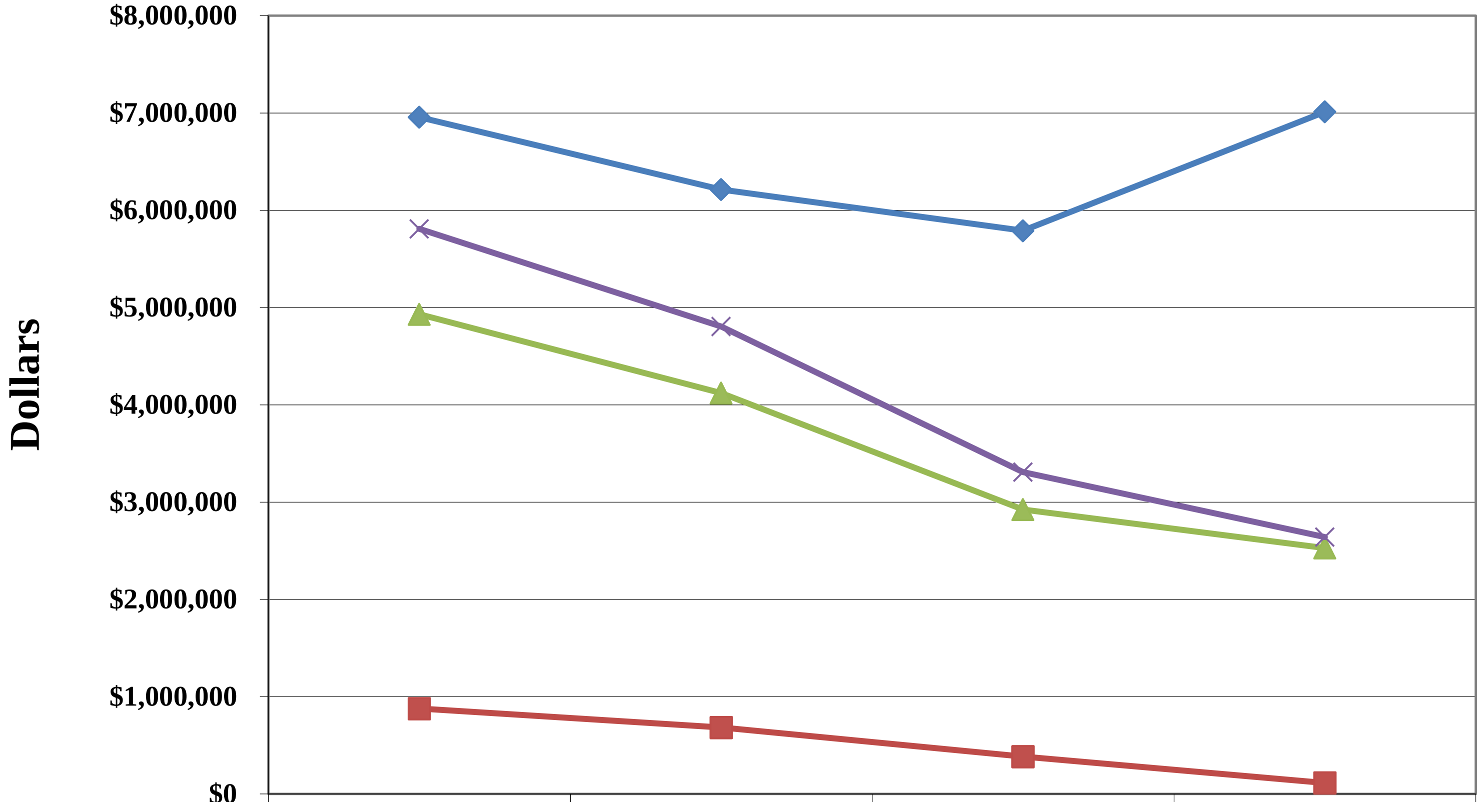
Utility	2015	2016	2017	2018
Audubon	$0	$0	$0	$0
Columbia Water	$0	$0	$0	$0
Newtown Artesian	$0	$0	$0	$0
Superior*	$0	N/A	N/A	N/A
SUEZ Bethel	$0	$0	$0	$0
SUEZ PA	$0	$0	$0	$0
York	$0	$0	$0	$0
Other Class A Total	***$0***	***$0***	***$0***	***$0***
Aqua	$49,307	$0	$16,606	$36,209
PAWC	$59,392	$12,220	$94,950	$55,488
Total	**$108,699**	**$12,220**	**$111,556**	**$91,697**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The total arrearages of accounts over $10,000 for the water industry decreased overall by 15.6% from 2015 as compared to 2018. Aqua showed a decrease since 2015, by 26.6%. PAWC is the only other utility to report any accounts over $10,000 with arrearages and since 2015, the amount of total arrearages decreased slightly by 6.6%.

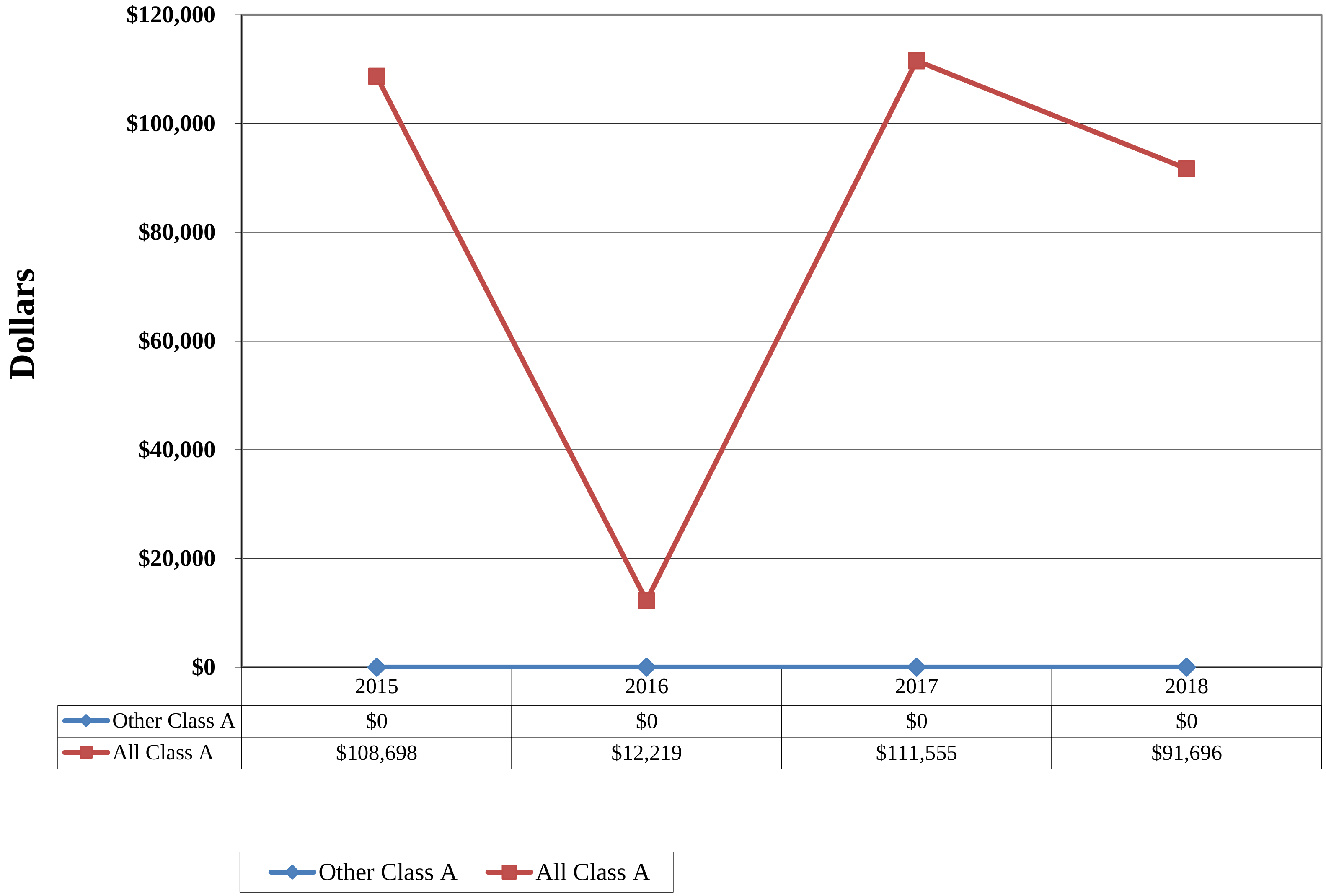
The following graphs show the total arrearages of active (*i.e.*, accounts not final billed) residential accounts over $10,000 in arrearages at the end of year for the electric and gas industries, since reporting began in 2015. The graphs provide a visual perspective to better recognize the industry trends.

Residential Total Arrearages of Accounts over $10,000 - Electric & Gas



	2015	2016	2017	2018
Electric	$6,955,666	$6,214,020	$5,789,838	$7,010,940
Gas-Excluding PGW	$877,934	$683,786	$384,201	$112,892
PGW	$4,930,634	$4,122,061	$2,922,473	$2,527,459
Gas-Including PGW	$5,808,568	$4,805,847	$3,306,674	$2,640,351

Residential Total Arrearages of Accounts over $10,000 - Water



	2015	2016	2017	2018
Other Class A	$0	$0	$0	$0
All Class A	$108,698	$12,219	$111,555	$91,696

Act 155 implemented a new reporting requirement for the utilities to report data regarding the number of active (*i.e.*, accounts not final billed) residential accounts that exceed $10,000 in arrearages at the end of each calendar year, along with those account balances. The utilities began reporting this data in 2015 and Peoples and Peoples-Equitable report combined data for this variable. The average arrearage is calculated by dividing the total arrearages by the number of accounts over $10,000.

Table 57 – Residential Average Arrearage of Accounts over $10,000 – Electric

Utility	2015	2016	2017	2018
Duquesne	$13,402.89	$12,774.36	$12,781.75	$13,750.76
Met-Ed	$12,319.31	$12,833.83	$13,004.28	$12,684.80
PECO*	$13,394.91	$12,976.35	$14,661.93	$13,610.87
Penelec	$12,755.90	$13,067.50**	$13,218.49	$13,828.20
Penn Power	$14,113.96	$14,783.32	$16,643.14	$13,557.41
PPL	$13,026.03	$13,478.12	$13,844.69	$14,120.67
West Penn	$12,041.07	$12,909.89	$12,590.70	$12,865.29
Average	**$12,928.75**	**$13,221.32**	**$13,655.28**	**$13,639.96**

*PECO data includes electric and gas.

**In 2019, Penelec discovered an error in the 2016 data which has now been corrected.

The average arrearage of accounts over $10,000 for the electric industry increased slightly by 5.5% from 2015 as compared to 2018. Penelec and PPL showed the largest increases since 2015, with 8.4%. Penn Power had the largest decrease, by 3.9%.

Table 58 – Residential Average Arrearage of Accounts over $10,000 – Gas

Utility	2015	2016	2017	2018
Columbia Gas	$0.00	$0.00	$0.00	$0.00
NFG	$0.00	$0.00	$0.00	$0.00
Peoples/ Peoples-Equitable*	$12,910.79	$13,149.73	$13,019.78	$14,066.04
UGI-Gas	$0.00	$0.00	$11,152.45	$13,372.32
UGI Penn Natural	$0.00	$0.00	$10,362.38	$14,594.67
Average w/out PGW	***$12,910.79***	***$13,149.73***	***$12,806.71***	***$14,111.48***
PGW	$14,291.69	$13,786.16	$13,046.75	$12,637.29
Average w/PGW	**$14,064.33**	**$13,691.87**	**$13,018.40**	**$12,693.99**

*Peoples and Peoples-Equitable reported combined data.

The average arrearage of accounts over $10,000 for the gas industry decreased overall by 9.7% from 2015 as compared to 2018. PGW showed the largest decrease since 2015, by 11.6%. Peoples/Peoples-Equitable showed an increase in the average arrearage of 8.9%. UGI-Gas and UGI Penn Natural have both reported accounts over $10,000 with average arrearages in 2017 and 2018 but did not report any previously.

Table 59 – Residential Average Arrearage of Accounts over $10,000 – Water

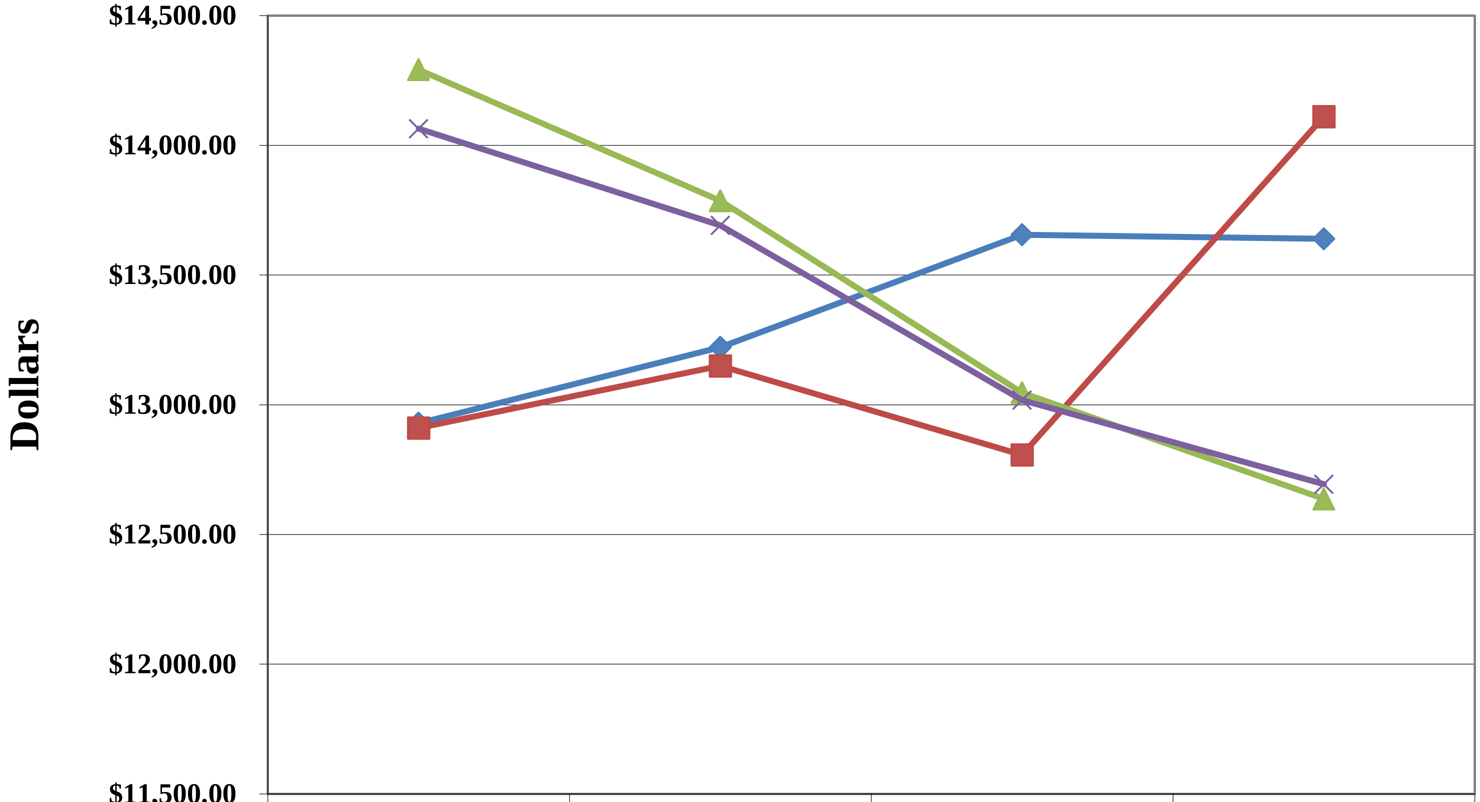
Utility	2015	2016	2017	2018
Audubon	$0.00	$0.00	$0.00	$0.00
Columbia Water	$0.00	$0.00	$0.00	$0.00
Newtown Artesian	$0.00	$0.00	$0.00	$0.00
Superior*	$0.00	N/A	N/A	N/A
SUEZ Bethel	$0.00	$0.00	$0.00	$0.00
SUEZ PA	$0.00	$0.00	$0.00	$0.00
York	$0.00	$0.00	$0.00	$0.00
Other Class A Average	***$0.00***	***$0.00***	***$0.00***	***$0.00***
Aqua	$16,435.70	$0.00	$16,606.01	$18,104.28
PAWC	$14,847.91	$12,219.85	$11,868.73	$13,872.06
Average	**$15,528.39**	**$12,219.85**	**$12,395.10**	**$15,282.80**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The average arrearages of accounts over $10,000 for the water industry decreased overall by 1.6% from 2015 as compared to 2018. Aqua showed an increase since 2015, by 10.2%. PAWC is the only other utility to report any accounts over $10,000 with average arrearages and since 2015, the average arrearages decreased slightly by 6.6%.

The following graphs show the average arrearages of active (*i.e.*, accounts not final billed) residential accounts over $10,000 in arrearages at the end of year for the electric and gas industries, since reporting began in 2015. The graphs provide a visual perspective to better recognize the industry trends.

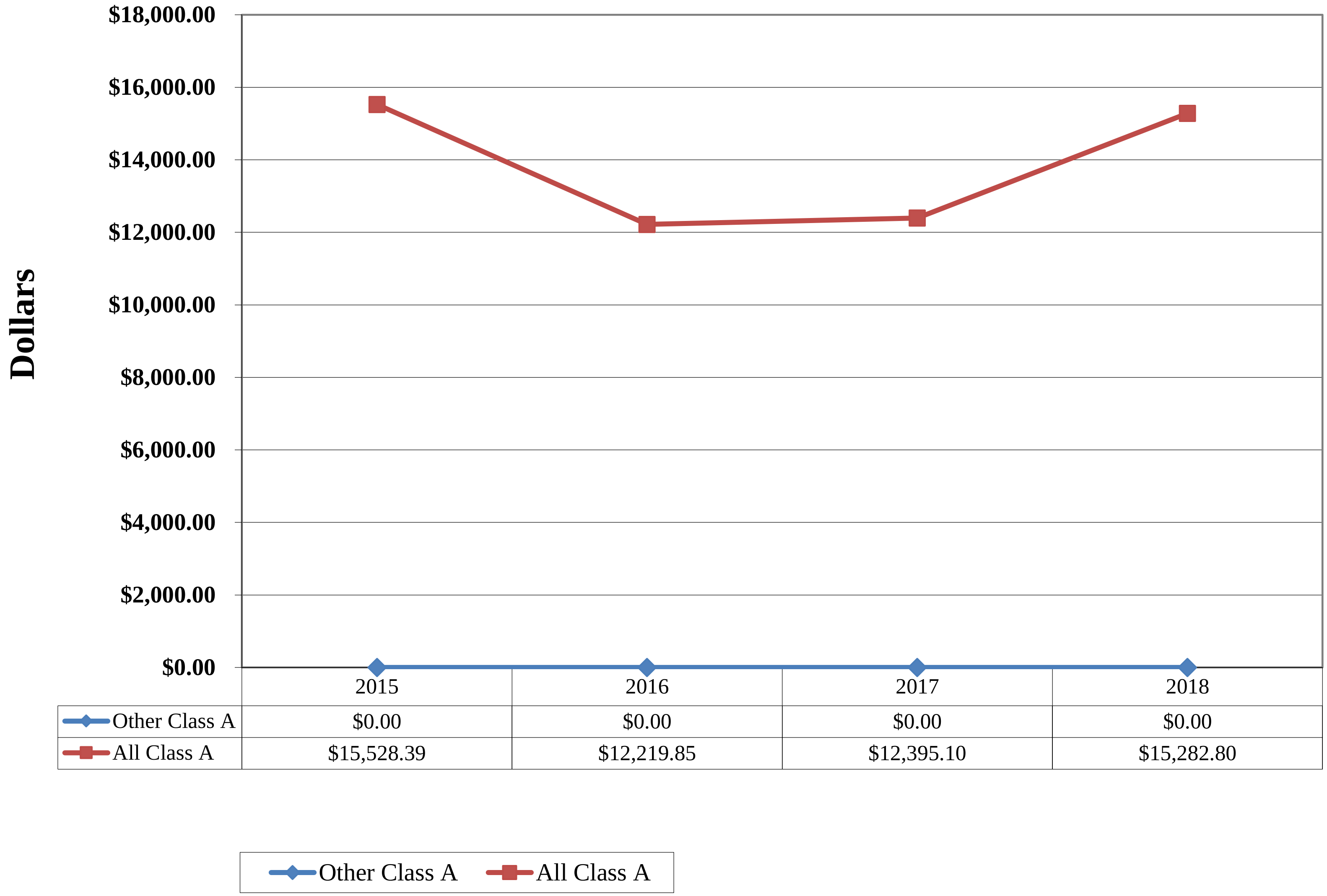
Residential Average Arrearage of Accounts over $10,000 - Electric & Gas



	2015	2016	2017	2018
Electric	$12,928.75	$13,221.32	$13,655.28	$13,639.96
Gas-Excluding PGW	$12,910.79	$13,149.73	$12,806.71	$14,111.48
PGW	$14,291.69	$13,786.16	$13,046.75	$12,637.29
Gas-Including PGW	$14,064.33	$13,691.87	$13,018.40	$12,693.99

Electric Gas-Excluding PGW PGW Gas-Including PGW

Residential Average Arrearage of Accounts over $10,000 - Water



	2015	2016	2017	2018
Other Class A	$0.00	$0.00	$0.00	$0.00
All Class A	$15,528.39	$12,219.85	$12,395.10	$15,282.80

The following tables show Total Universal Service Program Costs for electric and gas utilities from 2004 and 2013-2018. Universal service programs are targeted to low-income customers and include CAP, LIURP, Customer Assistance and Referral Evaluation Services (CARES) and Hardship Funds. Universal service programs offer an alternative payment strategy for low-income customers aimed at making bills more affordable. Customers who participate in CAP are removed from mainstream collections data and are tracked under Universal Service Program Costs, consistent with the Commission's treatment of such costs for ratemaking purposes. The total Universal Service Program Costs include CAP, LIURP and CARES and are reported annually in the Commission's Universal Service Programs & Collections Performance reports.

Table 60 – Total Universal Service Program Costs – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$6,396,250	$18,382,533	$17,715,724	$21,364,333	$23,079,521	$24,407,415	$28,297,392
Met-Ed	$6,686,226	$26,345,613	$21,361,480	$19,266,696	$18,588,313	$19,455,470	$21,755,946
PECO*	$86,102,371	$106,202,183	$109,410,817	$111,124,517	$104,648,884	$83,240,263	$74,383,392
Penelec	$8,571,959	$29,308,073	$24,410,743	$22,695,875	$23,224,130	$24,089,756	$26,480,948
Penn Power	$2,353,117	$7,651,533	$6,264,422	$5,765,980	$6,692,707	$6,714,043	$7,242,197
PPL	$20,334,191	$63,456,467	$81,704,642	$92,986,720	$96,306,051	$90,908,486	$80,034,598
West Penn	$7,109,745	$13,444,879	$16,792,245	$20,989,720	$29,038,484	$32,014,170	$28,300,622
Total	**$137,553,859**	**$264,791,281**	**$277,660,073**	**$294,193,841**	**$301,578,090**	**$280,829,603**	**$266,495,095**

*PECO data includes electric and gas.

The universal service program costs for the electric industry increased 93.7% since 2004. Duquesne showed the largest increase since 2004, at 342.4%. PECO is the only electric utility to show a decrease in universal service program costs since 2004, by 13.6%.

Table 61 – Total Universal Service Program Costs – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$16,344,747	$18,031,209	$22,825,440	$23,284,881	$18,786,181	$24,628,083	$27,253,047
NFG	$5,833,965	$3,375,672	$3,141,501	$2,495,982	$2,313,269	$2,250,979	$3,186,234
Peoples	$6,161,196	$9,484,832	$12,661,301	$13,959,572	$7,976,736	$9,464,197	$10,351,124
Peoples-Equitable	$6,596,751	$8,243,335	$10,864,120	$9,609,317	$4,711,659	$6,209,416	$7,583,997
UGI-Gas	$2,615,634	$3,688,185	$3,082,136	$4,875,929	$3,392,125	$4,474,618	$5,600,907
UGI Penn Natural	$1,036,120	$3,843,399	$3,186,673	$4,603,845	$3,055,000	$3,055,613	$3,767,180
Total w/out PGW	***$38,588,413***	***$46,666,632***	***$55,761,171***	***$58,829,526***	***$40,234,970***	***$50,082,906***	***$57,742,489***
PGW	$59,808,697	$86,003,672	$79,016,258	$65,502,542	$55,613,766	$54,930,489	$68,093,074
Total w/PGW	**$98,397,110**	**$132,670,304**	**$134,777,429**	**$124,332,068**	**$95,848,736**	**$105,013,395**	**$125,835,563**

The Universal Service Program Costs for the gas industry increased 27.9% since 2004. UGI-Gas and UGI Penn Natural showed the largest increases since 2004, at 114.1% and 263.6%, respectively. NFG is the only gas utility to show a decrease in universal service program costs since 2004, by 45.4%.

The following table is a summary of various key collections data variables and collections data performance metrics that appear in Section II and in various appendices in this report. For both the electric and gas industries, the post-Chapter 14 analysis is shown in the columns indicating the percent change from 2004, as compared to 2018. For the water industry, the post-Chapter 14 analysis is shown in the columns indicating the change from 2012, as compared to 2018.

Table 62 – Summary of Key Collections Variables – Percent Changes

Key Collections Variables	Electric Industry 2004-2018	Gas Industry 2004-2018*	PGW 2004-2018	Water Industry 2012-2018
Billings (Revenues)	50.3%	-2.3%	-4.2%	9.0%
Total Dollars in Debt (Active)	9.4%	-44.7%	-43.7%	30.0%
Total Dollars in Debt (Inactive)	11.6%	-7.6%	23.7%	70.8%
Percentage of Billings in Debt**	-27.2%	-42.3%	-42.2%	19.4%
Total Customers in Debt (Active)	8.9%	-28.6%	-16.2%	28.6%
Total Customers in Debt (Inactive)	14.0%	21.7%	28.7%	48.0%
Percentage of Customers in Debt (Active)**	-5.3%	-17.5%	-28.7%	24.0%
Gross Write-Offs (Dollars)	47.6%	-47.0%	-38.7%	67.7%
Gross Write-Offs Ratio	-1.9%	-27.8%	-44.6%	49.6%
Universal Service Programs Costs	93.7%	49.6%	13.9%	N/A

*Includes PGW.
**See Appendix 8 for the explanation of variability among the utilities for reporting when they consider an account to be overdue. See Appendix 9 for the explanation of variability of when they move an account from active status to inactive status following a termination or discontinuance of service.

Conclusion: Section II – The Effect Upon the Cash Working Capital or Cash Flow, Uncollectible Levels and Collections of the Affected Public Utilities

This section reviews and evaluates the overall industry trends in terms of the key collections performance variables. The categories Billings, Total Dollars in Debt (Active and Inactive), Percentage of Billings in Debt, Total Customers in Debt (Active and Inactive), Percentage of Customers in Debt, Gross Write-Offs (Dollars), and the Gross Write-offs Ratio provide a comprehensive review of the collections performance of each utility. While some variables measure actual numbers or dollar amounts, other categories are reported as percentages or ratios and involve calculations performed on two separate variables. Data is presented both in individual variables and calculated categories in order to provide accuracy and a more complete depiction of how individual variables may be influencing a calculated category. For example, in the electric industry table, Billings and the Total Dollars in Debt (Active and Inactive) both increased, but when calculating the Percentage of Billings in Debt, the category indicates a decrease. Therefore, when reviewing and evaluating both industry trends and overall performance of each individual utility, all the key collections performance variables are considered in the recommendations in this report.

As shown above, analysis of the impact on residential collections continues to be more developed since our initial report in 2006. The number of residential accounts has shown an increase for both the electric and gas industries as compared to 2004. The water industry has shown an increase since 2012, when the industry began reporting. Since 2004, there has been an increase in the number of confirmed low-income customers for both the electric and gas industries. The water industry does not report low-income customer data.

Several of the key collections performance variables for the electric industry show mixed improvement since the passage of Chapter 14. Billings and the Total Dollars in Debt (Active and Inactive) increased slightly since 2004, but the Percentage of Billings in Debt decreased. The Total Customers in Debt (Active and Inactive) also increased, as did the Gross Write-Offs (Dollars), but the Percentage of Customers in Debt and the Gross Write-Offs Ratio decreased. Universal Service Program Costs for the electric industry have increased as compared to 2004.

The key collections performance variables for the gas industry show overall improvement as compared to 2004. This improvement reflects the continuation of a trend that had already begun in the pre-Chapter 14 period, likely attributable to the decrease in the cost of natural gas. The categories of Billings, Total Dollars in Debt (both Active and Inactive), Percentage of Billings in Debt, Total Customers in Debt (Active), Percentage of Customers in Debt, Gross Write-Offs (Dollars)and the Gross Write-offs Ratio all decreased as compared to 2004. The only categories where the gas industry showed an increase in key variables were in the Total Customers in Debt (Inactive) and Universal Service Program Costs.

The analysis of the key collections performance variables in this report continue to show a pattern of overall improvement for PGW since the passage of Chapter 14. The categories of Billings, Total Dollars in Debt (Active), Percentage of Billings in Debt, Total Customers in Debt (Active), Percentage of Customers in Debt, Gross Write-Offs (Dollars) and the Gross Write-Offs Ratio all decreased for PGW. There were increases in the categories of Total Dollars in Debt (Inactive), Total Customers in Debt (Inactive), and a slight increase in Universal Service Program Costs.

The water industry began reporting data in 2012. The key collections performance variables all show increases since 2012, but several more years of data are required to evaluate long-term collections performance. The categories of Billings, Total Dollars in Debt (Active and Inactive), the Percentage of Billings in Debt, Total Customers in Debt (Active and Inactive), the Percentage of Customers in Debt, the Gross Write-Offs (Dollars), and the Gross Write-off Ratio have all increased as compared to 2012. Billings for the water industry have also increased. The water utilities are not required to have universal service programs.

Enrollment in universal service programs has increased since 2004, resulting in higher overall universal service costs for the electric and gas industries. These costs are recoverable for the utilities and represent a pre-emptive alternative to the traditional costs associated with collections, by helping utilities manage customer debt and providing a safety net to low-income customers in order to make bills more affordable.

The increases in key collections performance variables for some individual utilities and some industry categories suggest that not all utilities are fully or effectively using the tools provided to them by Chapter 14. In order to improve overall collections performance, the Commission suggests utilities act on delinquent accounts more quickly and allow this Commission the discretion to establish additional payment arrangements. Timely collections action on accounts will result in lower arrearage amounts, which are easier for the customer to pay off than larger balances. Additionally, because the data show more customer debt is not on arrangement than is on arrangement, allowing the Commission to order or establish a second payment arrangement may improve collections performance. Debt that is on arrangement is less at risk of becoming inactive and uncollectible, which should decrease gross write-offs. This recommendation is addressed in greater detail in Section IV - *The Effect Upon the Level of Consumer Complaints and Payment Arrangements (PARs) Filed with and Adjudicated by the Commission.*

More detailed data regarding the universal service programs can be found in the Universal Service Programs & Collections Performance Reports on the PUC website at http://www.puc.pa.gov/filing_resources/universal_service_reports.aspx.

Section III - The Level of Access to Utility Services by Residential Customers, Including Low-Income Customers

This report measures the impact of Chapter 14 on access to utility services by residential customers, including low-income customers.

To help measure access, the Commission collects monthly termination and reconnection data from the electric and gas distribution utilities. The following tables detail the path from receipt of a termination notice through termination and possibly reconnection of service. Termination rates are calculated by dividing the number of terminations by the total number of customers for each utility. Reconnection rates are calculated by dividing the number of reconnections by the number of terminations. Presenting the data in this manner allows for comparison of termination and reconnection statistics across utilities regardless of the number of residential customers.

The Commission also uses limited information on terminated households in the annual Cold Weather Survey (CWS). The electric and natural gas distribution utilities gather CWS data annually during the fall months. The utilities survey residential properties where heat-related service was terminated during the calendar year and not reconnected. The CWS does not provide any indication as to how long the household has been without utility service. A further limitation of the CWS is that customers whose service was terminated and not reconnected in a prior year will not be counted with the customers to be surveyed in the current year.

Termination of utility service is the most serious consequence of customer nonpayment. The termination of utility service is a last resort when customers fail to meet their payment obligations. The following tables contain information on the number of terminations for electric and gas utilities from 2004 and 2013-2018.

Table 63 – Residential Terminations – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	10,694	25,649	23,853	16,601	12,726	21,777	26,119
Met-Ed	4,506	23,672	25,071	25,136	25,276	23,870	24,099
PECO*	55,098	84,235	89,655	87,144	85,937	90,145	85,583
Penelec	5,881	20,544	20,657	21,579	22,121	21,096	19,949
Penn Power	1,446	4,999	4,482	4,951	4,651	4,360	4,089
PPL	9,061	47,759	56,777	52,229	40,849	42,216	44,971
West Penn	12,007	13,904	12,133	12,551	14,878	14,234	13,577
Total	**98,693**	**220,762**	**232,628**	**220,191**	**206,438**	**217,698**	**218,387**

*PECO statistics include electric and gas.

Terminations for the electric industry increased overall by 121.3% from 2004 as compared to 2018. Met-Ed and PPL had the largest increases in terminations since 2004, with 434.8% and 396.3%, respectively. West Penn had the smallest increase, at 13.1%.

Table 64 – Residential Terminations – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	7,545	12,030	11,252	12,664	9,945	10,728	10,859
NFG	7,422	9,576	9,942	9,025	1,422	5,490	6,449
Peoples	6,054	7,229	9,436	7,894	7,536	9,744	9,707
Peoples-Equitable	7,023	8,507	7,607	3,562	5,845	7,757	8,622
UGI-Gas	8,911	9,055	11,149	9,658	12,029	8,580	15,924
UGI Penn Natural	5,169	6,214	7,242	6,829	6,826	4,840	8,243
Total w/out PGW	***42,124***	***52,611***	***56,628***	***49,632***	***43,603***	***47,139***	***59,804***
PGW	29,695	28,497	29,769	29,602	25,805	27,443	25,576
Total w/PGW	**71,819**	**81,108**	**86,397**	**79,234**	**69,408**	**74,582**	**85,380**

Terminations for the gas industry increased by 18.9% from 2004 as compared to 2018. Peoples and UGI-Gas showed the largest increases since 2004, with 60.3% and 78.7%, respectively. NFG and PGW were the only utilities to show decreases in terminations, with 13.1% and 13.9%, respectively.

Table 65 – Residential Terminations – Water

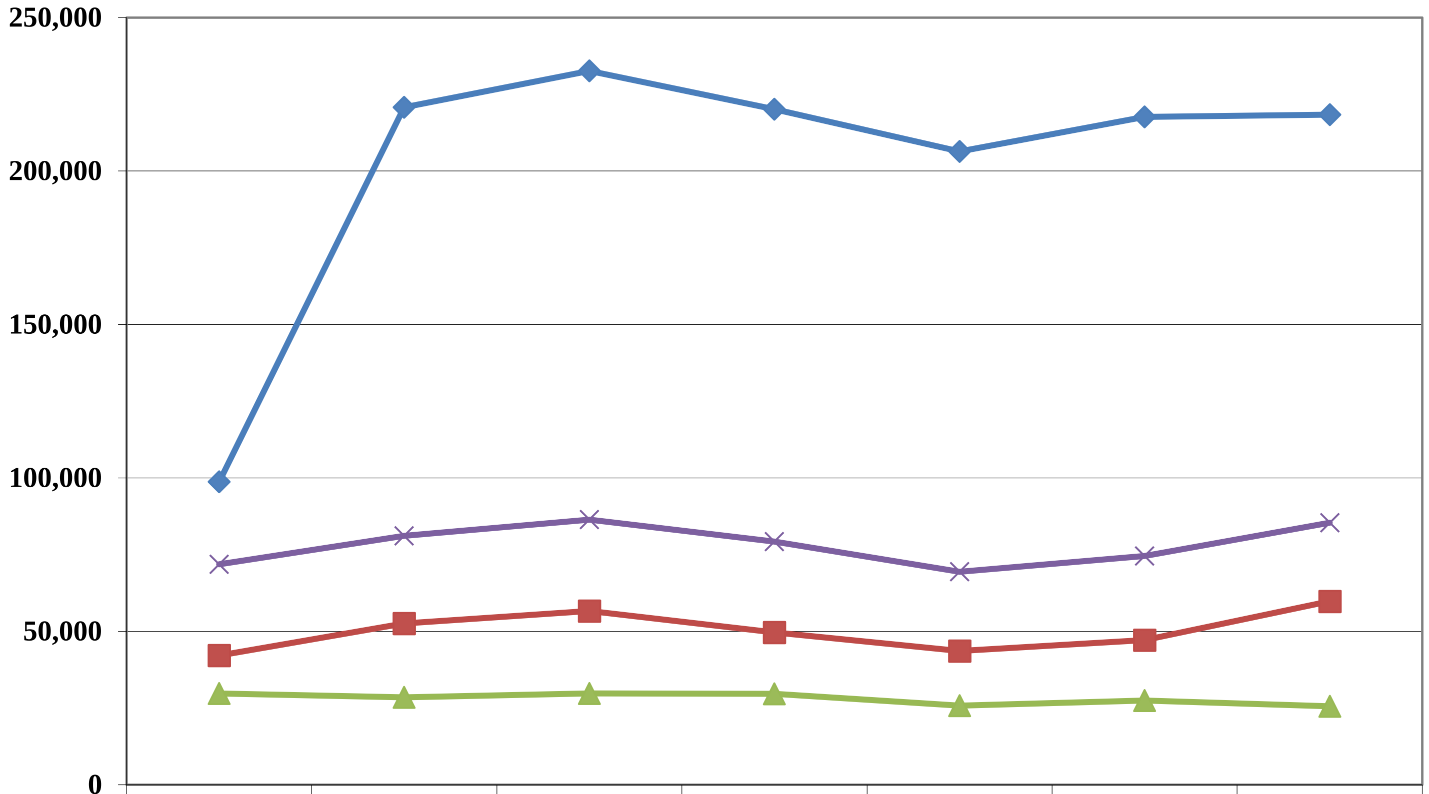
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	0	1	3	3	0	0	0
Columbia Water	12	10	125	132	183	197	241
Newtown Artesian	3	3	58	53	50	62	43
Superior*	1	1	7	10	N/A	N/A	N/A
SUEZ Bethel	1	0	0	0	0	0	0
SUEZ PA	83	110	376	428	725	501	372
York	98	112	1,237	1,192	1,113	953	1,121
Other Class A Total	***198***	***237***	***1,806***	***1,818***	***2,071***	***1,713***	***1,777***
Aqua	556	621	6,111	5,294	6,735	5,912	7,415
PAWC	1,495	1,505	8,161	20,750	17,796	21,475	24,695
Total	**2,249**	**2,363**	**16,078**	**27,862**	**26,602**	**29,100**	**33,887**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

Terminations for the water industry increased by 1,406.8% from 2012 as compared to 2018. Columbia Water and PAWC showed the largest increases since 2004, with 1,908.3% and 1,551.8%, respectively. SUEZ PA had the smallest increase, by 348.2%.

The following graphs show the residential terminations for the electric and gas industries since 2004. The water industry is shown separately since the reporting began in 2012. The graphs provide a visual perspective to better recognize the industry trends. Termination of utility service is the most serious consequence of customer nonpayment. The termination of utility service is a last resort when customers fail to meet their payment obligations.

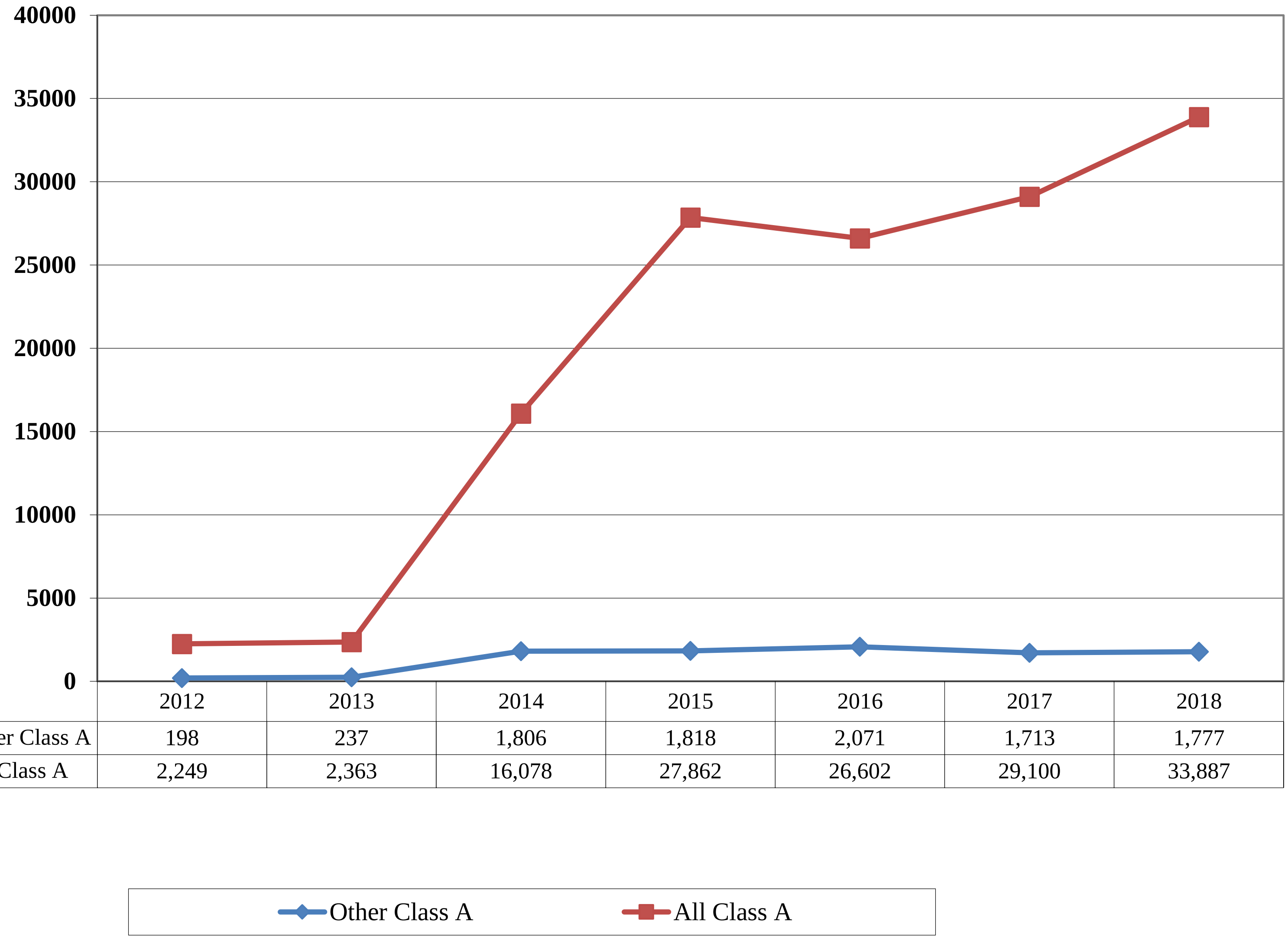
Residential Terminations - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	98,693	220,762	232,628	220,191	206,438	217,698	218,387
Gas-Excluding PGW	42,124	52,611	56,628	49,632	43,603	47,139	59,804
PGW	29,695	28,497	29,769	29,602	25,805	27,443	25,576
Gas-Including PGW	71,819	81,108	86,397	79,234	69,408	74,582	85,380

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

Residential Terminations - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	198	237	1,806	1,818	2,071	1,713	1,777
All Class A	2,249	2,363	16,078	27,862	26,602	29,100	33,887

Prior to termination of utility service, the utility must provide written notice of the termination at least 10 days prior to the date of the proposed termination. The following tables contain information on the number of 10-day termination notices issued by electric and gas utilities from 2004 and 2013-2018.

Table 66 – Number of 10-Day Residential Termination Notices – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	303,967	348,837	322,144	218,761	372,370	421,158	390,586
Met-Ed	155,585	305,228	304,709	283,162	273,047	271,023	294,565
PECO*	823,849	763,832	830,370	840,140	783,975	801,588	837,821
Penelec	160,395	291,629	300,979	276,726	267,799	270,761	296,583
Penn Power	77,977	72,278	77,323	77,010	74,321	74,532	81,539
PPL	435,843	423,592	453,366	421,874	371,563	430,015	463,829
West Penn	362,270	268,796	314,680	324,425	301,520	299,514	328,319
Total	**2,319,876**	**2,474,192**	**2,603,571**	**2,442,098**	**2,444,595**	**2,568,591**	**2,693,242**

*PECO statistics include electric and gas.

The number of 10-day termination notices issued by the electric industry increased by 16.1% from 2004 as compared to 2018. Met-Ed and Penelec showed the largest increases in 10-day terminations issued since 2004, by 89.3% and 84.9%, respectively. West Penn was the only electric utility to show a decrease, with 9.4%.

Table 67 – Number of 10-Day Residential Termination Notices – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	45,746	138,376	149,849	147,873	127,198	142,910	159,393
NFG	183,284	138,755	148,906	136,119	65,016	112,754	69,582
Peoples	202,432	57,732	77,206	77,541	59,843	61,795	92,120
Peoples-Equitable	62,554	126,841	132,483	84,132	48,700	51,479	131,473
UGI-Gas	58,465	108,121	131,361	105,773	136,449	109,453	65,375
UGI Penn Natural	113,778	70,492	83,221	69,673	77,095	54,648	38,088
Total w/out PGW	***666,259***	***640,317***	***723,026***	***621,111***	***514,301***	***533,039***	***556,031***
PGW	693,269	243,678	276,531	246,051	177,376	182,250	227,644
Total w/PGW	**1,359,528**	**883,995**	**999,557**	**867,162**	**691,677**	**715,289**	**783,675**

The number of 10-day termination notices issued by the gas industry decreased overall by 42.4% from 2004 as compared to 2018. Columbia Gas and Peoples-Equitable showed the largest increases since 2004 with 248.4% and 110.2%, respectively. NFG and PGW had the largest decreases in the number of 10-day termination notices issued, with 62% and 67.2%, respectively.

Table 68 – Number of 10-Day Residential Termination Notices – Water

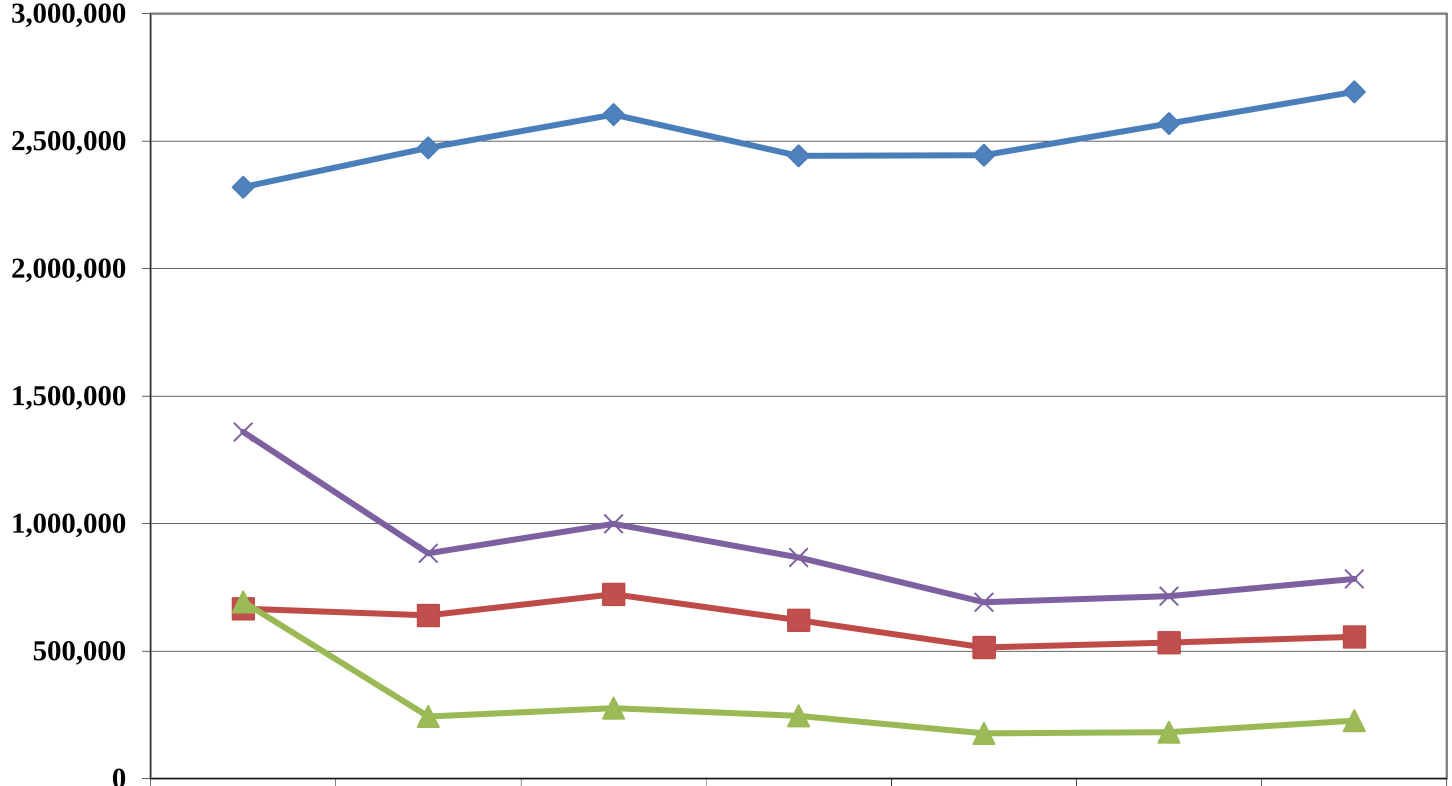
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	821	1,050	1,005	885	979	953	1,289
Columbia Water	4,905	4,960	5,617	5,754	6,424	5,523	14,928
Newtown Artesian	1,508	1,649	1,410	1,336	1,339	1,318	910
Superior*	2,147	2,039	2,465	2,234	N/A	N/A	N/A
SUEZ Bethel	0	0	728	743	948	746	741
SUEZ PA	65,184	66,251	69,142	66,987	78,143	75,415	83,558
York	34,529	36,400	32,770	25,433	35,936	35,996	34,753
Other Class A Total	***109,094***	***112,349***	***113,137***	***103,372***	***123,769***	***119,951***	***136,179***
Aqua	221,873	224,690	213,158	201,348	204,726	190,471	185,784
PAWC	231,308	213,573	234,133	385,689	374,059	394,303	392,905
Total	**562,275**	**550,612**	**560,428**	**690,409**	**702,554**	**704,725**	**714,868**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The number of 10-day termination notices issued by the water industry increased overall by 27.1% from 2012 as compared to 2018. Columbia Water showed the largest increase, by 204.3%. Newtown Artesian and Aqua were the only water utilities to show decreases since 2012, with 39.7% and 16.3%, respectively.

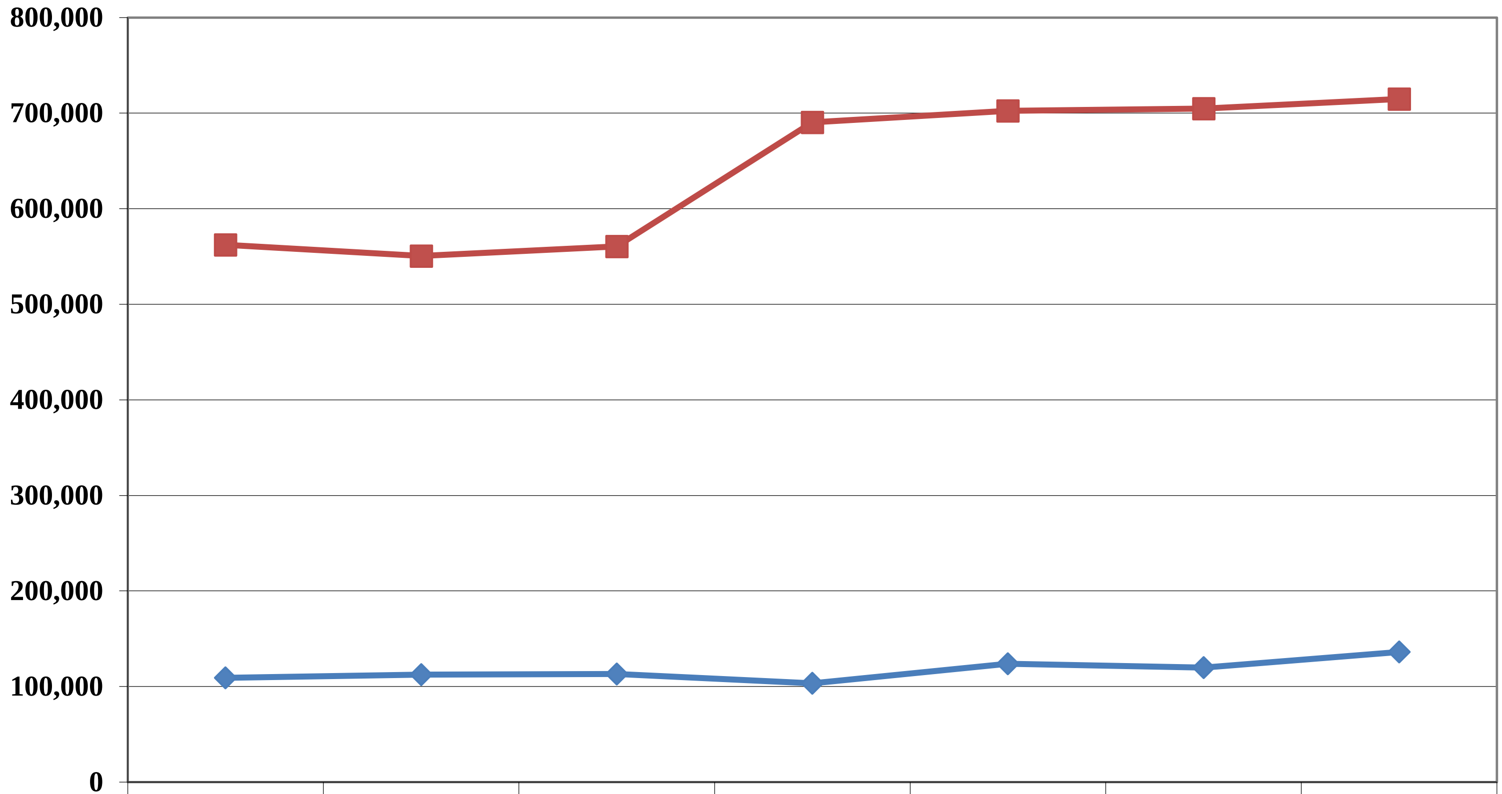
The following graphs show the number of 10-day termination notices for the electric and gas industries since 2004. The water industry is shown separately since the reporting began in 2012. The graphs provide a visual perspective to better recognize the industry trends. Prior to termination of utility service, the utility must provide written notice of the termination at least 10 days prior to the date of the proposed termination.

Number of 10-Day Residential Termination Notices - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	2,319,876	2,474,192	2,603,571	2,442,098	2,444,595	2,568,591	2,693,242
Gas-Excluding PGW	666,259	640,317	723,026	621,111	514,301	533,039	556,031
PGW	693,269	243,678	276,531	246,051	177,376	182,250	227,644
Gas-Including PGW	1,359,528	883,995	999,557	867,162	691,677	715,289	783,675

Number of 10-Day Residential Termination Notices - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	109,094	112,349	113,137	103,372	123,769	119,951	136,179
All Class A	562,275	550,612	560,428	690,409	702,554	704,725	714,868

Termination of utility service is the most serious consequence of customer nonpayment. The termination of utility service is a last resort when customers fail to meet their payment obligations. The following tables contain information on the number of confirmed low-income terminations for electric and gas utilities from 2004 and 2013-2018.

Table 69 – Confirmed Low-Income Terminations – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	4,109	12,671	11,631	1,410	438	4,301	7,600
Met-Ed	2,129	11,999	12,718	13,092	13,638	12,769	13,246
PECO*	21,877	28,622	38,310	35,056	29,191	26,867	27,647
Penelec	3,307	11,672	12,085	12,940	13,631	12,910	12,561
Penn Power	857	2,675	2,610	2,744	2,764	2,484	2,431
PPL	5,013	25,950	39,104	33,186	33,075	30,717	27,433
West Penn	2,194	6,919	6,215	6,820	8,090	7,860	7,631
Total	**39,486**	**100,508**	**122,673**	**105,248**	**100,827**	**97,908**	**98,549**

*PECO statistics include electric and gas.

The confirmed low-income terminations for the electric industry increased overall by 149.6% from 2004 as compared to 2018. Met-Ed and PPL showed the largest increases, with 522.2% and 447.2%, respectively. Duquesne and PECO showed the smallest increases in confirmed low-income terminations since 2004, with 85% and 26.4%, respectively.

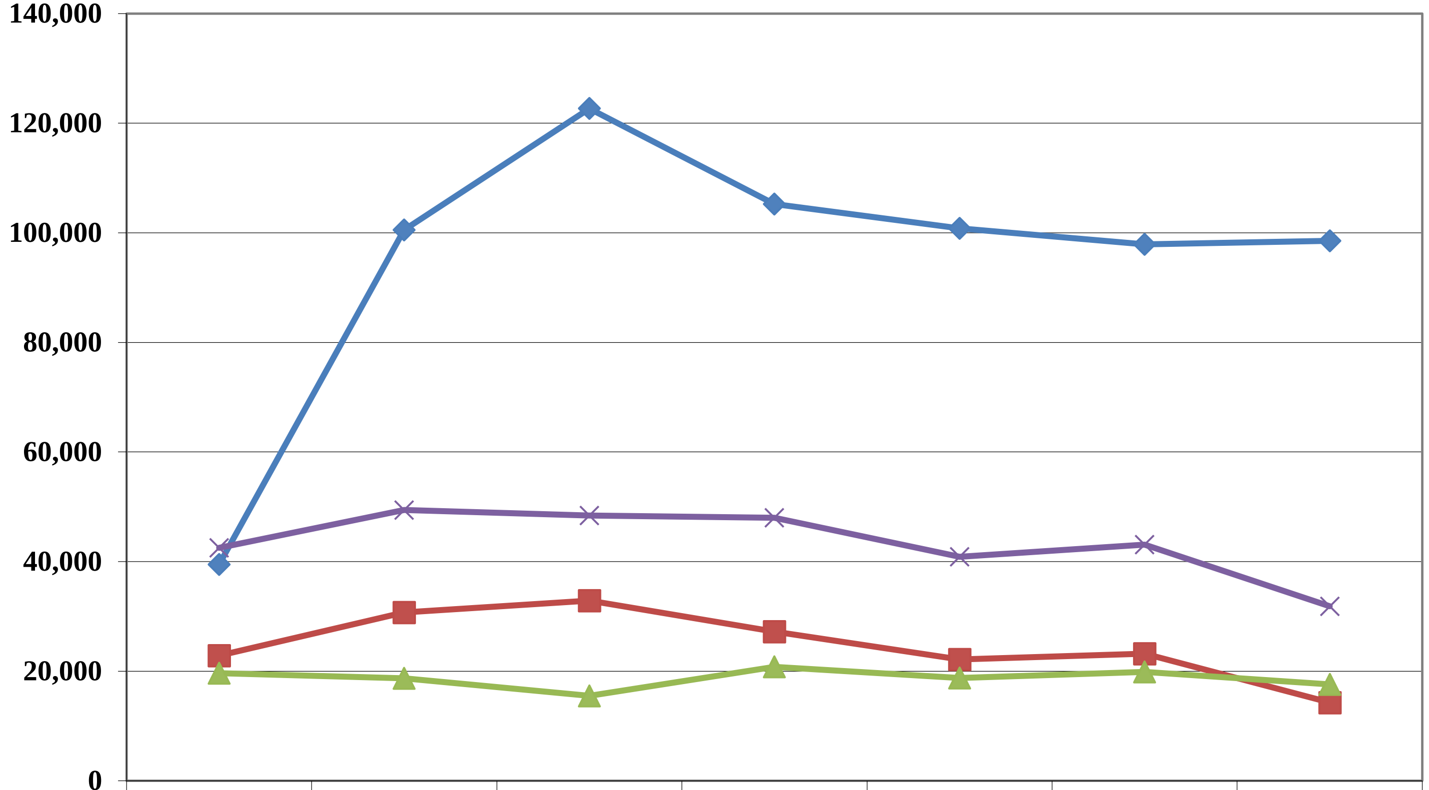
Table 70 – Confirmed Low-Income Terminations – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	4,461	7,030	6,610	7,498	6,030	6,425	6,314
NFG	4,359	5,640	5,825	5,220	861	3,835	3,710
Peoples	3,929	1,373	2,453	2,052	1,959	2,535	1,554
Peoples-Equitable	3,937	5,477	4,757	643	1,106	1,397	1,602
UGI-Gas	3,095	6,674	8,018	6,943	7,716	5,649	593
UGI Penn Natural	3,068	4,552	5,212	4,883	4,459	3,357	513
Total w/out PGW	***22,849***	***30,746***	***32,875***	***27,239***	***22,131***	***23,198***	***14,286***
PGW	19,636	18,672	15,503	20,788	18,757	19,887	17,567
Total w/PGW	**42,485**	**49,418**	**48,378**	**48,027**	**40,888**	**43,085**	**31,853**

The confirmed low-income terminations for the gas industry decreased by 25.0% from 2004 as compared to 2018. UGI-Gas and UGI Penn Natural showed the largest decreases, with 80.8% and 83.3%, respectively. Columbia Gas was the only gas utility to show an increase in confirmed low-income terminations, with 41.5%.

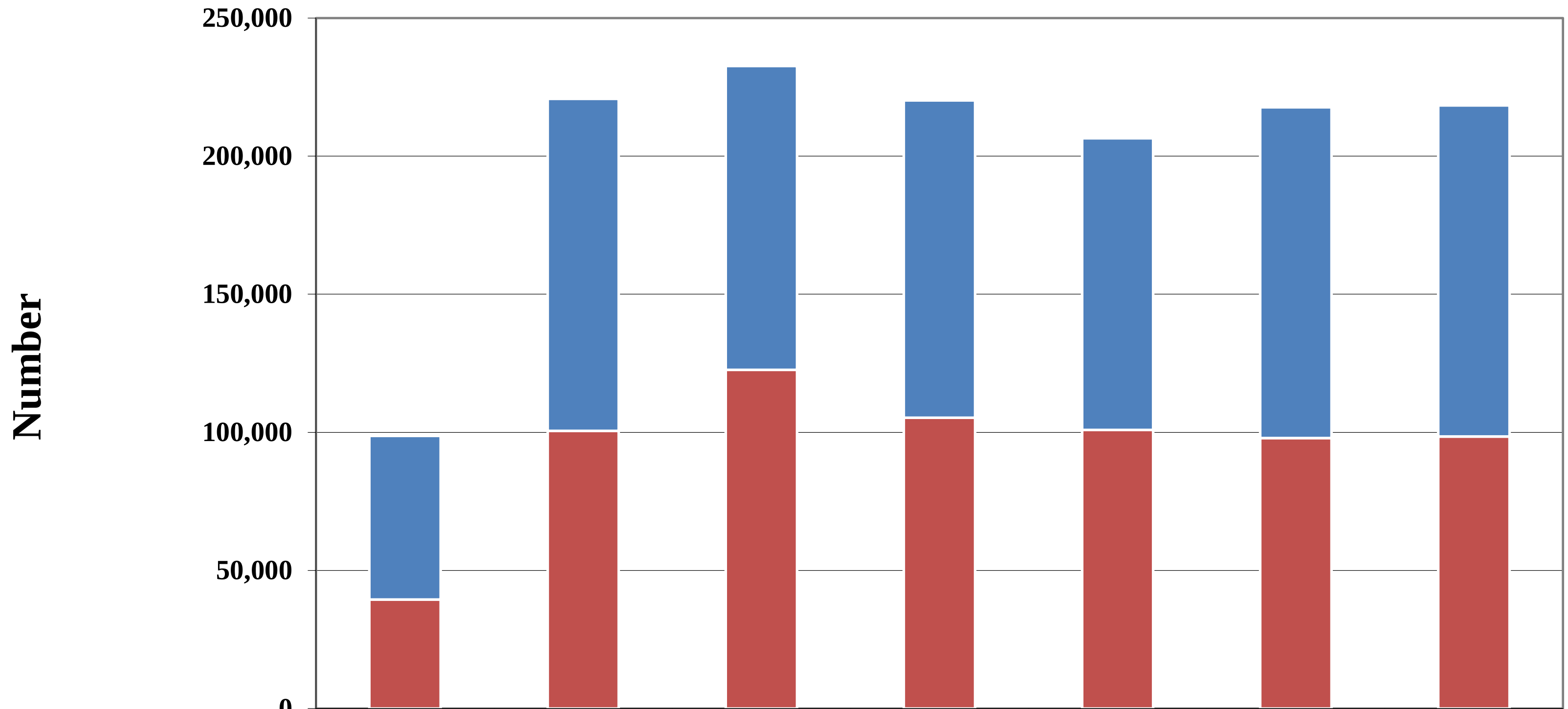
The following graphs show the confirmed low-income terminations for the electric and gas industries since 2004. The water industry does not report confirmed low-income data. The graphs provide a visual perspective to better recognize the industry trends. Termination of utility service is the most serious consequence of customer nonpayment. The termination of utility service is a last resort when customers fail to meet their payment obligations.

Confirmed Low-Income Terminations - Electric & Gas



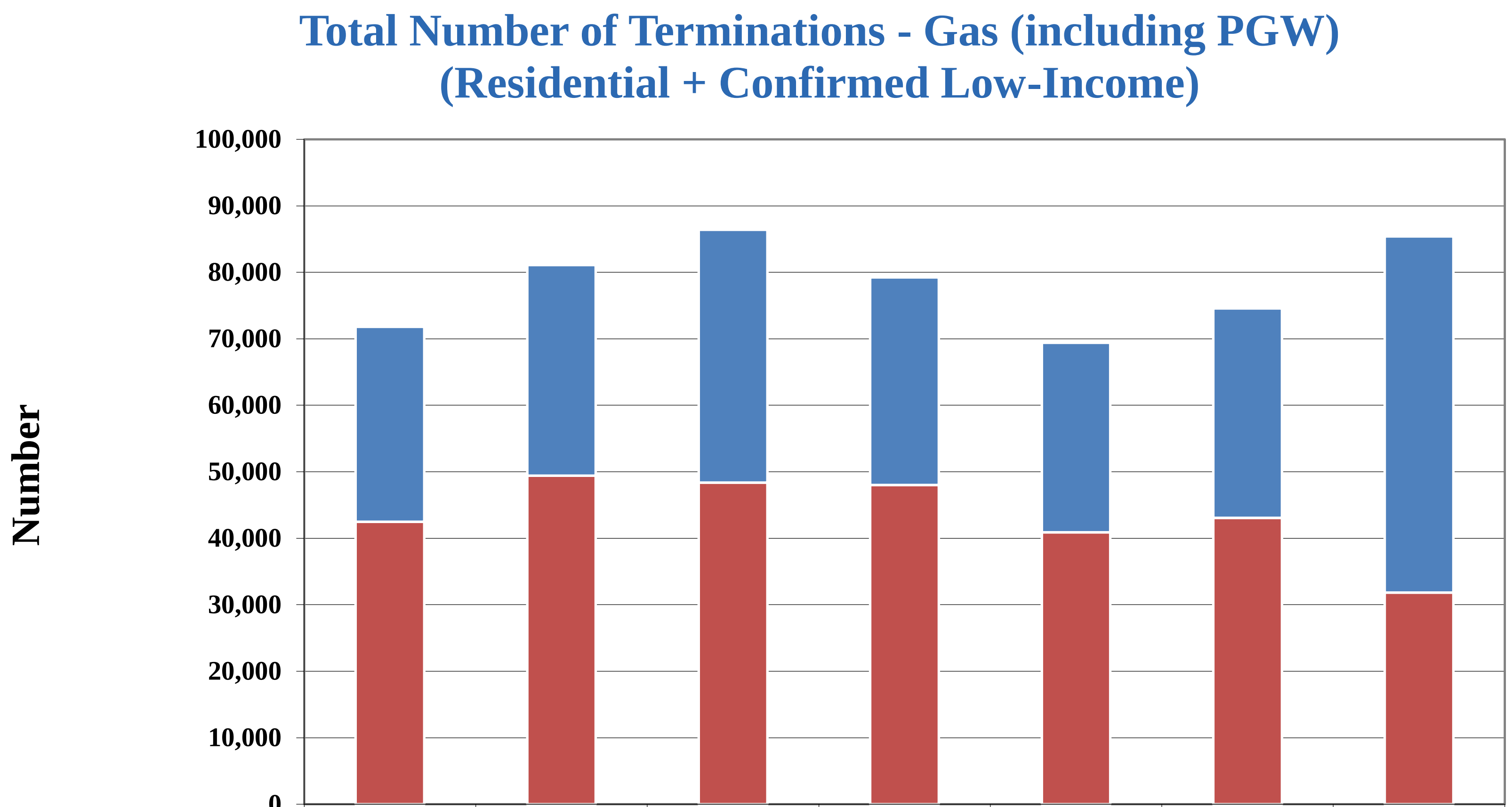
	2004	2013	2014	2015	2016	2017	2018
Electric	39,486	100,508	122,673	105,248	100,827	97,908	98,549
Gas-Excluding PGW	22,849	30,746	32,875	27,239	22,131	23,198	14,286
PGW	19,636	18,672	15,503	20,788	18,757	19,887	17,567
Gas-Including PGW	42,485	49,418	48,378	48,027	40,888	43,085	31,853

Total Number of Terminations - Electric
(Residential + Confirmed Low-Income)



	2004	2013	2014	2015	2016	2017	2018
Residential-Excluding Conf. Low-Income	59,207	120,254	109,955	114,943	105,611	119,790	119,838
Confirmed Low-Income	39,486	100,508	122,673	105,248	100,827	97,908	98,549

Confirmed Low-Income   Residential-Excluding Conf. Low-Income



	2004	2013	2014	2015	2016	2017	2018
Residential-Excluding Conf. Low-Income	29,334	31,690	38,019	31,207	28,520	31,497	53,527
Confirmed Low-Income	42,485	49,418	48,378	48,027	40,888	43,085	31,853

Confirmed Low-Income   Residential-Excluding Conf. Low-Income

The following tables show the residential termination rates for electric and gas utilities from 2004 and 2013-2018. The residential termination rate is calculated by dividing the number of residential terminations by the total number of residential customers.

Table 71 – Residential Termination Rate – Electric (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	2.03	4.87	4.52	3.16	2.42	4.09	4.88
Met-Ed	0.98	4.85	5.12	5.10	5.10	4.78	4.80
PECO*	3.95	5.87	6.20	5.99	5.86	6.10	5.73
Penelec	1.17	4.07	4.10	4.30	4.41	4.21	3.98
Penn Power	1.05	3.54	3.16	3.47	3.24	3.02	2.81
PPL	0.78	3.92	4.65	4.26	3.32	3.45	3.66
West Penn	2.00	2.24	1.95	2.02	2.38	2.28	2.17
Average	**2.06**	**4.47**	**4.70**	**4.43**	**4.14**	**4.35**	**4.34**

*PECO statistics include electric and gas.

The residential termination rate for the electric industry increased overall by 110.7% from 2004 as compared to 2018. Met-Ed and PPL showed the largest increases, with 389.8% and 369.2%, respectively. PECO and West Penn had the smallest increases in the residential termination rate, with 45.1% and 8.5%, respectively.

Table 72 – Residential Termination Rate – Gas (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	2.11	3.13	2.91	3.27	2.55	2.73	2.74
NFG	3.81	4.82	5.00	4.53	0.72	2.79	3.27
Peoples	1.87	2.19	2.86	2.38	2.27	2.92	2.90
Peoples-Equitable	3.00	3.51	3.12	1.45	2.40	3.13	3.47
UGI-Gas	3.30	2.79	3.36	2.85	3.48	2.43	4.40
UGI Penn Natural	3.69	4.17	4.81	4.50	4.47	3.14	5.27
Average w/out PGW	***2.77***	***3.23***	***3.45***	***3.00***	***2.62***	***2.81***	***3.53***
PGW	6.23	6.08	6.34	6.29	5.46	5.78	5.36
Average w/PGW	**3.60**	**3.87**	**4.09**	**3.73**	**3.25**	**3.46**	**3.93**

The residential termination rate for the gas industry increased by 27.4% from 2004 as compared to 2018. Peoples and UGI-Penn Natural showed the largest increases, with 55.1% and 42.8%, respectively. NFG and PGW were the only gas utilities to show a decrease in the residential termination rate since 2004, with 14.2% and 14%, respectively.

Table 73 – Residential Termination Rate – Water (shown as a percentage)

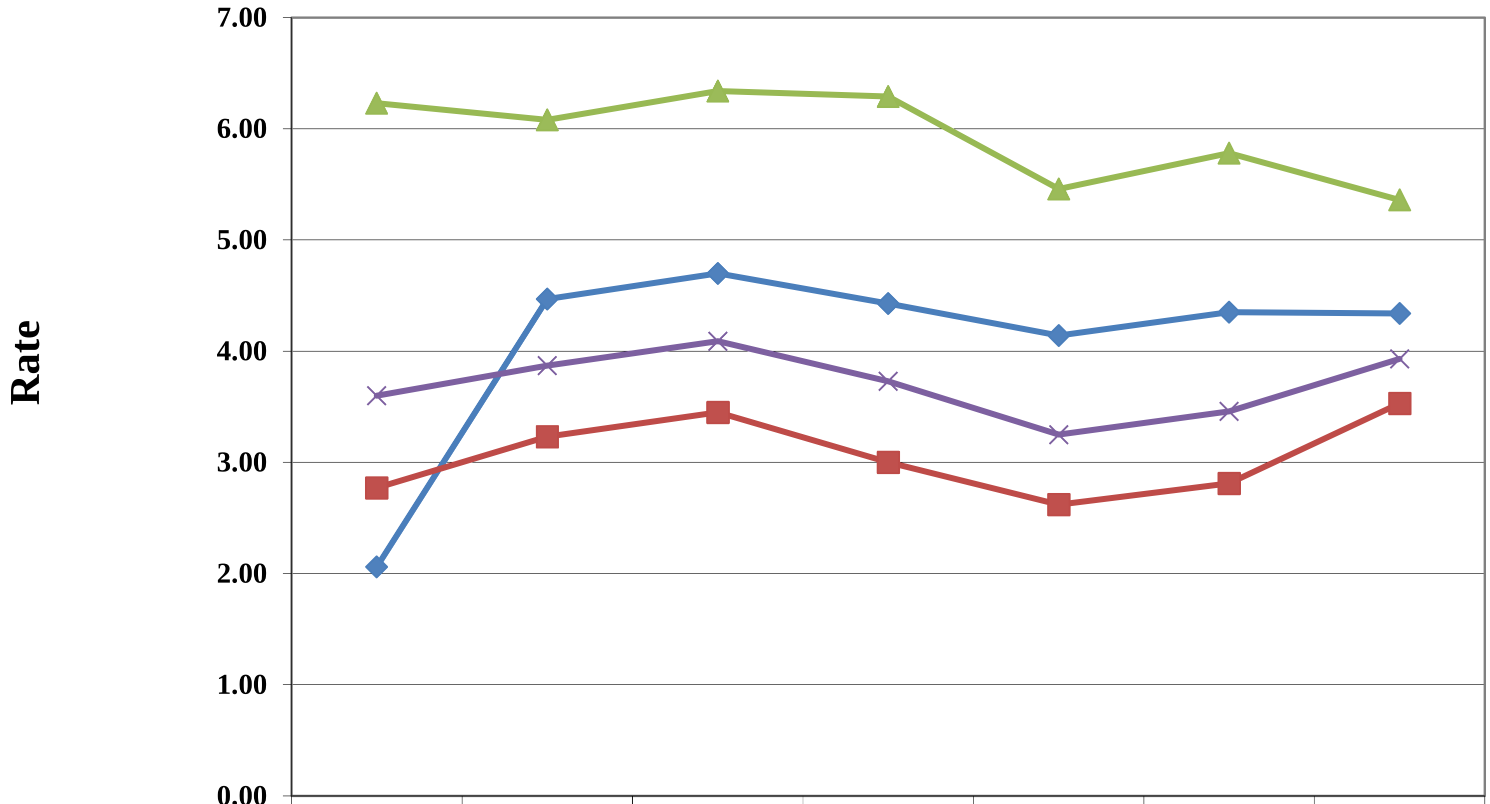
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	0.00	0.04	0.12	0.12	0.00	0.00	0.00
Columbia Water	0.14	0.12	1.34	1.40	1.93	2.05	2.49
Newtown Artesian	0.03	0.03	0.62	0.56	0.52	0.65	0.46
Superior*	0.03	0.03	0.19	0.27	N/A	N/A	N/A
SUEZ Bethel	0.04	0.00	0.00	0.00	0.00	0.00	0.00
SUEZ PA	0.16	0.21	0.71	0.80	1.35	1.00	0.68
York	0.17	0.19	2.12	1.99	1.86	1.56	1.82
Other Class A Average	***0.15***	***0.17***	***1.31***	***1.29***	***1.50***	***1.27***	***1.26***
Aqua	0.14	0.16	1.56	1.36	1.70	1.48	1.85
PAWC	0.25	0.25	1.37	3.48	2.97	3.54	4.06
Average	**0.20**	**0.21**	**1.43**	**2.47**	**2.35**	**2.55**	**2.94**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The residential termination rate for the water industry increased by 1,470% from 2012 as compared to 2018. Columbia Water and PAWC showed the largest increases, with 1,678.6% and 1,524%, respectively. SUEZ PA had the smallest increase in the residential termination rate since 2012, with 325%.

The following graphs show the residential termination rate for the electric and gas industries since 2004. The water industry is shown separately, since reporting did not begin until 2012. The graphs provide a visual perspective to better recognize the industry trends. The residential termination rate is calculated by dividing the number of residential terminations by the total number of residential customers.

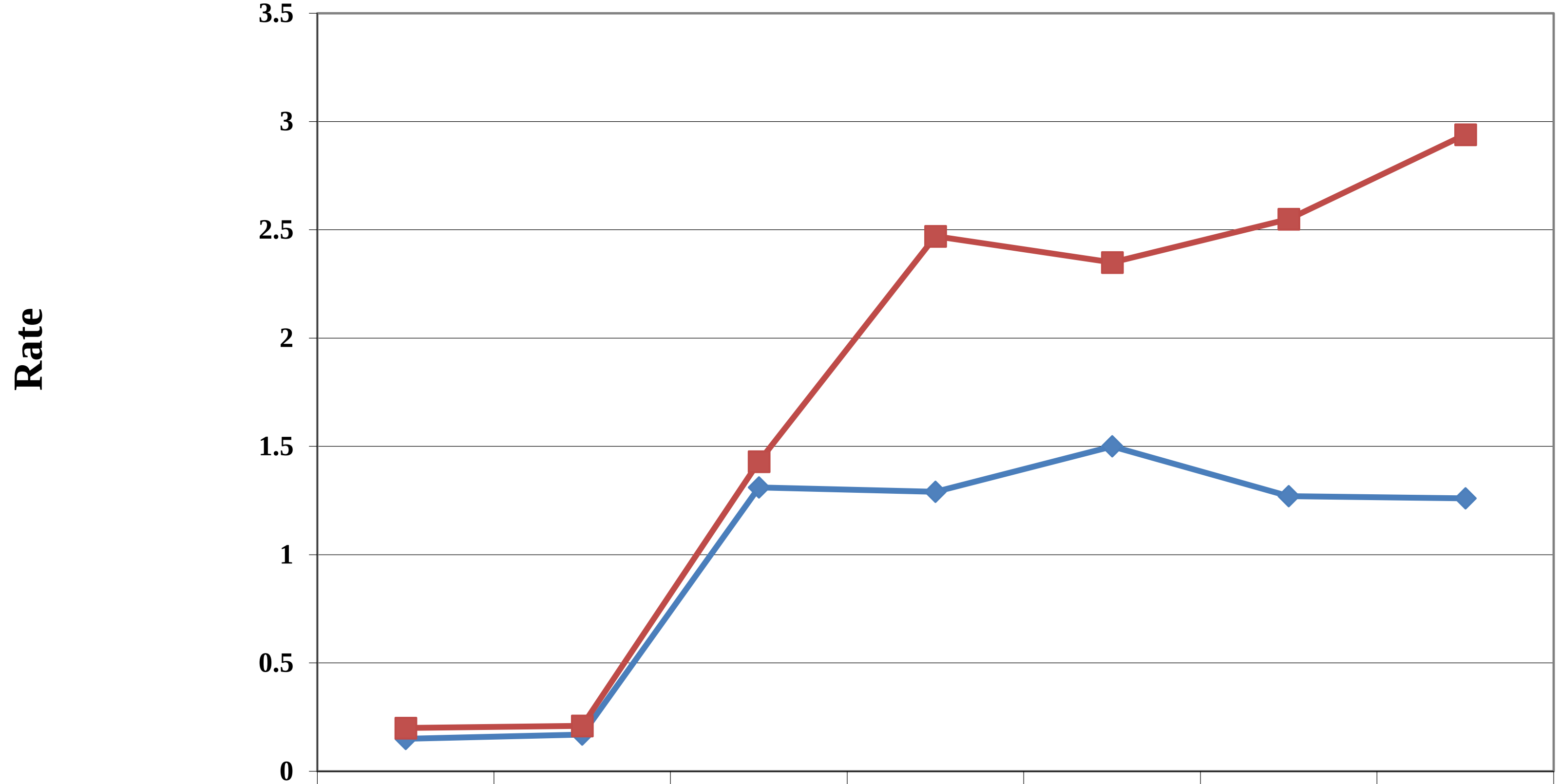
Residential Termination Rate - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	2.06	4.47	4.70	4.43	4.14	4.35	4.34
Gas-Excluding PGW	2.77	3.23	3.45	3.00	2.62	2.81	3.53
PGW	6.23	6.08	6.34	6.29	5.46	5.78	5.36
Gas-Including PGW	3.60	3.87	4.09	3.73	3.25	3.46	3.93

Electric Gas-Excluding PGW PGW Gas-Including PGW

Residential Termination Rate - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	0.15	0.17	1.31	1.29	1.5	1.27	1.26
All Class A	0.20	0.21	1.43	2.47	2.35	2.55	2.94

Other Class A All Class A

The following tables show confirmed low-income termination rates for electric and gas utilities from 2004 and 2013-2018. The confirmed low-income termination rate is calculated by dividing the number of confirmed low-income terminations by the total number of confirmed low-income customers.

Table 74 – Confirmed Low-Income Termination Rate – Electric (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	12.66	21.78	19.78	2.74	0.97	8.87	15.40
Met-Ed	6.82	19.46	20.07	20.01	20.23	18.30	18.35
PECO*	10.48	14.65	18.53	16.97	14.48	14.63	16.09
Penelec	6.63	14.94	15.10	15.80	16.14	14.66	13.88
Penn Power	5.84	14.45	14.02	14.56	14.29	12.61	12.10
PPL	4.34	15.58	22.84	19.09	18.69	16.90	14.45
West Penn	7.27	15.37	11.91	11.64	12.64	11.45	10.56
Average	**8.18**	**16.12**	**18.85**	**16.03**	**15.30**	**14.83**	**14.80**

*PECO statistics include electric and gas.

The confirmed low-income termination rate for the electric industry increased by 80.9% from 2004 as compared to 2018. Met-Ed and PPL showed the largest increases, with 169.1% and 237.9%, respectively. Duquesne and West Penn had the smallest increases in the confirmed low-income termination rate, with 21.6% and 45.3%, respectively.

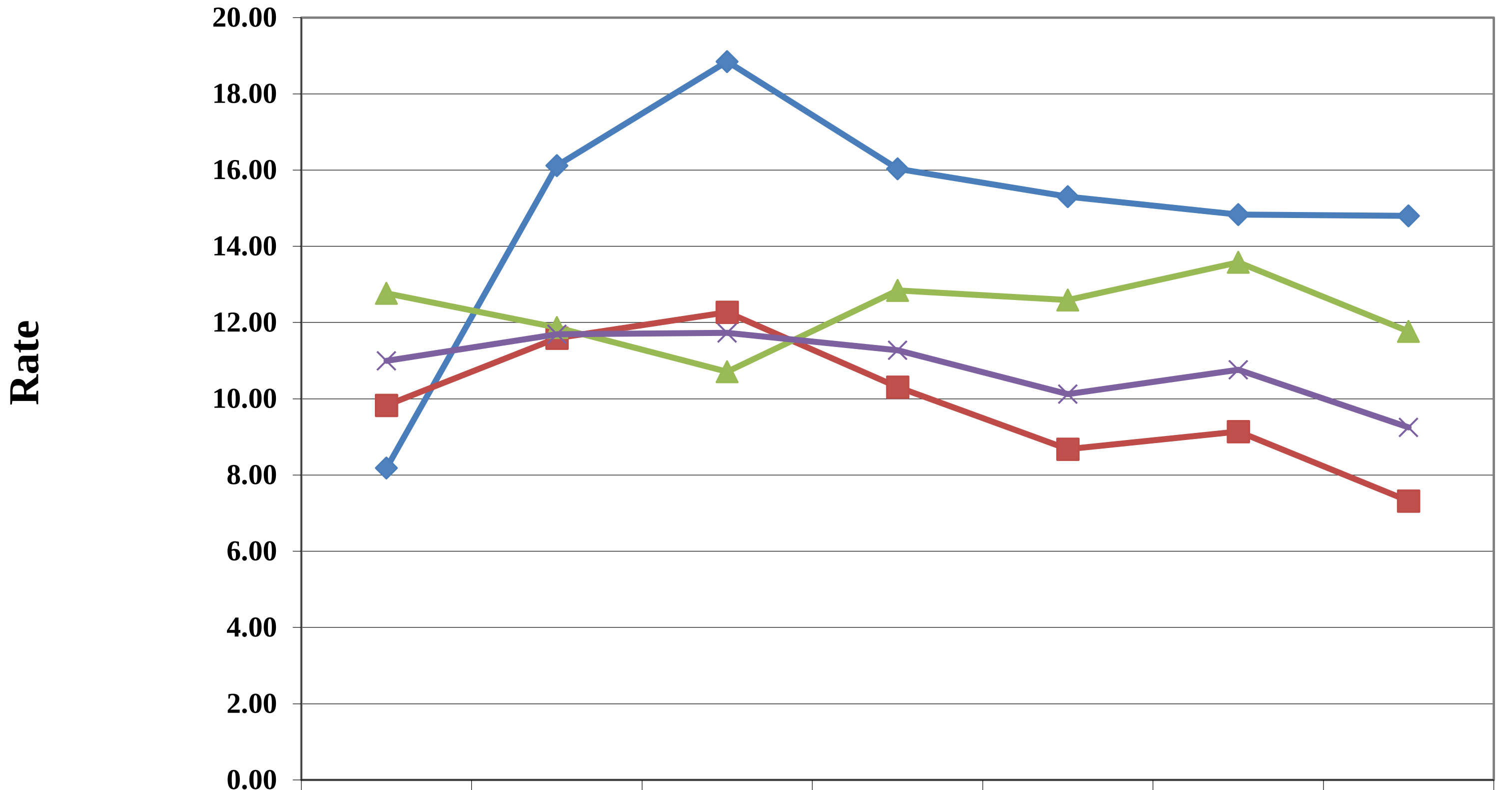
Table 75 – Confirmed Low-Income Termination Rate – Gas (shown as percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	6.37	10.38	9.66	10.89	8.84	9.45	9.34
NFG	17.80	19.00	20.25	18.69	3.31	14.97	16.55
Peoples	6.57	2.32	4.12*	3.44	3.28	4.22	5.53
Peoples-Equitable	12.17	12.68	11.03	1.46	2.52	3.13	7.85
UGI-Gas	15.07	16.87	19.26	18.04	22.52	16.86	1.70*
UGI Penn Natural	12.20	17.53	19.72	19.57	19.34	15.28	2.34*
Average w/out PGW	***9.83***	***11.59***	***12.27***	***10.31***	***8.68***	***9.14***	***7.32***
PGW	12.77	11.87	10.71	12.84	12.59	13.58	11.77
Average w/PGW	**11.00**	**11.69**	**11.73**	**11.27**	**10.12**	**10.76**	**9.25**

The confirmed low-income termination rate for the gas industry decreased by 15.9% from 2004 as compared to 2018. UGI-Gas and UGI Penn Natural showed the largest decreases, with 88.7% and 80.8%, respectively. NFG and PGW had the smallest decreases, with 7% and 7.8%, respectively. Columbia Gas was the only gas utility to show an increase in the confirmed low-income termination rate, by 46.6%.

The following graphs show the confirmed low-income termination rate for the electric and gas industries since 2004. The water industry does not report confirmed low-income data. The graphs provide a visual perspective to better recognize the industry trends. The confirmed low-income termination rate is calculated by dividing the number of confirmed low-income terminations by the total number of confirmed low-income customers.

Confirmed Low-Income Termination Rate - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	8.18	16.12	18.85	16.03	15.30	14.83	14.80
Gas-Excluding PGW	9.83	11.59	12.27	10.31	8.68	9.14	7.32
PGW	12.77	11.87	10.71	12.84	12.59	13.58	11.77
Gas-Including PGW	11.00	11.69	11.73	11.27	10.12	10.76	9.25

Electric Gas-Excluding PGW PGW Gas-Including PGW

Reconnection of service occurs when a customer pays his/her debt in full or makes a significant up-front payment and agrees to a payment arrangement for the balance owed to the utility. The following tables contain information on the number of residential reconnections for electric and gas utilities from 2004 and 2013-2018.

Table 76 – Residential Reconnections – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	6,182	20,355	18,523	10,578	8,710	14,961	19,522
Met-Ed	1,953	19,046	20,185	20,503	20,811	19,554	19,916
PECO*	35,469	61,858	67,343	67,000	70,228	74,421	71,705
Penelec	2,558	16,184	15,959	16,506	16,942	15,919	14,882
Penn Power	589	4,740	3,925	4,880	4,201	3,415	3,186
PPL	3,681	34,910	42,767	39,083	30,669	31,280	31,666
West Penn	6,084	11,089	9,472	9,732	11,744	10,783	10,104
Total	**56,516**	**168,182**	**178,174**	**168,282**	**163,305**	**170,333**	**170,981**

*PECO statistics include electric and gas.

Residential reconnections for the electric industry increased substantially, by 202.5% from 2004 as compared to 2018. Met-Ed and PPL showed the largest increases since 2004, with 919.8% and 760.3%, respectively. West Penn had the smallest increase in residential reconnections, with 66.1%.

Table 77 – Residential Reconnections – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	2,797	6,490	6,212	7,088	5,199	5,881	6,054
NFG	3,304	6,453	6,753	6,081	913	4,578	4,224
Peoples	2,320	5,426	5,210	5,597	5,081	5,884	6,658
Peoples-Equitable	1,964	6,453	5,620	2,361	4,006	5,171	6,055
UGI-Gas	2,819	4,332	5,240	5,559	7,556	4,816	10,806
UGI Penn Natural	3,131	3,483	4,008	4,222	4,318	2,799	5,539
Total w/out PGW	***16,335***	***32,637***	***33,043***	***30,908***	***27,073***	***29,129***	***39,336***
PGW	24,937	19,907	19,836	19,672	16,771	18,324	17,657
Total w/PGW	**41,272**	**52,544**	**52,879**	**50,580**	**43,844**	**47,453**	**56,993**

Residential reconnections for the gas industry increased 38.1%, from 2004 as compared to 2018. Peoples-Equitable and UGI-Gas showed the largest increases since 2004, with 208.3% and 283.3%, respectively. NFG and UGI Penn Natural had the smallest increases, with 27.8% and 76.9%, respectively. PGW is the only gas utility to show a decrease in residential reconnections since 2004, by 29.2%.

Table 78 – Residential Reconnections – Water

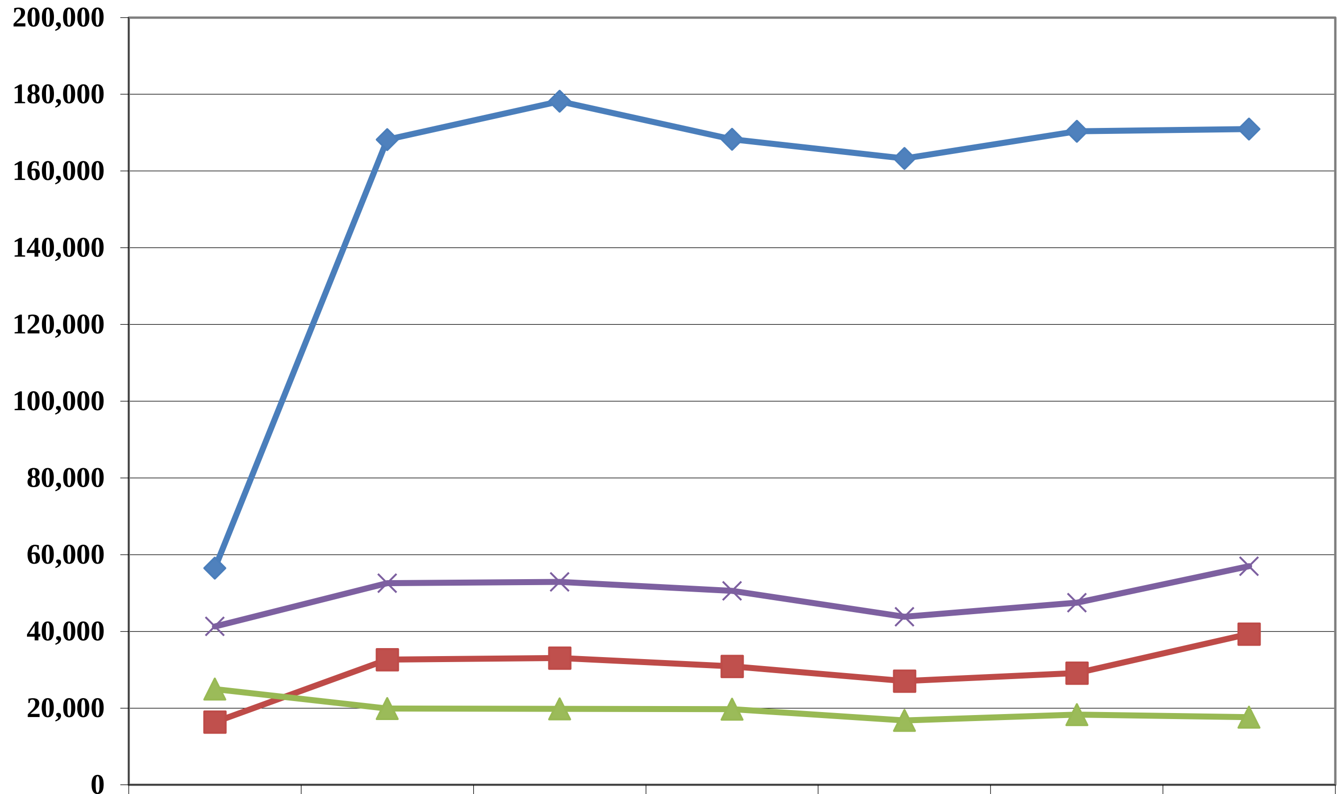
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	0	0	1	0	0	0	0
Columbia Water	8	6	70	85	118	137	167
Newtown Artesian	2	3	52	43	47	49	37
Superior*	1	0	2	1	N/A	N/A	N/A
SUEZ Bethel	1	0	0	0	0	0	0
SUEZ PA	62	99	256	283	467	364	177
York	42	54	634	698	820	585	763
Other Class A Total	***116***	***162***	***1,015***	***1,110***	***1,452***	***1,135***	***1,144***
Aqua	337	362	3,952	3,521	4,815	4,734	5,898
PAWC	1,173	1,194	4,899	16,850	15,601	18,947	20,974
Total	**1,626**	**1,718**	**9,866**	**21,481**	**21,868**	**24,816**	**28,016**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

Residential reconnections for the water industry have increased substantially, by 1,623% from 2012 as compared to 2018. Columbia Water and PAWC showed the largest increases, with 1,987.5% and 1,688.1%, respectively. SUEZ PA had the smallest increase, by 185.5%.

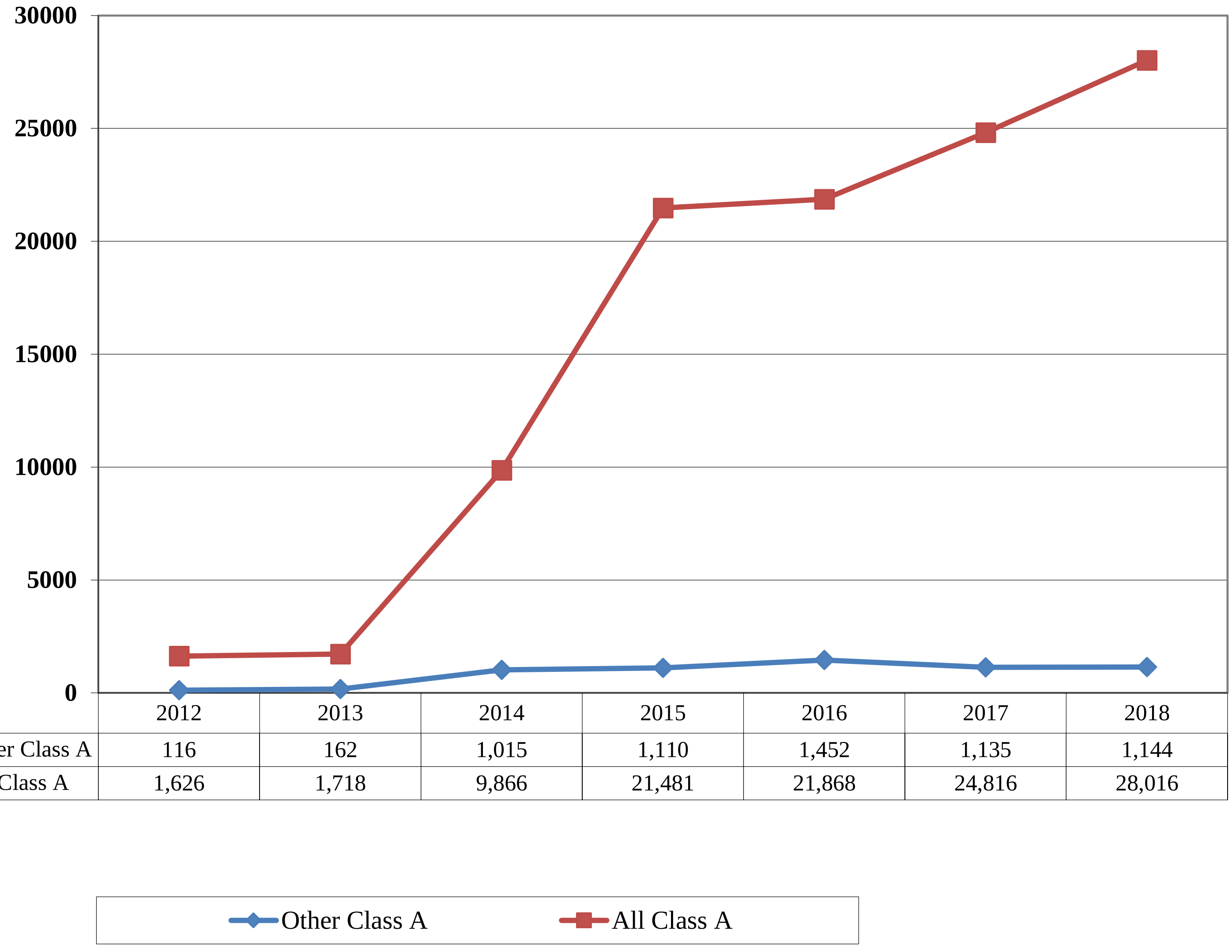
The following graphs show the residential reconnections for the electric and gas industries since 2004. The water industry is shown separately, since reporting did not begin until 2012. The graphs provide a visual perspective to better recognize the industry trends. Reconnection of service occurs when a customer pays his/her debt in full or makes a significant up-front payment and agrees to a payment arrangement for the balance owed to the utility.

Residential Reconnections



	2004	2013	2014	2015	2016	2017	2018
Electric	56,516	168,182	178,174	168,282	163,305	170,333	170,981
Gas-Excluding PGW	16,335	32,637	33,043	30,908	27,073	29,129	39,336
PGW	24,937	19,907	19,836	19,672	16,771	18,324	17,657
Gas-Including PGW	41,272	52,544	52,879	50,580	43,844	47,453	56,993

Residential Reconnections - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	116	162	1,015	1,110	1,452	1,135	1,144
All Class A	1,626	1,718	9,866	21,481	21,868	24,816	28,016

Reconnection of service occurs when a customer pays his/her debt in full or makes a significant up-front payment and agrees to a payment arrangement for the balance owed to the utility. The following tables contain information on the number of confirmed low-income reconnections for electric and gas utilities from 2004 and 2013-2018.

Table 79 – Confirmed Low-Income Reconnections – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	3,151	9,932	11,208	1,150	336	3,233	5,875
Met-Ed	978	8,273	8,964	9,264	10,110	9,461	9,931
PECO*	14,457	26,600	31,350	28,155	24,282	23,099	24,464
Penelec	1,562	8,020	8,217	8,595	9,266	8,898	8,567
Penn Power	381	2,048	1,900	2,124	2,041	1,660	1,620
PPL	2,432	21,849	26,429	23,877	19,365	21,207	20,351
West Penn	1,071	4,568	4,135	4,381	5,643	5,098	5,056
Total	**24,032**	**81,290**	**92,203**	**77,546**	**71,043**	**72,656**	**75,864**

*PECO statistics include electric and gas.

Confirmed low-income reconnections for the electric industry increased overall by 215.7% from 2004 as compared to 2018. Met-Ed and PPL showed the largest increases, with 915.4% and 736.8%, respectively. PECO had the smallest increase, at 69.2%.

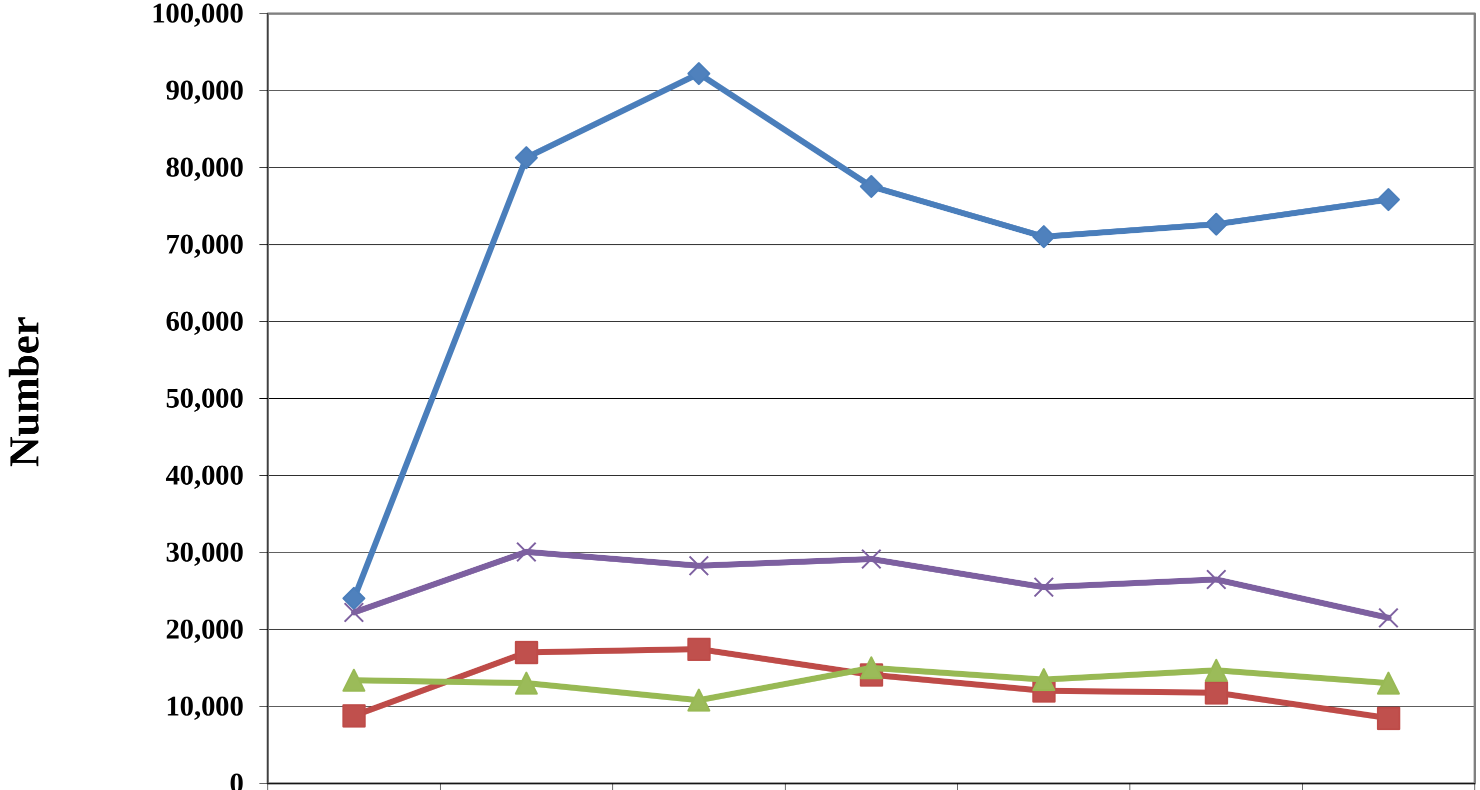
Table 80 – Confirmed Low-Income Reconnections – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	1,503	3,245	3,223	3,731	2,753	3,123	3,133
NFG	2,004	3,908	4,012	3,616	435	2,137	1,783
Peoples	1,478	1,031	1,354	1,453	1,321	1,528	1,145
Peoples-Equitable	1,123	3,969	3,321	453	720	929	1,181
UGI-Gas	908	2,832	3,242	2,771	4,362	2,511	691
UGI Penn Natural	1,796	2,051	2,300	2,098	2,430	1,566	548
Total w/out PGW	***8,812***	***17,036***	***17,452***	***14,122***	***12,021***	***11,794***	***8,481***
PGW	13,391	13,043	10,815	15,010	13,492	14,702	13,040
Total w/PGW	**22,203**	**30,079**	**28,267**	**29,132**	**25,513**	**26,496**	**21,521**

Confirmed low-income reconnections for the gas industry decreased by 3.1% from 2004 as compared to 2018. UGI Penn Natural showed the largest decrease since 2004, with 69.5%. Columbia Gas and Peoples-Equitable were the only gas utilities to show increases in confirmed low-income reconnections, with 108.4% and 5.2%, respectively.

The following graphs show the confirmed low-income reconnections for the electric and gas industries since 2004. The water industry does not report confirmed low-income data. The graphs provide a visual perspective to better recognize the industry trends. Reconnection of service occurs when a customer pays his/her debt in full or makes a significant up-front payment and agrees to a payment arrangement for the balance owed to the utility.

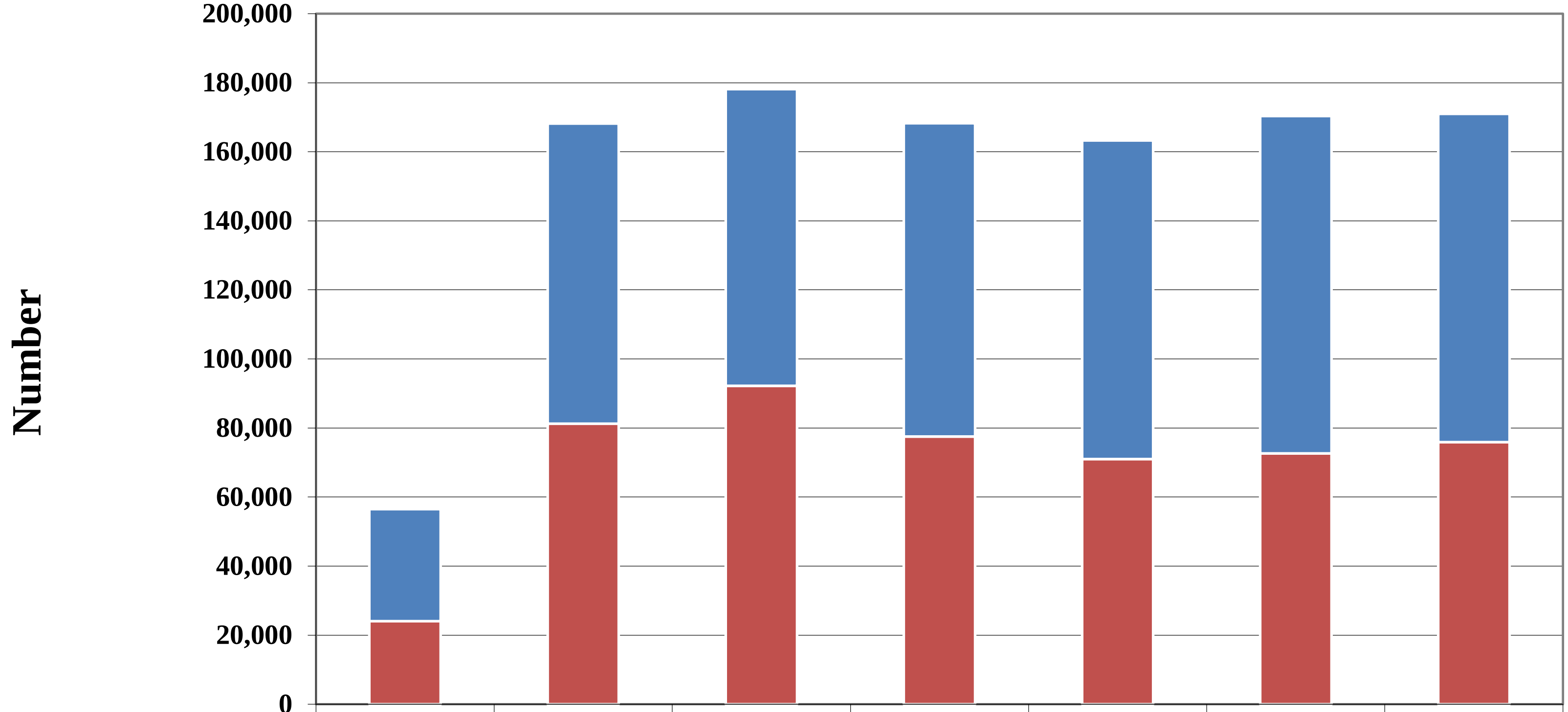
Confirmed Low-Income Reconnections - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	24,032	81,290	92,203	77,546	71,043	72,656	75,864
Gas-Excluding PGW	8,812	17,036	17,452	14,122	12,021	11,794	8,481
PGW	13,391	13,043	10,815	15,010	13,492	14,702	13,040
Gas-Including PGW	22,203	30,079	28,267	29,132	25,513	26,496	21,521

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

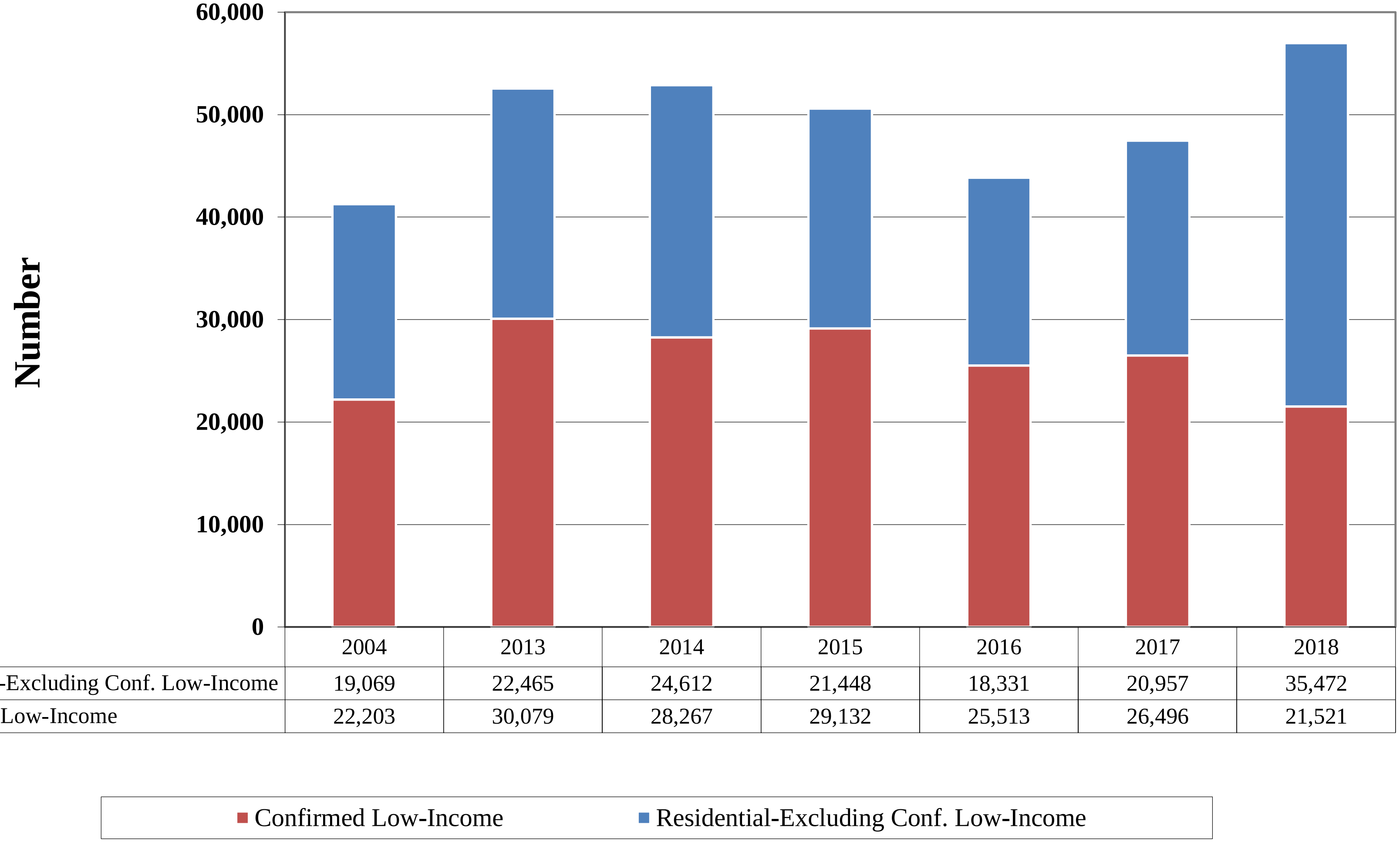
Total Number of Reconnections - Electric
(Residential + Confirmed Low-Income)



	2004	2013	2014	2015	2016	2017	2018
Residential-Excluding Conf. Low-Income	32,484	86,892	85,971	90,736	92,262	97,677	95,117
Confirmed Low-Income	24,032	81,290	92,203	77,546	71,043	72,656	75,864

Confirmed Low-Income Residential-Excluding Conf. Low-Income

Total Number of Reconnections - Gas (including PGW) (Residential + Confirmed Low-Income)



	2004	2013	2014	2015	2016	2017	2018
Residential-Excluding Conf. Low-Income	19,069	22,465	24,612	21,448	18,331	20,957	35,472
Confirmed Low-Income	22,203	30,079	28,267	29,132	25,513	26,496	21,521

The following tables show the residential reconnection ratios of electric and gas utilities from 2004 and 2013-2018. The reconnect ratio is calculated by dividing the number of residential reconnections by the number of residential terminations in a calendar year.

Table 81 – Residential Reconnect Ratio – Electric (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	57.81	79.36	77.65	63.72	68.44	68.70	74.74
Met-Ed	43.34	80.46	80.51	81.57	82.34	82.14	82.62
PECO*	64.37	73.44	75.11	76.88	81.72	82.56	83.78
Penelec	43.50	78.78	77.26	76.49	76.59	75.64	74.60
Penn Power	40.73	94.82	87.57	98.57	90.32	78.33	77.92
PPL	40.62	73.10	75.32	74.83	75.08	74.10	68.54
West Penn	50.67	79.75	78.07	77.54	78.94	75.96	74.41
Average	**57.26**	**76.18**	**76.59**	**76.43**	**79.11**	**78.24**	**78.29**

*PECO statistics include electric and gas.

The residential reconnect ratio for the electric industry increased by 36.7% from 2004 as compared to 2018. Met-Ed and Penn Power showed the largest increases since 2004, with 90.6% and 91.3%, respectively. Duquesne and PECO had the smallest increases, at 29.3% and 30.2%, respectively.

Table 82 – Residential Reconnect Ratio – Gas (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	37.07	53.95	55.21	55.97	52.28	54.79	55.75
NFG	44.52	67.39	67.92	67.38	64.21	83.39	65.50
Peoples	38.32	75.06	55.21	70.90	67.42	60.39	73.16
Peoples-Equitable	27.97	75.86	73.88	66.28	68.54	66.66	71.39
UGI-Gas	31.64	47.73	47.00	57.56	62.81	56.13	67.86
UGI Penn Natural	60.57	56.05	55.34	61.82	63.26	57.83	67.20
Average w/out PGW	***38.78***	***62.02***	***58.35***	***62.27***	***62.09***	***61.79***	***66.61***
PGW	83.98	71.01	66.63	66.45	64.99	66.77	69.04
Average w/PGW	**57.47**	**64.77**	**61.20**	**63.84**	**63.17**	**63.62**	**67.34**

The residential reconnect ratio for the gas industry increased by 17.2% from 2004 as compared to 2018. Peoples-Equitable and UGI-Gas showed the largest increases, with 155.2% and 114.5%, respectively. UGI Penn Natural had the smallest increase at 10.9%. PGW was the only gas utility to show a decrease in the residential reconnect ratio since 2004, by 17.8%.

Table 83 – Residential Reconnect Ratio – Water (shown as a percentage)

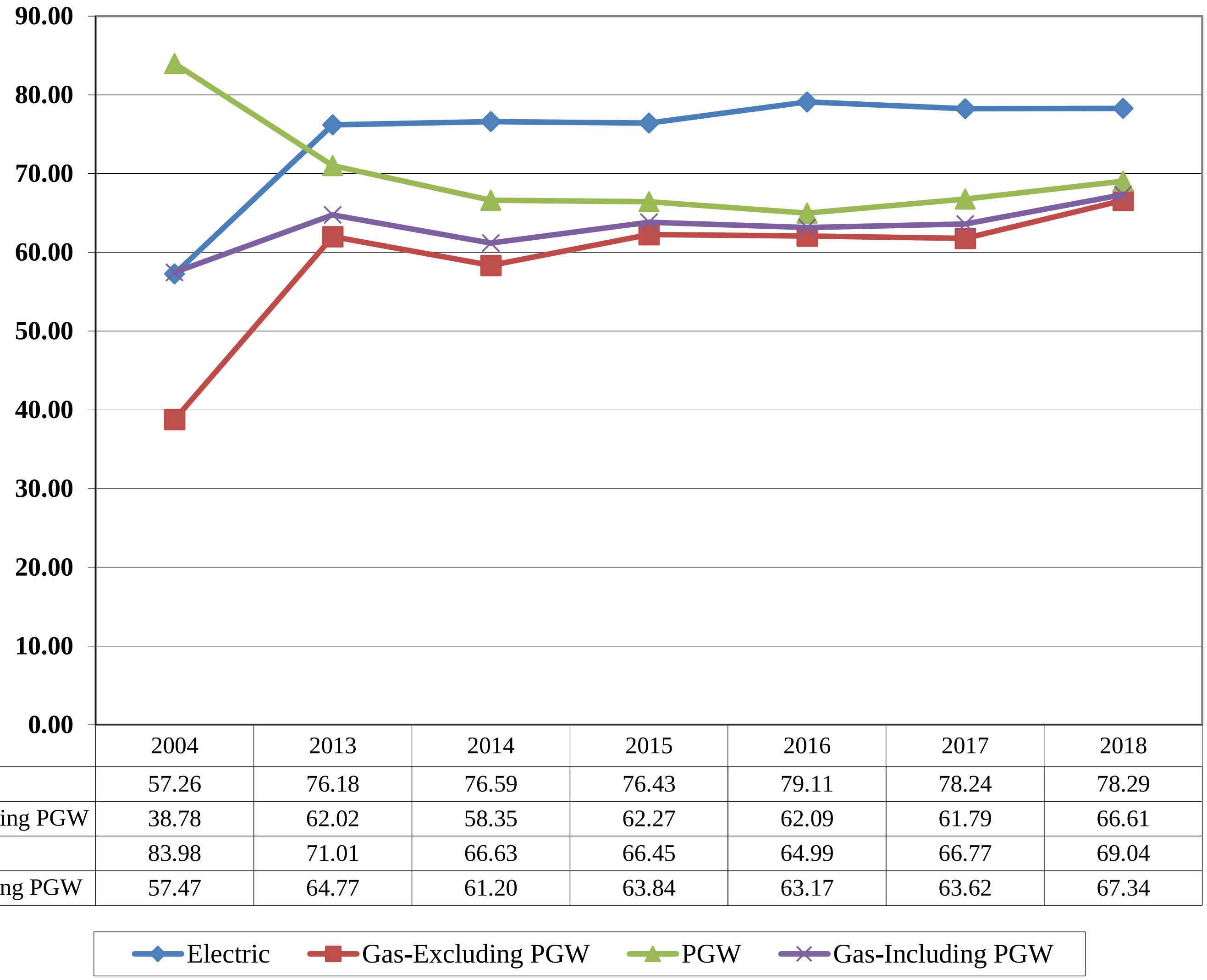
Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	0.00	0.00	33.33	0.00	0.00	0.00	0.00
Columbia Water	66.67	60.00	56.00	64.39	64.48	69.54	69.29
Newtown Artesian	66.67	100.00	89.66	81.13	94.00	79.03	86.05
Superior*	100.00	0.00	28.57	10.00	N/A	N/A	N/A
SUEZ Bethel	100.00	0.00	0.00	0.00	0.00	0.00	0.00
SUEZ PA	74.70	90.00	68.09	66.12	64.41	72.65	47.58
York	42.86	48.21	51.25	58.56	73.67	61.39	68.06
Other Class A Average	***58.59***	***68.35***	***56.20***	***61.06***	***70.11***	***66.26***	***64.38***
Aqua	60.61	58.29	64.67	66.51	71.49	80.07	79.54
PAWC	78.46	79.34	60.03	81.20	87.67	88.23	84.93
Average	**72.30**	**72.70**	**61.36**	**77.10**	**82.20**	**85.28**	**82.67**

* Effective Jan. 1, 2016, Superior was acquired by Aqua. All data were filed under Aqua from 2016 forward.

The residential reconnect ratio for the water industry increased by 14.3% from 2012 as compared to 2018. York showed the largest increase, at 58.8%. SUEZ PA was the only water utility to show a decrease in the residential reconnect ratio since 2012, by 36.3 percent.

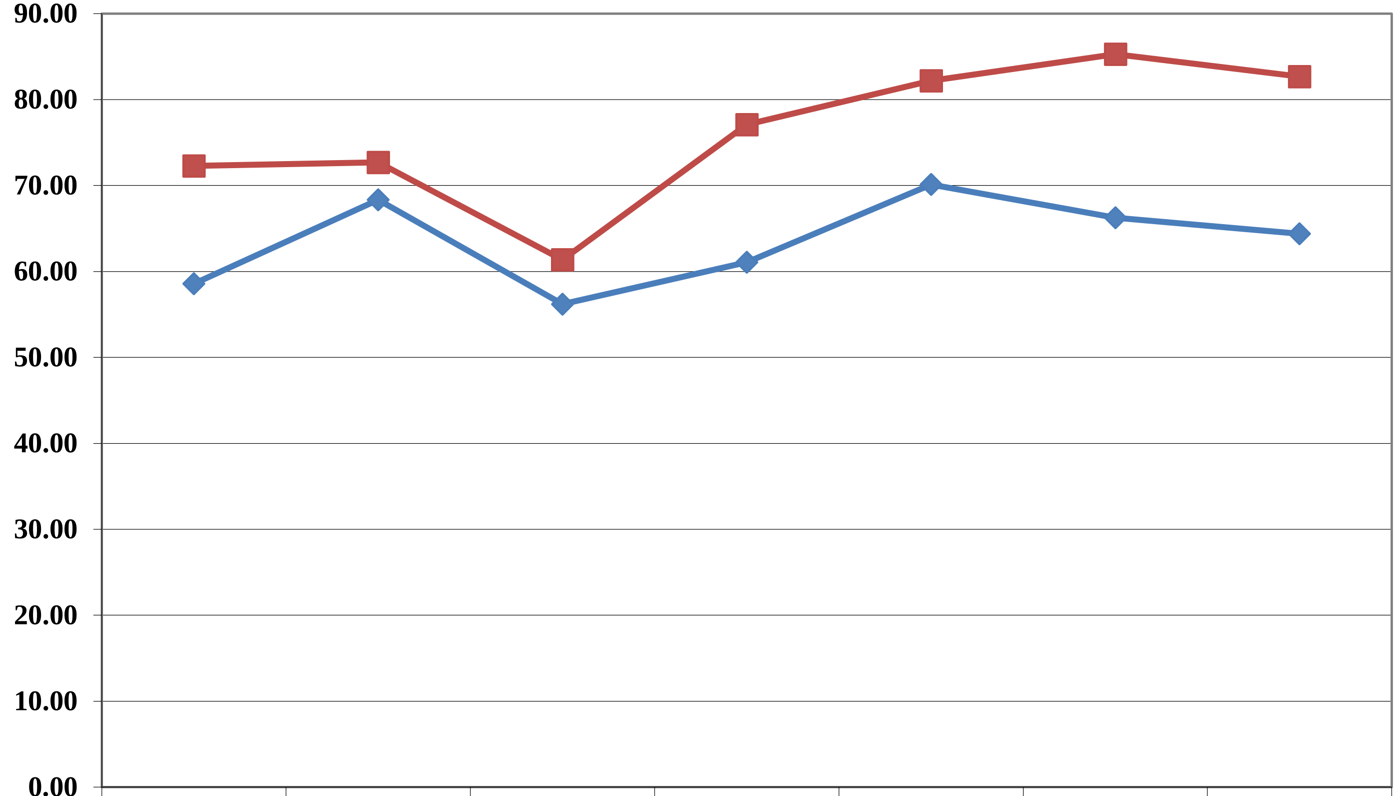
The following graphs show the residential reconnect ratios for the electric and gas industries since 2004. The water industry is shown separately, since reporting did not begin until 2012. The graphs provide a visual perspective to better recognize the industry trends. The reconnect ratio is calculated by dividing the number of residential reconnections by the number of residential terminations in a calendar year.

Residential Reconnect Ratio - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	57.26	76.18	76.59	76.43	79.11	78.24	78.29
Gas-Excluding PGW	38.78	62.02	58.35	62.27	62.09	61.79	66.61
PGW	83.98	71.01	66.63	66.45	64.99	66.77	69.04
Gas-Including PGW	57.47	64.77	61.20	63.84	63.17	63.62	67.34

Residential Reconnect Ratio - Water



	2012	2013	2014	2015	2016	2017	2018
Other Class A	58.59	68.35	56.20	61.06	70.11	66.26	64.38
All Class A	72.30	72.70	61.36	77.10	82.20	85.28	82.67

Other Class A   All Class A

The following tables show the confirmed low-income reconnection ratios of electric and gas utilities from 2004 and 2013-2018. The confirmed low-income reconnect ratio is calculated by dividing the number of confirmed low-income reconnections by the number of confirmed low-income terminations in a calendar year.

Table 84 – Confirmed Low-Income Reconnect Ratio – Electric (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	76.69	78.38	96.36	81.56	76.71	75.17	77.30
Met-Ed	45.94	68.95	70.48	70.76	74.13	74.09	74.97
PECO*	66.08	92.94	81.83	80.31	83.18	85.98	88.49
Penelec	47.23	68.71	67.99	66.42	67.98	68.92	68.20
Penn Power	44.46	76.56	72.80	77.41	73.84	66.83	66.64
PPL	48.51	84.20	67.59	71.95	58.55	69.04	74.18
West Penn	48.81	66.02	66.53	64.24	69.75	64.86	66.26
Average	**60.86**	**80.88**	**75.16**	**73.68**	**70.46**	**74.21**	**76.98**

*PECO statistics include electric and gas.

The confirmed low-income reconnect ratio for the electric industry increased by 26.5% from 2004 as compared to 2018. Met-Ed and PPL showed the largest increases with 63.4% and 52.9%, respectively. Duquesne had the smallest increase in the confirmed low-income reconnect ratio since 2004, by 0.8%.

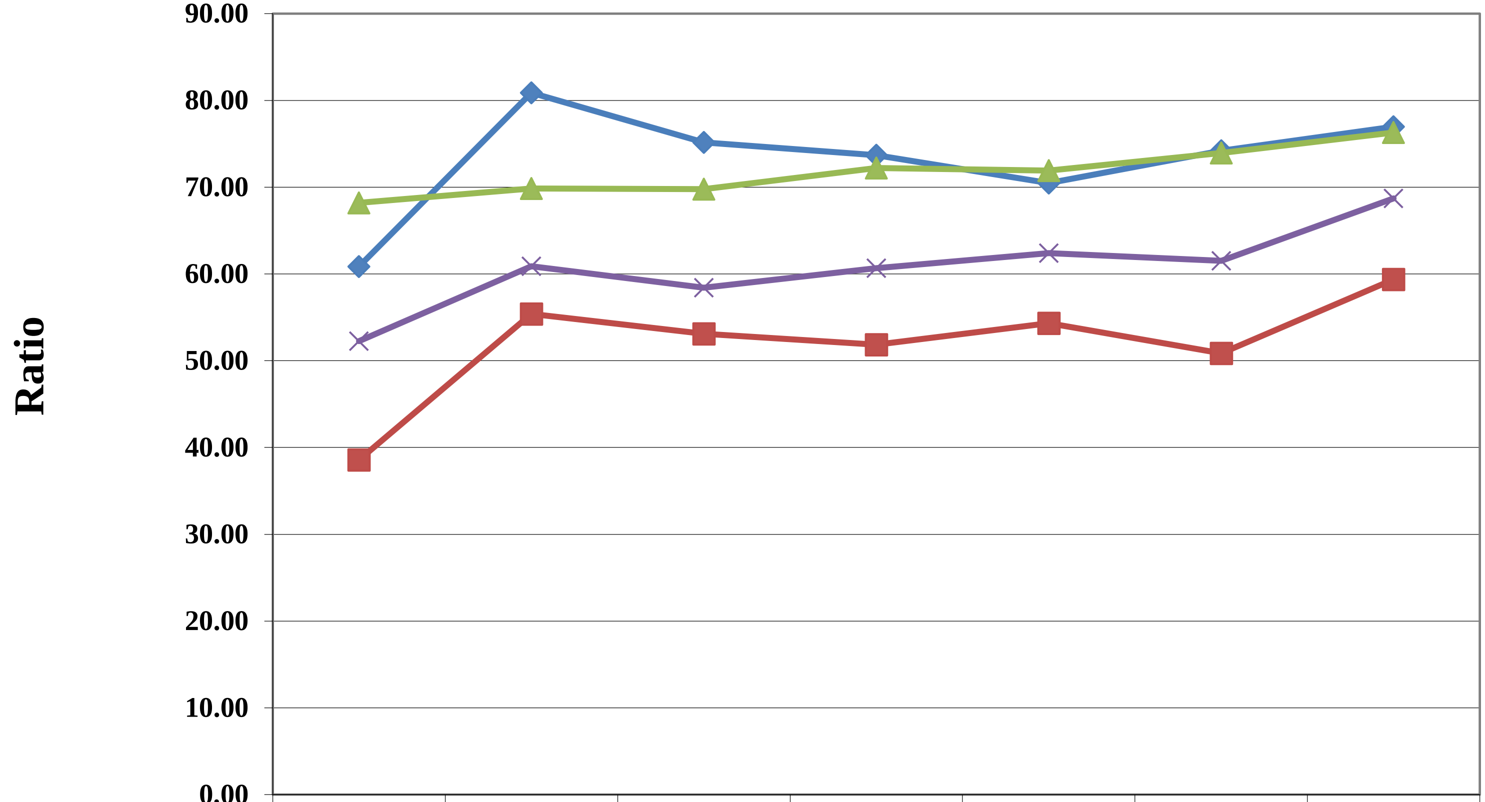
Table 85 – Confirmed Low-Income Reconnect Ratio – Gas (shown as a percentage)

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	33.7	46.16	48.76	49.76	45.66	48.61	49.62
NFG	46.0	69.29	68.88	69.27	50.52	55.72	48.06
Peoples	37.6	75.09	55.20	70.81	67.43	60.28	73.68
Peoples-Equitable	28.5	72.47	69.81	70.45	65.10	66.50	73.72
UGI-Gas	29.3	42.43	40.43	39.91	56.53	44.45	116.53
UGI Penn Natural	58.5	45.06	44.13	42.97	54.50	46.65	106.82
Average w/out PGW	***38.57***	***55.41***	***53.09***	***51.84***	***54.32***	***50.84***	***59.37***
PGW	68.20	69.85	69.76	72.21	71.93	73.93	76.30
Average w/PGW	**52.26**	**60.87**	**58.43**	**60.66**	**62.40**	**61.50**	**68.71**

The confirmed low-income reconnection ratio for the gas industry increased by 31.5% from 2004 as compared to 2018. Peoples-Equitable and UGI-Gas showed the largest increases, with 158.7% and 297.7%, respectively. NFG and PGW had the smallest increases in the confirmed low-income reconnect ratio since 2004, with 4.5% and 11.9%, respectively.

The following graphs show the confirmed low-income reconnect ratios for the electric and gas industries since 2004. The water industry does not report confirmed low-income data. The graphs provide a visual perspective to better recognize the industry trends. The confirmed low-income reconnect ratio is calculated by dividing the number of confirmed low-income reconnections by the number of confirmed low-income terminations in a calendar year.

Confirmed Low-Income Reconnect Ratio - Electric & Gas



	2004	2013	2014	2015	2016	2017	2018
Electric	60.86	80.88	75.16	73.68	70.46	74.21	76.98
Gas-Excluding PGW	38.57	55.41	53.09	51.84	54.32	50.84	59.37
PGW	68.20	69.85	69.76	72.21	71.93	73.93	76.30
Gas-Including PGW	52.26	60.87	58.43	60.66	62.4	61.5	68.71

Electric   Gas-Excluding PGW   PGW   Gas-Including PGW

Cold Weather Survey (CWS)

Every December, the Commission releases its CWS results, which assess the number of households without heat-related service entering the winter months. As part of the survey, the Commission requires natural gas and electric utilities under its jurisdiction to survey residential properties where service has been terminated during that calendar year. Utilities attempt contact through mail, telephone calls, and in-person visits to the homes. In the pre-Chapter 14 period of 2001-2004, an average of 14,806 households entered the winter heating season without heat-related utility service. This number peaked in 2014 at a record high 25,172 households. In 2018, there were 17,481 households without heat-related utility service. It is important to note that some households may be without both electric and natural gas service, resulting in a double counting of some households.

Homes using potentially unsafe heating sources are also counted because the home is not relying on a central heating system. According to the National Fire Protection Association, potentially unsafe sources of heat include kerosene heaters, kitchen stoves or ovens, electric space heaters, fireplaces, and connecting extension cords to neighbors' homes. According to the 2018 survey, 1,060 residences were using potentially unsafe heating sources, bringing the total number of homes not using a central heating system to 18,541. The total number of homes not using a central heating system continues to be considerably higher than the pre-Chapter 14 average of 14,806.

The 2018 survey results also show that as of Dec. 17, 2018:

- 5,454 residential households were without electric service and 199 households are heating with potentially unsafe heating sources. The total electric residences without safe heating are 5,653.

- 12,027 residential households that heat with natural gas are without service and 861 households are heating with potentially unsafe heating sources. The total natural gas residences without safe heating are 12,888.

- PGW reported that 7,777 households that heat with natural gas are without service - the highest number of all utilities. A total of 11,782 or 64% of the total off accounts that have no service live in the Philadelphia area.

The Commission urges customers to call their utility first and then the Commission for help in getting their service restored.

The CWS charts that follow show the number of residential properties without service for each of the major, regulated electric and natural gas distribution utilities in the Commonwealth. The charts show only post-Chapter 14 results, which include the average of the years 2013-2016 and individual results for 2017 and 2018. The years 2017 and 2018, as shown in Tables 36 and 37, represent the two most recent years of available data.

Table 86

4-Year Average, 2017 & 2018 Cold Weather Survey Results – Electric

Survey Outcome	Duquesne	Met-Ed	PECO	Penelec	Penn Power	PPL	UGI-Electric	West Penn	Total	Percent Change from Avg. of 2013-2016 to 2017	Percent Change from Avg. of 2013-2016 to 2018	Percent Change 2017 to 2018
Total Vacant Residences												
Avg. of 2013-2016	1,226	1,462	2,603	1,629	400	4,186	70	1,180	12,756			
2017	1,280	762	2,211	1,757	445	3,312	40	1,366	11,173	-12%		
2018	1,666	758	2,037	1,354	438	2,947	14	1,128	10,342		-19%	-7%
Total Households Using Potentially Unsafe Heating Sources												
Avg. of 2013-2016	3	10	233	10	3	1	3	5	268			
2017	1	8	253	13	7	0	0	12	294	10%		
2018	2	3	190	1	0	0	1	2	199		-26%	-32%
Total Households Without Service After Completion of the Survey (Excludes Households Using Potentially Unsafe Heating Sources, Other Central Heating Sources and Vacant)												
Avg. of 2013-2016	671	594	5,056	695	139	5	127	425	7,712			
2017	364	316	4,187	536	115	16	66	457	6,057	-21%		
2018	372	296	3,815	444	89	113	31	294	5,454		-29%	-10%
Total Households Without a Central Heating Source Due to Termination of Utility Service (Includes Households Using Potentially Unsafe Heating Sources and Excludes Other Central Heating Sources and Vacant Residences)												
Avg. of 2013-2016	674	604	5,289	705	142	6	130	430	7,980			
2017	365	324	4,440	549	122	16	66	469	6,351	-20%		
2018	374	299	4,005	445	89	113	32	296	5,653		-29%	-11%

*PECO statistics include electric and gas.

Table 87

4-Year Average, 2017 & 2018 Cold Weather Survey Results – Gas

Survey Outcome	Columbia Gas	NFG	Peoples	Peoples Equitable	Peoples Gas (FKA TWP)	PGW	UGI Central Penn	UGI-Gas	UGI Penn Natural	Total	Percent Change from Avg. of 2013-2016 to 2017	Percent Change from Avg. of 2013-2016 to 2018	Percent Change 2017 to 2018
Total Vacant Residences													
Avg. of 2013-2016	960	544	735	422	129	1,940	165	518	273	5,686			
2017	821	696	588	397	124	832	148	297	193	4,096	-28%		
2018	773	548	680	510	29	228	163	377	256	3,564		-37%	-13%
Total Households Using Potentially Unsafe Heating Sources													
Avg. of 2013-2016	342	222	107	151	35	214	81	214	113	1,479			
2017	210	212	50	68	20	105	40	83	31	819	-45%		
2018	233	219	69	71	2	55	52	81	79	861		-42%	5%
Total Households Without Service After Completion of the Survey (Excludes Households Using Potentially Unsafe Heating Sources, Other Central Heating Sources and Vacant)													
Avg. of 2013-2016	707	312	811	692	148	9,260	260	953	619	13,762			
2017	618	295	789	580	182	8,656	183	553	269	12,125	-12%		
2018	580	263	906	761	27	7,722	248	1,012	508	12,027		-13%	-1%
Total Households Without a Central Heating Source Due to Termination of Utility Service (Includes Households Using Potentially Unsafe Heating Sources and Excludes Other Central Heating Sources and Vacant Residences)													
Avg. of 2013-2016	1,049	534	918	843	183	9,474	341	1,167	732	15,241			
2017	828	507	839	648	202	8,761	223	636	300	12,944	-15%		
2018	813	482	975	832	29	7,777	300	1,093	587	12,888		-15%	0%

Media Reported Incidents Related to Lack of Utility Service

Historically, through media reports, when alerted to a possible utility-related tragedy, the Commission investigates the incident by contacting the utilities involved, and, if necessary, health and safety officials in the municipality. If it appears that a lack of utility service was involved, staff initiates a preliminary investigation into possible compliance issues. If possible compliance issues are identified, staff refers the matter to the appropriate bureau for possible enforcement action. The Commission tracks the incidents as well as subsequent informal and formal investigations and settlements or other outcomes.

To make the investigating and reporting of these incidents more consistent and comprehensive, on Jan. 16, 2009, the Commission issued a Secretarial Letter instituting an interim reporting requirement. Electric and gas utilities were directed to report to the Commission when, in the normal course of business, they become aware of a household fire, incident of hypothermia, carbon monoxide poisoning or another event that resulted in a death at a residence where the utility service was off at the time of the event. Additionally, the Commission's revisions to the Chapter 56 regulations[11] require utilities to report to the Commission anytime they become aware of a death at a residence lacking utility service.

Conclusion: Section III – The Level of Access to Utility Services by Residential Customers, Including Low-Income Customers

The CWS is used as a snapshot of access to utility service at the end of the calendar year. As of Dec. 17, 2018, the utilities reported that 18,541 households entered the winter season without heat-related utility service. This total is 12% lower than the 2005[12] level, which was 21,063 households. Those figures include homes that are using potentially unsafe heating sources.

Terminations increased by 121.3% for the electric industry and 18.9% for the natural gas industry from 2004 as compared to 2018, with Met-Ed and UGI Gas reporting the largest increases of 434.8% and 78.7% respectively. Terminations increased by 1,406.8% for the water industry from 2012 as compared to 2018.[13] The number of 10-day termination notices issued increased by 16.1% for electric from 2004 as compared to 2018, with the largest increase reported by Met-Ed at 89.3%. Gas utilities reported a decrease of 42.4% in the number of 10-day termination notices issued from 2004 as compared to 2018, with the greatest decrease reported by PGW at 67.2%. Confirmed low-income terminations showed an increase of 149.6% for electric and a decrease of 25% for gas from 2004 as compared to 2018.

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[11] 52 Pa. Code § 56.100(j).

[12] 2005 was the first full year of Cold Weather Survey reporting after the implementation of Chapter 14.

[13] The termination rate for the water industry increased from 0.20 percent in 2012 to 2.94 percent in 2018 but is still below the 2018 termination rates of 3.97 percent and 3.93 percent for electric and natural gas.

Reconnections increased by 202.5% for the electric industry and by 38.1% for the natural gas industry from 2004 as compared to 2018, with the largest increase reported by Met-Ed at 919.8% and UGI-Gas at 283.3%, respectively. For the water industry, reconnections increased by 1,623.0% from 2012 as compared to 2018. Confirmed low-income reconnections showed an increase of 215.7% for electric and a decrease of 3.1% for gas from 2004 as compared to 2018. The corresponding increase in reconnections shows an increase in customers' ability to maintain reasonable access to utility service. Overall analysis of these results may indicate that fewer Pennsylvanians are without electric and gas service since the passage of Chapter 14.

Low-income consumers in CAP who pay bills and avoid termination represent the success of the safety net in place for our poorest customers. Thus, it is essential that utilities design CAP programs to be reasonably affordable. The Commission will examine and focus on CAP affordability on a case-by-case basis as utilities submit their universal service and energy conservation plans to the Commission for approval.[14]

Lastly, the Commission continues to promote energy efficiency and conservation education through programs such as LIURP, which not only provides weatherization services, but also emphasizes customer responsibility as a tool for maintaining access to utility service. Through increased efforts by utilities to coordinate weatherization across multiple programs and agencies, a unique opportunity is emerging to address a residence as a whole to reduce utility usage and remedy many of the barriers that contribute to higher termination rates.

[14] In 2017, the Commission initiated separate proceedings at Docket Nos. M-2017-2587711 and M-2017-2596907 to investigate energy affordability for low-income customers and review universal service programs, respectively. These proceedings resulted in amendments to the CAP Policy Statement in an Order entered on Nov. 5, 2019, at Docket No. M-2019-3012599. The amended CAP Policy Statement, among other things, reduced the maximum energy burden levels for CAP customers to 6% for customers at or below 50% of the FPIG and 10% for all other participating customers.

Section IV - The Effect Upon the Level of Consumer Complaints and Payment Arrangements[15] (PARs) Filed with and Adjudicated by the Commission

Generally, customer contacts to BCS fall into three categories: consumer complaints, PARs, and inquiries. BCS classifies contacts regarding complaints about utilities' actions - including those related to billing, service delivery and repairs - as consumer complaints. Contacts involving payment negotiations for unpaid utility service are PARs. Consumer complaints and PARs are collectively known as informal complaints. Inquiries include contacts to BCS that do not require follow-up investigation. These contacts include informational requests and opinions from consumers. Additionally, BCS classifies informal complaints that are resolved on the first call as "inquiries" for the purpose of storing them in its complaint information systems. Since the passage of Chapter 14, PARs that are ineligible for BCS assistance per Sections 1405(c) and 1405(d), payment arrangement requests from active CAP customers, customers who owe CAP arrears, and customers who have not satisfied a previous Commission-established payment arrangement are also categorized as inquiries.

This section of this report includes a comparison of the number of consumer complaints and PARs received pre-Chapter 14 (2004) versus post-Chapter 14 (2013-2018). This report also includes data on the number of non-CAP customers denied a PAR by the Commission for eligibility or other reasons. The data show that the number of PARs received has decreased since the passage of Chapter 14. Data in this section are derived from the Commission's Consumer Service Information System (CSIS) through a contract with the Pennsylvania State University. This system enables BCS to aggregate and analyze the thousands of informal complaints that are reported to the Commission each year.

Consumer Complaints

The following represents the number of residential consumer complaints to BCS for 2004 and 2013-2018. As shown by the table, the number of residential customer complaints investigated by BCS since the passage of Chapter 14 has declined for the gas and water but increased for electric. This chart does not include complaints resolved on the first call from 2013 forward, which are now coded as "inquiries."

[15] In Section 1415 payment arrangement requests are termed as "Mediations."

Table 88 – Consumer Complaints

	2004	2013	2014	2015	2016	2017	2018
Electric	5,330	4,955	7,101	4,714	4,737	6,452	7,293
Gas	5,992	2,165	2,586	1,656	1,494	2,012	2,516
Water	1,189	544	628	620	712	876	1,332
Total	**12,511**	**7,664**	**10,315**	**6,990**	**6,943**	**9,340**	**11,141**

PARs

Section 1405 of Chapter 14 authorizes the Commission to establish a payment arrangement between a utility and its customers and applicants within the limits established by the chapter.

While the Commission continues to issue payment arrangements for customers whose service has been terminated, this authority must be exercised judiciously and only in instances where the customer has made a good-faith effort to pay the bill.

PARs primarily include contacts to BCS or to utilities involving requests for payment terms in one of the following situations:

- Termination of service is pending;
- Service has been terminated and the customer needs payment terms to have service restored; and
- The customer wants to amortize an arrearage.

The table below represents the number of PARs to BCS for 2004 and 2013-2018. The number of PARs to BCS has declined since the passage of Chapter 14. This chart does not include complaints resolved on the first call from 2013 forward, which are now coded as "inquiries." Changes that occurred with Chapter 14 only allow the Commission to issue one payment arrangement. These cases are coded as "inquiries" as they may be dismissed on the first call.

Table 89 – Payment Arrangement Requests

	2004	2013	2014	2015	2016	2017	2018
Electric	45,758	39,872	39,790	31,499	34,315	29,764	31,118
Gas	40,378	13,712	15,421	13,779	13,774	12,392	12,891
Water	3,805	3,896	4,235	4,025	3,866	3,543	4,145
Total	**89,941**	**57,480**	**59,446**	**49,303**	**51,955**	**45,699**	**48,154**

Number of Non-CAP Customers Denied a Payment Arrangement by the Commission

After the implementation of Chapter 14, BCS began tracking the number of ineligible customers calling the Commission seeking assistance to avoid termination. In these cases, the complaint was resolved during the initial call. The customers were ineligible because Section 1405(d) of Chapter 14 prohibits the Commission from establishing a second Commission payment arrangement if the customer failed to satisfy the balance from a previous Commission-established payment arrangement. The only permitted exception is when the customer has experienced a change in income since the previous arrangement as defined in Section 1403: "A decrease in household income of 20% or more if the customer's household income level exceeds 200% of the federal poverty level or a decrease in household income of 10% or more if the customer's household income level is 200% or less of the federal poverty level."

The table below represents the number of customers turned away by the Commission because the customers failed to satisfy the balance from a previous PUC payment arrangement. These customers are not participating in the utility's CAP.

Table 90 – Non-CAP Customers Turned Away by Call Center Because of Ineligibility

	2005	2013	2014	2015	2016	2017	2018
Service is on	23,326	6,801	4,072	5,222	5,935	4,972	4,855
Service is off	4,760	66	162	84	154	172	267
Total	**28,086**	**6,867**	**4,234**	**5,306**	**6,089**	**5,144**	**5,122**

Number of CAP Customers Denied a Payment Arrangement by BCS

Section 1405(c) prohibits the Commission from establishing a payment arrangement on a CAP arrearage. The table below represents the number of customers turned away by BCS because their balance contains arrearages from a utility's CAP. In these cases, the complaint was resolved during the initial call.

Table 91 – CAP Customers Turned Away by Call Center Because of Ineligibility

	2005	2013	2014	2015	2016	2017	2018
CAP Customers	5,403	11,445	7,809	7,918	6,671	6,619	5,926

PARs Dismissed Without a Decision

In addition to those determined to be ineligible for a Commission payment arrangement and dismissed on the initial call, occasions also exist where a PAR case is opened for investigation with BCS but subsequently dismissed because the customer is not eligible for a new payment arrangement. This normally occurs when the customer previously defaulted on a Commission payment arrangement or owes CAP arrears.

The table below represents the number of complaints opened for investigation, but subsequently dismissed because it was determined they were not eligible for a Commission payment arrangement.

Table 92 – Payment Arrangement Requests Dismissed Without a Decision

	2005	2013	2014	2015	2016	2017	2018
Cases Dismissed	14,225	8,425	7,871	7,011	7,201	6,500	7,166

The number of PARs received by the Commission decreased and remain well below the 2004 level primarily due to payment arrangement limitations imposed on the Commission through Chapter 14. However, the percentage of PARs to overall informal complaint activity has continued to increase. In 2018, PARs accounted for 54.0% of the Commission's Bureau of Consumer Services (BCS) informal complaint activity and 42.2% of inquiries to BCS.

Table 93 – Percentage of BCS Activity – PARs

	2004	2013	2014	2015	2016	2017	2018
PARs	44.33	45.74	46.69	53.99	58.71	54.30	53.99

The following table shows the top two reasons for inquiries to BCS are related to PARs on active accounts. The total row is the percentage of total inquiries related to the two top reasons for contact.

Table 94 – Top Reasons for Inquiries (shown as a percentage)

	2005*	2013	2014	2015	2016	2017	2018
CAP inquiry/contact	5.02	20.22	15.79	24.65	24.95	25.92	23.11
Unable to open new PAR - service on	21.78	12.09	8.42	16.21	22.27	19.57	19.04
Total	**26.80**	**32.31**	**24.21**	**40.86**	**47.22**	**45.49**	**42.15**

*BCS started tracking these contact types in 2005.

Customers Under a Protection From Abuse (PFA) or an Order Which Provides Clear Evidence of Domestic Violence Who Received a Payment Arrangement from the PUC

Section 1417 of Chapter 14 specifies that the chapter "shall not apply to victims under a PFA Order as provided by 23 Pa. C.S. Ch. 61 (relating to protection from abuse), or a court order issued by a court of competent jurisdiction in this Commonwealth, which provides clear evidence of domestic violence against the applicant or customer." In May 2005, BCS modified its complaint tracking system to allow the tracking of complaints that involve customers with these orders. The table below represents the number of informal cases taken in from victims of domestic violence.

Table 95 – Complaints from Customers with Domestic Violence Orders

	2006*	2013	2014	2015	2016	2017	2018
Number of Complaints	21	220	233	194	269	306	293

*BCS started tracking these contact types in 2006.

Conclusion: Section IV – The Effect Upon the Level of Consumer Complaints and PARs Filed with and Adjudicated by the Commission

PARs decreased 46.5% from 2004 as compared to 2018 and remain well below the 2004 level. The Commission denied a total of 265,265[16] requests for payment arrangements since 2004 due to the restrictions on its ability to grant payment arrangements. This includes 18,214 callers in 2018. However, the percentage of PARs to overall BCS informal complaint activity has continued to increase. In 2018, PARs accounted for 54.0% of total BCS informal complaint activity. When the percent of inquiries related to PARs are included, it increases the percentage to more than two thirds of total BCS activity.[17]

The passage of Chapter 14 significantly restricted the Commission's ability to issue payment arrangements. Section 1405 of Chapter 14 authorizes the Commission to establish a payment arrangement between a utility and its customers and applicants within the limits established by the chapter; however, Section 1405(b) provides very restrictive limits as to how the Commission may establish those arrangements. Additionally, Section 1405(d) states:

[16] These totals include the following categories: Non-CAP Customers Turned Away by Call Center Because of Ineligibility, CAP Customers Turned Away by Call Center Because of Ineligibility, and Payment Arrangement Requests Dismissed Without a Decision

[17] See Appendices 35 and 36.

> ***Number of payment arrangements**.--Absent a change in income, the commission shall not establish or order a public utility to establish a second or subsequent payment arrangement if a customer has defaulted on a previous payment arrangement established by a commission order or decision. A public utility may, at its discretion, enter into a second or subsequent payment arrangement with a customer.*

As shown in Section II, the majority of customer debt is not on a payment arrangement. Debt on a payment arrangement is less likely to become uncollectible. Section IV shows that BCS PAR-related informal complaint activity is increasing. Therefore, the Commission recommends amending 1405(d) to allow the Commission, at its discretion, to grant a second payment arrangement. Currently this is prohibited unless the household has a change in income or a significant change in circumstance as defined in Chapter 14. The Commission will identify other circumstances that may warrant additional consideration to establish a second payment arrangement.

Appendices

Appendix 1 – 2013 Infractions

Section of Chapter 14	Equivalent Section(s) of Title 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	10	13	1	**24**
§ 1403 Definitions	§ 56.2 Def. of Applicant, § 56.2 Def. of Customer	2	1		**3**
§ 1404 Credit and Deposits	§ 56.32-37, § 56.41, § 56.42, § 56.51, and § 56.53	24	14	4	**42**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	10	21	9	**40**
§ 1406(b) Notice of Termination	§ 56.91 and 56.93	5	2	9	**16**
§ 1406(f) Medical Certification	§ 56.114	1	1		**2**
§ 1407(a) Reconnection Fee	§ 56.191(a)			1	**1**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b)	3	6	1	**10**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	1	1	3	**5**
§ 1407(d)(e) Payment of Outstanding Balance at Premise	§ 56.191(d)(e)		1		**1**
§ 1409 Late Payment Charge Waiver	§ 56.22		3	10	**13**
§ 1410 Complaints Filed with the Commission	§ 56.181	1	1		**2**
Total		**57**	**64**	**38**	**159**

Appendix 2 – 2014 Infractions

Section of Chapter 14	Equivalent Section(s) of Title 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	36	19	19	**74**
§ 1403 Definitions	§ 56.2 Def. of Applicant, § 56.2 Def. of Customer	3			**3**
§ 1404 Credit and Deposits	§ 56.32-37, 56.41, 56.42, § 56.51, and 56.53	55	26	9	**90**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	15	4	16	**35**
§ 1406(b) Notice of Termination	§ 56.91 and § 56.93	3	1	3	**7**
§ 1406(e) Winter Termination	§ 56.100 and § 56.340			1	**1**
§ 1406(f) Medical Certification	§ 56.111-112, § 56.114-115	3	2		**5**
§ 1407(a) Reconnection Fee	§ 56.191(a)	2			**2**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b) and § 56.421	5	3		**8**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	2	2		**4**
§ 1409 Late Payment Charge Waiver	§ 56.22	4	1	7	**12**
§ 1410 Complaints Filed with the Commission	§ 56.181	1			**1**
Total		**129**	**58**	**55**	**242**

Appendix 3 – 2015 Infractions

Section of Title 66 Pa. C.S. Chapter 14	Equivalent Section(s) of Title 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	42	24	2	**68**
§ 1403 Definitions	§ 56.2 Def. of Applicant, 56.2 Def. of Customer	2	3		**5**
§ 1404 Credit and Deposits	§ 56.32-37, § 56.41, § 56.42, § 56.51, and § 56.53	115	24	11	**150**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	13	3	17	**33**
§ 1406(b) Notice of Termination	§ 56.91 and § 56.93	1	1	2	**4**
§ 1406(d) Timing of Termination	§ 56.82		1		**1**
§ 1406(e) Winter Termination	§ 56.100 and § 56.340	3		1	**4**
§ 1406(f) Medical Certification	§ 56.111-112, § 56.114-115	3	1		**4**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b) and § 56.421	3	4	7	**14**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	6	4		**10**
§ 1407(d)(e) Payment of Outstanding Balance at Premise	§ 56.191(d)(e)		1		**1**
§ 1409 Late Payment Charge Waiver	§ 56.22			1	**1**
Total		**188**	**66**	**41**	**295**

Appendix 4 – 2016 Infractions

Section of Title 66 Pa. C.S. Chapter 14	Equivalent Section(s) of Title 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	13	30	2	**45**
§ 1403 Definitions	§ 56.2 Def. of Applicant, § 56.2 Def. of Customer		1		**1**
§ 1404 Credit and Deposits	§ 56.32-37, § 56.41, § 56.42, § 56.51, and § 56.53	89	20	8	**117**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	16	6	14	**36**
§ 1406(b) Notice of Termination	§ 56.91 and § 56.93	2	1	7	**10**
§ 1406(d) Timing of Termination	§ 56.82			1	**1**
§ 1406(e) Winter Termination	§ 56.100 and § 56.340	48			**48**
§ 1406(f) Medical Certification	§ 56.111-112, § 56.114-115	4	1	1	**6**
§ 1407(a) Reconnection Fee	§ 56.191(a)			1	**1**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b) and § 56.421	6	1	2	**9**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	6	1		**7**
§ 1409 Late Payment Charge Waiver	§ 56.22	4	2		**6**
§ 1410.1(2) Referral to Universal Services Program	n/a	6	6		**12**
Total		**194**	**69**	**36**	**299**

Appendix 5 – 2017 Infractions

Section of Title 66 Pa. C.S. Chapter 14	Equivalent Section(s) of Title 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	29	4	3	**36**
§ 1404 Credit and Deposits	§ 56.32-37, § 56.41, § 56.42, § 56.51, and § 56.53	49	8	6	**63**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	17	4	28	**49**
§ 1406(b) Notice of Termination	§ 56.91 and § 56.93	1	1	5	**7**
§ 1406(d) Timing of Termination	§ 56.82			1	**1**
§ 1406(e) Winter Termination	§ 56.100 and § 56.340			2	**2**
§ 1406(f) Medical Certification	§ 56.111-112, § 56.114-115	2	2		**4**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b) and § 56.421	6	3	3	**12**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	2	1		**3**
§ 1407(d)(e) Payment of Outstanding Balance at Premise	§ 56.191(d)(e)	1			**1**
§ 1409 Late Payment Charge Waiver	§ 56.22			1	**1**
§ 1410.1(2) Referral to Universal Services Program	n/a	8	2		**10**
Total		**115**	**25**	**49**	**189**

Appendix 6 – 2018 Infractions

Section of Title 66 Pa. C.S. Chapter 14	Equivalent Section(s) of Title 52 Pa. Code Chapter 56	Electric Utilities	Gas Utilities	Water Utilities	Total
§ 1402 Declaration of Policy	§ 56.1	42	6	6	**54**
§ 1403 Definitions	§ 56.2 Def. of Applicant, § 56.2 Def. of Customer	3	3	2	**8**
§ 1404 Credit and Deposits	§ 56.32-37, § 56.41, § 56.42, § 56.51, and § 56.53	51	14	6	**71**
§ 1406(a) Authorized Termination	§ 56.81 and § 56.83	24	19	18	**61**
§ 1406(b) Notice of Termination	§ 56.91 and § 56.93	3	2	4	**9**
§ 1406(d) Timing of Termination	§ 56.82	2		1	**3**
§ 1406(e) Winter Termination	§ 56.100 and § 56.340	2		2	**4**
§ 1406(f) Medical Certification	§ 56.111-112, § 56.114-115	10	1		**11**
§ 1407(a) Reconnection Fee	§ 56.191(a)	1	1		**2**
§ 1407(b) Reconnection of Service – Timing	§ 56.191(b) and § 56.421	9	7	2	**18**
§ 1407(c) Reconnection of Service – Payment to Restore Service	§ 56.191(c)	8	5	4	**17**
§ 1407(d)(e) Payment of Outstanding Balance at Premise	§ 56.191(d)(e)	1			**1**
§ 1409 Late Payment Charge Waiver	§ 56.22		1		**1**
§ 1410.1(2) Referral to Universal Services Program	n/a	1	1		**2**
§ 1417 Nonapplicability - Protection From Abuse	§ 56.285	1	1		**2**
Total		**158**	**61**	**45**	**264**

Appendix 7 – Collections Data Variables (§ 56.231)

Collections data variables as required by Chapter 56 reporting include the total:

1. Number of residential customers;

2. Dollar amount of annual collections operating expenses;

3. Dollar amount of annual residential billings;

4. Dollar amount of gross residential write-offs;

5. Number of active residential accounts in arrears and not on a payment arrangement;

6. Dollar amount in arrears for active residential accounts in arrears and not on a payment arrangement;

7. Number of active residential accounts in arrears and on a payment arrangement;

8. Dollar amount in arrears for active residential accounts in arrears and on a payment arrangement;

9. Number of inactive residential accounts in arrears;

10. Dollar amount in arrears for inactive residential accounts in arrears;

11. Number of terminations for non-payment as defined at Section 1406(a)(1) or Section 1406(a)(2) or Section 1406(a)(3);

    Number of terminations for other reasons including failure to permit access, unauthorized use of service, fraud, meter tampering and safety as defined at Section 1406(a)(4), Section 1406(c)(1)(i), Section 1406(c)(1)(ii), Section 1406(c)(1)(iii), and Section 1406(c)(1)(iv);

12. Number of reconnections for customer payment by income level;

13. Number of reconnections for medical certification by income level;

14. Number of reconnections for reasons other than customer payment or medical certification;

15. Number of applicants that are billed a security deposit;

16. Dollar amount of security deposits billed to applicants;

17. Number of customers that are billed a security deposit;

18. Dollar amount of security deposits billed to customers;

19. Number of security deposits on-hand;

20. Dollar amount of security deposits on-hand;

21. Dollar amount of actual LIURP spending for the previous year;

22. Dollar amount of CAP administrative costs for the previous year;

23. Dollar amount of CAP credits for the previous year;

24. Dollar amount of CAP pre-program arrearage forgiveness for the previous year;

25. Dollar amount of Customer Assistance and Referral Evaluation Services (CARES) program costs for the previous year; and

26. Dollar amount of hardship fund administrative costs assessed to ratepayers for the year just completed.

The BCS has advocated that the bill due date is equal to day zero, the starting point for determining when an account should be considered overdue, and this position is clarified in the Collections Data Dictionary filed at the Docket M-00041802F0003. The table below shows the individual utility variations for the historical data set presented in this report and applies to all tables that show overdue customers or overdue dollars.

Appendix 8 – When is an Account Considered to be Overdue?

Utility	When is Day Zero (0)	How Many Days Overdue	Days of Variance from BCS Interpretation
Duquesne	Bill Due Date	30 Days	0 Days
Met-Ed and Penelec	Bill Due Date	30 Days	0 Days
PECO-Electric	Bill Transmittal Date	30 Days	20 Days Sooner
Penn Power	Bill Due Date	30 Days	0 Days
PPL	Bill Transmittal Date	30 Days	20 Days Sooner
West Penn	Bill Due Date	30 Days	0 Days
Columbia Gas	Bill Due Date	30 Days	0 Days
NFG	Bill Rendition Date*	60 Days	9 Days Later
PECO-Gas	Bill Transmittal Date	30 Days	20 Days Sooner
Peoples	Bill Due Date	30 Days	0 Days
Peoples-Equitable	Bill Due Date	30 Days	0 Days
PGW	Bill Transmittal Date	30 Days	20 Days Sooner
UGI-Gas	Bill Due Date	30 Days	0 Days
UGI Penn Natural	Bill Due Date	30 Days	0 Days

*Bill Rendition Date is one day prior to the Bill Transmittal Date.

After an account is terminated or discontinued, it is no longer considered to be an active account. These accounts then become "inactive" accounts. Ultimately, these accounts are either paid or written-off according to each utility's accounting or write-offs procedures. The Commission began to quantify the number of inactive accounts and corresponding arrearages beginning with 2007 collections data.

Appendix 9 – When Does an Account Move from Active to Inactive Status?

Utility	After an Account is Terminated	After an Account is Discontinued
Duquesne	7 Days after Termination Date	3 to 5 Days after Discontinuance
Met-Ed and Penelec	10 Days after Termination Date	Same Day as Discontinuance
PECO-Electric	30 to 32 Days after Termination Date	Same Day as Discontinuance
Penn Power	10 Days after Termination Date	Same Day as Discontinuance
PPL	15 Days after Termination Date	Bill Transmittal Date
West Penn	10 Days after Termination Date	Same Day as Discontinuance
Columbia Gas	5 to 7 Days after Termination Date	Same Day as Discontinuance
NFG	Same Day as Termination Date	Same Day as Discontinuance
PECO-Gas	30 to 32 Days after Termination Date	Same Day as Discontinuance
Peoples	10 Days after Termination Date	10 Days after Discontinuance
Peoples-Equitable	10 Days after Termination Date	10 Days after Discontinuance
PGW	0 to 30 Days after Termination Date	0 to 1 Day after Final Bill Transmittal Date
UGI-Gas	Same Day as Termination Date	Same Day as Discontinuance
UGI Penn Natural	Same Day as Termination Date	Same Day as Discontinuance

Gross Residential Write-Offs that are reported below represent the cumulative total dollar amount written off as of the end of the calendar year. CAP Preprogram Arrearage Forgiveness dollars are excluded.

Appendix 10 – Gross Residential Write-Offs – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$9,909,654	$5,258,566	$3,199,684	$11,249,134	$8,688,610	$18,617,640	$19,578,220
Met-Ed	$9,690,456	$10,760,304	$12,186,981	$14,112,271	$13,557,436	$12,158,927	$15,183,890
PECO*	$41,562,593	$40,274,726	$35,822,459	$32,619,563	$25,157,943	$29,441,016	$29,445,461
Penelec	$8,748,857	$8,990,906	$9,939,670	$12,311,625	$12,745,926	$11,516,271	$15,418,293
Penn Power	$2,361,062	$1,873,734	$1,888,898	$2,579,296	$2,930,804	$2,851,522	$3,358,838
PPL	$22,326,252	$53,609,736	$61,828,466	$66,007,829	$56,183,980	$50,434,096	$53,809,070
West Penn	$8,571,821	$6,072,775	$8,180,202	$10,531,117	$12,404,107	$12,673,729	$15,506,690
Total	**$103,170,695**	**$126,840,747**	**$133,046,360**	**$149,410,835**	**$131,668,806**	**$137,693,201**	**$152,300,462**

*PECO data includes electric and gas.

Appendix 11 – Gross Residential Write-Offs – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$16,079,652	$6,630,828	$8,357,228	$9,437,857	$7,405,860	$7,722,801	$8,531,390
NFG	$6,001,579	$3,458,420	$3,543,650	$4,483,553	$3,650,873	$2,616,334	$4,330,927
Peoples	$13,926,284	$10,678,789	$8,426,426	$12,278,609	$10,256,963	$8,722,734	$7,957,830
Peoples-Equitable	$7,922,823	$4,786,037	$5,304,131	$2,189,341	$3,659,582	$4,985,137	$5,143,394
PGW	$65,949,043	$49,563,281	$46,746,444	$48,411,806	$61,371,552	$47,487,882	$34,986,533
UGI-Gas	$6,790,705	$4,756,334	$7,052,238	$6,842,786	$4,725,255	$6,329,806	$8,854,360
UGI Penn Natural	$5,157,851	$2,664,482	$3,869,792	$4,419,332	$2,534,491	$3,384,812	$4,904,780
Total	**$121,827,937**	**$82,538,171**	**$83,299,909**	**$88,063,284**	**$93,604,576**	**$81,249,506**	**$74,709,214**

Appendix 12 – Gross Residential Write-Offs – Water

Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$0	$1,625	$635	$0	$0	$0	$0
Columbia Water	$10,649	$9,131	$12,376	$9,524	$14,423	$16,896	$16,664
Newtown Artesian	$808	$125	$574	$0	$1,055	$1,195	$0
Superior*	$2,809	$3,237	$1,190	$7,242	N/A	N/A	N/A
SUEZ Bethel	$4,132	$1,693	$3,573	$3,263	$824	$1,224	$2,653
SUEZ PA	$177,507	$132,445	$192,185	$191,294	$138,653	$183,992	$199,858
York	$377,502	$312,255	$361,570	$342,929	$309,482	$303,882	$298,613
Other Class A Total	***$573,407***	***$460,511***	***$572,103***	***$554,252***	***$464,437***	***$507,189***	***$517,788***
Aqua	$2,348,646	$2,152,760	$2,536,138	$2,973,881	$2,149,182	$2,159,570	$2,700,141
PAWC	$5,352,205	$5,428,184	$7,950,163	$9,797,565	$8,721,607	$7,079,114	$10,269,942
Total	**$8,274,258**	**$8,041,455**	**$11,058,404**	**$13,325,698**	**$11,335,226**	**$9,745,873**	**$13,487,871**

* Effective Jan. 1, 2016, Superior was acquired by Aqua, so all data was filed under Aqua from 2016 forward.

Annual collections operating expenses include administrative expenses associated with termination activity, field visits, negotiation of payment arrangements, budget counseling, investigation and resolution of informal and formal complaints associated with payment arrangements, the securing and maintenance of security deposits, the tracking of delinquent accounts, collection agencies' expenses, litigation expenses other than those already included, dunning expenses, and winter survey expenses.

Appendix 13 – Annual Collections Operating Expenses – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$16,164,612	$12,918,873	$14,756,632	$7,405,412	$6,530,439	$8,639,362	$8,114,677
Met-Ed	$13,567,289	$14,174,470	$15,355,927	$16,926,682	$16,438,551	$15,034,489	$17,699,048
PECO*	$9,576,151	$16,667,497	$16,059,880	$14,721,156	$15,528,147	$15,883,375	$15,524,811
Penelec	$13,526,387	$12,431,170	$12,880,756	$15,011,373	$15,518,497	$14,238,435	$17,756,784
Penn Power	$3,619,639	$2,860,186	$2,752,716	$3,444,506	$3,805,201	$3,739,461	$4,130,948
PPL	$4,878,365	$15,414,244	$13,166,739	$12,669,951	$14,178,936	$11,439,560	$9,825,885
West Penn	$14,313,568	$8,464,260	$10,346,099	$12,771,498	$14,741,360	$15,221,444	$17,645,222
Total	**$75,646,011**	**$82,930,700**	**$85,318,749**	**$82,950,578**	**$86,741,131**	**$84,196,126**	**$90,697,375**

*PECO data includes electric and gas.

Appendix 14 – Annual Collections Operating Expenses – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$2,463,992	$2,300,518	$2,885,816	$2,635,931	$3,289,473	$5,072,461	$4,848,900
NFG	$1,154,535	$596,785	$648,971	$650,180	$533,740	$685,670	$699,066
Peoples	$3,224,084	$2,880,864	$2,705,304	$2,501,252	$2,478,687	$2,184,813	$2,225,302
Peoples-Equitable	$3,950,187	$2,409,090	$2,516,300	$2,417,037	$2,385,710	$1,636,909	$1,631,759
PGW	$10,102,014	$1,249,782	$1,307,869	$1,200,173	$2,964,826	$3,470,457	$4,229,699
UGI-Gas	$3,349,562	$2,264,783	$2,568,308	$3,548,792	$4,123,296	$4,805,837	$4,843,785
UGI Penn Natural	$2,403,614	$831,413	$1,464,516	$1,454,435	$1,484,127	$1,982,632	$2,294,424
Total	**$26,647,988**	**$12,533,235**	**$14,097,084**	**$14,407,800**	**$17,259,859**	**$19,838,779**	**$20,772,935**

Appendix 15 – Annual Collections Operating Expenses – Water

Utility	2012	2013	2014	2015	2016	2017	2018
Audubon	$13,119	$11,078	$0	$16,070	$18,027	$21,056	$22,316
Columbia Water	$23,075	$23,161	$21,014	$21,779	$22,487	$23,968	$24,177
Newtown Artesian	$12,000	$12,000	$13,000	$14,500	$16,000	$16,500	$16,850
Superior*	$6,240	$5,940	$0	$6,118	N/A	N/A	N/A
SUEZ Bethel	$10,000	$50,844	$53,057	$54,231	$26,100	$23,966	$25,289
SUEZ PA	$215,000	$288,298	$291,651	$345,878	$353,144	$361,378	$1,010,974
York	$1,734,386	$1,771,121	$1,866,886	$1,617,655	$282,306	$225,988	$269,798
Other Class A Total	***$2,013,820***	***$2,162,442***	***$2,245,608***	***$2,076,231***	***$718,064***	***$672,856***	***$1,369,404***
Aqua	$2,133,466	$2,158,607	$2,302,303	$1,850,871	$2,009,413	$1,805,771	$1,909,902
PAWC	$4,164,737	$3,719,291	$3,828,749	$4,638,730	$4,252,653	$4,850,879	$5,818,417
Total	**$8,312,023**	**$8,040,340**	**$8,376,660**	**$8,565,832**	**$6,980,130**	**$7,329,506**	**$9,097,723**

* Effective Jan. 1, 2016, Superior was acquired by Aqua, so all data was filed under Aqua from 2016 forward.

Collections operating expenses as a percentage of billings is calculated by dividing the collections operating expenses by the annual residential billings. The higher the percentage the more a utility is spending on collections operating expenses. Appendices 16-18 show the percentage for the year 2018, which is the most current data available.

Appendix 16 – 2018 Collections Operating Expenses as a Percentage of Residential Billings – Electric

Utility	Billings	Collections Operating Expenses	Collections Operating Expenses as a Percent of Billings
Duquesne	$565,825,977	$8,114,677	1.4%
Met-Ed	$631,235,520	$17,699,048	2.8%
PECO*	$2,477,620,946	$15,524,811	0.6%
Penelec	$591,507,790	$17,756,784	3.0%
Penn Power	$195,071,468	$4,130,948	2.1%
PPL	$2,076,233,183	$9,825,885	0.5%
West Penn	$715,500,920	$17,645,222	2.5%
Total/Average	**$7,252,995,804**	**$90,697,375**	**1.3%**

*PECO data includes electric and gas.

Appendix 17 – 2018 Collections Operating Expenses as a Percentage of Residential Billings – Gas

Utility	Billings	Collections Operating Expenses	Collections Operating Expenses as a Percent of Billings
Columbia Gas	$441,253,741	$4,848,900	1.1%
NFG	$153,674,403	$699,066	0.5%
Peoples	$315,638,063	$2,225,302	0.7%
Peoples-Equitable	$230,033,115	$1,631,759	0.7%
PGW	$548,304,433	$4,229,699	0.8%
UGI-Gas	$269,363,627	$4,843,785	1.8%
UGI Penn Natural	$163,406,878	$2,294,424	1.4%
Total/Average	**$2,121,674,260**	**$20,772,935**	**1.0%**

Appendix 18 – 2018 Collections Operating Expenses as a Percentage of Residential Billings – Water

Utility	Billings	Collections Operating Expenses	Collections Operating Expenses as a Percent of Billings
Audubon	$1,243,480	$22,316	1.8%
Columbia Water	$4,019,836	$24,177	0.6%
Newtown Artesian	$3,086,758	$16,850	0.5%
SUEZ Bethel	$765,086	$25,289	3.3%
SUEZ PA	$28,941,953	$1,010,974	3.5%
York	$31,302,819	$269,798	0.9%
Other Class A Total/Average	***$69,359,932***	***$1,369,404***	***2.0%***
Aqua	$289,591,031	$1,909,902	0.7%
PAWC	$399,002,102	$5,818,417	1.5%
Total/Average	**$757,953,065**	**$9,097,723**	**1.2%**

The aggregate spending for universal service programs is shown in Appendices 19 and 20 for the year 2018 and that spending also is shown as a percentage of residential billings for 2018.

Appendix 19 – 2018 Universal Service Program Costs* as a Percentage of Residential Billings – Electric

Utility	Billings	Universal Service Costs*	Universal Service Costs as a Percent of Billings
Duquesne	$565,825,977	$28,297,392	5.0%
Met-Ed	$631,235,520	$21,755,946	3.4%
PECO**	$2,477,620,946	$69,290,716	2.8%
Penelec	$591,507,790	$26,480,948	4.5%
Penn Power	$195,071,468	$7,242,197	3.7%
PPL	$2,076,233,183	$80,034,598	3.9%
West Penn	$715,500,920	$28,300,622	4.0%
Total/Average	**$7,252,995,804**	**$261,402,419**	**3.6%**

*Includes CAP, LIURP, and CARES.

**PECO data includes electric and gas.

Appendix 20 – 2018 Universal Service Program Costs* as a Percentage of Residential Billings – Gas

Utility	Billings	Universal Service Costs*	Universal Service Costs as a Percent of Billings
Columbia Gas	$441,253,741	$27,253,047	6.2%
NFG	$153,674,403	$3,186,234	2.1%
Peoples	$315,638,063	$5,092,676	1.6%
Peoples-Equitable	$230,033,115	$10,351,124	4.5%
PGW	$548,304,433	$7,583,997	1.4%
UGI-Gas	$269,363,627	$68,093,074	25.3%
UGI Penn Natural	$163,406,878	$5,600,907	3.4%
Total/Average	**$2,121,674,260**	**$127,161,059**	**6.0%**

*Includes CAP, LIURP, and CARES.

CAPs provide an alternative to traditional collections methods for low-income, payment-troubled customers. Customers make regular monthly payments, which may be for an amount that is less than the current bill for utility service.

Appendix 21 – Annual Total CAP Costs – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$5,275,000	$16,549,705	$15,888,626	$18,984,666	$21,244,454	$23,083,236	$25,820,755
Met-Ed	$4,966,221	$22,984,906	$17,525,198	$15,113,962	$14,313,820	$14,758,527	$16,128,557
PECO*	$79,088,439	$96,927,753	$100,107,481	$101,580,459	$95,227,237	$73,011,114	$64,886,113
Penelec	$6,914,194	$25,303,288	$20,236,493	$18,127,221	$18,254,884	$18,852,006	$20,282,993
Penn Power	$1,825,678	$6,116,965	$4,287,789	$3,970,526	$4,275,287	$4,435,519	$4,720,719
PPL	$14,691,811	$55,223,019	$72,016,857	$83,614,471	$86,446,411	$80,923,575	$80,034,598
West Penn	$4,987,081	$10,768,235	$13,385,035	$16,540,073	$24,609,316	$27,280,111	$23,885,800
Total	**$117,748,424**	**$233,873,871**	**$243,447,479**	**$257,931,378**	**$264,371,409**	**$242,344,088**	**$235,759,535**

*PECO data includes electric and gas.

Appendix 22 – Annual Total CAP Costs – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$14,708,222	$13,272,158	$18,237,407	$18,204,869	$13,544,667	$19,668,704	$22,396,085
NFG	$4,613,226	$1,838,472	$1,934,109	$1,489,477	$1,169,595	$1,199,650	$1,849,773
Peoples	$5,358,196	$8,227,588	$11,270,401	$12,607,004	$6,606,963	$8,102,420	$8,927,521
Peoples-Equitable	$5,694,802	$7,090,722	$9,988,104	$8,614,710	$3,826,459	$5,328,722	$6,703,377
PGW	$57,800,000	$77,281,237	$71,187,450	$56,502,542	$47,310,248	$49,005,928	$59,549,654
UGI-Gas	$1,898,609	$3,176,112	$2,482,458	$4,145,889	$2,470,474	$3,187,005	$4,253,550
UGI Penn Natural	$590,454	$2,852,339	$2,299,074	$3,747,453	$2,137,095	$2,088,411	$2,671,047
Total	**$90,663,509**	**$113,738,628**	**$117,399,003**	**$105,311,944**	**$77,065,501**	**$88,580,840**	**$106,351,007**

The LIURP is a statewide, utility-sponsored, residential usage reduction program mandated by PUC regulations at 52 Pa. Code, Chapter 58. The primary goal of LIURP is to assist low-income residential customers in lowering energy bills through usage reduction (energy conservation) and thereby making bills more affordable.

Appendix 23 – Annual Total LIURP Costs – Electric

Utility	2004	2013	2014	2015	2016	2017	2018
Duquesne	$1,021,250	$1,707,828	$1,692,098	$2,244,667	$1,700,067	$1,189,179	$2,341,637
Met-Ed	$1,720,005	$3,360,707	$3,836,282	$4,147,534	$4,266,267	$4,664,642	$5,588,477
PECO*	$6,475,000	$7,850,000	$7,850,004	$7,850,000	$7,850,002	$8,247,252	$7,850,000
Penelec	$1,657,765	$4,004,785	$4,174,250	$4,565,730	$4,966,122	$5,212,543	$6,167,794
Penn Power	$527,439	$1,534,568	$1,976,633	$1,794,913	$2,416,724	$2,266,670	$2,504,699
PPL	$5,642,380	$8,233,448	$9,687,785	$9,371,754	$9,859,640	$9,984,911	$10,229,891
West Penn	$2,053,981	$2,676,644	$3,407,210	$4,448,225	$4,426,313	$4,699,352	$4,378,426
Total	**$19,097,820**	**$29,367,980**	**$32,624,262**	**$34,422,823**	**$35,485,135**	**$36,264,549**	**$39,060,924**

*PECO data includes electric and gas.

Appendix 24 – Annual Total LIURP Costs – Gas

Utility	2004	2013	2014	2015	2016	2017	2018
Columbia Gas	$1,399,634	$4,363,318	$4,266,008	$4,847,387	$5,000,477	$4,492,304	$4,448,061
NFG	$1,199,392	$1,533,989	$1,203,340	$1,002,398	$1,139,533	$1,047,123	$1,331,938
Peoples	$610,000	$1,100,000	$1,250,000	$1,251,395	$1,249,763	$1,250,322	$1,294,769
Peoples-Equitable	$602,699	$926,319	$711,788	$890,300	$799,802	$800,198	$791,077
PGW	$2,008,697	$8,054,404	$7,181,015	$7,913,908	$7,638,390	$5,239,743	$7,848,602
UGI-Gas	$648,025	$438,032	$529,676	$665,759	$853,543	$1,217,159	$1,200,908
UGI Penn Natural	$365,191	$957,294	$853,782	$831,817	$881,288	$926,789	$1,059,335
Total	**$6,833,638**	**$17,373,356**	**$15,995,609**	**$17,402,964**	**$17,562,796**	**$14,973,638**	**$17,974,690**

The following two appendices show the three major collections cost categories and the Universal Service Program Costs for the year 2018. The corresponding residential billings are also shown as a basis for comparison against the four cost categories in the tables. Only a fraction of the total dollars in debt is recovered in rates.

Appendix 25 – Summary of 2018 Collections and Universal Service Program Costs* – Electric

Utility	Residential Billings	Collections Operating Expenses	Gross Write-Offs	Total Dollars in Debt	Universal Service Programs*
Duquesne	$565,825,977	$8,114,677	$19,578,220	$2,987,307	$28,297,392
Met-Ed	$631,235,520	$17,699,048	$15,183,890	$5,050,028	$21,755,946
PECO**	$2,477,620,946	$15,524,811	$29,445,461	$10,469,771	$69,290,716
Penelec	$591,507,790	$17,756,784	$15,418,293	$5,263,707	$26,480,948
Penn Power	$195,071,468	$4,130,948	$3,358,838	$1,107,206	$7,242,197
PPL	$2,076,233,183	$9,825,885	$53,809,070	$19,558,691	$80,034,598
West Penn	$715,500,920	$17,645,222	$15,506,690	$4,298,385	$28,300,622
Total	**$7,252,995,804**	**$90,697,375**	**$152,300,462**	**$48,735,095**	**$261,402,419**

*Includes CAP, LIURP, and CARES.

**PECO data includes electric and gas.

Appendix 26 – Summary of 2018 Collections and Universal Service Program Costs* – Gas

Utility	Residential Billings	Collections Operating Expenses	Gross Write-Offs	Total Dollars in Debt	Universal Service Programs*
Columbia Gas	$441,253,741	$4,848,900	$8,531,390	$762,577	$27,253,047
NFG	$153,674,403	$699,066	$4,330,927	$4,498,510	$3,186,234
Peoples	$315,638,063	$2,225,302	$7,957,830	$9,889,700	$5,092,676
Peoples-Equitable	$230,033,115	$1,631,759	$5,143,394	$5,585,254	$10,351,124
PGW	$548,304,433	$4,229,699	$34,986,533	$14,157,264	$7,583,997
UGI-Gas	$269,363,627	$4,843,785	$8,854,360	$2,831,512	$68,093,074
UGI Penn Natural	$163,406,878	$2,294,424	$4,904,780	$1,466,018	$5,600,907
Total	**$2,121,674,260**	**$20,772,935**	**$74,709,214**	**$39,190,835**	**$127,161,059**

*Includes CAP, LIURP, and CARES.

For the purpose of showing individual utility variations and differences in collections costs, collections operating expenses, gross write-offs and Universal Service Program Costs are added together and shown as a percentage of the residential billings.

Appendix 27 – 2018 Total Collections Costs* as a Percentage of Billings – Electric

Utility	Billings	Collections Operating Expenses	Gross Write-Offs	Universal Service Programs	Total Collections Costs*	Total Collections Costs* as a Percent of Billings
Duquesne	$565,825,977	$8,114,677	$19,578,220	$28,297,392	$55,990,289	9.9%
Met-Ed	$631,235,520	$17,699,048	$15,183,890	$21,755,946	$54,638,884	8.7%
PECO**	$2,477,620,946	$15,524,811	$29,445,461	$69,290,716	$114,260,988	4.6%
Penelec	$591,507,790	$17,756,784	$15,418,293	$26,480,948	$59,656,025	10.1%
Penn Power	$195,071,468	$4,130,948	$3,358,838	$7,242,197	$14,731,983	7.6%
PPL	$2,076,233,183	$9,825,885	$53,809,070	$80,034,598	$143,669,553	6.9%
West Penn	$715,500,920	$17,645,222	$15,506,690	$28,300,622	$61,452,534	8.6%
Total/Average	**$7,252,995,804**	**$90,697,375**	**$152,300,462**	**$261,402,419**	**$504,400,256**	**7.0%**

*Includes collections operating expenses, gross write-offs and universal service program costs.

**PECO data includes electric and gas.

Appendix 28 – 2018 Total Collections Costs* as a Percentage of Billings – Gas

Utility	Billings	Collections Operating Expenses	Gross Write-Offs	Universal Service Program Costs	Total Collections Costs*	Total Collections Costs* as a Percent of Billings
Columbia Gas	$441,253,741	$4,848,900	$8,531,390	$27,253,047	$40,633,337	9.2%
NFG	$153,674,403	$699,066	$4,330,927	$3,186,234	$8,216,227	5.3%
Peoples	$315,638,063	$2,225,302	$7,957,830	$5,092,676	$15,275,808	4.8%
Peoples-Equitable	$230,033,115	$1,631,759	$5,143,394	$10,351,124	$17,126,277	7.4%
PGW	$548,304,433	$4,229,699	$34,986,533	$7,583,997	$46,800,229	8.5%
UGI-Gas	$269,363,627	$4,843,785	$8,854,360	$68,093,074	$81,791,219	30.4%
UGI Penn Natural	$163,406,878	$2,294,424	$4,904,780	$5,600,907	$12,800,111	7.8%
Total/Average	**$2,121,674,260**	**$20,772,935**	**$74,709,214**	**$127,161,059**	**$222,643,208**	**10.5%**

*Includes collections operating expenses, gross write-offs and universal service program costs.

Appendices 29 and 30 show the percentage of billings for collections operating expenses, gross residential write-offs and Universal Service Program Costs. These two tables, though similar to Appendices 28 and 29, differ in that they show the individual contributions to the overall collections costs for the three specific expenses, rather than showing the dollar amounts of each expense category.

Appendix 29 – 2018 Individual Expense Categories as a Percentage of Billings – Electric

Utility	2018 Billings	Collections Operating Expenses as a Percent of Billings	Gross Write-Offs as a Percent of Billings (Ratio)	Universal Service Programs as a Percent of Billings	Total Collections Costs*	Total Collections Costs* as a Percent of Billings
Duquesne	$565,825,977	1.4%	3.5%	5.0%	$55,990,289	9.9%
Met-Ed	$631,235,520	2.8%	2.4%	3.4%	$54,638,884	8.7%
PECO**	$2,477,620,946	0.6%	1.2%	2.8%	$114,260,988	4.6%
Penelec	$591,507,790	3.0%	2.6%	4.5%	$59,656,025	10.1%
Penn Power	$195,071,468	2.1%	1.7%	3.7%	$14,731,983	7.6%
PPL	$2,076,233,183	0.5%	2.6%	3.9%	$143,669,553	6.9%
West Penn	$715,500,920	2.5%	2.2%	4.0%	$61,452,534	8.6%
Total/Average	**$7,252,995,804**	**1.3%**	**2.1%**	**3.6%**	**$504,400,256**	**7.0%**

*Includes collections operating expenses, gross write-offs and universal service program costs.

**PECO data includes electric and gas.

Appendix 30 – 2018 Individual Expense Categories as a Percentage of Billings – Gas

Utility	Billings	Collections Operating Expenses as a Percent of Billings	Gross Write-Offs as a Percent of Billings (Ratio)	Universal Service Programs as a Percent of Billings	Total Collections Costs*	Total Collections Costs* as a Percent of Billings
Columbia Gas	$441,253,741	1.1%	1.9%	6.2%	$40,633,337	9.2%
NFG	$153,674,403	0.5%	2.8%	2.1%	$8,216,227	5.3%
Peoples	$315,638,063	0.7%	2.5%	1.6%	$15,275,808	4.8%
Peoples-Equitable	$230,033,115	0.7%	2.2%	4.5%	$17,126,277	7.4%
PGW	$548,304,433	0.8%	6.4%	1.4%	$46,800,229	8.5%
UGI-Gas	$269,363,627	1.8%	3.3%	25.3%	$81,791,219	30.4%
UGI Penn Natural	$163,406,878	1.4%	3.0%	3.4%	$12,800,111	7.8%
Total/Average	**$2,121,674,260**	**1.0%**	**3.5%**	**6.0%**	**$222,643,208**	**10.5%**

*Includes collections operating expenses, gross write-offs and universal service program costs.

Customers are classified as either heating or non-heating. Heating and non-heating bills are shown for the years 2004 and 2018. The size of customer bills is impacted by both utility rates and customer usage levels.

Appendix 31 – Monthly Average Bill: Heating vs. Non-Heating Accounts 2004-18 – Electric

Utility	Average Bill – Heating Customers		Average Bill – Non-Heating Customers	
	2004	2018	2004	2018
Duquesne	$59.30	$117.00	$49.01	$86.00
Met-Ed	$125.25	$135.00	$72.92	$94.00
PECO*	$114.12	$105.18	$75.92	$105.45
Penelec	$99.83	$130.00	$57.75	$92.00
Penn Power	$131.00	$166.00	$78.75	$99.00
PPL	$114.72	$175.05	$61.99	$116.82
West Penn	$100.80	$128.00	$56.40	$86.00

*PECO data includes electric and gas.

Appendix 32 - Monthly Average Bill: Heating vs. Non-Heating Accounts 2004-18 – Gas

Utility	Average Bill – Heating Customers		Average Bill – Non-Heating Customers	
	2004	2018	2004	2018
Columbia Gas	$92.34	$94.00	$29.55	$38.00
NFG	$103.67	$69.45	$54.02	$34.86
Peoples	$101.10	$81.06	$34.31	$28.09
Peoples-Equitable	$109.62	$80.04	$35.75	$22.73
PGW	$106.60	$96.15	$46.50	$42.39
UGI-Gas	$93.79	$77.06	$26.47	$24.51
UGI Penn Natural	$115.25	$96.24	$25.88	$24.05

Appendix 33 – 2018 Inactive Accounts

Utility	Number of Inactive Accounts	Dollars in Debt	Average Debt
Duquesne	5,766	$2,987,307	$518.09
Met-Ed	11,265	$5,050,028	$448.29
PECO*	15,425	$10,469,771	$678.75
Penelec	11,549	$5,263,707	$455.77
Penn Power	2,537	$1,107,206	$436.42
PPL	22,586	$19,558,691	$865.97
West Penn	11,238	$4,298,385	$382.49
Electric – Total/Average	**80,366**	**$48,735,095**	**$606.41**
Columbia Gas	1,504	$762,577	$507.03
NFG	10,585	$4,498,510	$424.99
Peoples	13,772	$9,889,700	$718.10
Peoples-Equitable	10,367	$5,585,254	$538.75
PGW	13,762	$14,157,264	$1,028.72
UGI-Gas	5,739	$2,831,512	$493.38
UGI Penn Natural	2,511	$1,466,018	$583.84
Gas – Total/Average	**58,240**	**$39,190,835**	**$672.92**

*PECO data includes electric and gas.

Appendix 34 – 2018 Security Deposits on Hand

Utility	Number of Security Deposits	Dollars on Hand	Average Deposit on Hand
Duquesne	54,628	$7,402,923	$135.52
Met-Ed	63,711	$15,718,436	$246.71
PECO*	120,231	$26,219,916	$218.08
Penelec	52,060	$11,601,533	$222.85
Penn Power	18,567	$6,131,192	$330.22
PPL	34,602	$7,205,212	$208.23
West Penn	60,821	$12,887,791	$211.90
Electric – Total/Average	**404,620**	**$87,167,003**	**$215.43**
Columbia Gas	14,012	$2,270,180	$162.02
NFG	244	$43,170	$176.93
Peoples	6,488	$742,030	$114.37
Peoples-Equitable	5,653	$609,407	$107.80
PGW	11,187	$2,909,023	$260.04
UGI-Gas	20,516	$2,412,040	$117.57
UGI Penn Natural	8,591	$1,136,626	$132.30
Gas – Total/Average	**66,691**	**$10,122,476**	**$151.78**

*PECO data includes electric and gas.

Appendix 35 – BCS Activity

Year	PARs	Consumer Complaints	Inquiries	Total Activity	Percent PARs	Percent Consumer Complaints	Percent Inquiries
2004	94,521	26,173	92,541	213,235	44.33%	12.27%	43.40%
2005	61,683	22,590	108,318	192,591	32.03%	11.73%	56.24%
2006	49,380	21,310	90,940	161,630	30.55%	13.18%	56.26%
2007	50,465	20,596	79,341	150,402	33.55%	13.69%	52.75%
2008	61,074	20,420	62,146	143,640	42.52%	14.22%	43.27%
2009	55,618	18,147	75,329	149,094	37.30%	12.17%	50.52%
2010	55,318	13,341	77,761	146,420	37.78%	9.11%	53.11%
2011	59,132	14,718	66,747	140,597	42.06%	10.47%	47.47%
2012	53,042	14,830	63,113	130,985	40.49%	11.32%	48.18%
2013	58,123	12,211	56,749	127,083	45.74%	9.61%	44.66%
2014	62,079	19,735	51,146	132,960	46.69%	14.84%	38.47%
2015	50,434	10,684	32,298	93,416	53.99%	11.44%	34.57%
2016	52,898	10,368	26,831	90,097	58.71%	11.51%	29.78%
2017	46,136	13,215	25,610	84,961	54.30%	15.55%	30.14%
2018	48,797	15,871	25,720	90,388	53.99%	17.56%	28.46%
Total/Average	**858,700**	**254,209**	**934,590**	**2,047,499**	**41.94%**	**12.42%**	**45.65%**

Appendix 36 – Top Reasons for Inquiries (shown as a percentage)

	2005*	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CAP inquiry/contact	5.02	5.83	9.01	12.76	18.52	17.31	18.48	15.95	20.22	15.79	24.65	24.95	25.92	23.11
Unable to open new PAR - service on	21.78	7.87	8.98	9.26	9.08	8.14	11.18	9.63	12.09	8.42	16.21	22.27	19.57	19.04
Total	**26.80**	**13.70**	**17.99**	**22.02**	**27.60**	**25.45**	**29.66**	**25.58**	**32.31**	**24.21**	**40.86**	**47.22**	**45.49**	**42.15**

*BCS started tracking these contact types in 2005.