BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	Docket No. R-2017-2586783
PHILADELPHIA GAS WORKS	:	

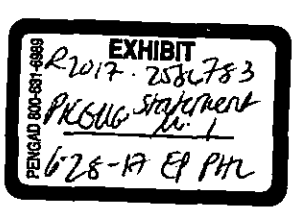
DIRECT TESTIMONY
AND EXHIBITS
OF
RICHARD A. BAUDINO

ON BEHALF OF THE

PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

MAY 16, 2017



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DIRECT TESTIMONY OF RICHARD A. BAUDINO

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Richard A. Baudino. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. What is your occupation and by whom are you employed?

A. I am a consultant to Kennedy and Associates.

Q. Please describe your education and professional experience.

A. I received my Master of Arts degree with a major in Economics and a minor in Statistics from New Mexico State University in 1982. I also received my Bachelor of Arts Degree with majors in Economics and English from New Mexico State in 1979.

I began my professional career with the New Mexico Public Service Commission Staff in October 1982 and was employed there as a Utility Economist. During my employment with the Staff, my responsibilities included the analysis of a broad range of issues in the ratemaking field. Areas in which I testified included cost of service, rate of return, rate design, revenue requirements, analysis of sale/leasebacks of generating plants, utility finance issues, and generating plant phase-ins.

In October 1989, I joined the utility consulting firm of Kennedy and Associates as a Senior Consultant where my duties and responsibilities covered substantially the same areas as those during my tenure with the New Mexico Public Service Commission Staff. I became Manager in July 1992 and was named Director of Consulting in January 1995. Currently, I am a consultant with Kennedy and Associates.

Exhibit ____(RAB-1) summarizes my expert testimony experience.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG").

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to provide recommendations regarding cost allocation, revenue allocation, and rate design to the Pennsylvania Public Utility Commission ("PUC" or "Commission"). In so doing I will respond to the Direct Testimonies of Mr. Douglas Moser and Mr. Philip Hanser, witnesses for Philadelphia Gas Works ("PGW" or "Company").

Q. Please summarize your conclusions and recommendations to the Commission.

A. My conclusions with respect to PGW's cost and revenue allocation and rate design proposals are as follows:

1. PGW's selection of a Customer/Demand approach to the classification and allocation of distribution mains in the class cost of service study ("CCOSS") presented by Mr. Hanser is an appropriate beginning for allocating cost responsibility to customer classes.

2. However, Mr. Hanser's CCOSS inappropriately combines Interruptible Transportation ("IT") customers and General Transportation Service ("GTS") customers into one class. These two classes are fundamentally different and should not be combined for purposes of a class cost of service study. The

difference lies in the fact that GTS customers receive firm service from PGW, while IT customers receive interruptible service.

3. Moreover, the rate of return for the combined GTS/IT customer class is significantly understated in PGW's CCOSS. This understatement is because PGW is providing heavily discounted rates from the Company's current tariffed rates to GTS customers resulting in a reduction in revenues for PGW. Consequently, PGW's CCOSS fails to provide an accurate portrayal of the rate of return for IT customers taking service at current cost-based tariff rates.

4. Combining the GTS and IT classes in Mr. Hanser's CCOSS results in highly inaccurate results for both classes of customers. Therefore, PGW's CCOSS cannot be relied upon for purposes of determining class revenue allocations generally and cost based rates specifically for the IT class in this proceeding.

5. Mr. Hanser proposed a grossly excessive 59% rate increase for Rate IT customers. Even worse, this increase would provide the low end of the range of rates that PGW could charge IT customers if PGW's request to implement a negotiated rate process is approved. The Company's filed CCOSS does not support a 59% rate increase to IT customers. Furthermore, such a proposal would result in rate shock to the IT class.

6. PGW witness Moser proposed a radical and unreasonable change to the IT class. Mr. Moser recommended that interruptible customers be subjected to pricing based on the cost of alternative fuels and rates for firm service customers. Under Mr. Moser's proposed change, IT rates would no longer be based on the allocated cost to serve IT customers. However, IT customers would still be subject to interruption and would be required to maintain alternative fuel capabilities. This arbitrary and adverse proposal should be rejected out of hand by the Commission.

My recommendations to the Commission are as follows:

1. Rates for the IT class should continue to be based on the allocated cost to serve those customers, not on value of service pricing.

2. PGW should be required to file a CCOSS in its next case that separates GTS and IT customers, as these customer classes have different levels of service.

3. Mr. Hanser's proposed 59% increase to IT customers should be rejected.

4. For purposes of this case, Rate IT should receive no more than a system average percentage increase in this proceeding. The majority of any rate increase to IT customers should be collected through the fixed charges, or, at a minimum, both the customer charges and volumetric charges should be increased at the system percentage increase.

5. Mr. Moser's proposed restructuring of IT rates should be rejected.

6. Rate IT should be continued as currently structured in PGW's tariff.

7. PGW, as part of its next base rate proceeding, should be required to propose firm transportation service for large commercial and industrial customers that is cost-based and in alignment with other natural gas distribution companies in Pennsylvania.

II. COST AND REVENUE ALLOCATION

Q. Did you review PGW's CCOSSs?

A. Yes. Mr. Hanser sponsored the Company's CCOSS in his Direct Testimony.

Q. Please provide a general description of the process of allocating cost responsibility to customer classes using a cost of service study.

A. A class cost of service study allocates and assigns the total cost of providing utility service to the classes of customers receiving that service. In certain instances, the subject utility can identify and directly assign costs to customers. For the vast majority of costs, however, such direct assignments are not possible and a cost of service study is required so that the remaining costs may be allocated to customers. The development of a class cost of service study consists of three steps: functionalization, classification, and allocation. Step 1, functionalization, involves separating the utility's investment and expenses into major functional categories. For natural gas utilities such as PGW, these categories may include production, storage, transmission, and distribution functions. The FERC Uniform System of Accounts provides the method by which costs are identified and placed into these various functional categories.

Step 2 is classification. Once functionalization is complete, the utility's costs are classified into demand, commodity, and customer components. Demand-related costs are fixed and do vary with the monthly and yearly gas commodity consumption

of the utility's customers. These costs are driven by demands placed on the system during the winter peak period and include such items as gas main investment and expenses. Commodity-related expenses vary with the amount of gas consumed by customers and include the cost of gas and certain operation and maintenance expenses. Customer-related costs are associated with the number of customers and include items such as a portion of main investment, meters, and services.

Step 3 is allocation. After costs are classified, they are allocated to customer classes based on each class' contribution to the respective cost classifications. Generally speaking, demand costs are allocated based on each class' contribution to the total winter peak. Commodity costs are allocated based on each class' share of total yearly consumption, or throughput. Customer costs are allocated based on the number of customers.

Q. Do you agree with Mr. Hanser's proposed classification and allocation of distribution mains?

A. I agree with the general approach of classifying and allocating mains based on contribution to peak demand and the number of customers.

Q. Please explain why distribution mains should be classified as both demand and customer related for purposes of the Company's CCOSS.

A. The two main functions of distribution mains are to deliver gas during the system winter peak and to connect customers to the system. A properly designed zero-intercept study or minimum size system study recognizes these two functions by classifying main costs into demand-related and customer-related costs, which can then be assigned to customer classes based on their respective contributions to system peak and on the number of customers in each class.

Peak winter demand is one of the primary drivers of PGW's investment in gas distribution mains. The Company must have sufficient capacity available on its system to satisfy the peak winter heating demand, which is caused mainly by residential customers. If the peak winter demand increases, the Company may need to invest in additional mains to serve the load. During the non-winter months, substantial excess capacity exists on the system. Use of the Company's distribution system during these months does not cause additional fixed costs to be incurred by the Company. In fact, high load factor customers provide valuable margins to the Company during off-peak months when the demands of residential heating customers are very low. In a similar manner to peak winter demand, if the number of customers increases, the Company may need to expand its distribution system investment. Thus, the number of customers connected to the distribution system is another important causative factor in distribution main investment. In my view, this is just obvious common sense in terms of the two factors that drive a gas distribution company's costs of distribution mains.

Q. Is it appropriate to classify and allocate a portion of the costs of mains on the basis of total throughput?

A. No. Peak winter demands and the number of customers drive investment in distribution mains, not gas consumption throughout the year. If the peak winter demand increases, the Company may need to invest in additional mains to serve the load. Likewise, if the number of customers increases, the Company may need to expand its distribution system investment. In my view, this is just obvious common sense in terms of the two factors that drive a gas distribution company's main costs.

Throughput, which varies substantially during the year, is not what causes PGW's investment in the *fixed costs* of distribution mains. During the non-winter months, substantial excess capacity exists on the system. In fact, high load factor customers provide valuable margins to the Company during off-peak months when the demands of residential heating customers are very low.

Q. Have you prepared a table illustrating the effect of winter heating load on PGW's system?

A. Yes. Table 1 below shows monthly sendout for the Residential Heating, Commercial Heating, and GTS/IT classes for the twelve months ending August 2018. I calculated the average monthly consumption for the heating and non-heating seasons from the data and included them in Table 1.

TABLE 1

Monthly Mcf Sendout by Rate Class

	Res - Heat	Comm - Heat	GTS/IT
09/2017	712,817	284,584	1,946,773
10/2017	1,636,094	490,438	2,183,886
11/2017	3,585,024	908,653	2,432,056
12/2017	5,482,495	1,320,826	2,763,749
01/2018	7,271,558	1,704,090	3,006,953
02/2018	6,375,686	1,498,209	2,711,090
03/2018	4,698,808	1,152,218	2,629,761
04/2018	2,302,476	631,361	2,222,630
05/2018	1,056,510	366,539	2,057,779
06/2018	680,364	281,306	1,937,765
07/2018	699,639	291,385	1,995,852
08/2018	696,086	292,121	1,995,852
Totals	35,197,557	9,221,729	27,884,147
Monthly Avg., Heating Season	4,478,877	1,100,828	2,564,303
Monthly Avg., Non-Heating Season	697,227	287,349	1,969,061

Heating season defined as October - May
Source: Exhibit PQH-8C

Note the dramatic increase in the average monthly heating season Mcf for the Residential and Commercial classes. The GTS/IT classes have a far more even usage pattern throughout the year and have a much smaller difference between heating and non-heating season average monthly consumption compared to the Residential and Commercial Heating classes of customers.

Q. Please summarize the results of the CCOSS presented by Mr. Hanser.

A. Table 2 summarizes the customer class rates of return at current rates from the CCOSS presented by Mr. Hanser.

TABLE 2
Class Rates of Return and
Relative Rates of Return

	Current Return on Rate Base	Relative ROR	Proposed Return On Rate Base	Relative ROR
Residential	3.7%	0.78	9.6%	0.91
Commercial	12.3%	2.62	15.9%	1.50
Industrial	12.9%	2.75	8.7%	0.82
PHA GS	3.9%	0.82	13.7%	1.29
Municipal/PHA	4.1%	0.87	6.6%	0.62
NGVS	13.4%	2.84	13.4%	1.26
Interruptible	-16.4%	-3.50	-16.4%	-1.55
GTS/IT	1.7%	0.37	20.3%	1.92
Total	4.7%		10.6%	

The relative rate of return ("RROR") ratios provide a measure of each class' rate of return compared to PGW's system average rate of return. A relative rate of return of less than 1.0 indicates that a rate class is providing less than the system average return. A relative rate of return greater than 1.0 indicates that a customer class is

providing a rate of return greater than the system average. For example, the current RROR for the Residential class is 0.78, meaning its current return is lower than the system average return on 4.7%. Alternatively, Commercial customers' RROR is 2.62, showing that this class is significantly above the system average rate of return.

Q. Mr. Baudino, does the current rate of return percentage and relative rate of return for the GTS/IT class accurately portray the rate of return for IT customers?

A. No, it does not. The 1.7% combined class rate of return is due to the inclusion of GTS customers, which have steeply discounted rates that have been held constant per contracts with PGW since at least 2003, as that is when PGW closed Rate GTS to other customers. These contracts are steeply discounted compared to both firm service and interruptible transportation service rates for PGW. These discounted GTS contracts are solely responsible for the low rate of return and RROR that show up in Mr. Hanser's CCOSS for the GTS/IT class.

Q. How much of the GTS/IT class revenues come from GTS customers?

A. From the Company's original filing, GTS sales were 13,176,839 Mcf, which represents 48% of total GTS/IT sales. In comparison, GTS customers generated $1,249,147 in revenues, representing 10.3% of total revenues for the combined GTS/IT class.

Q. What is the average revenue per Mcf from GTS customers compared to IT customers?

A. Table 3 below shows the average revenue per Mcf from GTS and IT customers separately. The average GTS revenue per Mcf is only $0.095 (9 ½ cents) compared

to the average IT revenue per Mcf of $0.769 (76.9 cents). The difference between these two sets of customers is $0.674 per Mcf.

TABLE 3
GTS and IT Avg. Rate Comparison

Current GTS Revenues	$	1,249,147
Current IT Revenues	$	10,928,669
Total GTS/IT Sales		27,393,512
Less: IT Sales		14,216,673
GTS Sales		13,176,839
IT Average $/mcf	$	0.769
GTS Average $/mcf	***$***	***0.095***
Difference	***$***	***0.674***

Q. If GTS customers provided revenues closer to those generated by IT customers, would the CCOSS results change?

A. Yes. If GTS customers provided the same average revenue per Mcf as IT customers, they would generate an additional $8.88 million per year in revenues. Now, Mr. Hanser's Exhibit PQH-1, page 1 of 1, line 7, shows that the GTS/IT class requires an additional $2.598 million to reach its full cost of service revenue level. Thus, the additional $8.88 million in revenues from GTS customers would completely turn the CCOSS study results around and show a higher than average return for the combined GTS/IT classes.

There is another way to view this situation as well. To generate the additional $2.598 million in revenues to bring the GTS/IT class to its cost of service, the

average GTS rate would need to increase by $0.20 per Mcf, bringing the total average rate to $0.295. This rate is still far below the average IT revenue per Mcf.

Q. What do you conclude from the foregoing analysis and discussion?

A. The conclusion is obvious. It is the deeply discounted GTS contract customers that are responsible for the 1.7% rate of return from the combined GTS/IT class, not the IT customers in that combined class.

Q. Do you have further explanation or qualification of the results shown in Table 3?

A. Yes. The CCOSS results are also problematic because IT and GTS customers have fundamentally different service characteristics. GTS customers are firm service customers and should be allocated costs commensurate with firm transportation service. IT customers are interruptible and should be allocated costs that reflect their much lower reliability of service. In other words, IT customers can be interrupted during peak periods while GTS customers cannot be. Two such different classes should not be combined for purposes of a CCOSS study. This is a significant flaw in the Mr. Hanser's CCOSS.

Q. Could PGW have produced a CCOSS that separated GTS and IT customers?

A. According to PGW, no. PGW's response to OCA-VII-1 claimed that data limitations precluded separate CCOSS analyses for GTS and IT customers. *See* Exhibit___(RAB-3). Importantly, however, PGW had only three customer accounts on Rate GTS, and, in April 2017, one of those three customer accounts left PGW's system altogether.[1] *See* Exhibit___(RAB-3). The small number of customers in the

[1] Although PGW included the volumes of all three customer accounts in its Fully Projected Future Test Year, the volumes of the customer account that left the system in April 2017 represented approximately 8.5% of the GTS volumes at issue.

GTS class suggests that separating the classes should not be difficult for PGW to accomplish. Moreover, if only two customer accounts remain, PGW should certainly be able to overcome any data limitations for purposes of separating GTS and IT customers as part of any future CCOSS. Regardless, because of PGW's claimed data limitations, we cannot accurately ascertain the specific rate of return for IT customers for purposes of this proceeding.

Q. Should PGW be required to address the limitations of the data supporting its proposed allocation factors?

A. Yes. PGW's explanation as to why it combined GTS and IT customers is wholly insufficient. The Commission should require PGW to separate GTS and IT customer demands, volumes, and customer counts in its next rate case. I will address this more fully in my CCOSS recommendation later in my testimony.

Q. Turning now to revenue allocation, what was Mr. Hanser's proposed revenue increase to IT customers?

A. *Mr. Hanser proposed a staggering 59% revenue increase to Rate IT customers, as compared to PGW's overall requested increase of 14.2%. Thus, Mr. Hanser's proposed increase to IT customers is 415% higher than the overall requested increase.*

Q. Does Mr. Hanser's testimony and exhibits reflect a 59% increase to Rate IT customers?

A. No. On page 1 of Mr. Hanser's Exhibit PQH-1, he reflects a rate increase of 44.9% to the GTS/IT class; however, that increase is understated because, arithmetically, the CCOSS presentation assumes that any rate increase will be borne by the GTS and IT customers. Because Rate GTS is a negotiated rate, in actuality, all of the rate

increase would be allocated to Rate IT, resulting in the aforementioned 59% rate increase.

Q. What is your recommendation with respect to Mr. Hanser's increase to Rate IT?

A. I recommend that the Commission reject Mr. Hanser's unwarranted, baseless, and economically harmful proposed increase to IT customers. My analysis shows that it is the GTS customers that are causing the shortfall in total GTS/IT combined class revenues, not IT customers. Therefore, there is no good reason for IT customers to suffer a 59% revenue increase. Moreover, as I noted previously, the GTS/IT combined classes have nothing in common, so requiring IT customers to shoulder the entirety of any differential between actual and negotiated revenues for GTS customers is unreasonable. Either all of PGW's customers should be responsible for the subsidization of GTS customers or PGW should take responsibility for this differential, as PGW entered into these GTS negotiated rates at least fourteen years ago with no evidence in this proceeding showing that the rates and terms of these heavily discounted contracts are still appropriate.

Q. On page 22, lines 17 through 19 of Mr. Hanser's Direct Testimony, he testified that he allocated a portion of the revenue increase to the IT Rate Class "to reflect the fact that the IT customer demand drives many of the costs associated with building and operating the system." Do you agree with this statement?

A. No. Mr. Hanser's 59% rate increase to IT customers in no way reflects cost responsibility for this customer class. As I demonstrated previously, it is the GTS customers who are solely responsible for the low 1.7% return for the combined GTS/IT customer class.

Q. Does Mr. Hanser's proposed 59% increase to Rate IT customers constitute rate shock?

A. It most certainly does. It also flies in the face of the gradualism principle, which generally provides that rates and revenue should be increased gradually over time to avoid excessively large rate increases to customers.

It is important to note that in PGW's last rate case, in 2009, Mr. Dybalski considered gradualism as a principle in allocating the Company's revenue. On page 5 of Mr. Dybalski's Direct Testimony in that proceeding he stated the following:

> 1) Observe the principles of gradualism and avoid rate shock by allocating the rate increase in such a way that carefully moves all classes closer to the system rate of return when compared to PGW's 2006 base rate case filing (Docket No. R-00061931).

Direct Testimony of Kenneth S. Dybalski, PGW Statement No. 5, *Pa. PUC v. Philadelphia Gas Works*; Docket No. R-2009-2139884 (2009), p. 5. Mr. Hanser made no such careful move with his 59% rate increase to Rate IT customers in this case. His proposal is wildly inconsistent with PGW's approach in Docket No. R-2009-2139884.

Q. Did you attempt to ascertain the basis for Mr. Hanser's contention regarding cost responsibility for Rate IT customers?

A. Yes. PICGUG asked the Company to explain in detail how Mr. Hanser's proposed revenue increase reflected the "fact" that the IT customer demand drives many of the costs associated with building and operating the system. In its response to PICGUG-II-9, included in Exhibit ___(RAB-3), the Company responded as follows:

> While Rate IT customers do not contribute to design-day demand, their needs are still being met by the distribution system. As discussed by Company witness Moser in PGW St. No. 7, PGW has been able to avoid interrupting Rate IT customers during the winter

> and permitted them to continue to stay on the system on peak days. Mr. Moser also explains that the gas distribution system is maintained and modernized for all customers, including those in the Rate IT class. Because not all capacity costs imposed by these customers on the system can be avoided, some portion of capacity costs should be allocated to Rate IT customers.

See Exhibit___(RAB-3). This response fails to support Mr. Hanser's proposed 59% increase to IT customers. IT customers are indeed being allocated their fair share of capacity costs and other distribution expenses in the CCOSS presented by Mr. Hanser. What PGW and Mr. Hanser failed to explain is how a 59% revenue increase that results in a 20.9% rate of return reflects IT cost responsibility. The fact is that it does not reflect IT cost responsibility in any way.

The Company's response to PICGUG's data request also misses the main point of IT's service characteristics. IT customers must invest in alternate fuel capability and be ready to interrupt their gas consumption when needed. Just because system conditions precluded the need for interruptions over the last several years does not mean that IT customers will never be interrupted and that, therefore, they are receiving firm service. PGW's tariff clearly states that IT service is interruptible and, therefore, is not firm. PGW's data request response also confirmed the fact that IT customers do not contribute to design day demands. This is not the case for firm service customers who do contribute to design day demands and are allocated costs on that basis.

In conclusion, Mr. Hanser and PGW have no basis whatsoever for the assertion that IT customers are not contributing their fair share of costs and that an economically harmful 59% rate increase is justified.

Q. Do IT customers incur costs for their service that firm customers do not incur?

A. Yes. IT customers must install and maintain alternate fuel capability in order to receive service under the IT rate schedule. This is a significant additional cost that IT customers incur that firm service customers do not incur.

Q. If IT customers chose to receive firm service, would PGW incur additional costs to serve them?

A. Yes. In PGW's response to OSBA-I-31, the Company was asked to estimate its investment requirement to provide firm service to IT customers. The Company responded as follows.

> D. If Rate IT customers converted to firm service, there would be an increase need of system supply. This increase in volume would be met with a combination pipeline firm transportation, expansion of city gate capacity, expansion of PGW distribution system infrastructure and/or additional LNG capability. The exact mix would need additional studies to finalize.

See Exhibit___(RAB-3). This response confirms that IT customers do not impose the same costs on PGW's system as firm customers. In essence, IT customers provide system savings due to their lower reliability of service. It is inappropriate to allocate costs and revenue increases to Rate IT as if it were receiving firm service.

Q. Based on the foregoing discussion and analysis of PGW's flawed CCOSS, what is your recommended approach to revenue allocation?

A. I recommend that the Commission increase IT revenues by the system average increase. Please refer to Exhibit ____(RAB-2) for my recommended class revenue allocation.

For purposes of this case, I increased IT revenues by the Company's proposed 14.2% increase, or $1.5 million. Mr. Hanser's proposed increase was $5.5 million for IT. I

allocated the difference, $4.0 million, to the Residential class since that class was returning revenues below its allocated cost to serve. This resulted in an increase to Residential customers of 16.3%, which is 1.15 times the system average increase. I accepted Mr. Hanser's revenue allocation to the other rate classes.

Q. Please explain why the system average increase is appropriate for Rate IT customers.

A. The main challenge with PGW's CCOSS is that GTS and IT customers are lumped into one class for purposes of cost allocation. We cannot know how much, if any, of the rate increase should be assigned to the IT rate class. Nevertheless, my analysis of GTS revenues suggests that if those customers were paying rates commensurate with costs, the combined GTS/IT rate class would be returning revenues far greater than the cost to serve them. Therefore, it would be reasonable to give IT customers no increase in this proceeding.

I recognize, however, that the CCOSS does not specifically separate IT customers. Because the GTS/IT class is so far below the cost to serve, and in light of the flawed CCOSS allocations, I believe a fair and reasonable compromise in this proceeding would be for Rate IT to receive an increase no greater than the system average increase with the caveat that PGW be required in its next base rate proceeding to provide a CCOSS that specifically separates the GTS/IT class so that a comprehensive determination can be made with respect to the Rate IT customers' cost to serve.

Q. What is your recommended rate design for IT customers?

A. Since most of the costs of PGW's system are fixed, more of the IT revenues should be collected through the fixed charges. Unfortunately, PGW recommended holding

customer charges constant, with the entirety of the 59% rate increase flowing through volumetric rates. Because this is unreasonable, I recommend that the majority of any rate increase to IT customers be collected through the fixed charge or, at a minimum, both the customer charges and volumetric charges be increased at the system percentage increase.

Q. Should the current language in Rate IT be continued and approved by the Commission?

A. Yes. The language changes proposed by the Company to Rate IT should be rejected. The only changes in the Rate IT tariff language should be the new rates approved by the Commission.

Q. What is your recommendation regarding cost allocation for GTS and IT customers?

A. I recommend that the Commission order PGW to separate GTS and IT customers into separate rate classes in the CCOSS filed in the Company's next rate proceeding. As I testified earlier, PGW's alleged data limitations are no excuse for combining these two very different classes of customers. The Commission should order PGW to separately identify all demand, volumetric, and customer allocation factors for GTS and IT customers by its next rate proceeding.

III. INTERRUPTIBLE TRANSPORTATION PROPOSAL

Q. Briefly describe Mr. Moser's proposal for the IT rate class.

A. Mr. Moser set forth his proposal for Rate IT beginning on page 27 of his Direct Testimony. In essence, Mr. Moser's proposal consists of the following main points:

- IT rates would no longer be based solely on the cost to serve. Mr. Moser proposed to move to a negotiated rate approach that moves significantly away from cost of service principles.
- PGW would establish price ranges for IT rates. The lower end of the range would be the cost based IT rate established in this and future rate proceedings. The upper end of the range would be based on a so-called "equivalent transportation rate," which is actually a firm service rate.
- The distribution charge would be negotiated by the IT customer and the Company within the established range. The negotiated rate would reflect the cost of service as well as "competitive considerations."
- IT rates would reflect cost of service and "value of service pricing principles."

Q. What is your recommendation with respect to Mr. Moser's IT rate proposal?

A. The Commission should reject Mr. Moser's IT rate proposal.

Q. Why should the Commission reject Mr. Moser's IT proposal?

A. Mr. Moser's Rate IT proposal is a misguided attempt to fix a problem with Rate IT that quite simply does not exist. I will summarize the major flaws as follows:

First, PGW presented no evidence that IT customers are not paying their fair share of system costs. In fact, it is the GTS customers that are being heavily subsidized by PGW's customers, and, as noted in my testimony above, PGW is specifically seeking to have Rate IT customers subsidize the GTS customers through PGW's combination of the GTS/IT classes for the CCOSS.

Second, Mr. Moser's proposed value of service pricing would allow the Company to charge excessive and economically damaging rates to IT customers. These excessive

rates would result in IT customers paying PGW excessive returns. Regulation should prevent the kind of pricing abuses that PGW is attempting to inflict on IT customers with this so-called value of service pricing approach.

Third, Mr. Moser attempted to characterize IT customers as being more risky than other classes of customers. I disagree with this assertion. In fact, IT customers are likely less risky than temperature sensitive customers, such as Residential customers.

Fourth, simply because UGI, Inc. ("UGI"), has long standing negotiated interruptible tariff that fit its system, this is not sufficient grounds for the kind of unreasonable IT rate proposal for which Mr. Moser seeks approval, especially since UGI's services available to large commercial and industrial customers seeking firm transportation service are significantly different than those provided by PGW.

Finally, if PGW seeks to offer firm transportation service to large commercial and industrial customers, PGW should be required to do so on a basis that it is reflective of the cost to serve those types of customers.

Q. Regarding your first point, please explain why PGW failed to show that IT customers are not paying their fair share of system costs.

A. I discussed this point at length in Section II of my Direct Testimony. Mr. Hanser's flawed CCOSS combined GTS and IT customers into one rate class. Given the heavily discounted rates for GTS customers, the rate of return for the GTS/IT class is unrealistically low and fails to show the correct rate of return for IT customers. The low rate of return for GTS/IT is completely due to GTS customers, not IT customers. PGW's CCOSS presentation hides the huge GTS rate subsidy in the combined GTS/IT class. GTS customers are being subsidized by all PGW customers. However, neither Mr. Hanser nor Mr. Moser made any mention of this important

fact. This subsidy is likely several million dollars per year. By imposing a 59% rate increase on IT customers, Mr. Hanser, Mr. Moser, and PGW are essentially trying to collect the entire GTS rate subsidy, and a lot more, from IT customers. This is totally unreasonable, and the Commission should reject PGW's IT rate proposal on this basis alone.

Q. Regarding your second point, please explain why the Commission should continue a cost of service approach to IT pricing rather than a value of service pricing.

A. Absent a compelling reason to the contrary, the Commission should continue its approved cost of service based pricing for all customers, including IT customers. Cost of service is the bedrock of utility pricing principles. In fact, the Pennsylvania Commonwealth Court has indicated that cost of service is the polestar in determining a utility's rates. *See Lloyd v. Pa. PUC*, 904 A.2d 1010 (Pa. Commw. Ct. 2006). A utility's customer classes should provide revenues that reflect the costs to serve them. In this manner, all customers are treated fairly and equally. Deviations from cost of service introduce economic inefficiencies into the utility's pricing structure. This happens because improper pricing signals are conveyed to customers. For example, if PGW's prices for its distribution service are too high, then customers will cut back on their use of gas and search out other substitutes for heating. The opposite would be true if PGW's prices are too low. This would cause uneconomic consumption of natural gas above the level that would be consumed if prices were set equal to cost. Moreover, the Commission has previously indicated that PGW's Rate IT should be cost-based. In PGW's 2007 distribution rate case, the Commission specifically directed PGW to establish cost-based transportation rates, noting that PGW had

failed to show that the margin-based IT transportation rates were cost-based or just and reasonable. *See Pa. PUC v. PGW*, Opinion and Order; Docket No. R-00061931 (Sept. 28, 2007), p. 92.

Q. Would PGW's IT proposal allow the Company to earn excessive profits from IT customers?

A. Yes, absolutely. Mr. Moser's IT rate proposal is completely untethered from cost of service pricing principles. The lower bound of IT rates would be set at an excessive level that is based on Mr. Hanser's 59% rate increase to IT customers. This would cause an excessive rate of return (20.9%) from IT customers as a starting point. From there, the Company could negotiate the IT rate all the way up to the firm service rate. At the same time, IT customers' service would still be subject to interruption. Clearly, PGW would be earning supernormal profits from IT customers. The Commission should protect not just IT customers but all customers from this kind of monopolistic pricing abuse.

Q. Does the fact that PGW has not interrupted IT customers in the last few years suggest that IT customers are receiving firm service?

A. No. From a cost to serve standpoint, the Company clearly stated in its response to PICGUG-II-9 that Rate IT customers do not contribute to design-day demand. Therefore, they are not responsible for design day costs like firm service customers. Rate IT is allocated its share of mains costs based on the Company's mains allocator, which is based 50% on demand and 50% on the number of customers. Rate IT customers are thus paying for a portion of the Company's capacity costs.

Further, IT customers must invest in alternative fuel capability whether PGW interrupts them or not. In other words, IT customers must stand ready to be

interrupted and have invested in the capability to meet such interruptions. Firm customers have no such alternative fuel investment or capability because none is required for their level of service.

Q. Regarding your third point, did Mr. Moser present any evidence that PGW may lose customers to alternative fuels?

A. No, he did not.

Q Are IT customers more risky than firm service customers?

A. I do not believe they are necessarily more risky than firm service customers. IT/GTS customers have lower variability of consumption throughout the year than do Residential and Commercial customers, who rely on gas for heating. Thus, weather will cause heating customers' consumption to vary substantially in either warmer or colder weather. Less weather sensitive customers in the GTS and IT classes have much lower variation in their monthly consumption as I showed in Table 1. Other things being equal, the consumption patterns of GTS and IT customers over a year suggests lower, not higher, risk than weather sensitive Residential and Commercial customers.

It is true that IT customers have alternatives to natural gas consumption, but the prices of those alternatives are quite a bit higher than natural gas as Mr. Moser showed on page 29 of his Direct Testimony. Given the price differences shown by Mr. Moser, it appears unlikely that Rate IT customers would switch from natural gas to the other alternatives he presented. Thus, there is very little risk from IT customer fuel switching at this point in time.

Q. Do the prices of alternative fuels shown by Mr. Moser on page 29 of his Direct Testimony support a change from cost of service pricing to value of service pricing?

A. Absolutely not. The only relevant consideration is whether IT rates are cost based. The price of alternative fuels is completely irrelevant as to proper pricing for IT customers.

In order to illustrate the fallacy of PGW's IT rate proposal, I provide the following example. Residential customers could choose to heat their homes with either natural gas or electricity. Let us assume that it costs an average Residential customer $150 per month to heat his or her home with natural gas. Assume further that it would cost $250 per month to heat that same customer's home with electricity. PGW's value of pricing approach would suggest that it would be perfectly fine to negotiate with that Residential customer and charge anywhere between $150 and $250 per month based on the alternative cost of heating with electricity. Once PGW's pricing is untethered from cost of service principles, it could charge our Residential customer $210 per month based on the rationale that it is still less than the electric heating alternative.

Obviously, regulation would not allow a utility company to price its services to Residential customers in such a manner. Neither should the PPUC allow PGW to price its service to IT customers using value of service pricing.

Q. Regarding your fourth point, why should the Commission disregard the UGI interruptible tariff in this case?

A. PGW's comparison to UGI's interruptible transportation tariff is irrelevant. The PPUC has already established the principle that PGW's interruptible transportation

rates should be based on the cost to serve those customers. PGW failed to provide any sound basis for changing that finding to one that supports a value of service pricing approach that has been used by UGI for a number of years.

In addition, UGI's value of service pricing is based, in part, on the fact that UGI's interruptible customers can switch to firm transportation service if they so choose. While PGW claims to have a firm service, PGW fails to recognize that its "firm service," does not reflect the cost to serve large commercial and industrial transportation customers on a firm basis. For example, UGI offers two types of firm transportation service to large commercial and industrial customers, with rates of $1.5470/Mcf to $1.0465/Mcf for throughput and a demand charge of $5.45/Mcf of the customer's daily firm requirement ("DFR"). Conversely, if a Rate IT customer sought to switch to firm transportation service, the customer's only option would be PGW's Rate GS delivery service, which is priced at $4.5332/Mcf. Moreover, for large commercial and industrial customers just a few miles away in PECO's service territory, PECO offers a firm transportation charge of between $1.6823/Mcf and $0.7736/Mcf.

Thus, PGW's use of its purported "firm" service rate as a ceiling for value based pricing completely ignores the fact that PGW does not offer an actual firm transportation rate for large commercial and industrial customers. In order for PGW to utilize firm service as the basis for a rate involving large commercial and industrial customers, PGW must first be required to offer a cost-based firm transportation rate to these customers. Until that happens, PGW's value based pricing cannot be compared to UGI's pricing.

Q. Does this conclude your Direct Testimony?

A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	Docket No. R-2017-2586783
PHILADELPHIA GAS WORKS	:	

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

MAY 16, 2017

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

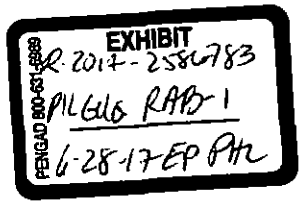
New Mexico State University, B.A.
Economics
English

Thirty-two years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks



RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates: Consultant** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
Atmos Cities Steering Committee
Canadian Federation of Independent Businesses
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Climax Molybdenum Company
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

Expert Testimony Appearances
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Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Evaluation of cost allocation, rate design, rate plan, and carrying charge proposals.
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

Expert Testimony Appearances
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As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

Expert Testimony Appearances
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As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD & United States	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

Expert Testimony Appearances
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Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HealthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T Users Group	WV	West Virginia Energy	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-	WV E-42T	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co.	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
08/13	R-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CF! Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint; security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP and Sharyland Dist. and Transmission Services, LLC	Return on equity
02/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
03/17	10580	TX	Atmos Cities Steering Committee	Atmos Pipeline Texas	Return on equity, capital structure, weighted cost of capital
03/17	R-3867-2013	Quebec, Canada	Canadian Federation of Independent Businesses	Gaz Metro	Marginal Cost of Service Study

Expert Testimony Appearances
of
Richard A. Baudino
As of May 2017

Date	Case	Jurisdict.	Party	Utility	Subject
05/17	R-2017-2586783	PA	Philadelphia Industrial and Commercial Gas Users Gp.	Philadelphia Gas Works	Cost and revenue allocation, rate design, interruptible tariffs

PICGUG Recommended Revenue Allocation (000s)

	Total	Residential	Commercial	Industrial	PHA GS	Muni/PHA	NGVS	Interruptible	GTS/IT
Proposed Increase (decrease)	70,000	63,000	5,000	(400)	400	500	-	-	1,500
Current Distribution Revenue	491,318	385,459	77,324	5,899	1,499	8,852	20	18	12,246
Percentage Increase	14.2%	16.3%	6.5%	-6.8%	26.7%	5.6%	0.0%	0.0%	12.2%
Income Before Interest and Surplus	125,899	99,056	22,154	813	557	1,311	4	(10)	2,014
Rate Base	1,188,371	986,470	138,958	9,387	4,073	19,814	29	62	29,579
Return on Rate Base Before Int. and Surplus	10.6%	10.0%	15.9%	8.7%	13.7%	6.6%	13.8%	-16.1%	6.8%
Relative Rate of Return		0.95	1.50	0.82	1.29	0.62	1.30	(1.52)	0.64

Exhibit ___(RAB-2)

**Response of Philadelphia Gas Works ("PGW")
to the Interrogatories of the Office of Consumer Advocate, Set VII in
Docket No. R-2017-2586783**

Request: OCA-VII-1 Reference Exhibit PQH-1, page 1:

a. Please provide a separate breakout for the GTS Firm, GTS Interruptible, and IT rate classes; and

b. Please explain why PGW is proposing to increase the relative rate of return of the GTS/IT class to 1.92.

Response:

a. The breakout requested would necessitate the development of allocation factors for each of these classes individually. I am unable to provide such a breakout because the data granularity is not sufficient to derive allocation factors for the GTS Firm, GTS Interruptible, and IT rate classes.

b. The revenue increase for the GTS/IT class grouping is driven entirely by an increase to the IT Rate Class. Based on Company specification, I allocate a portion of the revenue increase to the IT class to reflect the fact that IT customer requirements drive many of the costs associated with building and operating the system. This specification is appropriate because the IT contribution to peak demand is not appropriately captured with the allocators used in the current CCOSS, and thus the results – including the class rate of return – somewhat understate their cost responsibility. Even though the IT customers are not contributing to demand on the peak day, their needs are still being met by the distribution system. While their interruptiblity could result in avoidance of costs that are strictly related to peak capacity, it does not avoid all capacity costs imposed by these customers on the system, throughout the year.

Response Provided by: Philip Q Hanser, Principal of The Brattle Group

Dated: April 17, 2017

RESPONSE OF PHILADELPHIA GAS WORKS ("PGW") TO THE INTERROGATORIES OF PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP ("PICGUG"), SET II
DOCKET NO. R-2017-2586783

Request: PICGUG-II-9: Please refer to page 22, lines 17 through 19 of Mr. Hanser's Direct Testimony.

a. Please explain in detail how the proposed revenue increase to the IT Rate Class reflects "the fact that the IT customer demand drives many of the costs associated with building and operating the system."

b. Since Rate IT customers are interruptible, explain why IT customer demand "drives many of the costs associated with building and operating the system" according to Mr. Hanser.

c. Do Rate IT customers drive the costs associated with building and operating the system more than or less than firm customers? Provide a detailed explanation, including analyses performed by Mr. Hanser and/or PWG demonstrating that Rate IT customer demand "drives many of the costs associated with building and operating the system."

d. Does Mr. Hanser agree that interruptible customers allow a gas distribution company to free capacity on its system for the use of firm customers, thereby saving the Company and firm customers additional system capacity costs? Explain why or why not.

Response:

a. While Rate IT customers do not contribute to design-day demands, their needs are still being met by the distribution system. As discussed by Company witness Moser in PGW St. No. 7, PGW has been able to avoid interrupting Rate IT customers during the winter and permitted them to continue to stay on the system on peak days. Mr. Moser also explains that the gas distribution system is maintained and modernized for all customers, including those in the Rate IT class. Because not all capacity costs imposed by these customers on the system can be avoided, some portion of capacity costs should be allocated to Rate IT customers.

b. Please see response to part (a) above.

c. See response to PICGUG II-13(a).

RESPONSE OF PHILADELPHIA GAS WORKS ("PGW") TO THE
INTERROGATORIES OF PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS
USERS GROUP ("PICGUG"), SET II
DOCKET NO. R-2017-2586783

d. Please see response to part (a) above.

Response Provided by: Philip Q Hanser, Principal of The Brattle Group
Part (c): Douglas A. Moser, Executive Vice President, Acting Chief Operating Officer, PGW

Dated: May 5. 2017

Response of Philadelphia Gas Works ("PGW")
to the Interrogatories of the Office of Small Business Advocate ("OSBA"), Set I in
Docket No. R-2017-2585783

Request: OSBA-I-31 Reference PGW Statement No. 7, pages 27 to 37, IT Rates:

A. Please explain why the Company does not allocate costs separately to Rate GTS and Rate IT customers in the cost allocation study.

B. Please explain how design day demand for Rate IT customers is reflected in the cost allocation study with respect to mains cost allocation. If design day demand for Rate IT customers is not included in the cost allocation study, please provide the Company's estimate of test year design day demand for Rate IT customers, as well as the maximum actual daily demand from Rate IT customers served by PGW over the past three years.

C. Please specify the "equivalent firm transportation rate" that would serve as the upper bound of the rate range for Rate IT customers.

D. Please estimate PGW's investment requirement to provide service to Rate IT customers if they were to convert to firm service, with supporting calculations. In effect, what is PGW's avoided cost associated with the interruptibility of Rate IT customers.

E. Regarding the discussion at the top of page 30 regarding the need to interrupt Rate IT customers, are rate IT customers obligated to deliver their daily requirements on peak days to the city gate? If so, please explain why Rate IT customers may be constrained by LNG capacity.

F. Also regarding the discussion at the top of page 30 regarding the need to interrupt Rate IT customers on peak days, please specify the costs that are avoided by the interruption. Specifically, are PGW's avoided costs related to the interruptibility of Rate IT customers a result of a need to increase deliverability capacity to the city gate, or are the avoided costs related to a need to expand or modify the distribution system?

Response: A. I have treated Rate GTS and Rate IT as a single class at the direction of the Company. The Company provided this direction because, at the time of filing, there were only three GTS customers (which are large volume legacy transportation customers). Additionally, as of the date of this response, only

**Response of Philadelphia Gas Works ("PGW")
to the Interrogatories of the Office of Small Business Advocate ("OSBA"), Set I in
Docket No. R-2017-2586783**

two GTS customer remain because one ceased operations in April 2017.

B. Design day demand for Rate IT does not enter into my computations. PGW does not include any demand from interruptible customers when calculating its design day demand and, therefore, does not estimate design day demand for interruptible customers.

C. The current delivery charge for firm transportation customers per MCF is as follows:

Commercial GS	$4.5984
Industrial GS	$4.5332
Phila. Housing Authority	$4.1101
Municipal (MS)	$3.3661

D. If Rate IT customers converted to firm service, there would be an increase need of system supply. This increase in volume would be met with a combination pipeline firm transportation, expansion of city gate capacity, expansion of PGW distribution system infrastructure and/or additional LNG capability. The exact mix would need additional studies to finalize.

E. Rate IT suppliers operate within PGW's Tariff Rate DB. There is a Daily Imbalance Surcharge and Monthly Imbalance Reconciliation. When PGW firm service customer send out demand exceeds PGW pipeline and off-site storage deliverability, requiring LNG to supplement firm send out, a Rate IT supplier that under delivers during these periods (meaning delivers less than their customers' actual demand), LNG would be required to meet this demand.

F. The costs are those identified in Part D.

Response Provided by: Kenneth S. Dybalski, Vice President - Energy Planning & Technical Compliance, PGW
Philip Q Hanser, Principal of The Brattle Group
Douglas A. Moser, Executive Vice President, Acting Chief Financial Officer, PGW

Dated: April 20, 2017

RESPONSE OF PHILADELPHIA GAS WORKS ("PGW") TO THE INTERROGATORIES OF PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP ("PICGUG"), SET I
DOCKET NO. R-2017-2586783

Request: PICGUG-I-5: Please confirm the number of customers currently served under Rate GTS Firm, as well as the volume of natural gas transported by each identified customer.

Response: PGW has 2 GTS customers at the same service address which are provided transportation service pursuant to a special contract. There was a third GTS customer which ceased operations during April 2017. The total GTS volumes for all three customers which are included in the FPFTY = 13,176,839 Mcf. These volumes should be adjusted downward in order to account for the GTS customer which ceased operations. The adjusted volumes for the 2 remaining GTS customers are 12,057,211 Mcf.

Response Provided by: Douglas A. Moser, Executive Vice President, Acting Chief Operating Officer, PGW

Dated: April 28, 2017

PICGUG Statement No. 1-R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	Docket No. R-2017-2586783
PHILADELPHIA GAS WORKS	:	

REBUTTAL TESTIMONY

AND EXHIBIT

OF

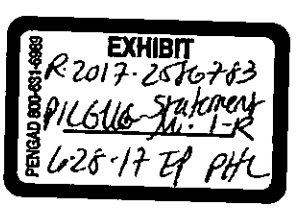
RICHARD A. BAUDINO

ON BEHALF OF THE

PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

JUNE 2017



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	**Docket No. R-2017-2586783**
PHILADELPHIA GAS WORKS	:	

REBUTTAL TESTIMONY OF RICHARD A. BAUDINO

Q. Please state your name and business address.

A. My name is Richard A. Baudino. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. Did you submit Direct Testimony in this proceeding?

A. Yes. I submitted Direct Testimony on behalf of the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG").

Q. What is the purpose of your Rebuttal Testimony?

A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimonies of Mr. Jerome Mierzwa, witness for the Office of Consumer Advocate ("OCA"), Mr. Robert Knecht, witness for the Office of Small Business Advocate ("OSBA"), and Mr. Kokou Apetoh, witness for the Bureau of Investigation and Enforcement ("I&E"). My Rebuttal Testimony will focus on certain issues relating to the cost and revenue allocation proposals set forth in the Direct Testimony of each of these witnesses. For purposes of my Rebuttal Testimony in this case, my not addressing a particular issue in the Direct Testimony of these witnesses should not imply that I

agree with or do not oppose that issue. My Rebuttal Testimony will focus instead on several major issues, which are discussed in the following sections.

PGW Alternative Fuel Rate Proposal

Q. Please summarize the positions of the OCA, the OSBA, and I&E on PGW's alternative fuel rate proposal for Rate IT customers.

A. Mr. Mierzwa accepted the Company's Rate IT proposal, but with two exceptions. First, the floor rate would be determined based on Mr. Mierzwa's recommended 31.6% increase to Rate IT. I will discuss the details of this proposed increase later in my testimony. Second, Mr. Mierzwa recommended shortening the implementation time for the negotiated rate proposal from PGW's proposed three years to one year from Commission approval of this proposal.

Mr. Knecht rejected PGW's Rate IT proposal. Instead, Mr. Knecht recommended a 52% revenue increase for Rate IT customers that would produce rates that would be a ceiling from which the Company and the Rate IT customers could negotiate downward. I will address the problems with Mr. Knecht's recommendation in a subsequent section of my testimony.

Mr. Apetoh did not address PGW's alternative fuel rate proposal for Rate IT.

Q. Please address Mr. Mierzwa's alternative fuel rate proposal for Rate IT customers.

A. Mr. Mierzwa's proposal would make PGW's unacceptable proposal for Rate IT even worse. I addressed in my Direct Testimony why the Commission should reject PGW alternative fuel rate proposal for Rate IT and those arguments apply to Mr. Mierzwa's proposal to cut the implementation period from three years to one year.

In addition, Mr. Mierzwa did not address whether Rate IT customers would be able to fully convert their facilities to substitute alternative fuel for PGW's natural gas service in the one year that he proposed. If Rate IT customers are not set up to convert their facilities into taking alternative fuels, then they do not actually have a viable alternative fuel option. Moreover, Rate IT customers would be facing substantial rate increases under Mr. Mierzwa's proposal with very little time to prepare for those increases. Mr. Bresser describes Temple University's situation in greater detail in his Rebuttal Testimony and explains that Temple could be facing a 500% rate increase under both Mr. Mierzwa's and Mr. Moser's Rate IT proposals. Mr. Mierzwa's 31.6% rate increase is only the minimum increase for Rate IT, with substantially higher increases likely based on the cost of alternative fuels.

Q. Did Mr. Mierzwa examine whether alternative fuels are actually viable for Rate IT customers?

A. No. Mr. Mierzwa simply accepted Mr. Moser's proposed IT alternative fuel rate with no independent analysis as to whether Rate IT customers would or even could convert to alternative fuels after the one-year transition period he proposed in his testimony. Mr. Mierzwa seems to accept Mr. Moser's suggestion that Rate IT customers can leave PGW's system and switch to the customers' alternative fuel systems without recognizing that Rate IT customers may have alternative fuel systems sized for only limited durations (*e.g.*, interruptions).

Q. Are alternative fuels an economically viable alternative to PGW's natural gas service?

A. No, in my opinion they are not. Recent advances in the extraction of shale gas have produced new and abundant supplies of natural gas, which has resulted in significantly lower natural gas prices relative to alternative fuels. Mr. Moser cited the publication entitled *Annual Energy Outlook 2017* published by the United States Energy Information Administration ("EIA") in his Direct Testimony and showed that the cost of alternative fuels (propane and fuel oil) are significantly higher than natural gas and the EIA projects this trend to continue far into the future. Rebuttal Table 1 below presents the projected MMBtu costs for natural gas, propane, and distillate fuel oil for commercial and industrial sectors from the EIA's report.

Rebuttal Table 1

Energy Price Comparison ($/MMBtu)

	2018	2020	2025
Commercial:			
Propane	$15.55	$15.54	$16.15
Distillate Fuel Oil	$17.78	$18.91	$20.37
Natural Gas	$8.42	$9.65	$10.14
Industrial:			
Propane	$12.69	$12.68	$13.41
Distillate Fuel Oil	$17.86	$19.15	$20.80
Natural Gas	$4.46	$5.32	$5.48

Rebuttal Table 1 clearly shows that neither propane nor fuel oil are economically viable alternatives to natural gas for the foreseeable future.

Q. Since alternative fuels are not economically viable for Rate IT customers, does either Mr. Mierzwa's proposal or PGW's original proposal make any sense?

A. No. With alternative fuels priced so far above natural gas, there is no basis whatsoever for pricing Rate IT based on the cost of alternative fuels. Neither fuel oil nor propane are economically viable alternatives to natural gas.

Moreover, both proposals would inflict serious economic harm on the customers taking service under Rate IT. They would result in massive and totally unjustified rate increases for Rate IT customers. The Commission must take into consideration the huge economic burdens on the businesses and other customers, such as Temple University, that would be inflicted from PGW's and the OCA's alternative fuel rate proposals for IT customers. For the sake of the public interest, I strongly and unequivocally recommend the Commission reject any alternative fuel rate proposal for Rate IT.

Q. On page 27 of his Direct Testimony, Mr. Mierzwa testified that his revenue allocation "moderates" the increase proposed by PGW. Do you agree with his statement?

A. No. Mr. Mierzwa's recommended revenue allocation merely lowered the floor rate under PGW's proposal but left the ceiling rate unchanged. Thus, PGW could impose the same increase to Rate IT customers regardless of Mr. Mierzwa's recommendation. If, for example, the cost of alternative fuel would allow PGW to impose a 100% rate increase to Rate IT customers, PGW could do so under either Mr. Moser's or Mr. Mierzwa's proposal. Given Mr. Mierzwa's agreement with the rest of PGW's alternative fuel rate proposal, this is not rate moderation.

Class Cost of Service Studies

Q. Briefly summarize the positions of the witnesses with respect to class cost of service studies ("CCOSS").

A. Messrs. Apetoh and Mierzwa support the Peak and Average ("P&A") approach to classifying and allocating distribution mains in their recommended class cost of service studies ("CCOSS"). In these studies, class contribution to peak demand and average demands, or throughput, are each weighted 50%. Mr. Knecht developed a CCOSS based on his formulation of an average and excess ("A&E") approach to the classification and allocation of distribution mains.

Q. Do you agree with the P&A approach to allocating distribution mains in Philadelphia Gas Works' ("PGW") CCOSS?

A. No, I do not. For the reasons I stated in my Direct Testimony, the P&A CCOSS method is not appropriate due to the large amount of fixed distribution main cost that is classified and allocated based on throughput.

Q. On page 7, line 8 through page 9, line 10 of his Direct Testimony Mr. Mierzwa provides hypothetical examples that are intended to support his premise that distribution mains should not be classified and allocated based on the number of customers. Please respond to this portion of Mr. Mierzwa's Direct Testimony.

A. Mr. Mierzwa's simple examples do not refute the use of number of customers in classifying and allocating distribution mains costs to customers.

Mr. Mierzwa testified on page 7, lines 11 through 13 that mains are not sized based on the number of customers, but on the loads placed on the mains. I agree with

Mierzwa that mains are indeed sized based on loads, and I would go further to point out that the loads are based on the peak demands placed on the mains. This is especially important given peak winter demands placed on those mains. However, the number of customers connected to the distribution main system will also drive a portion of the Company's investment in mains. I described why a portion of distribution mains is related to the number of customers more fully in my Direct Testimony.

With respect to the example Mr. Mierzwa provided on page 9, lines 1 through 10, he confused the footage of distribution mains with the cost of distribution mains. Classifying and allocating distribution mains based on the number of customers does not allocate any particular number of feet of distribution mains to each customer regardless of size. Rather, it allocates the customer-related portion of total distribution main costs to customers based on the number of customers. This is the way other customer-related costs are allocated to customer classes. Mr. Mierzwa's example missed the point with respect to the customer-related portion of PGW's *distribution mains costs.*

Q. On page 14, lines 23 through 25 of his Direct Testimony, Mr. Mierzwa testified that "PGW cannot meet its customers' annual gas demands with a system capability any smaller than 204,878 Mcf" per day. Please respond to Mr. Mierzwa's testimony.

A. I do not agree with Mr. Mierzwa. The average daily demand figure he calculated does not properly show the difference between the design day peak and the average

usage in the off-peak periods. Please refer to Rebuttal Table 2 below, in which I present a comparison of monthly sendout for January 2018, a peak winter month, and June 2018, the lowest consumption off-peak month.

Rebuttal Table 2
Monthly Mcf Sendout Comparison

	(1) Jan 2018	(2) June 2018	(3) Jan. as Multiple of June
Residential Heat	7,271,558	680,364	10.69
Commercial Heat	1,704,090	281,306	6.06
Municipal Heat	182,159	10,533	17.29
Total System	12,774,383	3,054,088	4.18

This comparison shows the large differences between peak month consumption and off-peak consumption for the heating classes and PGW's total system. The multiple for the Residential class is 10.69, which means that January peak month consumption is almost 11 times greater than off-peak consumption. For the system, the multiple is 4.18 times greater in the peak month.

The average daily consumption for the system in June is 101,803 Mcf. This is substantially less than the average daily consumption of 204,878 Mcf presented by Mr. Mierzwa. This comparison shows that average demand does vary substantially by month and that, by far, the highest monthly demands occur during the winter heating season. This also demonstrates that there is substantial excess capacity on the system during off-peak months.

In my opinion, Mr. Mierzwa has made a series of unsupported and conclusory statements in support of using average demands to classify and allocate distribution mains costs. He presented no concrete analysis that shows PGW considers annual throughput or demands in the design and construction of its distribution mains system. The Commission should reject the use of annual throughput and/or annual demands in PGW's CCOSS.

Q. Based on his analysis of the cost per foot of smaller and larger mains, Mr. Mierzwa concluded on page 19, lines 9 through 13, that "well less than half of distribution mains costs are associated with meeting elevated peak demand." Do you agree with Mr. Mierzwa's conclusion?

A. No. Mr. Mierzwa merely demonstrated economies of scale in the cost of distribution mains. Mr. Mierzwa even pointed this out on page 17, line 21 through page 18, line 2. However, economies of scale related to increasingly larger pipe sizes have no relevance with respect to how the total cost of distribution mains is classified and allocated. Rather, it is the overarching importance of meeting peak winter demands of PGW's customers and connecting those customers to the distribution system that should be reflected in the Company's CCOSS, not average demands and/or throughput.

Q. Did you compare the results of the P&A CCOSS and PGW's recommended CCOSS?

A. Yes. Rebuttal Table 3 below compares the results of the two studies (*i.e.*, OCA and I&E use of the P&A method versus PGW's usage of the Customer/Demand method).

The Table shows the amounts that each class' current revenues are either over or under the allocated cost to serve each class.

Rebuttal Table 3
CCOSS Results Comparison
Current Rev. Over (Under) Requirements

	P&A CCOSS	PGW CCOSS
Residential	$(52,256)	$(67,718)
Commercial	$(9,931)	$2,536
Industrial	$(906)	$226
PHA GS	$(259)	$(272)
Municipal/PHA	$(3,230)	$(1,273)
NGVS	$(8)	$1
Interrupt. Sales	$(15)	$(17)
GTS/IT	$(2,509)	$(2,598)
Total	$(69,113)	$(69,115)

The results are quite similar for GTS/IT customers. The largest shift occurs in the Commercial class, which shows a significant deficit in the P&A study compared to a significant surplus in PGW's study.

Q. Why are the results so similar for GTS/IT in both studies?

A. The P&A CCOSS weights the commodity portion of the mains allocator at 0% for GTS/IT. Neither Mr. Apetoh nor Mr. Mierzwa explained the reason for this. However, given the fact that IT customers are interruptible, it is appropriate to make an allowance in the allocation of mains such that IT is not given a full share of the P&A allocation factor in the CCOSS. This may be because IT customers can be interrupted and do not receive firm service from the Company.

Q. Does PGW's demand allocator for mains properly reflect cost responsibility for Rate IT customers?

A. No. PGW's demand allocator for main assumes that Rate IT customers will fully contribute to demands during the design day. As such, Rate IT customers are assigned demand-related distribution mains costs on the same basis as firm service customers. This is not the proper way to treat interruptible customers with respect to the allocation of mains because they would likely be interrupted on the design day, whereas firm service customers would not be interrupted. PGW also saves on distribution system costs thanks to the existence of interruptible customers taking service under Rate IT. Thus, Rate IT receives too much cost responsibility for distribution mains in both PGW's CCOSS and the P&A CCOSS relied upon by Mr. Apetoh and Mr. Mierzwa.

Q. Briefly describe the A&E CCOSS that Mr. Knecht recommends.

A. Mr. Knecht began the discussion of his recommended CCOSS on page 31 of his Direct Testimony. Mr. Knecht utilized an average and excess allocation factor for all customer classes, including separate factors for Rates IT and GTS. Mr. Knecht directly assigned mains to the GTS class that were identified with those customers. Mr. Knecht did not allocate a portion of the remaining distribution mains to GTS customers. Mr. Knecht also allocated costs associated with production and storage to GTS and IT customers using a 50/50 allocation of firm demand and total demand. In making this allocation, Mr. Knecht noted on page 32, lines 6 through 8 of his Direct Testimony that "it is only reasonable that interruptible customers who similarly benefit from these costs should be assigned some reasonable share."

Mr. Knecht also made other revisions to PGW's CCOSS, which he explains on page 32, line 26 through page 39, line 16. . Among these changes is assigning Universal Service Costs to the Residential class.

Q. What is the amount of net distribution main plant that is allocated or assigned to GTS customers in Mr. Knecht's CCOSS?

A. The value of the directly assigned net distribution main plant assigned to the Rate GTS class in Mr. Knecht's CCOSS is $0. Mr. Knecht limited his allocation of distribution main plant to only directly assigned plant because, according to Mr. Knecht on page 30 of his Direct Testimony, PGW is able to identify specific mains facilities used to serve GTS customers. However, this directly assigned plant is fully depreciated. As a result, GTS customers have no distribution mains cost in their allocated cost to serve in Mr. Knecht's CCOSS.

Mr. Knecht's CCOSS assumes that GTS customers are not served by or otherwise interconnected with PGW's interconnected distribution system.

Q. What was Mr. Knecht's basis for excluding GTS customers from any allocation of PGW's distribution main system?

A. According to Mr. Knecht's response to PICGUG to OSBA-1-4, it was his understanding from past PGW proceedings that the mains plant used to serve GTS customers was identifiable and the full costs could be directly assigned. Mr. Knecht could not provide any studies, documentation, work papers or other materials showing that GTS customers are not part of PGW's integrated distribution system. Please refer to my Rebuttal Exhibit ____(RAB-1R) for Mr. Knecht's complete response.

Q. Have you conducted additional discovery on this issue?

A. Yes. PICGUG issued additional discovery to PGW regarding the issue of whether GTS customers are served by PGW's interconnected distribution system. In its response to PICGUG-V-1, the Company indicated that two of the three GTS customers included in its CCOSS are served on a separate individual gas main that is not part of PGW's distribution system. It is my understanding that this is why PGW did not include these customers in the distribution main allocation factor in its CCOSS.

In my view, PGW did not provide the necessary evidence or support that these two GTS customers do not receive any benefits or service from the Company's integrated distribution system. PICGUG issued another set of follow-up discovery on this issue. The Company's responses are not due until after the submission of Rebuttal Testimony. If the Company's responses have any effect on my own revenue allocation recommendation to the Commission, I will address it in my Surrebuttal Testimony.

Q. Mr. Baudino, please present your conclusions regarding Mr. Knecht's recommended A&E CCOSS.

A. Mr. Knecht's recommended CCOSS should be rejected by the Commission. It treats Rate IT customers as if they are receiving firm service, which they are not. Rate IT customers are interruptible, and simply because Rate IT has had one interruption in 20 years does not suddenly warrant treating it like firm service. I thoroughly discussed the reasons in my Direct Testimony as to why Rate IT customers should not be allocated costs as if they take firm service and I need not repeat them here.

However, they apply with equal force to the overall approach taken by Mr. Knecht in this proceeding.

Mr. Knecht's allocation of production and storage costs to Rate IT customers is particularly objectionable since these facilities are used to serve firm service customers, not interruptible transportation customers. PGW's CCOSS did not even allocate these costs to Rate IT, which is entirely appropriate. PGW's production and storage facilities were not designed to serve interruptible loads. As I pointed out on page 16 of my Direct Testimony, PGW explained that if Rate IT customers took firm service, the Company would need to invest in additional distribution system infrastructure, including LNG capability. Since PGW does not include Rate IT customers in its design day planning or its design day demand allocator, it logically would not invest in LNG and storage facilities to serve interruptible customers.

This is also the case for distribution mains, which Mr. Knecht allocated to Rate IT as if it were firm service. This is simply incorrect and results in a radical and unwarranted shift in costs to Rate IT.

Q. Did Mr. Knecht recommend that Rate IT be changed so that it is no longer interruptible?

A. No. Based on my understanding of Mr. Knecht's Direct Testimony, he did not recommend any changes to the Rate IT tariff language with respect to customers being interruptible or having to maintain alternative fuel capability. Thus, Mr. Knecht's CCOSS allocates costs to Rate IT as if it were a firm service class, but retains the interruptible characteristics of the current tariff. This results in the worst of all possible worlds for Rate IT customers.

Q. How much did Mr. Knecht's CCOSS affect cost responsibility for Rate IT customers?

A. Mr. Knecht's CCOSS has a drastic effect on Rate IT customers. Mr. Knecht's CCOSS would result in an increase of $24.077 million to Rate IT, compared to PGW's increase to full cost of service of $2.598 million for the combined GTS/IT class. This represents an unwarranted increase of $21.479 million in cost responsibility for Rate IT customers compared to PGW's CCOSS and would result in a 220% rate increase for IT customers, which I will show in the next section of my Rebuttal Testimony.

Q. Mr. Knecht recommended that universal service costs be assigned to the residential class. Do you agree with this recommendation?

A. Yes. These costs are incurred by the Company for residential customers and should be allocated to the Residential class. Non-residential customers bear no responsibility for these costs and should not be allocated any of these costs in the CCOSS.

Q. Mr. Knecht's recommended CCOSS also presented results for GTS customers as a separate class. What are your comments with respect to the CCOSS results for the GTS class?

A. Although I disagree with Mr. Knecht's A&E CCOSS, even with zero cost of distribution mains in the CCOSS, the GTS class showed a revenue shortfall of $2.438 million. Since the GTS rates are negotiated, Mr. Knecht did not allocate any increase to the GTS class. This, in effect, shows that the rest of PGW's customers are paying for the revenue shortfall from the GTS rate class.

Class Revenue Allocation

Q. Please summarize the revenue allocation recommendations of Mr. Apetoh, Mr. Mierzwa, and Mr. Knecht with respect to Rate IT customers.

A. Rebuttal Table 4 below summarizes the respective revenue allocations to Rate IT customers made by Mr. Apetoh, Mr. Mierzwa, and Mr. Knecht.

Rebuttal Table 4
Rate IT Increase Comparison

	(1) COSS Increase To System Avg.	(2) % Increase	(3) Recommended Increase	(4) % Increase
I&E Recommendation	2,509	20.00%	2,570	20.99%
OCA Recommendation	2,509	20.00%	3,450	28.20%
PGW Recommendation	2,598	23.77%	5,500	50.33%
OSBA Recommendation	*24,077*	*220.10%*	*5,696*	*52.10%*

In reviewing Rebuttal Table 4, a few additional comments are necessary. First, Column (1) shows the increases required to bring Rate IT to the required cost of service revenue level in each witness' recommended CCOSS. Messrs. Apetoh and Mierzwa recommend the same CCOSS (*i.e*, the P&A methodology), so the required increase to the system average return is the same ($2.509 million); however, Messrs. Apetoh and Mierzwa diverge with respect to their proposed rate increases for Rate IT.

Mr. Apetoh's recommended increase is in keeping with the CCOSS results in that the COSS shows a 20% rate increase, and Mr. Apetoh proposes a 20.99% increase; however, Mr. Apetoh's proposed increase is actually understated since the increases

are calculated based upon combined GTS and IT revenues. In other words, Mr. Apetoh's proposed increase assumes both GTS and IT customers would receive a 20.99% increase; however, because GTS customers have negotiated rates, only IT customers would bear the burden of any rate increase. As a result, Mr. Apetoh's proposed rate increase translates to an actual rate increase for Rate IT customers of 23.5%.

Mr. Mierzwa testified that he limited the increase to Rate IT to consider gradualism, but seemed to agree with PGW that the CCOSS did not capture the full cost responsibility for Rate IT customers. Specifically, Mr. Mierzwa's COSS shows the need for an increase to Rate IT of 20%; however, the OCA recommends a rate increase of 28.2%. Moreover, as with Mr. Apetoh's proposal, Mr. Mierzwa's proposal is understated since the increases are calculated based on combined GTS and IT revenues. As I stated in my Direct Testimony, GTS customers cannot have their negotiated rates increased in this proceeding. Therefore, the actual percentage increase to Rate IT that results from the OCA recommendation is 31.6%. As a result, Mr. Mierzwa's claims of gradualism do not seem to comport with this actual rate increase.

Conversely, Mr. Knecht utilized the A&E methodology, which showed a significant difference from the COSSs adopted by PGW, OCA, and I&E. Mr. Knecht, however, does not propose to utilize his COSS for purposes of revenue allocation, but rather, accepted the Company's recommended revenue increase. As a result, Mr. Knecht's proposed revenue increase of $5.696 million is substantially below the $24.077 million that would be required under his recommended CCOSS; however, Mr.

Knecht's proposed increase is slightly higher than PGW's recommendation of $5.5 million as set forth in Mr. Hanser's Direct Testimony.

Q. Please present your conclusion with respect to Mr. Apetoh's recommended revenue allocation.

A. Mr. Apetoh followed the results of the P&A CCOSS with respect to revenue allocation for Rate IT. Although I disagree with the P&A CCOSS, if the Commission adopts his recommended CCOSS, then I continue to recommend a system average increase for Rate IT consistent with my recommendation in my Direct Testimony.

Q. On page 24, line 13 of his Direct Testimony Mr. Apetoh recommended a $125 monthly customer charge for Rate IT. Please respond to Mr. Apetoh's recommendation.

A. I disagree with Mr. Apetoh's recommendation. As I described in my Direct Testimony, most of PGW's costs are fixed and, as such, should be collected more through fixed charges than through a volumetric charge based on consumption. Mr. Apetoh's recommendation goes in the opposite direction by significantly decreasing the current Rate IT customer charge.

Mr. Apetoh cited the Commission Order in Docket R-00038805 as a precedent for costs that may be included in the customer charge. I will not take issue with respect to how the Commission applies this Order to sales gas customers. However, for large transportation customers that do not have monthly demand charges, more of PGW's fixed costs must be collected through the fixed monthly customer charge. Collecting most of the Company's fixed costs through the volumetric rate tends to

favor low load factor customers over high load factor customers, causing intra-class subsidies in Rate IT and with larger usage customers generally. Furthermore, the collection of less fixed costs in the volumetric rate contributes to revenue stability for the utility company, other things being equal.

Q. What is your recommendation with respect to the customer charge for Rate IT?

A. As I have already noted, I believe the PUC should approve a system average increase for Rate IT; however, in the event that the PUC decides different, and given the large recommended increases from the OCA and the OSBA in addition to PGW's large recommended increase, I have decided to modify my recommendation for increasing the customer charge for Rate IT customers. I believe this revised recommendation will better address any potential rate increase scenario.

First, my primary recommendation is that the Rate IT customer charge be increased at 1.5 times the average increase for Rate IT customers. For example, if the Commission orders a 10% increase for Rate IT, then the customer charge should be increased by 15%. This recommendation will ensure a reasonable increase to the customer charge and, at the same time, protect IT customers from excessive increases to the customer charge.

Second, consistent with the recommendation in my Direct Testimony, the customer charge for Rate IT should at a minimum be increased at an equal percentage to the overall increase for Rate IT customers. Thus, if the Commission orders a 10% increase in revenue for Rate IT, then the customer charge would then be increased by 10%. I recommend that the Commission adopt this recommendation if it orders an increase for Rate IT that is more than twice the system average rate increase. For

example, if the Commission orders a system average revenue increase of 10% and a 20% increase for Rate IT, then both the customer and volumetric charges would be increased by the same percentage increase.

Q. On page 47, lines 4 through 7 of his Direct Testimony Mr. Apetoh described his recommended scale back of rates. Please comment on this proposal.

A. If the Commission accepts Mr. Apetoh's recommended revenue allocation, then this approach is reasonable. However, it is not reasonable with respect to the revenue allocation proposals from PGW, the OCA and the OSBA because of the excessive increases these parties recommend for Rate IT. Based upon my Rebuttal Testimony, though, the Commission should reject the increases recommended by these parties for Rate IT customers.

Q. What is your recommendation with respect to Mr. Mierzwa's revenue allocation to Rate IT?

A. I recommend the Commission reject Mr. Mierzwa's recommended revenue allocation to Rate IT. His recommendation does not follow the results of his recommended P&A CCOSS, which shows a much smaller increase for Rate IT/GTS. Mr. Mierzwa merely followed PGW's recommendation for a large increase to Rate IT on the basis that the CCOSS does not provide an adequate measure of Rate IT's cost responsibility. Mr. Mierzwa, however, provided the Commission with no guidance or analysis as to what exactly the cost responsibility should be for Rate IT. As such, like Mr. Hanser's proposed 50.33% increase to Rate IT, Mr. Mierzwa's 31.6% increase to Rate IT customers is untethered from the principle that rates should be based on costs to serve.

Q. What is your recommendation with respect to Mr. Knecht's recommended 52% revenue increase to Rate IT?

A. Mr. Knecht's recommendation should be rejected. Mr. Knecht's CCOSS is flawed and grossly inflates cost responsibility for the interruptible customers taking service under Rate IT. It also flagrantly violates the gradualism principle by subjecting Rate IT customers to a punitive and unjustified rate increase, which I strongly recommend the Commission reject.

Q. On page 45, line 12 through page 46, line 3 Mr. Knecht explained his reasoning behind the 52% increase. Please respond to his testimony on this point.

A. Mr. Knecht's justifications for violating the gradualism principle are wholly insufficient.

First, Mr. Knecht reasoned that customers who switched to Rate IT and received uninterrupted service did so with what he called a significant rate decrease. Therefore, the 52% increase was justified. Essentially, Mr. Knecht would punish Rate IT customers for taking interruptible service, being willing to agree to having alternate fuel capability, and being willing to be interrupted in accordance with a Commission approved tariff. This is no reasonable basis whatsoever for the violation of the gradualism principle.

Second, Mr. Knecht asserted that under his Rate IT proposal, customers could negotiate a lower rate if Mr. Knecht's proposed IT rates proved to be a hardship. I believe that this possibility is highly unlikely. This is because PGW would lose the Commission approved revenues from Rate IT customers if they were to negotiate a lower rate with the Company. Under Mr. Knecht's proposal there is no way for

PGW to make up lost revenues from negotiated rates that are lower than the tariffed IT rates he recommends. Rather than have its margins eroded from lost revenues from lower negotiated rates with Rate IT customers, it is highly likely that PGW would never agree to negotiate lower rates unless a customer were to go out of business and PGW would lose all revenues from the customer. Therefore, the remote possibility that a Rate IT customer could somehow negotiate a lower rate with PGW provides no basis for the extreme 52% increase imposed by Mr. Knecht.

Q. Does this conclude your Rebuttal Testimony?

A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	Docket No. R-2017-2586783
PHILADELPHIA GAS WORKS	:	

REBUTTAL EXHIBIT

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

JUNE 2017

PICGUG to OSBA-I-4

Please explain in detail why Mr. Knecht did not allocate a share of distribution mains, other than those that were directly assigned, to GTS customers in his recommended CCOSS.

a. Please provide any studies, documentation, work papers, and other materials that show that GTS customers are not part of PGW's integrated distribution mains system.

b. Please confirm that the net distribution mains plant allocated/assigned to GTS customers in Mr. Knecht's CCOSS is zero. If you disagree, please provide the amount of net distribution mains plant (gross plant less accumulated depreciation) that is allocated/assigned to GTS customers.

c. If net distribution mains plant allocated to GTS customers in Mr. Knecht's CCOSS is zero, please explain why this is a reasonable allocation of mains to GTS customers.

Response:

Based on my experience in PGW proceedings, it was my understanding that the mains plant used to serve GTS customers was all identifiable and the full costs could be directly assigned. If additional mains are needed to provide service to GTS customers, the mains allocator should be modified to do so. While the Company's responses are not definitive, the response to PICGUG-III-1 might be interpreted as implying that the mains allocator for GTS should reflect a relatively small demand from one customer. If that proves to be the case, I will update my analysis in surrebuttal testimony.

a. I have none. I relied on Company representations and past experience.

b. Confirmed. However, as shown at page 19 of Exhibit IEc-3, gross plant is assigned to the GTS rate class, and that contributes to "downstream" allocation factors for O&M and A&G. Thus, the directly assigned GTS plant does "attract" a set of other costs to the GTS rate class.

c. The Company indicates that the plant used to serve GTS customers is fully depreciated. While replacement cost concepts may sometimes be used in cost allocation analyses, my experience is that Pennsylvania utilities generally rely on book costs for allocating mains costs among rate classes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	**Docket No. R-2017-2586783**
	:	
PHILADELPHIA GAS WORKS	:	

SURREBUTTAL TESTIMONY

OF

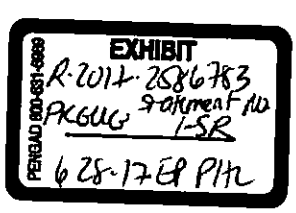
RICHARD A. BAUDINO

ON BEHALF OF THE

PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

J. KENNEDY AND ASSOCIATES, INC.

JUNE 2017



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	**Docket No. R-2017-2586783**
PHILADELPHIA GAS WORKS	:	

SURREBUTTAL TESTIMONY OF RICHARD A. BAUDINO

Q. Please state your name and business address.

A. My name is Richard A. Baudino. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. Did you submit Direct and Rebuttal Testimony in this proceeding?

A. Yes. I submitted Direct and Rebuttal Testimony on behalf of the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG").

Q. What is the purpose of your Surrebuttal Testimony?

A. The purpose of my Surrebuttal Testimony is to respond to the Rebuttal Testimonies of Mr. Moser and Mr. Hanser, witnesses for Philadelphia Gas Works ("PGW"), Mr. Jerome Mierzwa, witness for the Office of Consumer Advocate ("OCA"), Mr. Robert Knecht, witness for the Office of Small Business Advocate ("OSBA"), and Mr. Kokou Apetoh, witness for the Bureau of Investigation and Enforcement ("I&E"). As in my Rebuttal Testimony, I will focus on several major cost and revenue allocation issues, and PGW's Alternative Fuel Rate Proposal, which are discussed in the following sections.

PGW Alternative Fuel Rate Proposal for Rate IT

Q. On page 3, lines 5 through 13 of his Rebuttal Testimony, Mr. Moser testified that PGW's Rate IT proposal "would not generate more revenue from the Company overall." Is this correct?

A. No. PGW's Rate IT proposal provides that the Company's proposed 50% increase to Rate IT customers is only a starting point in terms of the revenues that would be generated from Rate IT customers. This 50% increase would collect PGW's proposed test year revenues from Rate IT, but the increase to IT customers would not stop there. The so-called "value-based" part of PGW's proposal would enable the Company to collect further increases from Rate IT customers over and above the test year level of revenues shown in Mr. Hanser's class cost of service study ("CCOSS"). Thus, Mr. Moser's Rate IT proposal would generate more revenues for the Company than the test year level of revenues, and those increased revenues will come from Rate IT customers.

Q. On page 3, lines 21 through 24 of his Rebuttal Testimony, Mr. Moser testified that "using only a cost-based rate created an incentive for customers to avoid taking firm service which is resulting in fewer and fewer transportation customers contributing to the overall costs of running the distribution system." Please respond to Mr. Moser's testimony on this point.

A. Cost-based rates by definition do not create incentives for customers to avoid paying their fair share of costs. Rather, cost-based rates are designed to collect each class' fair share of the utility company's costs to serve them. PGW's interruptible customers appropriately pay for a lower share of costs than firm service customers because they are willing and able to be interrupted and because they have alternative

fuel capability to help them manage the interruptions. Cost-based rates for interruptible customers should be lower than those for equivalent firm service customers.

Q. On page 3, line 24 through page 4, line 8 of his Rebuttal Testimony, Mr. Moser explained why the Company should be allowed "to maximize the amount of revenue that can be achieved from interruptible customers." Please respond to this portion of Mr. Moser's Rebuttal Testimony.

A. Mr. Moser's reasons for "maximizing" the amount of revenue that can be collected from Rate IT customers are unreasonable and should be rejected by the Commission. Mr. Moser's view of revenue maximization, regardless of the actual cost to serve, as well as his disregard for the potentially harmful rate impact on IT customers, is highly objectionable. The Commission should not allow PGW to charge exorbitant rates to IT customers in the name of deferring the need for future base rate relief for other customers. Such an approach would cause Rate IT customers to subsidize the other customer classes. Moreover, the proper way for PGW to defer future rate proceedings is to prudently manage its costs so that all customers, both firm and interruptible, are assured of reliable service at the lowest possible costs to serve them.

The Commission should not allow PGW or any other Company it regulates to charge excessive rates to a particular customer class in order to defer rate increases for other customers. Such an approach violates appropriate ratemaking principles.

Q. On page 4, lines 15 through 20 of his Rebuttal Testimony, Mr. Moser claimed that Rate IT customers have competitive alternatives and that they could "leave the system tomorrow." Please respond to Mr. Moser's assertion.

A. Mr. Moser provided no basis for the statement that Rate IT customers have competitive alternatives to PGW's service and that they could "leave the system tomorrow" if they so desired. Both Mr. Moser and I have shown that the cost of alternative fuels is far greater than natural gas. The economics of alternative fuels do not support Mr. Moser's contention that Rate IT customers have any viable alternative to PGW's interruptible service or that they could or would leave the system tomorrow or any other day. Given the costs per MMBtu I presented in my Rebuttal Table 1, fuel oil and propane are not economic alternatives to natural gas and will not be economic for the foreseeable future. Distillate fuel oil is around four times the cost of natural gas on an MMBtu basis for industrial customers according to the United States Energy Information Administration's *Annual Energy Outlook 2017*, a source that Mr. Moser relied on in his testimony. Neither current nor forecasted alternative fuel costs support Mr. Moser's contention that Rate IT customers have economic alternatives to natural gas.

Q. On page 5, lines 11 through 13 of his Rebuttal Testimony, Mr. Moser claimed that, because IT customers have "competitive alternatives," PGW is "inherently incentivized to negotiate fair and reasonable rates." Please respond to Mr. Moser's testimony.

A. First, both Mr. Moser and I presented evidence that Rate IT customers do not have economic competitive alternatives to natural gas, so the first part of Mr. Moser's statement is clearly incorrect. Second, given the fact that Rate IT customers do not

have economically viable alternatives to natural gas, there is no inherent incentive for PGW to negotiate fair and reasonable rates since those negotiated rates will be based on the costs of uneconomic alternative fuels and not based on PGW's costs to serve Rate IT customers.

Q. On page 5, line 25 through page 6, line 1 of his Rebuttal Testimony, Mr. Moser cited an alternative fuel rate that the Pennsylvania Public Utility Commission ("PPUC" or "Commission") approved for UGI Utilities, Inc. Please respond to this portion of Mr. Moser's testimony.

A. I recommend that the PPUC base its decision in this case on the merits of PGW's proposal, not on what the Commission decided for another, unrelated natural gas utility. The current economic environment clearly shows that the costs of alternative fuels are so far above the cost of natural gas that Rate IT customers do not have viable alternatives to PGW's interruptible natural gas service. Therefore, PGW's proposed alternative fuel proposal for Rate IT is ill timed, unreasonable, and should be rejected.

Q. On page 6, lines 10 through 20 of his Rebuttal Testimony, Mr. Moser took issue with your reference to the 2007 Commission Order that directed PGW to establish cost-based transportation rates. Please respond to Mr. Moser's testimony.

A. My testimony still stands with regard to prior Commission precedent addressing cost-based transportation rates. I note that Mr. Moser once again testified that the Commission has approved value of service pricing for interruptible customers "that have competitive alternatives." I have demonstrated very clearly that Rate IT customers do not have economically competitive alternatives to PGW's natural gas

service. With this being the case, there is no reasonable support for PGW's proposed alternative fuel rate for IT customers in this case.

Q. On page 7, lines 4 through 17 of his Rebuttal Testimony, Mr. Moser disagreed with your contention that PGW's proposal would allow the Company to earn excess profits from Rate IT customers. Please respond to this portion of Mr. Moser's testimony.

A. Nothing in this portion of Mr. Moser's Rebuttal Testimony alters my position with respect to the fact that PGW's alternative rate proposal would allow the Company to earn excessive returns from Rate IT customers, much to their detriment. I continue to recommend that the Commission continue its practice of cost-based rates for IT customers and reject the so-called "value based pricing" approach proposed by Mr. Moser.

Q. On page 8, line 1 of his Rebuttal Testimony, Mr. Moser testified that the PICGUG witnesses do not contest the long-term pattern of no interruptions for Rate IT. Please respond to Mr. Moser's testimony.

A. Simply because PGW has not interrupted Rate IT customers frequently does not mean that Rate IT customers are not interruptible. Rate IT customers are, in fact, interruptible, have agreed to be interrupted, and have alternate fuel capability as a condition of their service. This arrangement is not the same as firm customers, and Rate IT customers should not be treated as firm service customers with respect to cost allocation and responsibility. I explained this more fully in my Direct Testimony and nothing in this portion of Mr. Moser's Rebuttal Testimony alters my position.

Q. On page 8, lines 21 through 24 of his Rebuttal Testimony, Mr. Moser testified that PGW could use a different model such as throughput and demand that would allocate far greater costs to Rate IT customers. Please respond to this portion of Mr. Moser's testimony.

A. Mr. Moser's testimony here seems to be at odds with Mr. Hanser's approach to the Company's CCOSS. If indeed PGW believed that cost responsibility should be based partly on throughput, then the Company could have filed a CCOSS based on classifying and allocating distribution mains based on both demand and throughput. However, Mr. Hanser was quite clear in both his Direct and Rebuttal Testimonies that distribution mains should be classified and allocated based on design day demand and the number of customers, not throughput. I agree with Mr. Hanser's approach in this regard, although allocating Rate IT customers a full share of distribution mains based on design day demand would likely overstate their cost responsibility given the fact that they are interruptible and that PGW does not plan for interruptible loads on the design day. In any event, Mr. Moser's testimony on this point is not even supported by Mr. Hanser.

Q. On page 9, lines 7 through 17 of his Rebuttal Testimony, Mr. Moser describes his view of the cost savings that IT customers provide to the system. He stated that "the only cost savings IT customers can reasonably claim are the costs that PGW would have to incur to have the capacity to serve them on PGW's design day." Please respond to Mr. Moser's testimony on this point.

A. Mr. Moser's view of the cost savings provided by IT customers is incomplete. I agree that the costs referenced by Mr. Moser in his testimony are saved by not providing firm service to IT customers. However, excluding IT loads on the design

day should also include savings from the future expansion of PGW's distribution system. There are also other benefits to firm service customers from PGW's ability to interrupt IT customers for reliability reasons during peak winter load conditions, for example. Interruptible loads benefit all of PGW's customers in terms of lowering system expansion costs and enhancing system reliability.

Q. On page 9, lines 23 through 24 of his Rebuttal Testimony, Mr. Moser made the claim that large volume customers are inherently riskier because they have "competitive alternatives." Is this assertion correct?

A. No. I have demonstrated that IT customers do not have economic alternatives to PGW's natural gas service. Because this is the case, it is a virtual certainty that IT customers will not leave PGW's system to pursue alternative fuel options.

Q. On page 11, lines 4 through 15 of his Rebuttal Testimony, Mr. Moser responds to your testimony regarding UGI's interruptible tariff. Please respond to his testimony on this point.

A. First, I explained that simply because UGI had an alternative fuel rate tariff that had been in place for a number of years, that in and of itself is not an appropriate basis for the Commission to approve PGW's proposal for Rate IT, and I stand by that testimony. As I stated previously, PGW's proposal is ill timed and unreasonable given the current and forecasted prices of alternative fuels.

Second, I disagree with Mr. Moser's assertion that "Rate IT customers do not like the price that PGW charges for firm transportation service." As I stated in my Direct Testimony, PGW does not currently have a cost based firm transportation rate that is designed based on the characteristics of large commercial and industrial customers. I

continue to maintain the recommendation in my Direct Testimony that PGW submit a cost based firm transportation rate for the customers in Rate IT.

Q. On page 12, lines 9 through 14 of his Rebuttal Testimony, Mr. Moser responded to Mr. Bresser's estimate of the additional costs faced by Temple University from PGW's proposed IT rate. Please respond to Mr. Moser's testimony on this point.

A. Mr. Bresser's testimony showed the full impact of PGW's proposal if Temple's rate was based on PGW's proposed firm transportation rate. However, even a movement to the midpoint of PGW's proposed "cost of service" rate and the firm transportation rate would be excessive and unreasonable. Referring to Mr. Bresser's Direct Testimony on page 8, the midpoint between PGW's proposed minimum rate for IT-C ($1.08/Dth) and the proposed maximum rate ($3.81/Mcf) is $2.45/Dth (not including conversion from Mcf to Dth). This $2.45/Dth rate compared to the current IT-C rate of $0.68/Dth ***represents an increase of 260% from the current IT-C rate.***

This exorbitant increase, which would very likely take place under Mr. Moser's proposal for Rate IT, is unreasonable by any principled standard of ratemaking. I continue to strongly recommend that the Commission categorically reject Mr. Moser's proposal for Rate IT customers.

Q. On pages 12 and 13 of his Rebuttal Testimony, Mr. Mierzwa continued to recommend the adoption of PGW's alternative rate proposal. Please respond to Mr. Mierzwa's testimony.

A. First, Mr. Mierzwa failed to evaluate whether Rate IT customers have viable alternatives to PGW's natural gas service. I have demonstrated that Rate IT

customers do not have economic alternative fuel choices, and, thus, Mr. Mierzwa's testimony is not supported on this point.

Second, Mr. Mierzwa testified on page 13, lines 2 through 4 that adopting a policy of negotiating rates for IT service will likely reduce the alleged difference between IT revenues and the IT cost of service "more quickly than the traditional base rate setting." Rapidly escalating the rates for Rate IT customers is by no means a valid or reasonable basis for adopting PGW's proposal. It totally ignores the excessive rate increases to which IT customers would be subjected and thus violates the principle of gradualism. I doubt that Mr. Mierzwa would have recommended a similar approach to rate increases for the Residential class if this class was found to be far below its allocated cost to serve.

Moreover, I disagree with Mr. Mierzwa's view on cost responsibility for Rate IT. I will discuss this issue later in my Surrebuttal Testimony.

Class Cost of Service Studies and Revenue Allocation

Q. On page 11, Table 2-R of his Rebuttal Testimony, Mr. Mierzwa attempted to show that the per Mcf increases for Rate IT were less than those for the firm service classes and incorporate the concept of gradualism. Please respond to Mr. Mierzwa's testimony.

A. The per Mcf increases shown in Mr. Mierzwa's Table 2-R are irrelevant with respect to the principle of gradualism. Because a typical Rate IT customer consumes far more Mcfs than a typical Residential customer, the per Mcf increase is applied to a substantially higher level of consumption. This translates into a far higher total increase for Rate IT customers under Mr. Mierzwa's proposal, which is 31.6%, as set forth on page 17 of my Rebuttal Testimony. The fact is that Mr. Mierzwa's

recommended increase to Rate IT customers fails to incorporate the principle of gradualism. Moreover, the OCA's proposed increase is merely the minimum increase Rate IT customers would be subjected to because Mr. Mierzwa also embraces a one-year phase-in of PGW's alternate rate proposal. This expedited phase-in will increase IT rates substantially above those shown in Mr. Mierzwa's Table 2-R. Contrary to Mr. Mierzwa's Rebuttal Testimony, his proposals for Rate IT customers utterly fail to incorporate gradualism.

Q. On page 11, lines 5 through 11 of his Rebuttal Testimony, Mr. Mierzwa took issue with your testimony regarding the alternate fuel requirement in Rate IT. Please respond to Mr. Mierzwa's testimony on this point.

A. Mr. Mierzwa claims that not all Rate IT customers are interruptible based upon alternative fuel capability; however, according to PGW's response to PICGUG-VI-1, PGW has 422 Rate IT customers. Of that number, only 12 fall into the category of demonstrating the ability to manage their businesses without the use of gas during periods of curtailment. The other 410 Rate IT customers have alternative fuel capability. Thus, only a very small minority (*i.e.*, less than 3%) of Rate IT customers demonstrated the ability to operate without alternative fuel capability. The vast majority of Rate IT customers were required to have alternate fuel capability.

Q. On page 2 of his Rebuttal Testimony, Mr. Mierzwa testified that the OCA requested PGW rerun his recommended CCOSS to allocate 50% of distribution mains investment and costs based on throughput. Mr. Mierzwa's Table 3 Revised and Revised Schedule JDM-1 present the results of this revised CCOSS. Please present your conclusions with respect to this revised CCOSS.

A. Mr. Mierzwa's revised CCOSS contains a substantial error with respect to the classification and allocation of distribution mains. Therefore, his revised CCOSS cannot be used for purposes of cost and revenue allocation in this proceeding.

Mr. Knecht discussed the problem with Mr. Mierzwa's CCOSS on page 10 of his Rebuttal Testimony. Mr. Knecht pointed out this revised CCOSS incorrectly includes a 36.3% allocation of commodity-related mains to the GTS/IT class. This is incorrect because this allocation includes volumes associated with two large GTS customers who are served from directly assigned mains. I reviewed this revised CCOSS, which was provided by PGW in response to OCA-VII-7 on June 5, 2017, and my review confirms the error described by Mr. Knecht. The error causes a substantial misallocation of costs to the GTS/IT class and a significant overstatement of cost responsibility for the combined GTS/IT class in Mr. Mierzwa's revised CCOSS. The GTS volumes should not have been included in the allocation of commodity-related mains to the GTS/IT class.

Turning back to Mr. Mierzwa's Table 3 Revised on page 2 of his Rebuttal Testimony, the GTS/IT class rate of return is substantially understated due to the misallocation of mains costs. I agree with Mr. Knecht that this revised Peak and Average CCOSS cannot be used for revenue allocation in this proceeding.

Finally, my comments and critique of the peak and average CCOSS that are included in my Direct and Rebuttal Testimonies still fully apply to Mr. Mierzwa's revised CCOSS.

Q. Did the OCA request PGW to rerun the P&A CCOSS?

A. Yes. The Company submitted a revised P&A CCOSS on June 19, 2017, that *apparently corrected the CCOSS relied upon by Mr. Mierzwa. I have not fully* evaluated this CCOSS, but it appears to have excluded the volumes from the GTS customers that were included in the P&A CCOSS that Mr. Mierzwa relied on in his Rebuttal Testimony.

Despite the revision in this second revised P&A CCOSS, I recommend that the Commission reject this study. This study allocates a full share of distribution mains costs to Rate IT customers, which includes a demand portion based on design day demand and an average demand allocation based on total volumes for Rate IT. It therefore fails to recognize the interruptible nature of Rate IT service and allocates distribution mains costs to Rate IT on the same basis as firm service customers.

Q. Mr. Knecht discusses the merits of the peak and average ("P&A") and customer/demand ("CD") CCOSS approaches in his Rebuttal Testimony. Does anything in his discussion change your view on the appropriateness of the CD CCOSS in this proceeding?

A. No. For the reasons stated in my Direct and Rebuttal Testimonies the CD CCOSS is the appropriate approach for allocating costs to customer classes, and Mr. Hanser supports this method as well.

Q. On page 8 lines 12 through 26 of his Rebuttal Testimony, Mr. Knecht recommends moving toward a direct assignment method for allocating costs to customer classes. Please comment on Mr. Knecht's suggestion.

A. One of the major drawbacks of such an approach is that it could lead to the balkanization of PGW's system and result in substantially different rates for customers across the system. This could also lead to confusion on the part of PGW's customers. However, there may be some merit to segregating smaller and larger distribution mains and assigning costs of smaller distribution mains to the customers who use those mains. For example, larger customers may never use smaller sized mains that serve Residential customers, yet they are allocated the cost of those mains in the CD and the P&A CCOSS, as well as Mr. Knecht's Average and Excess ("A&E") CCOSS.

Q. On page 13, lines 5 through 12 of his Rebuttal Testimony, Mr. Knecht testified that, if the Commission rejects his proposal that no universal service costs be allocated to non-residential customers, Rate IT should share in the allocation of these costs. Please address Mr. Knecht's testimony on this point.

A. I disagree with Mr. Knecht and recommend that Rate IT customers receive no allocation of universal service costs. Indeed, my recommendation that IT rates be based on the cost to serve would preclude an allocation of universal service costs to Rate IT, which is not responsible for those costs and receives no benefit from them.

Q. On page 5 of his Rebuttal Testimony, Mr. Apetoh recommended that the Commission reject your proposed allocation of main costs based on the number of customers. Please respond to Mr. Apetoh's testimony on this point.

A. Mr. Apetoh did not present any new evidence regarding the proper classification and allocation of distribution main costs in his Rebuttal Testimony that would change my support of classifying and allocating costs based on contribution to peak demand and the number of customers. I continue to recommend the use of the CD CCOSS method, subject to my concerns about using the design day allocator for Rate IT customers.

Q. On page 13, lines 2 through 15 of your Rebuttal Testimony, you explained that you were waiting to receive further discovery responses regarding whether GTS customers were taking service from the Company's integrated distribution system. Did you receive the additional responses from PGW?

A. Yes. In addition, both Mr. Hanser and Mr. Dybalski presented Rebuttal Testimony supporting the contention that two large GTS customers which were included in the combined GTS/IT class in Mr. Hanser's CCOSS do not take service from PGW's integrated distribution system. PICGUG's Request PICGUG-VII-1 requested that the Company provide all supporting studies, documentation, and other materials showing that the GTS customers only take service from the directly assigned distribution mains shown in Mr. Hanser's CCOSS. The Company's filed response on June 13 indicated that the response to this request was pending.

Q. Mr. Hanser responded to your Direct Testimony regarding the cost to serve GTS customers and the rate of return for the combined GTS/IT class beginning on page 10 of his Rebuttal Testimony. On page 12, lines 10 through 12 of his Rebuttal Testimony Mr. Hanser testified that your conclusion with respect to GTS customers being responsible for the low rate of return for the combined GTS/IT class is incorrect. Please respond to Mr. Hanser's testimony on this point.

A. After reviewing PGW's discovery responses and the Rebuttal Testimony from Mr. Hanser and Mr. Dybalski, it appears that the GTS customers are likely not fully responsible for the low rate of return from the combined GTS/IT class in Mr. Hanser's CCOSS.

Q. Does the Rebuttal Testimony filed by Mr. Hanser and Mr. Dybalski, as well as PGW's discovery responses, affect your recommendation with respect to revenue allocation for Rate IT customers?

A. In my view, there remains uncertainty with respect to the proper cost allocation for Rate IT customers. Although I agree with the general approach Mr. Hanser presented in his CD CCOSS, I remain concerned that the design day demand for Rate IT customers is too high given their interruptibility. The P&A CCOSS and the A&E CCOSS are inappropriate for the reasons I explained in my Rebuttal Testimony. Further, the revised P&A CCOSS presented by Mr. Mierzwa contains a substantial error that results in a gross overstatement of cost responsibility for the combined GTS/IT class.

Given this uncertainty, I continue to recommend a system average increase for Rate IT customers.

Q. If the Commission decides to adopt the P&A method, what is your recommendation?

A. If the Commission decides to adopt the P&A CCOSS, then the study provided by Mr. Apetoh is probably the closest to being correct, although it is still quite flawed. As I stated on page 10 of my Rebuttal Testimony, allowance must be made in the P&A CCOSS for the interruptibility of Rate IT customers. Rate IT should not be given a full share of main costs in the P&A CCOSS given their interruptibility. This would essentially put Rate IT customers on equal footing with firm service customers with respect to responsibility for distribution mains costs, which is not appropriate.

Q. If the Commission decides to increase revenues for Rate IT at a percentage that is greater than the system average, do you have a recommendation as to how such a percentage be applied by the Commission?

A. Yes. Mr. Apetoh's approach is the least objectionable of all the parties that have submitted revenue allocation recommendations in this proceeding.

However, Mr. Apetoh's recommendation requires some modification. In his Direct Testimony, his recommended 20.99% increase for the combined GTS/IT class is 1.48 times the system average increase of 14.2%. Unfortunately, since the increase can only be collected from Rate IT customers, Mr. Apetoh's revenue increase winds up being a 23.5% increase to Rate IT, which is 1.65 times the system average increase.

Assuming arguendo that my recommended revenue increase is not adopted, I recommend that the Commission limit any increase to Rate IT customers to 1.5 times the system average increase. This approach reasonably incorporates the principle of

gradualism with respect to class rate increases that the Commission may order in this proceeding irrespective of the class of customers involved.

Q. Do you have any concluding observations for the Commission to consider?

A. Yes. PGW, the OSBA, and the OCA have recommended extreme increases for Rate IT customers in this proceeding. It is important to keep in mind that the increases recommended by PGW and the OCA merely set the floor rate for IT, which would likely be increased to the maximum extent possible under the so-called negotiated alternative rate structure. Increases to PGW's customers that could reach over 250% - 300% are totally unreasonable, and the Commission should reject any proposal that would subject customers under its jurisdiction to such treatment. Imposing this type of increase on residential and commercial customers would be just as objectionable. There is no reasonable basis or standard by which the potential increases recommended by PGW and the OCA can be justified. Likewise, the 50% increase recommended by the OSBA would also violate the principle of gradualism. If the Commission decides to increase rates to IT customers more than the system average increase, it should apply the same standard of gradualism that it would apply to residential and commercial customers.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes.

VERIFICATION

I, Richard A. Baudino, Consultant of J. Kennedy and Associates, Inc., hereby state that the facts contained in the Direct Testimony of Richard A. Baudino (PICGUG Statement No. 1), Rebuttal Testimony of Richard A. Baudino (PICGUG Statement No. 1-R), Surrebuttal Testimony of Richard A. Baudino (PICGUG Statement No. 1-SR) and the Responses of Philadelphia Industrial and Commercial Gas Users Group ("PICGUG") to Philadelphia Gas Works Discovery Requests Set I and Set II (1-15), are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904, relating to unsworn falsification to authorities.

6/26/2017
Date

Richard A. Baudino

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	**Docket No. R-2017-2586783**
	:	
PHILADELPHIA GAS WORKS	:	

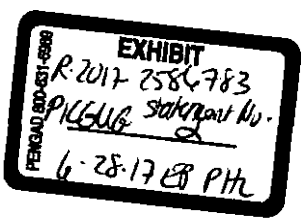
DIRECT TESTIMONY

OF

KURT BRESSER

DIRECT TESTIMONY OF KURT BRESSER OF TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION AS MEMBER OF THE PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

MAY 2017



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	**Docket No. R-2017-2586783**
	:	
PHILADELPHIA GAS WORKS	:	

DIRECT TESTIMONY OF KURT BRESSER OF TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION AS MEMBER OF THE PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

Q. Please state your full name and business address.

A. My name is Kurt Bresser. My business address is Temple University, Facilities Management, 1009 West Montgomery Avenue, Philadelphia, PA 19122.

Q. By whom are you employed?

A. I am employed by Temple University ("Temple" or "University").

Q. How long have you worked for Temple?

A. I have worked for Temple for thirty-four years.

Q. What is your current position with Temple?

A. I am Temple's Director of Utilities and Energy Management.

Q. What are your duties in your current position?

A. I am in charge of a $29 million annual utility budget covering Temple's Main Campus ("Main"), Ambler Campus ("Ambler"), Center City Campus, Health Sciences Center Campus ("HSC"), Temple University Center City Campus ("TUCC") and the School of Podiatric Medicine ("Podiatry"). My duties include the procurement of central plant fuel and

competitive electric energy supplies. I also manage the day-to-day operation of a 16 MW standby electric generating plant and am responsible for central utility planning and environmental compliance.

Q. What is your educational and employment background prior to joining Temple?

A. In 1980, I concluded six years of study at the University of Cincinnati earning a B.A. in English Literature and an A.S. in energy management. In 1990, I received my M.B.A. from Temple University. I worked for three years with a mechanical engineering office doing energy conservation studies and HVAC design before taking the position of assistant energy manager at Temple University.

Q. Please provide some background regarding Temple.

A. Temple University - of the Commonwealth System of Higher Education is one of the nation's major centers of teaching, research and service. It offers a broad range of outstanding academic programs attracting students from every state in the United States and from more than sixty foreign nations. Temple has approximately 38,000 students and over 8,000 employees. The University offers undergraduate, graduate and professional degrees in 540 academic areas including law, medicine and dentistry. Temple is a state-related University. Temple University, founded in 1884, has provided more than 133 years of service to the city of Philadelphia, the Commonwealth of Pennsylvania and the nation.

My testimony is limited to the University academic campuses and does not include the affiliates of the Temple University Health System.

As I mentioned previously, Temple University has five local campuses and various affiliates. Temple's five campuses are Main, Health Sciences, Ambler, Podiatry and

Center City. The main, HSC, Podiatric and center city campuses receive natural gas service from Philadelphia Gas Works ("PGW"). Only the Ambler campus does not.

The Main Campus is located in the north central section of Philadelphia. It is home for the Fox School of Business and Management, College of Education, College of Science and Technology, College of Liberal Arts, College of Engineering, Esther Boyer College of Music, School of Social Administration, School of Communications and Theater, School of Tourism and Hospitality Management, College of Health, and the James E. Beasley School of Law, as well as numerous academic centers, administrative support units and student residence halls. Enrollment at the Main Campus approximates 34,000 full and part-time undergraduate and graduate students. The Main Campus includes approximately 8.2 million gross square feet of buildings and 118 acres of land.

The HSC Campus is located at Broad and Ontario Streets in North Philadelphia. In addition to the Temple University Hospital and Temple University Children's Medical Center, the HSC Campus is home for the Schools of Medicine, Dentistry, Pharmacy and the College of Allied Health Professions, as well as a number of centers and administrative units. The HSC Campus has an enrollment of approximately 2,661 undergraduate, graduate, and professional students. (The Shriners Hospital for Children, although not a part of Temple, is also located on the HSC campus.) The HSC campus includes a total of approximately 3.0 million gross square feet of buildings on 24 acres.

Q. Have you ever submitted testimony in another proceeding before this Commission?

A. Yes, I submitted testimony in PGW's Restructuring Proceeding at Docket No. M-00021612.

Q. Please describe Temple's facilities located in PGW's service territory.

A. Temple's Main and HSC campuses are located entirely within PGW's service territory. In total, Temple operates 11 million gross square feet of buildings that can be heated by burning natural gas with our existing boilers and furnaces. Temple has four major interruptible accounts on PGW's Rate IT, which consume on average a total of 1,240,000 MMbtu of gas and oil per year. Temple also has eight large firm GS accounts using an average of 20,000 Dth of gas per year. Temple also has 62 firm GS accounts using much smaller quantities of gas.

Q. Is Temple a large energy customer?

A. Compared to most other customers in PGW's service territory, Temple would be considered a large natural gas consumer. Over the last five years, Temple has spent an average of $8.2 million per year for natural gas and oil. Judging by these figures, and the fact that our business with PGW is managed through their Major Accounts department, I believe Temple is among PGW's larger customers.

Q. How does Temple utilize natural gas?

A. The primary use of natural gas at Temple is for space heating. To meet this need Temple operates two large central steam plants serving the majority of the Main and HSC Campuses, as well as several smaller building heating plants and dozens of firm gas services for laboratories, domestic hot water, cooking and emergency generators. The two large central steam plants account for more than 90% of Temple's total gas and oil consumption.

Q. Do these facilities use any alternate fuel?

A. Yes, Temple's central heating plants burn fuel oil as an alternative to natural gas. The main campus central steam plant (BMC-CSP) burns #2 oil in its newer boilers and #6 oil in its older boilers. The Health Sciences Center central steam plant (HSC-CSP) and Liacouras Center central plant (LLCP) burn #2 oil as their alternative fuel.

Q. What is your understanding of PGW's filing in this proceeding?

A. PGW is proposing to increase rates for IT customers by 59%, as detailed in the Direct Testimony of Richard Baudino, PICGUG Statement No. 1. PGW further proposes to implement "value of service" pricing, whereby the IT rate (after the 59% rate increase is applied) would serve as the floor for a negotiated rate. The ceiling rate, for negotiation purposes, would be PGW's firm delivery rate as set forth under Rate GS - Industrial.

Q. What is your position regarding PGW's proposed rate increase for IT customers?

A. I agree with Mr. Baudino that a 59% rate increase, for any customer class, should be denied as unreasonable based on principles of gradualism.

Q. Did PGW propose any other modifications impacting IT customers?

A. Yes. PGW intends to dispense with cost-based rates for IT customers and implement a negotiated rate approach that would transition IT customers from the cost-based rates deemed appropriate by the Commission to a new "value of service" pricing structure.

Q. How would PGW set IT rates under the value of service pricing structure?

A. Rather than establish a single rate, PGW would affirm price ranges applicable to IT customers. The lower or floor end of each customer's IT rate would be the IT rate established in this and other future rate proceedings. The upper or ceiling end of the range would be determined by what PGW deems to be an "equivalent firm transportation

rate," which would be identical to the delivery rates for firm sales or transportation service under Rate GS.

Q. Do you agree with PGW's proposal?

A. No. While I am not an attorney, it is my understanding that the Commission has a long-standing policy favoring cost-based rates for services provided by PGW and other utilities in Pennsylvania. Authorizing PGW to negotiate IT rates above the cost-based rate established by the Commission creates tremendous uncertainty for IT customers and invites the possibility for unreasonable rates. Moreover, I recall when PGW's interruptible transportation rates were based upon the Company's marginal costs. As I recall, PGW's margin-based costs made it significantly more challenging for customers to transport on PGW's system, which is why PICGUG argued for the implementation of cost-based IT rates. To move from cost-based to value-based pricing would be a step backwards on PGW's system.

Q. Are your concerns addressed by PGW's proposal to cap negotiated rates at the equivalent firm transportation rate?

A. No. Mr. Baudino's testimony, in PICGUG Statement No. 1, explains that IT service differs from firm transportation service in that IT customers do not contribute to PGW's design day costs, as IT customers must be able to interrupt service when called upon by PGW. Moreover, although PGW argues that IT customers are similar to firm transportation customers because PGW has not interrupted Rate IT in several years, PGW fails to recognize that IT customers, if called upon, will be required to interrupt regardless of when that interruption occurs. As a result, customers such as Temple have the added

costs of maintaining an alternative fuel system that is not required of firm service customers, as they are not required to interrupt their service.

Q. How do PGW's firm transportation rates compare to similar rates for other gas utilities?

A. I do not know how PGW's rates would specifically compare to all other gas utilities, but I would generally expect them to be comparatively high because PGW does not actually have a firm transportation rate apart from its general service rate on its tariff. Instead, PGW simply allows customers the option of taking transportation service under its general service rate. From a customer perspective, a firm transportation rate is expected to offer a reduced delivery charge in recognition of the larger volumes delivered to transportation customers in comparison to smaller general service customers. As PGW's firm transportation rate simply adopts the same delivery charge applied to firm sales customers, it really does not constitute a firm transportation rate as the term is generally understood by customers.

Q. Do you have any other basis for suggesting that PGW's firm transportation rate is high compared to other gas utilities?

A. Yes. While I do not have comprehensive knowledge of the rates charged by other gas utilities for firm transportation service, I know that PGW's firm transportation rates are considerably higher than the corresponding rates on PECO Energy's gas system because Temple's Amber campus is within PECO's system. Notwithstanding differences in the customer charges for each utility, firm transportation service on PECO's system for Industrial customers costs either $0.7736/MCF or $1.6823/MCF (depending on the size of the account) as compared to PGW's proposed firm transportation rate of $3.81/MCF.

Q. Are you concerned about the impact of PGW's value of service pricing model on Temple's costs under Rate IT?

A. Absolutely. Temple takes IT service under PGW's Rate IT-C and Rate IT-E. The table below illustrates the current rates and the increases Temple would experience both at the lower and upper bounds of the range of value of service rates under PGW's proposed pricing structure. For illustrative purposes, this table shows only volumetric rates.

PGW INTERRUPTIBLE TRANSPORTATION RATES			
Interruptible Transportation Rate Class	**Current Rate**	**Proposed Minimum (59% Increase)**	**Proposed Maximum (Equivalent to Firm Transportation)**
Rate IT-A	$1.81/Dth	$2.88/Dth	$3.81/MCF
Rate IT-B	$0.87/Dth	$1.40/Dth	$3.81/MCF
Rate IT-C	**$0.68/Dth**	**$1.08/Dth**	**$3.81/MCF**
Rate IT-D	$0.61/Dth	$0.97/Dth	$3.81/MCF
Rate IT-E	**$0.58/Dth**	**$0.93/Dth**	**$3.81/MCF**

Notwithstanding the conversion issues resulting from PGW's publishing the Industrial GS rates solely on a per-MCF basis instead of the dual dekatherm and MCF rates published for Rate IT, the above table confirms that the range of outcomes under the proposed value of service pricing structure could potentially increase Temple's current IT rates by more than 500% from current rates and over 300% above PGW's proposed rate increase. Based upon Temple's consumption under Rates IT-C and IT-E, PGW's value of service pricing could increase its cost of IT service by as much as $3,860,000 per year.

Q. Do you have a recommendation for the Commission?

A. Yes. For the additional reasons set forth in my testimony, I recommend that the Commission adopt the recommendations from Mr. Baudino's PICGUG Statement No. 1, including limiting any increase for Rate IT to an appropriate cost-based increase and denying PGW's proposal to implement value-based pricing.

Q. Does this conclude your testimony?

A. Yes.

PICGUG Statement No. 2-R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	Docket No. R-2017-2586783
PHILADELPHIA GAS WORKS	:	

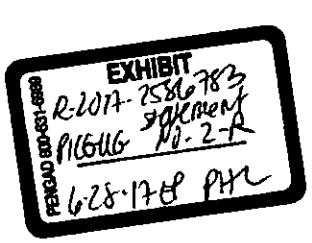
REBUTTAL TESTIMONY

OF

KURT BRESSER

REBUTTAL TESTIMONY OF KURT BRESSER
OF TEMPLE UNIVERSITY
OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION
AS MEMBER OF THE PHILADELPHIA INDUSTRIAL
AND COMMERCIAL GAS USERS GROUP

JUNE 2017



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	**Docket No. R-2017-2586783**
	:	
PHILADELPHIA GAS WORKS	:	

REBUTTAL TESTIMONY OF KURT BRESSER OF TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION AS MEMBER OF THE PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

Q. Please state your full name and business address.

A. My name is Kurt Bresser. My business address is Temple University, Facilities Management, 1009 West Montgomery Avenue, Philadelphia, PA 19122.

Q. By whom are you employed?

A. I am employed by Temple University ("Temple" or "University").

Q. Did you submit Direct Testimony on behalf of the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG") in this proceeding?

A. Yes.

Q. What is the purpose of your Rebuttal Testimony?

A. My Rebuttal Testimony responds to the Direct Testimonies of Office of Small Business Advocate ("OSBA") witness Robert D. Knecht and Office of Consumer Advocate ("OCA") witness Jerome D. Mierzwa regarding a limited component of each witness' revenue allocation proposals. I also respond to Mr. Knecht's and Mr. Mierzwa's

recommendations on PGW's proposal to transition Rate Interruptible Transportation ("IT") to a negotiated value-of-service rate.

Q. What is your response to the revenue allocations proposed by Mr. Knecht and Mr. Mierzwa?

A. PICGUG Witness Richard Baudino, in PICGUG Statement No. 1-R, provides a comprehensive response to Mr. Knecht's and Mr. Mierzwa's proposed revenue allocations. My Rebuttal Testimony responds only to each witness' decision to base, in part, their revenue allocation positions on a finding that Rate IT customers receive the equivalent of firm transportation service.

Q. How did Mr. Knecht and Mr. Mierzwa equate IT service to firm transportation service for revenue allocation purposes?

A. Both Mr. Knecht and Mr. Mierzwa proposed significant rate increases for Rate IT customers, the details of which are addressed in Mr. Baudino's Rebuttal Testimony. As part of these proposals, both Mr. Mierzwa and Mr. Knecht claim that Rate IT customers currently pay a discounted interruptible rate while actually receiving the functional equivalent of firm transportation service. *See* OCA Statement No. 3, p. 27, line 20; *see* OSBA Statement No. 1, p. 26, lines 13-14.

Q. Do you agree that customers on PGW's Rate IT receive the functional equivalent of firm transportation service?

A. No. A customer served on Rate IT must meet several significant and costly requirements that distinguish this service from firm transportation service. In particular, IT customers with large dual-fuel (oil and natural gas) central heating plants such as Temple University

assume increased costs and legal obligations directly related to the alternative fuel, including:

1. **Oil Storage Tanks** - Fuel oil storage tanks and the associated pumping, pressure control, heating, leak detection, overfill and spill containment systems.
2. **Boiler Tune-ups** – Routine periodic service requirements and associated costs are doubled because the boilers have to be in kept in shape to fire either gas or oil efficiently at any time.
3. **Fuel Testing** - Fuel oil sampling and lab testing to assure compliance with the limits on sulfur content.
4. **Emissions Testing** – The cost of third party NOx and CO air emissions testing for Title V permit compliance is doubled because it has to be done on both gas and oil.
5. **Title V** - Boiler operating permit compliance, including specific daily, monthly, semi-annual and annual monitoring, recordkeeping and reporting requirements.
6. **Logistics** - Involving the scheduling, ordering, transportation, receiving and payment for the oil.
7. **Labor** – Manpower requirements in the boiler plants are increased by one additional operating engineer per shift when the plant is operating with oil rather than natural gas.

As a Rate IT customer, Temple maintains functional access to alternative fuel supplies so that PGW can interrupt gas transportation service to Temple with due notice. As noted in Mr. Baudino's Rebuttal Testimony, the fact that PGW has interrupted service once in twenty years does not change the reality that customers on Rate IT have invested in additional infrastructure to allow PGW to interrupt service when necessary. Moreover,

Rate IT customers such as Temple have continued to maintain the equipment needed for these alternative fuel sources because PGW has the ability to interrupt Rate IT customers at any time. In other words, merely because PGW has not interrupted Rate IT customers in quite some time does not mean that Rate IT customers may avoid the costs tied to maintaining alternative fuel supply. Additionally, as discussed in Mr. Baudino's Direct Testimony, granting PGW the right to interrupt service also beneficially impacts PGW's design-day demand.

Further, Rate IT customers like Temple willingly surrender their right to continuous and uninterrupted gas supply during curtailment periods. The fact that IT customers have invested in alternative fuel systems poses no risk that these customers will abandon PGW. Having an alternative to natural gas does provide a measure of operational insurance and disaster resiliency but the primary budgetary justification for having an alternative fuel system is the availability of lower priced natural gas afforded by the IT rate. It is the willingness to pay the price of installing and maintaining an alternative fuel system that clearly and significantly distinguishes Rate IT customers from firm transportation customers regardless of whether PGW ever invokes its right to interrupt the delivery of natural gas.

Q. Did Mr. Knecht also comment on PGW's value-of-service pricing structure?

A. Yes. Mr. Knecht proposed to modify PGW's value-of-service pricing structure by eliminating the "equivalent firm transportation" rate as the ceiling and using OSBA's recommended cost-based rates for Rate IT as the ceiling. Rather than establish bottom and upper boundaries, PGW would set the ceiling rate and allow customers under Rate IT to negotiate downward from the modified ceiling rate. Essentially, the maximum rate

under OSBA's proposed value-of-service pricing structure would be comparable to the minimum rate under PGW's proposal.

Q. Do you concur with Mr. Knecht's proposal?

A. No. As a customer, Mr. Knecht's proposal to begin negotiations with cost-based rates approved for Rate IT as the ceiling would be less burdensome than PGW's proposal to negotiate downward from Rate General Service ("GS") delivery rates. However, as discussed above and in Mr. Baudino's PICGUG Statement No. 1-R, OSBA's proposal still unreasonably relies on a revenue allocation that assumes IT customers receive the equivalent of firm transportation service.

Q. Do you have any comments with regard to Mr. Mierzwa's recommendation to modify PGW's plan to transition Rate IT to a negotiated value-of-service rate?

A. Yes. PGW originally proposed to implement a negotiated value-of-service based rate for Rate IT, where the lower or floor end of each customer's IT rate would be the IT rate established in this and other future rate proceedings and the upper or ceiling end of the range would be the delivery rates for firm sales or transportation service under Rate GS, which PGW styles as the "equivalent firm transportation rate." Importantly, PGW's as-filed proposal would implement negotiated rates within three years of a Commission Order approving value-of-service pricing. Mr. Mierzwa's recommendation preserves the value-of-service pricing structure, but compresses the transition period from three years to one year.

Q. How would Mr. Mierzwa's proposal impact Rate IT customers?

A. Mr. Mierzwa's proposal would exacerbate the already burdensome and unreasonable impact of PGW's value-of-service rate proposal for IT customers. As stated in my Direct

Testimony, PGW's firm transportation rate is nothing more than the delivery charge assessed to firm sales customers. As a result, PGW's proposal to use firm transportation rates as a proxy for purposes of capping the negotiated rates paid by IT customers amounts to an arbitrary pricing mechanism. However, PGW proposed to implement negotiated rates over a three-year period, which would at least allow customers some opportunity to prepare for unreasonable and excessive rates. Mr. Mierzwa now asks the Commission to accelerate the negotiation timeframe up to one year. As shown in the table set forth in my Direct Testimony, this unreasonable recommendation would expose Temple to possible increases of both its current Rate IT-C of $0.68/Dth and Rate IT-E of $0.58/Dth to $3.81/Dth (or over 500%) **in one year**.

Q. Should Mr. Mierzwa's recommendation be approved?

A. No. While PGW's proposal to implement value-of-service pricing with potential rate increases exceeding 500% remains untenable regardless of the transition period, implementing such a drastic restructuring of Rate IT without allowing sufficient time for rate negotiations and budgeting processes would be arbitrary and infeasible. Mr. Mierzwa's proposal may have the effect of eroding Temple's leverage to negotiate a more favorable rate by restricting the amount of time available to conduct negotiations. With only one year available to negotiate rates with the 400+ IT customers on its system, PGW may be less inclined to dedicate sufficient resources towards addressing each customer's specific situation. The reduced transition period would also hinder Temple's, as well as other customers', attempts to budget or otherwise plan for the onset of dramatic and onerous rate increases.

Q. Do you have a recommendation for the Commission?

A. Yes. For the reasons set forth above and in my Direct Testimony, I recommend that the Commission deny the OSBA and OCA proposals to implement value-of-service based pricing for Rate IT.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	Docket No. R-2017-2586783
PHILADELPHIA GAS WORKS	:	

SURREBUTTAL TESTIMONY

OF

KURT BRESSER

SURREBUTTAL TESTIMONY OF KURT BRESSER OF TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION AS MEMBER OF THE PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

JUNE 2017

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	**Docket No. R-2017-2586783**
	:	
PHILADELPHIA GAS WORKS	:	

SURREBUTTAL TESTIMONY OF KURT BRESSER OF TEMPLE UNIVERSITY OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION AS MEMBER OF THE PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

Q. Please state your full name and business address.

A. My name is Kurt Bresser. My business address is Temple University, Facilities Management, 1009 West Montgomery Avenue, Philadelphia, PA 19122.

Q. By whom are you employed?

A. I am employed by Temple University ("Temple" or "University").

Q. Did you submit Direct and Rebuttal Testimony on behalf of the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG") in this proceeding?

A. Yes.

Q. What is the purpose of your Surrebuttal Testimony?

A. My Surrebuttal Testimony responds to the Rebuttal Testimonies of Philadelphia Gas Works ("PGW") witness Douglas Moser and Office of Consumer Advocate ("OCA") witness Jerome D. Mierzwa regarding their support for PGW's proposed value-of-service pricing structure for Rate Interruptible Transportation ("IT").

Q. Did Mr. Moser's Rebuttal Testimony further address PGW's proposal to transition Rate IT to a negotiated value-of-service rate?

A. Yes. In his Rebuttal Testimony, Mr. Moser claimed that PGW's proposal would not expose customers to unreasonable rate increases. To support this claim, Mr. Moser referenced statements from his Direct Testimony asserting that in the event PGW and an IT customer failed to reach agreement on an appropriate negotiated rate, PGW would offer the customer IT service at the midpoint between the cost-of-service IT rate approved by the Commission and the purported equivalent firm transportation rate. Mr. Moser also argued that value-of-service pricing is reasonable for IT customers because he believes they can avoid paying PGW's rates by leaving the system.

Q. Do you agree that Mr. Moser's proposal to establish a default negotiated rate at the midpoint between the cost-of-service IT rate approved by the Commission and the purported equivalent firm transportation rate protects Rate IT customers from rate shock?

A. No, for several reasons. First, Mr. Moser's proposal remains noticeably absent from the tariff modifications proposed by PGW in this proceeding. In my experience working with PGW's customer representatives, they rely on the tariff language when addressing customer complaints or implementing company policies. If Mr. Moser's statement is intended to be a policy that customers can rely on, it should be directly stated in the tariff. Second, I am challenged to understand the practicality of Mr. Moser's statement. If PGW intends to set a default price for negotiations at the midpoint of its proposed price range, then I cannot imagine how or why the result of negotiations would ever vary from that midpoint price. As a customer, I certainly would not agree to a negotiated price higher

than the midpoint under such circumstances, and I would think that PGW would have little incentive to agree to a negotiated price below said midpoint.

Third, Mr. Moser's proposal, even if executed as described in his testimony, would not protect IT customers from rate shock because the midpoint between the cost-of-service based rates proposed by PGW in this proceeding and the proposed equivalent firm transportation rate would still increase Temple's rates for IT service by more than 250%.

Q. Have you calculated the potential rate impact of Mr. Moser's midpoint proposal upon Temple?

A. Yes. As stated in my Direct Testimony, Temple takes service under PGW's Rate IT-C and Rate IT-E. The rates that would result from Mr. Moser's midpoint proposal are included in the below table:

PGW INTERRUPTIBLE TRANSPORTATION RATES				
Interruptible Transportation Rate Class	**Current Rate**	**Proposed Minimum (59% Increase)**	**Moser Proposed Midpoint[1] (81% - 308% Increase)**	**Proposed Maximum (Equivalent to Firm Transportation)**
Rate IT-A	$1.81/Dth	$2.88/Dth	$3.35/Dth	$3.81/MCF
Rate IT-B	$0.87/Dth	$1.40/Dth	$2.61/Dth	$3.81/MCF
Rate IT-C	**$0.68/Dth**	**$1.08/Dth**	**$2.46/Dth**	**$3.81/MCF**
Rate IT-D	$0.61/Dth	$0.97/Dth	$2.39/Dth	$3.81/MCF
Rate IT-E	**$0.58/Dth**	**$0.93/Dth**	**$2.37/Dth**	**$3.81/MCF**

As set forth in the above table, a "negotiated" rate set at the midpoint of PGW's proposed minimum and maximum value-of-service pricing structure would increase the current Rate IT-C from $0.68/Dth to approximately $2.46/Dth, or 261%. Under Mr. Moser's midpoint proposal, the current Rate IT-E would increase from $0.58/Dth to

[1] These rates are approximations due to rounding and conversions.

approximately $2.37/Dth, or 308%. I cannot fathom the Commission considering increases of this magnitude as anything other than unreasonable rate shock.

Q. What did Mr. Moser say about the ability of IT customers to leave PGW's system?

A. In responding to comments from PICGUG Witness Richard Baudino, Mr. Moser asserts that IT customers "could leave the system tomorrow; by staying, they have made a decision that the service they receive from PGW is valuable." PGW Statement No. 7-R, p. 4.

Q. Is Mr. Moser correct?

A. No. I am extremely disappointed and concerned to hear PGW misunderstands the circumstances of its IT customers. As explained in my Direct Testimony, Temple can supply its dual fuel boilers with oil when PGW interrupts natural gas distribution service. However, the Commission must understand that having the ability to take alternative service is not equivalent to the ability to bypass distribution service altogether. A customer may be able to interrupt gas distribution service and rely on alternative fuel for varying amounts of time, but not indefinitely. Temple certainly cannot leave PGW's system as its oil storage tanks are not sufficiently sized for continuous operation.

Q. Do you have any additional comments in response to Mr. Moser's testimony?

A. Yes. I am concerned that Mr. Moser's repeated focus on the availability of competitive alternatives to natural gas will incentivize industrial customers to increase use of less environmentally friendly alternative fuels, such as oil. In an environment where both the Commission and the Commonwealth have adopted numerous regulations and policies intended to develop and incentivize clean energy and sustainable business practices, it strikes me as counter-intuitive for PGW to defend policies that PGW readily

acknowledges could drive customers towards increase use of less environmentally friendly energy resources such as oil.

Q. Did OCA Witness Jerry Mierzwa address your Direct Testimony in his Rebuttal Testimony?

A. Yes. Mr. Mierzwa responded to my statement clarifying that PGW's current firm transportation rate is not a firm transportation rate in the sense that the term is understood by industrial customers. Mr. Mierzwa takes the position that it is common for Natural Gas Distribution Companies ("NGDCs") to assess the same delivery rate on customers in the same class, whether for sales or transportation service.

A. Is Mr. Mierzwa's response appropriate?

Q. No. Mr. Mierzwa misses the point of my statement. It may be appropriate to assess the same delivery charge to certain similarly situated customers taking sales or transportation service. However, IT customers are large volume users, and PGW's Industrial Rate GS does not reflect the tremendous diversity of customer size within the Industrial class, as many other NGDCs do with a large volume firm transportation rate.

Q. Does this conclude your testimony?

A. Yes.

VERIFICATION

I, Kurt Bresser, Director of Utilities and Energy Management of Temple University, hereby state that the facts contained in the Direct Testimony of Kurt Bresser (PICGUG Statement No. 2), Rebuttal Testimony of Kurt Bresser (PICGUG Statement No. 2-R), Surrebuttal Testimony of Kurt Bresser (PICGUG Statement No. 2-SR) and the Responses of Philadelphia Industrial and Commercial Gas Users Group ("PICGUG") to Philadelphia Gas Works Discovery Requests Set II (16-18), are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904, relating to unsworn falsification to authorities.

June 26, 2017
Date

Kurt Bresser

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	**Docket No. R-2017-2586783**
PHILADELPHIA GAS WORKS	:	

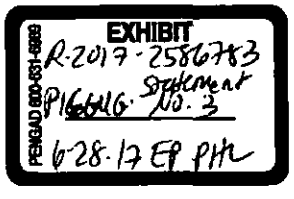
SURREBUTTAL TESTIMONY

OF

MICHAEL FERMAN

SURREBUTTAL TESTIMONY OF MICHAEL FERMAN
OF NEWMAN & COMPANY, INC.
AS MEMBER OF THE PHILADELPHIA INDUSTRIAL
AND COMMERCIAL GAS USERS GROUP

JUNE 2017



BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
v.	:	**Docket No. R-2017-2586783**
	:	
PHILADELPHIA GAS WORKS	:	

SURREBUTTAL TESTIMONY OF MICHAEL FERMAN OF NEWMAN & COMPANY, INC. AS MEMBER OF THE PHILADELPHIA INDUSTRIAL AND COMMERCIAL GAS USERS GROUP

Q. Please state your full name and business address.

A. My name is Michael Ferman. My business address is 6101 Tacony Street, Philadelphia, PA 19135.

Q. By whom are you employed?

A. I am employed by Newman & Company, Inc. ("Newman").

Q. Please describe Newman's business.

A. Newman and Company has operated a recycled paperboard Mill in Philadelphia since 1919. Our family-owned mill produces more than 65,000 tons of 100% recycled paperboard annually. The paperboard produced by Newman is used for a variety of purposes including paper boxes, game boards, puzzles, book covers, and tablets. We operate several related companies on-site including: United States Recycling, a processor of recycled materials including paper, plastics, and glass; and Mill Corporation, a full-service transportation company. Both are vertically integrated into our Mill. We also operate Bridgeview Paper, an international paper brokerage company. We are proud of our history as both an environmentally and socially responsible company. We produce

quality recycled products, while employing a challenged sector of the community - approximately 70% of our employees are ex-convicts. Our union employees earn competitive wages and benefits in a secure environment.

Q. What is your position with Newman?

A. I am the Vice President of Operations. In this capacity, I am responsible for complete oversight of the Papermill Operations including personnel, manufacturing, maintenance and utility procurement.

Q. How long have you been employed by Newman?

A. I have been employed by Newman since 1987.

Q. Is Newman a Philadelphia Gas Works ("PGW") customer?

A. Yes. Newman takes service from PGW primarily under Rate Interruptible Transportation ("IT") -E. On an annual average basis, Newman consumes 575,000 MCFs of natural gas.

Q. Have you submitted testimony on behalf of the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG") in this proceeding?

A. No. However, PICGUG Witnesses Richard Baudino of J. Kennedy and Associates, Inc., and Kurt Bresser of Temple University submitted Direct and Rebuttal Testimonies on behalf of PICGUG.

Q. What is the purpose of your Surrebuttal Testimony?

A. My Surrebuttal Testimony responds to the Rebuttal Testimony of PGW witness Douglas Moser regarding PGW's proposed value-of-service pricing structure for Rate IT.

Q. Did Mr. Moser's Rebuttal Testimony address PGW's proposal to transition Rate IT to a negotiated value-of-service rate?

A. Yes. In his Rebuttal Testimony, Mr. Moser attempts to justify PGW's proposed value-of-service pricing structure based on the position that "to the extent Rate IT customers would not be satisfied with their negotiated rate, they would be free to exercise their option to rely on other alternatives." *See* PGW Statement No. 7-R, p. 5.

Q. Do you have a response to Mr. Moser's comments?

A. Yes. This statement understates the grievous impact of PGW's proposed value-of-service pricing structure. As set forth in the Direct Testimony of PICGUG Witness Kurt Bresser, PGW's proposed value-of-service pricing structure exposes customers to rate increases in excess of 500%. Even at half of the potential rate increase under PGW's range of negotiated rates, this proposal would seriously endanger Newman's continued operations in Philadelphia and potentially force the company to lay off the 175 employees currently employed on our campus. Our Mill operates in an extremely competitive commodity marketplace, and energy is one of the largest components of our manufacturing costs.

Q. Are you suggesting that Newman does not have an alternative fuel source?

A. No. Newman uses an 1,800-kW dual fuel boiler, which enables the company to switch to No. 6 fuel oil supply.

Q. Why can't Newman rely on its alternative fuel source in lieu of PGW's natural gas service as suggested by Mr. Moser?

A. Cost is not the only factor used to determine fuel selection for a multiple fuel customer. The fact that Newman can switch its dual fuel boiler to oil supply does not create a scenario where Newman can leave PGW's distribution system. Firing the dual fuel boiler

exclusively with our alternative fuel would cause Newman to exceed the emissions restrictions approved through its Title V permit, in violation of the Pennsylvania Department of Environmental Protection's Reasonably Available Control Technology ("RACT") regulations.

Due to these emissions requirements, Newman cannot run for an entire year on its use of alternative fuels without exceeding annual limits. Simply put, alternative fuels for Newman are an emergency based solution and do not present an opportunity to switch fuels based solely on economic trends.

In addition, Newman must pay for the upkeep, testing, insurance, re-supply, environmental permitting, recordkeeping, and legal fees to maintain the ability to run a dual-fuel system. Maintenance of the dual-fuel system, even when not in use, is a considerable obligation.

Q. Do you wish to respond to any additional comments from Mr. Moser's Rebuttal?

A. Yes. As mentioned above, Newman has been operating in the City of Philadelphia for almost 100 years. I have been with the company for 30 of those years. In that time, I cannot recall any circumstances whereby PGW or any other Philadelphia-based public utility sought to implement a pricing structure with potential to increase rates in the order of magnitude proposed by PGW in this case. Manufacturing plants remaining in Philadelphia already face competition from their counterparts in other geographic areas. *I implore the Commission to reassure the industrial manufacturers in Philadelphia that* Pennsylvania supports the businesses that have contributed to its local economies for multiple generations.

The purpose of interruptible gas rates is to create a value-added benefit back to the utility. The ability to curtail natural gas usage to meet supply on short notice has been part of PGW's portfolio for many years. There is still value added for the ability to provide this service back to the utility. This ability to curtail gas usage requires time, money, and man-power for Newman & Company to maintain this ability.

Q. Does this conclude your testimony?

A. Yes.

VERIFICATION

I, Michael Ferman, Vice President of Operations of Newman & Company, Inc., hereby state that the facts contained in the Surrebuttal Testimony of Michael Ferman (PICGUG Statement No. 3), are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904, relating to unsworn falsification to authorities.

6/26/2017
Date

Michael Ferman