June 26, 2026

E-FILED

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission v. Philadelphia Gas Works / Docket No. R-2023-3037933

Dear Secretary Homsher:

Enclosed please find the Admitted Testimony, Exhibits, and Verification, on behalf of the Office of Small Business Advocate ("OSBA"), pursuant to the Order Granting Joint Stipulation and Motion for Admission of Evidence into the Record, that was issued on June 11, 2026, in the above-referenced proceeding:

- Remand Direct Testimony and Exhibits of Mark D. Ewen, labelled OSBA Statement No. 1-RD, with associated exhibits OSBA Exhibit IEc-RD1 and OSBA Exhibit IEc-RD2, with signed Verification of Mark D. Ewen.

Copies will be served on all known parties in this proceeding, as indicated on the attached Certificate of Service.

If you have any questions, please do not hesitate to contact me

Sincerely,

/s/ Rebecca Lyttle

Rebecca Lyttle
Assistant Small Business Advocate
Attorney ID No. 201399

Enclosures
cc: Mark D. Ewen
Parties of Record

COMMONWEALTH OF PENNSYLVANIA

March 19, 2026

The Honorable Eranda Vero
Administrative Law Judge
Pennsylvania Public Utility Commission
801 Market Street, Suite 4063
Philadelphia, PA 19107

Re: Pennsylvania Public Utility Commission v. Philadelphia Gas Works / Docket No. R-2023-3037933

Dear Judge Vero:

Enclosed, please find the Remand Direct Testimony and Exhibits of Mark D. Ewen, labelled OSBA Statement No. 1-RD, with associated exhibits OSBA Exhibit IEc-RD1 and OSBA Exhibit IEc-RD2, on behalf of the Office of Small Business Advocate ("OSBA"), in the above-referenced proceeding.

As evidenced by the enclosed Certificate of Service, all known parties will be served, as indicated.

If you have any questions, please do not hesitate to contact me.

Sincerely,

/s/ Rebecca Lyttle

Rebecca Lyttle
Assistant Small Business Advocate
Attorney ID No. 201399

Enclosures
cc: PA PUC Secretary Matthew L. Homsher (Cover Letter & Certificate of Service Only)
Mark D. Ewen
Parties of Record

OSBA STATEMENT NO. 1-RD

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	**Docket No. R-2023-3037933**
v.	:	
	:	
Philadelphia Gas Works	:	

ON REMAND

REMAND DIRECT TESTIMONY & EXHIBITS

of

MARK D. EWEN

on Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Cost Allocation
Interruptible Transportation Service
Revenue Allocation

Date Served: March 19, 2026

Date Admitted to the Record: June 11, 2026

REMAND DIRECT TESTIMONY OF MARK D. EWEN

Q. Mr. Ewen, please state your name and briefly describe your qualifications.

A. My name is Mark D. Ewen. I am a Principal and President of Industrial Economics, Incorporated ("IEc"), a consultancy headquartered at 2067 Massachusetts Avenue, Cambridge, MA 02140. My consulting practice focuses on regulatory and energy economics, expert case management and economic damages estimation in a variety of litigation contexts, and financial analysis. I obtained a B.A degree in Economics and Political Science from the University of North Dakota, and a Master of Public Policy degree from the University of Michigan. I have participated and provided testimony in a variety of proceedings before the Pennsylvania Public Utility Commission ("Commission"), including electric and gas base rates cases, 1307(f) purchased gas cost filings, energy efficiency and conservation cases, merger and acquisition cases, and default service provider ("DSP") petitions. My résumé and a listing of the expert testimony that I have filed in various litigation and utility regulatory proceedings are attached in Exhibit IEc-RD1.

I am appearing in this proceeding on behalf of the Pennsylvania Office of Small Business Advocate ("OSBA").

Q. Did you submit testimony earlier in this proceeding.

A. I did not. My colleague Mr. Robert D. Knecht submitted direct, rebuttal and surrebuttal testimony on behalf of OSBA. I reviewed Mr. Knecht's testimony, and I consulted with Mr. Knecht in preparing this testimony. Nevertheless, the analysis and conclusions presented herein are my own.

Q. Please provide the litigation background for this testimony.

A. This phase of this proceeding involves issues related to mains cost allocation for interruptible transportation customers, taking service under the Philadelphia Gas Works ("PGW") Rate IT.[1]

In its filed allocated class cost of service study ("CCOSS"), PGW effectively treats Rate IT customers as firm for the purpose of allocating mains costs, on the grounds that these customers have not been interrupted for more than twenty years. In its testimony and briefs, the Philadelphia Industrial and Commercial Gas Users Group ("PICGUG") objected to that method, based primarily on the fact that PGW requires Rate IT customers to incur material costs to either maintain alternative fuel capability or to demonstrate an ability to absorb an interruption, while being allocated mains costs as if they received firm service.

The Commission approved the PGW method in its *Order.*[2] PICGUG appealed this decision to the Commonwealth Court.

In its *Opinion*, the Commonwealth Court concluded that the Commission's decision was "inadequately explained."[3] Specifically, the Commonwealth Court concluded:

> Among the deficiencies in the Commission's decision, as more fully discussed in length below, are the Commission's (1) apparent and unexplained deviation from its and this Court's prior precedent, *Lloyd*, which requires gas utilities to adhere to cost causation principles to determine rate responsibility; (2) apparent and unexplained adoption of a new retrospective value-of-service or benefits principle to allocate fixed distribution mains costs among disparate classes, even though those fixed costs are characteristically allocatable only to Firm services customers, for whom the distribution system is designed and constructed to meet the peak demands of the Firm service customer Class; and (3) failure to address the justness and reasonableness of requiring Rate IT customers to continue to adhere to the mandatory and costly requirements for interruption under PGW's Tariff or why this does not violate Section 1303 of

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[1] PGW's allocation of compression station equipment and general measuring & regulating equipment are also subject to this proceeding, but the costs for those assets are less than 1 percent of mains costs. This testimony uses the shorthand of referring to these three assets as "mains."

[2] *Opinion and Order*, Pennsylvania Public Utility Commission, Docket No. R-2023-3037933 ("*Order*"), Order Entered November 9, 2023, at 136-139.

[3] Commonwealth Court of Pennsylvania, No. 128 C.D. 2024, Argued December 9, 2024, Opinion by Judge McCullough Filed August 1, 2025 ("Commonwealth Court Opinion"), at 2. The referenced *Lloyd* decision is at Lloyd v. Pennsylvania Public Utility Commission, 904 A.2d 1010, 1020 (Pa. Cmwlth. 2006).

> the PUC Code, which prohibits a utility from collecting rates from a customer for any service not specified in its Tariff.[4]

The Commonwealth Court remanded the decision to the Commission for explanation and clarification regarding:

> 1. Whether treating Philadelphia Industrial Commercial Gas Users Group as technically "Firm" for purposes of rate allocation while, at the same time, requiring it to adhere to the obligations of interruptible customers under Philadelphia Gas Work's (PGW) Tariff violates PGW's Tariff and, thus, Section 1303 of the PUC Code;
>
> 2. How, under a cost causation analysis, Rate IT customers caused PGW's distribution mains-related costs to be incurred;
>
> 3. Whether the Commission applied a new retrospective benefits or "value-of-service" principle to conclude that interruptible customers should pay for the benefits that they ultimately received from a utility service for purposes of rate allocation, and if so, whether that principle is consistent with cost causation principles or whether it is a new ratemaking principle that should replace or supplement cost causation as the operative ratemaking rationale in this unique situation, and
>
> 4. Whether employing a benefits principle can be squared with the Commission's duty to impose only "just and reasonable" rates considering the interruptible nature of rate IT customers and their investment in systems to allow for interruptions in the event that PGW does call for a curtailment.

Q. Please describe your assignment in this matter.

A. The OSBA requested that I provide my views with respect to the issues remanded by the Commonwealth Court, in the context of economic theory, utility practices for interruptible rates, and the historical context of PGW's interruptible service offerings.

Q. Please provide a background on the nature of service under Rate IT, and the composition of the Rate IT class.

A. In brief, the salient features of Rate IT service with respect to rate design issues are the following:

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[4] *Id.,* at 29-30.

- Rate IT customers must have a minimum load of 15,000 dekatherms (“Dth”) per year. To meet that minimum, PGW allows a group of up to 10 customers to aggregate loads to meet the 15,000 Dth/year requirement, with a minimum individual customer load of 2,500 Dth/year.[5]

- PGW reports that there are currently about 350 Rate IT customers, with the smallest customers having loads of under 2 million cubic feet (“mmcf”) per year and the largest exceeding 1.0 billion cubic feet (“bcf”) per year.[6]

- Rate IT customers represent a modest share of PGW’s loads and a relatively small share of allocated costs and revenues, as summarized in Table IEc-RD1 below.

Table IEc-RD1
Rate IT Percentage of PGW System Total*

Throughput	19.6%
Peak Demand	11.6%
Allocated Cost (PGW)	5.6%
Allocated Cost (Alternate)	3.8%
Base Rate Revenue (Current Rates)	1.4%

* Percentages are based on PGW totals excluding the Grays Ferry customer (Rate IT-XLT), to avoid distortions associated with this large volume, low-cost customer.

Source: MDE WP2, MDE WP3

- Most Rate IT customers are weather sensitive with winter peaks, implying that they have substantial space heating loads. Overall, the load factor for Rate IT is around 40

[5] OSBA-I-5. Unless otherwise noted, cited interrogatory responses refer to those submitted in the remand phase of the proceeding. A listing of IRs cited is shown in Exhibit IEc-RD2.

[6] See MDE WP4, based on non-zero loads in 2025. My workpapers are listed in Exhibit IEc-RD2 and will be circulated to the parties in electronic format with this testimony. At Exhibit FT-3 page 6, PGW indicates that there are at least 412 Rate IT customers. The Rate IT customer count in the CCOSS is 393 (MDE WP2).

percent, which is somewhat higher than that for the typical firm service customers but still substantially temperature-related.[7]

- To be eligible, Rate IT customers must demonstrate that they have alternative fuel capability for an interruption of at least 1 day, or must demonstrate to PGW's satisfaction that they can endure an interruption of an unspecified duration.[8] Of the approximately 350 Rate IT customers, PGW reports that only 16 customers qualify on the basis of demonstrated ability to manage an interruption.[9] PGW has not conducted compliance inspections since 2017.[10]

- Customers may be interrupted for reliability or economic reasons with no limit on number or duration of interruptions, at PGW's discretion.[11]

- Tariff charges for Rate IT are set either by a posted tariff rate or negotiation. Virtually all customers pay the posted tariff rates, with only one customer being subject to a negotiated rate.[12] The tariff charges are differentiated by customer size into five categories (A through E), consisting of both a monthly customer charge and a volumetric charge in each category.[13] Rate differentials between these intra-class categories are substantial, varying by almost a factor of three from lowest to highest,

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[7] See OSBA-I-18 and analysis in MDE WP4.

[8] OSBA-I-3. Note that PGW's last interruptions of interruptible customers occurred in fiscal years 2001 to 2004 (prior to the development of Rate IT), with interruption durations of 18 to 85 days. OCA-I-1, OSBA-I-1(j).

[9] MDE WP4.

[10] OSBA-I-2

[11] OSBA-I-6, OSBA-I-7. It is not entirely clear whether Rate IT customers may be interrupted for upstream gas supply reasons. PGW indicates Rate IT suppliers have no obligation to supply gas during an interruption (OSBA-I-4), which would imply that there would be no upstream benefit to PGW to interrupt the customer. However, PGW also reports that it can interrupt Rate IT customers for "the potential for loss of upstream pipeline capacity" (OCA-I-1(f)), and including "supply assets such as pipeline, off system storage" can contribute to a decision to interrupt (OSBA-I-6). (See also Exhibit FT-3 at 5.) These responses suggest that PGW may be able to avoid some upstream gas cost rate ("GCR") supply costs to serve its firm GCR customers associated with the ability to interrupt Rate IT customers. My understanding is that this is generally not a base rates cost allocation issue.

[12] MDE WP4.

[13] MDE WP1.

but these differentials are not justified by the CCOSS or any other cost analysis of which I am aware.

- To illustrate the relative magnitude of the issues in this proceeding, the Table IEc-RD2 summarizes the per thousand cubic feet ("mcf") revenues and costs for Rate IT customers, as well as the average revenues for the only firm service rate option that is currently available to Rate IT customers (GS-Industrial).[14] In short, the impact of the cost allocation issue in this proceeding is material for Rate IT, the Rate IT customers current revenues are far below allocated cost under either method, and costs assigned to Rate IT under either method are far lower than the firm service alternative.

Table IEc-RD2 Unit Cost and Rate Comparison ($/mcf)	
Rate IT Current Revenues	$1.10
Allocated Costs – PGW Method	$2.59
Allocated Costs – Alternative Mains	$1.76
GS Industrial Current Revenues*	$7.90
* Revenues include USEC, ECR, and OPEB charges that would apply if Rate IT customers took firm service. Source: MDE WP1, MDE WP2, MDE WP3	

Q. Please provide a brief history of how rates have been set for interruptible customers at PGW.

A. As I understand, prior to industry restructuring and rate unbundling in about 2002, PGW offered bundled interruptible service under a variety of rate schedules for gas supply and transportation. Rates for the interruptible customers were set based either on the cost of the alternative fuel or based on negotiation with the customer to reflect competitive conditions. In effect, rates for interruptible customers were based entirely on value-of-

[14] PGW confirms that Rate GS is the only firm service alternative available to Rate IT customers.

service considerations.[15] With industry restructuring, PGW developed interruptible transportation rates using the same logic, by deducting a measure of the cost of gas from the alternative fuel costs to derive a transportation rate.[16]

Under this value-of-service rate regime, interruptible customers were not directly assigned any responsibility for universal service costs or other supplemental PGW charges, because rates were implicitly “maxed out” at the cost of alternative fuels.

In the Company’s 2007 base rates case at Docket No. R-00061931, the Commission approved a proposal from PICGUG to replace the market-based value-of-service rates for Rate IT with cost-based rates. Cost allocation for Rate IT was structured to reduce costs assigned to Rate IT customers relative to what would be assigned to similarly situated firm service customers. Despite converting to cost-based rates, the Commission did not require Rate IT customers to make any contribution to universal service costs or other PGW charges.[17]

In the Company’s 2020 base rates case at Docket No. R-2020-3017206, the Company modified the allocation of mains costs to treat Rate IT customers as if they were firm, reflecting the absence of historical interruptions for an extended period. Preferential treatment for Rate IT for various other cost items was retained, however, notably universal service costs. While PICGUG objected to this method, the matter was resolved by settlement.

In the current proceeding, PGW offered a conceptually similar methodology for allocating mains costs to Rate IT as that in 2020, namely one in which mains costs are allocated to Rate IT customers as if they were firm.

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[15] See, e.g., OSBA-I-13.

[16] See, e.g., Docket No. M-00021612, PGW Statement No. 2 (Craig White), July 1, 2002, at 4. PGW also developed various mechanisms to address the impacts on gas commodity margins (on the gas supply side) that it earned from bundled interruptible customers. *Id.,* at 7-8,

[17] See, e.g., OSBA-I-15.

Q. Please address the theoretical implications associated with gas mains cost allocation for interruptible service.

A. Cost allocation experts generally agree that gas mains are constructed to interconnect the utility's customers with sufficient capacity to meet the design day load requirements of the customers. However, cost allocation experts do not agree as to how best to reflect that cost causation in allocating mains costs.[18] Nevertheless, there is reasonable agreement that some portion of mains costs should be allocated based on some measure of peak demand, to reflect the need to size mains capacity to meet peak demand.[19]

Because the utility can withhold service to its interruptible customers during system peaks, the utility theoretically does not incur any incremental capacity costs to serve those customers. The mains are sized only to meet the capacity of firm service customers, and thus zero costs related to peak demand need be allocated to interruptible customers.

Q. Please discuss the practical problems associated with the theoretical model for allocating costs to interruptible customers.

A. From a strict cost causation perspective, there are a couple of practical problems. First, gas mains are long-lived assets, and the actual planning decisions made for the assets used to supply interruptible customers are often not readily available. This problem is compounded by the potential that customers may switch from firm to interruptible service. For example, a customer may initially take firm service, causing the utility to install mains with capacity to meet that customer's (and all other customers') requirements. Once that capacity is in place, however, it is possible that the customer faces little risk of interruption for the duration of the asset, and it may be able to convert to non-firm service at a material rate discount with no loss of reliability.

[18] See OSBA Statement No. 1 at 19-27 for a review of the various methods and considerations involved in allocating mains costs at PGW.

[19] Because mains are sized to meet "design day" demand, namely the peak demand under extreme weather conditions, it would seem obvious that design day demand is the correct measure for allocating mains design costs. PGW, however, uses actual historical peak demands. See OSBA Statement No. 1 at 29-30. This distinction should not affect the issues in this case, as the cost causation issue relates to whether the utility considers interruptible customer demands in sizing its mains.

In addition, interruptible service may have explicit or implicit limits on the number and duration of interruptions. Under those conditions, the utility must have sufficient capacity to meet the loads of the customer once the allowed interruptions have been exhausted. While this consideration merits a reduced assignment of demand costs, it implies that some demand-related costs should be assigned to the customer.

In addition to the theoretical concerns, it is not uncommon for regulators to believe that the purely theoretical approach for interruptible service cost allocation is inequitable, because the interruptible customers are essentially being given a "free ride" for service. This equity consideration may be reflected in the choice of a cost allocation method, or it may be reflected judgmentally in the revenue allocation/rate design process.

For those reasons, rates for interruptible service are often set based on criteria other than embedded cost of service study results, including incremental cost analysis, value-of-service, or other judgmental criteria.[20]

If it is decided that interruptible rates are best set based on value-of-service or incremental cost avoidance considerations, the treatment of interruptible customers in the traditional embedded cost CCOSS is not an input to revenue allocation and rate design for interruptible customers.

Q. Has the Commission adopted value-of-service rates for natural gas distribution companies ("NGDCs") in Pennsylvania, as opposed to strictly cost-based rates?

A. Yes. While cost-based ratemaking is the norm (pursuant to the Commonwealth Court's *Lloyd* decision), value-of-service rates are used at Pennsylvania NGDCs, most often with respect to "flex" rates. In my experience, Pennsylvania NGDCs may offer negotiated flex rates to customers who have credible, demonstrated alternative fuel or bypass competitive threats. In those cases, as long as the flex rates exceed the incremental cost of service, firm customers are better off if the utility offers a discounted rate than if it

[20] Pennsylvania, like many jurisdictions, relies on an "embedded" cost allocation approach, in which the historical "book" costs are allocated amongst the various rate classes. While this method is generally preferred because it is more practical and stable, it is less effective in developing economically efficient price signals. In contrast, a marginal or incremental cost analysis would evaluate the going forward costs for meeting increases in customer load. In periods where the system has excess capacity, incremental costs are relatively low.

loses the customer to competition. Specific Pennsylvania NGDC examples where customers or customer classes have negotiated flex rates in IEc's experience include Columbia Gas of Pennsylvania (most rate categories), UGI Gas (Rates IS, XD), National Fuel Gas (Rates MMT, DMT, DMLMT), and PECO Gas (Rates NGS, TS-F, TS-I, MV-I, TCS).

Q. Is the PICGUG proposal for the allocation of mains costs fully consistent with the theoretical model?

A. No, it is not. Under the theoretical model, no costs related to peak or design day demand would be assigned to Rate IT. If mains costs were allocated using a peak demand allocator, the costs would be zero. However, PGW uses at 50/50 weighted "average-and-excess" ("A&E") allocator, pursuant to Commission precedent. As Mr. Knecht explained at some length, the A&E allocator consists of an average demand component and a "peak minus average" demand component. The A&E allocator, particularly with its traditional weighting, is both conceptually and numerically similar to a peak demand allocator for NGDCs.[21] Because interruptible customers have zero peak demand in the theoretical framework, the "excess" demand (peak minus average) would be a negative number.

PICGUG's proposal, however, is to set the "excess" component of the allocator to zero, rather than following the theoretical logic of the A&E method. In effect, mains costs would be assigned to Rate IT as if mains capacity to serve those customers is based on a need to meet one-half the average day demand.

There is no particular theoretical logic to the PICGUG proposed approach, but it has some practical appeal. First, directionally, the PICGUG approach would recognize that PGW avoids some mains costs (magnitude unknown) associated with the interruptibility of Rate IT customers. Second, this is the approach used by PECO Gas in its CCOSS, as well as by PGW prior to the change adopted by PGW in the 2023 base rates case. Third, this approach would be conceptually consistent with the treatment of interruptible customers in a "peak-and-average" ("P&A") CCOSS. While the P&A approach has little theoretical appeal from

[21] OSBA Statement No. 1 at 24-25.

a cost causation perspective, the Commission has approved its use at some Pennsylvania natural gas distribution companies ("NGDCs").[22]

In effect, the PICGUG approach is not a pure theoretical cost causation method, but one of a variety of options for reducing but not eliminating the peak demand costs assigned to interruptible customers.

Q. Does PGW plan its mains capacity to meet Rate IT loads under design conditions?

A. It is not clear, at least based on the responses to IRs submitted by OSBA in this proceeding. In one response, PGW reports that it assumes that there are no interruptible loads on a design day.[23] However, in a different response, PGW indicates: "PGW designs pipes on a block-by-block basis to be able to carry the full load of firm and interruptible customers. Interruptible customers may elect in the future to become firm customers." Then it indicates that "Annual throughput is utilized to model the projected load associated with a design day forecast."[24] Needless to say, given the load pattern exhibited by PGW's Rate IT customers, annual throughput is not a reasonable basis to determine design conditions, unless PGW is able to interrupt a customer only down to its average annual daily load.

Q. Does the Company have an obligation to ensure that the benefits of interruptible service to firm service exceed the cost?

A. With the caveat that I am not an attorney, I believe that it does. It is my understanding that the Company has an obligation to provide least cost service. In providing that service, PGW could treat all load as firm and construct its distribution system to meet the design day demands of all customers. In the alternative, the Company can offer interruptible service at a discount to regular firm service rates, thereby reducing its capacity requirements by implicitly "buying" that capacity from the interruptible customers. Least cost service and commonsense dictate that the Company should demonstrate that purchasing the capacity from interruptible customers has a lower cost than building the

[22] OSBA Statement No. 1 at 22-23.

[23] OSBA-I-1(g).

[24] OSBA-I-8.

capacity itself. This consideration implies that PGW should at least consider the incremental cost savings associated with interruptible service in developing its rates.

Q. Has the Company provided any credible analysis of the benefits to firm service ratepayers associated with the interruptibility of Rate IT customers?

A. No, it has not, despite efforts by parties to earlier PGW proceedings to encourage it to do so.

For example, in the settlement of the Company's 2020 base rates proceeding at Docket No. R-2020-3017206, the Company agreed that it would evaluate whether Rate IT should be supplemented or replaced by a firm transportation service ("FTS"). As part of that evaluation, PGW agreed that it would: "(a) assess the current interruptibility and alternative fuel requirements in the Rate IT tariff language and determine the potential value of interruptible transportation service; [and] (b) [evaluate] whether rate IT should be phased out . . ."[25]

In this proceeding, however, the Company failed to provide any credible analysis of the benefits associated with the interruptibility of Rate IT customers, and it concluded that the status quo treatment was appropriate.[26]

Q. Is the impact of the alternative mains cost allocation methods material?

A. There is a material impact on Rate IT, and modest impacts on other rate classes. Based on my analysis of PGW's CCOSS models at compliance rates, the costs allocated to Rate IT would decline from $2.59 per mcf to $1.76 per mcf (down 32.1 percent), if the only change made to the CCOSS is to substitute the PICGUG mains method for the PGW mains method. This change would implicitly shift about $9.64 million in costs away from Rate IT to the other classes. The impact on costs allocated to small businesses in the GS

[25] Joint Petition for Partial Settlement, Docket No. R-2020-3017206, August 26, 2020.

[26] See PGW Exhibit FT-3, OSBA Statement No. 1-SR at 6-7.

Commercial class would be about $0.17 per mcf, or about 2.2 percent of allocated base rates costs.[27]

Q. Beyond the issue of mains costs, does PGW's CCOSS treat Rate IT customers differently from firm service customers for other cost items?

A. It does. While this remand proceeding is focused on issues of mains cost allocation, any revenue allocation or rate design implications associated with this cost allocation issue should consider the entirety of the CCOSS (lest single issue ratemaking become a concern). I identified the following issues where Rate IT customers are treated differently from firm service customers in the CCOSS:

Universal Service Costs: Unlike most Pennsylvania utilities regulated by the Commission, PGW is permitted to recover part of its universal service program costs from some of its non-residential customers through the volumetric USEC. As I explained earlier, interruptible customers were exempt from this charge when the interruptible rates were market-based, because the rates were effectively maxed out. With the transition to cost-based rates, there is no conceptual reason why Rate IT customers should not make a reasonable contribution to universal service costs, as long as other non-residential customers are required to do so. While it is not clear why this modification has not been made, it may be due to the fact that Rate IT customers already substantially under-recover allocated costs, and there is no point in adding to the cost burden that cannot be recovered without violating the principle of rate gradualism. Nevertheless, it should be recognized that Rate IT customers are preferentially treated in the CCOSS and the associated revenue allocation by being exempt from these costs.[28]

Under PGW's current mechanism for allocating these costs, the impact on Rate IT customers would be very large in percentage terms if they were treated using the same cost

[27] See MDE WP2 and MDE WP3.

[28] In Exhibit FT-3, PGW asserts: "In PGW's view, not applying the various surcharges to rate IT is a recognition that those customers have made an investment in installing and maintaining alternative fuel capacity as well as the fact that, even though remote, they continue to be subject to possibility of interruption." PGW makes no effort to demonstrate that the costs incurred by Rate IT customers associated with alternative supply are comparable to the costs they would incur under firm service surcharges.

causation principles that apply to firm service customers, far larger than the impact of the alternative mains cost allocation being evaluated in this proceeding.[29]

Storage/Load Balancing Costs: PGW's base rates charges include load balancing costs related to its liquefied natural gas ("LNG") facilities. These costs are allocated using "excess" (peak minus average) demand allocators to all firm service customers, including both sales and firm transportation customers. For Rate IT, the excess demand allocator is set to zero, such that Rate IT customers pay zero for the LNG assets (nor are they assigned a credit to reflect a negative excess demand). In effect, PGW treats these costs in the same manner that PICGUG recommends for mains demand cost allocation. It must be recognized, however, that the costs associated with the LNG facilities are far lower than mains costs, with the net asset value for mains being some 13 times larger than the LNG assets.

In addition to those cost allocation issues, PGW's rate design is structured differently for Rate IT customers, in the following areas:

OPEB Charge: PGW's tariff contains a special per-mcf reconcilable charge that was originally designed for recovery of certain post-employment benefits costs, that applies to all firm service ratepayers. Rate IT is exempt from this charge.[30] Because the costs related to this charge are included in the CCOSS, Rate IT customers contribute to these costs through regular base rates, in contrast to firm service ratepayers who contribute to both base rates and the OPEP charge. However, Rate IT customers avoid the variability of the periodic changes in the OPEB tariff charge.

DSIC: PGW's tariff contains a reconcilable distribution system improvement charge, imposed as a percent of base rates costs, designed to recover a portion of PGW's incremental capital investment cash outlays. Rate IT is also exempt from this charge.[31] It is my understanding that by being exempt from this charge, Rate IT customers avoid the

[29] See MDE WP2, Sch F-F2.

[30] OSBA-I-14, OSBA-I-15, OSBA-I-16..

[31] OSBA-I-17.

multiplier effect from the DSIC on base rate increases, thereby providing an additional rate advantage to Rate IT customers relative to firm service.

ECR: PGW's tariff includes a class-specific charge for energy efficiency programs, based on the specific costs incurred for the class. While it may be that PGW incurs no energy efficiency program costs associated with Rate IT, I observe that the ECR charge for industrial customers applies to both firm service customers and the large Rate IT-XLT customer, with only Rate IT being exempted.

Q. In the context of that review and analysis, let's turn to the Commonwealth Court Opinion. First, can you comment as to whether the Commission's *Order* represents a departure from the cost principles set out in *Lloyd?*

A. Based on my review of the *Lloyd* decision and the underlying case, I do not believe the Commission's *Order* is inconsistent with *Lloyd*. In that matter, like the current case, there was debate about the appropriate cost allocation method to use to best reflect cost causation. In the *Lloyd* matter, while cost causation and cost allocation were debated in the proceeding before the Commission, they were not appealed to the Commonwealth Court. As I interpret it, the Commonwealth Court's primary concern was that, having specified the preferred cost allocation methodology, the Commission failed to reasonably rely on that cost analysis in its revenue allocation decision. As this Commission knows well, alternative cost allocation methods can result in substantially different implications for revenue allocation. However, having specified the appropriate methodology, the allocated costs should be the "polestar" criterion for revenue allocation. In this matter, the issue involves how best to reflect cost causation for Rate IT customers in the CCOSS. Further, there does not appear to be an issue that the Commission ignored the results of the CCOSS; the issue relates to the appropriate methodology for determining the costs.

Moreover, while *Lloyd* mandates that cost should be the polestar criterion for revenue allocation, I do not believe that it requires that the allocated costs produced by a traditional embedded CCOSS are the correct cost consideration for all rate classes. As I discussed earlier, a measure of incremental costs can be a reasonable consideration for evaluating the relationship between firm and interruptible service.

And, finally, as I also noted earlier, the Commission does not and cannot reasonably apply traditional allocated cost in every circumstance, particularly with respect to NGDC rates to large industrial customers. Negotiated "flex" rates for large customers are often constrained by competitive conditions, and they are therefore determined by alternative fuel prices or customer bypass costs, rather than traditional allocated embedded costs.

Q. Can you comment on the Commonwealth Court's finding that the Commission employed a retrospective value-of-service or benefits principle rather than a cost causation principle in which fixed costs are allocable only to firm service customers?

A. As I explained earlier, no party has advocated a proposal that zero peak demand-related mains costs be assigned to the Rate IT class. That is, no party has advocated the pure theoretical approach I reviewed above and advanced by the Commonwealth Court. The cost allocation issue is whether and how any downward adjustment should be made to the allocators for mains costs to reflect the interruptibility of Rate IT customers.

Nevertheless, it is true that the fact that Rate IT customers have not been interrupted for over two decades is not definitive proof that the Company is not avoiding costs related to the interruptibility of Rate IT service. A proper cost allocation analysis, as contemplated in the settlement of the Company's 2020 base rates case, would evaluate the magnitude of mains costs avoided by PGW associated with Rate IT interruptibility, and how that cost item should be reflected in revenue allocation and rates. Moreover, as I explained above, such analysis is necessary to evaluate whether overall costs for firm service are minimized by offering interruptible service or by constructing capacity to meet Rate IT customer requirements.

In addition, it is not uncommon for rates for interruptible service customers to be set based on value-of-service considerations rather than allocated costs. In those circumstances, the traditional embedded cost CCOSS is not particularly relevant for revenue allocation.

Q. Can you comment on the Commonwealth Court's finding that the Commission's decision to continue to require Rate IT customers to incur costs to demonstrate their interruptibility is not just and reasonable when mains costs are allocated to those customers as if they were firm?

A. There is little question that PGW has been inconsistent between its mains cost allocation methodology and the interruptibility requirements for Rate IT customers.[32] In this narrow perspective involving only mains costs allocation, the Commonwealth Court is correct that PGW's approach is not just and reasonable, in that it assigns mains costs on a firm service basis while requiring the customer to incur costs to demonstrate its interruptibility.

However, in the broader cost allocation and rate design perspective, the Company's approach to Rate IT also provides substantial benefits to Rate IT customers relative to firm service, notably with respect to universal service costs and overall cost recovery. Compared to comparably situated firm service customers, Rate IT customers are allocated zero universal service costs, and are assigned revenues that represent less than two-thirds of the costs assigned to the class even under the PICGUG cost allocation methodology with no universal service cost assignment. It is therefore impossible for me to conclude that the tariff charges for Rate IT in the Company's compliance filing in this proceeding are unreasonably high, despite the overstatement of mains costs assigned to Rate IT in the CCOSS. Overall, the Rate IT charges are unreasonably low. Whether this violates Section 1303 of the PUC Code is a legal issue I defer to the attorneys.

Q. Let's turn to the Commonwealth Court's remanded issues. Please address Issue 1, relating to whether treating Rate IT customers as firm for "rate allocation" while requiring them to demonstrate interruptibility violates Section 1303 of the PUC Code.

A. With respect, the Commonwealth Court is not correct that the Commission treated Rate IT customers as firm for revenue allocation or even overall cost allocation. As I explained earlier, the Rate IT customers receive preferable cost allocation treatment in certain areas in the CCOSS, notably LNG load balancing and universal service costs. Overall, the revenue allocation approved by the Commission in this proceeding materially understates the costs assigned to the Rate IT class regardless of which mains cost allocation method is adopted.

Q. Please comment on Issue 2, relating to how Rate IT customers cause PGW to incur mains costs.

[32] See OSBA Statement No. 1-SR at 7-8.

A. No credible evidence has been adduced in this proceeding as to how PGW considered the loads of the current Rate IT customers in sizing the mains from which those customers now take service. The simple theoretical model of cost causation implies that Rate IT customers do not contribute at all to cost causation for the peak demand-related portion of mains costs. However, that model is problematic for the reasons I reviewed, and it has not been advanced by any party. The PICGUG alternative has both directional and practical advantages, but it is not grounded in any credible review of cost causation. The actual investment decisions made by PGW are lost in history, and even PGW's considerations in its ongoing replacement cost decisions for joint use mains are murky. If the Commission determines that cost causation is the correct approach for mains cost allocation to Rate IT customers, I recommend that it do so on an incremental cost basis and that PGW develop a credible analysis of the mains costs that it avoids associated with the interruptibility of Rate IT customers.

Q. Please comment on Issue 3, regarding whether value-of-service is the appropriate criterion for Rate IT service rather than cost causation.

A. It is not obvious that either approach is necessarily unreasonable. The essential issue is that PGW's approach is something of a hodgepodge of cost causation and value-of-service considerations, combined with historical practices that are no longer relevant.

If a value-of-service approach is taken, I suggest that the Commission adopt a cost approach in which maximum rates are set (subject to gradualism) based on fully allocated costs less a reasonable provision for the costs incurred by the customer to maintain their interruptibility. Actual rates would reflect the result of negotiations between PGW and each customer, and they should reflect the customer's specific costs of maintaining interruptibility. In practice, the negotiations should reflect considerations regarding the potential for the customer to convert to alternative fuel or to bypass PGW entirely, much in the way "flex" rates apply at other Pennsylvania NGDCs.

If a cost causation approach is used, I recommend that the Commission require PGW to prepare a credible analysis of the specific costs that it avoids associated with the interruptibility of Rate IT customers in its next base rate case. In the interim, and if it is necessary, it does not seem unreasonable to rely on the PICGUG method for mains cost allocation, with the clear proviso that this approach is temporary and not obviously consistent with cost causation. Moreover, I suggest that the Commission require PGW to review of all aspects of the cost allocation and rate design aspects for Rate IT, to evaluate (a) how cost allocation of costs to Rate IT for mains, load balancing assets, manufactured gas plant costs, universal service, OPEB costs and all other costs are consistent with cost causation, and (b) whether the distinct rate design treatment of Rate IT with respect to USEC, OPEB charge, DSIC and the various other PGW charges are similarly consistent with cost causation. Even under a cost causation approach, however, PGW should retain the ability to negotiate discounted flex rates in cases of competitive threats from alternative fuels or bypass.

Q. Please comment on Issue 4, relating to whether a value-of-service approach to rate design for Rate IT is consistent with the costs incurred by Rate IT customers to demonstrate their interruptibility.

A. As noted above, a value-of-service approach for interruptible service is not unreasonable, but it should be adopted directly and consistently. If such an approach is used, it would be necessary to provide a rate discount from the firm service rate that, at a minimum, reflects the customer's cost of maintaining their interruptibility. Otherwise, there would be no reason for the customer to take interruptible service. The issue in this proceeding is that, in the context of this rate proceeding, both rates and allocated costs for Rate IT customers are far lower than those for comparably situated firm service customers. This matter is not a case of PGW allocating all costs to Rate IT as if those customers were firm, and then setting rates at 100 percent cost recovery while continuing to require Rate IT customers to incur costs associated with interruptibility.

Q. Does the resolution of the cost have an impact on revenue allocation in this proceeding?

A. From my non-legal perspective, I do not believe that it does. The Commonwealth Court decision is not entirely clear with respect to whether the approved revenue allocation should be re-evaluated in light of the resolution of the remanded issues. However, the

Order indicates that the ALJs recommended that PGW's revenue allocation proposal be adopted and no party took exception.[33]

Nevertheless, I reviewed the implications of the approved revenue allocation in PGW's compliance filing in this matter under both the Company's CCOSS methodology and an alternative approach in which the PICGUG mains costing approach is adopted. Based on that analysis, I conclude that under the PICGUG method, the Rate IT class revenue-cost ratio increases only modestly from 65.4 percent to 68.2 percent, compared to an improvement from 44.4 percent to 46.3 percent under the PGW method.[34] As such, the compliance Rate IT revenues substantially under-recover costs under either approach, and thus the PICGUG proposed change in the mains cost allocation methodology should have no impact on the approved revenue allocation.

Q. Does this conclude your remand direct testimony?

A. It does.

[33] *Order* at 146. PICGUG proposed an alternative revenue allocation in its case in chief, but it did not take exception.

[34] See MDE WP2 and MDE WP3. These workpapers contain the Company's CCOSS filings submitted in response to OCA-I-2 and OSBA-I-11 in this remand phase of the proceeding, with my supplemental calculations highlighted. To reflect the lower compliance cost of service, I scaled the fully allocated costs down to reflect the compliance revenues, rather than attempting to incorporate the specific revenue requirement changes mandated by the Commission.

EXHIBIT IEc-RD1

RÉSUMÉ AND EXPERT TESTIMONY LIST

for

MARK D. EWEN

MARK D. EWEN PRESIDENT

Education

Master of Public Policy, University of Michigan

B.A., *summa cum laude*, Economics and Political Science, University of North Dakota

Select Project Experience

Examples of his project work include the following:

Mr. Ewen has participated in various proceedings concerning energy markets and regulated utilities. These efforts, which focus on issues related to cost allocation, revenue allocation, and rate design, include working on behalf of industry and consumer intervenor groups in rate-making cases before the public utility commissions in New York, Pennsylvania, Alberta, Canada, and the U.S. Postal Rate Commission. For example, for the **Pennsylvania Office of Small Business Advocate (OSBA)** and **New York Department of State's Utility Intervention Unit (UIU)** and the he has and continues to provide consulting and analytic support relating to electricity and natural gas tariff design, revenue requirements, and other regulatory initiatives concerning electrical and natural gas distribution utilities. For the **Rhode Island Attorney General**, Mr. Ewen conducted a due diligence review of PPL's proposed acquisition of Narragansett Electric Company and its potential impacts on the state's ratepayers.

For the **New York State Energy Research and Development Authority (NYSERDA) and Department of Public Service (DPS)**, Mr. Ewen provided expert services assessing the economic impacts to municipal governments of extended electricity outages related to Tropical Storm Isaias. As part of this work, he constructed a model to estimate various costs of incremental staffing requirements for over 500 localities, including excess overtime, surge time (i.e., bringing on extra staff for outage response coordination and logistics), and idle time (e.g., crews waiting extended periods for downed lines to be de-energized). The review also included consideration of other direct costs, including, among others: effects to water systems; delivery of bottled water; operation of generators; and other constraints on the provision of essential governmental services. The litigation was settled to the satisfaction of the involved parties.

For the **NYSERDA and New York DPS**, Mr. Ewen directed the development of a Generic Environmental Impact Statement (GEIS), pursuant to the requirement of the State Environmental Quality Review Act (SEQRA) that assessed the environmental and economic impacts of the "Reforming the Energy Vision" and "Clean Energy Fund" initiatives within the state. He also directed the preparation of a Supplemental EIS to assess the environmental and economic impacts of the newly proposed Clean Energy Standard (CES). The CES is being developed to support the state's goal of supplying 50 percent of electricity demand with renewable generation resources by the year 2030. More recently, he directed the development of a model to assess the financial viability of various waste-to-energy technologies, and related social welfare benefits. This model uses detailed capital budgeting scenarios for specific facilities to generate forecast scenarios.

For the **U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM)**, directing an assessment of the Bureau's approach to calculating and presenting the operating fee included in offshore wind leases under BOEM's jurisdiction. As part of this engagement, IEc provided a number of recommendations for simplifying the implementation of the operating fee formula and identified available data sources and approaches to estimating individual components of the fee formula. The review also addressed the structure and levels of fees associated with operations of renewable wind energy projects in the U.S. and worldwide. More recently, IEc has been supporting the development of Standard Operating Procedures for the fee calculation and lease management process. The overall goal is to provide information resources and a methodological approach that will allow lessees to derive accurate data for fee equation variables efficiently and consistently, and for BOEM to present the fee calculation clearly in the lease.

For **NYSERDA**, conducting a market analysis examining the potential economic development opportunities that could accrue in New York from hydrogen playing a role in achieving components of its Climate Leadership and Community Protection Act.

For the **U.S. Department of the Interior, Bureau of Ocean Energy Management**, managed the development of a model to assess the economic and fiscal impacts of offshore oil and gas activity in the Gulf of Mexico and other BOEM OCS regions. This model, the Lifecycle Impacts Model (LCIM), assesses the economic and fiscal impacts associated with a specific lease or group of leases, over the time horizon of the lease(s). IEc's framework for the model was to build a capital budgeting forecasting tool for lease development, yielding estimates of industry expenditures, OCS revenues, industry profits, and employment impacts for a single lease or a set of leases. A key component of model development was to dynamically simulate the complex and unique timing parameters of lease development, incorporating the influence of critical exogenous factors like market prices and lease geology.

For the **U.S. Coast Guard, National Pollution Funds Center**, Mr. Ewen provides ongoing support to the NPFC in adjudicating damages claims resulting from oil spills. These claims include damages for business interruption, lost profits, property damage or value diminution, increased costs, and lost wages or employment, among other categories. Cases have also included damages for contract delays to construction projects and shipping demurrage. Industry sectors that Mr. Ewen has evaluated include: *electricity generation (nuclear and coal); railroads; cruise ships; oil ship transport; lodging and tourism; food and beverage; gambling; fisheries; marinas; real estate development, oil and gas development; and oil refining.*

Mr. Ewen's analytic work includes expert financial analysis and economic damages estimation in the context of general litigation and environmental enforcement actions. These efforts include assessing damages in breach of contract, nuisance, and cost recovery actions, and assessing the financial capabilities and economic benefit of noncompliance of firms accused of environmental violations. Clients in this area of his practice include the **U.S. Department of Justice, U.S. Coast Guard, U.S. Environmental Protection Agency, States**, and private parties.

Testimony and Appearances

Mr. Ewen has provided testimony or appeared in the following cases and regulatory proceedings.

On behalf of New Hampshire's Office of Consumer Advocate (OCA), submitted direct testimony before the Public Utilities Commission in the Request for Change in Rates of Until Energy Systems, Inc. (Docket No. DE 25-025).

On behalf of New York Department of State's Division of Consumer Protection's Utility Intervention Unit (UIU), submitting testimony before the Public Service Commission concerning cost of service, revenue allocation, and rate design in electric and gas base rates cases of New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation (Docket Nos. 25-E-0375, 25-G-0380, 25-E-0379 and 25-G-0378, October 2025).

On behalf of New York Department of State's Division of Consumer Protection's Utility Intervention Unit (UIU), submitting testimony before the Public Service Commission, concerning revenue allocation and rate design in electric and gas base rates case of Consolidated Edison, Inc. (Docket Nos. 25-E-0072 & 25-G-0073, May 2025).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning the distribution system improvement charge (DSIC) case for PPL Electric Utilities Corporation (Docket No. R-2024-3048732, July 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning cost allocation, revenue allocation, and rate design in the base rates case for First Energy of PA (Docket No. R-2024-30447068, June 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning cost allocation, revenue allocation, and rate design in the base rates case for PECO Gas (Docket No. R-2024-3046932, June 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning cost allocation, revenue allocation, and rate design in the base rates case for Columbia Gas of Pennsylvania (Docket No. R-2024-3046519, June 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning the Default Service Plan for PPL Electric (Docket No. P-2024-3047290, June 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning the Default Service Plan for PECO Energy Company (Docket No. P-2024-3046008, April/May 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning recovery of purchased gas costs and revenue sharing for National Fuel Gas Distribution Corporation (Docket No R-2024-3045177, March 2024).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning electricity price hedging under the default service plan for Pike County Light and Power (Docket No. P-2023-3039927; direct testimony June 2023; surrebuttal testimony August 2023).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning base tariff rate development for Columbia Gas of Pennsylvania, including issues of cost allocation, revenue allocation, and rate design. (Docket No. R-2022-3031211, June/July 2022).

On behalf of Attorney General of the State of Rhode Island, submitted testimony before the Rhode Island Division of Public Utilities and Carriers concerning due diligence and related reviews of PPL

Corporation's proposed acquisition of Narragansett Electric Company from National Grid USA (Docket No. D-21-09, November 2021).

Expert report and deposition testimony concerning economic damages and related financial matters, *Seaplane Adventures, LLC, vs. County of Marin, California*; expert report filed September 2021, deposition testimony given September 2021.

Expert reports and deposition testimony on bankruptcy reorganization plan feasibility and related financial matters, *in re: First Energy Solutions Corp., et al., Debtors, Case No. 18-50757*; expert reports filed July 2019, deposition testimony given August 9, 2019.

Expert declaration concerning economic damages and related financial matters, *in re: Outer Banks Power Outage Litigation, all actions, No. 4:17-CV-141-D*, March 2018.

Expert report and deposition testimony on Economic Damages in *State of Alaska v. Williams Alaska Petroleum, Inc., et al., Case No. 4FA-14-01544 CI*; expert report filed December 2016, deposition testimony given February 15, 2017.

Expert reports and deposition testimony on Economic Benefit in *Sierra Club v. Energy Future Holdings Corp. et al., Case No. 5:10-cv-156 (E.D. Tex.)* and *Sierra Club v. Energy Future Holdings Corp. et al., Case No. 6:12-cv-108 (W.D. Tex.)*; expert reports filed in June and July 2013, deposition testimony given August 2013. Trial testimony given in Case No. *6:12-cv-108 (W.D. Tex.) in March 2014*.

Expert testimony on ability-to-pay provided, in the matter of Mercury Vapor Processing Technologies, Inc., et al. (No. RCRA-05-2010-0015), July 2011.

Expert Declaration in a patent case concerning economic and financial matters in the context of environmental credits valuation – In re Patent Application of: Jeff Andrilenas et al., Application No.: 12/328,219, For: VALUING ENVIRONMENTAL CREDITS, submitted June 2011.

Export report and deposition testimony on financial matters in *Evansville Greenway and Remediation Trust v. Southern Indiana Gas and Electric Company, Inc., et al.* (03:07-cv-0066-SEB-WGH); expert report filed July 2009, deposition testimony given January 2010.

Expert testimony on ability-to-pay provided, in the matter of Robert J. Heser, Andrew J. Heser, and Heser Farms (No. CWA-05-2006-0002), May 2007.

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning tariff design issues for Columbia Gas of Pennsylvania (Docket No. R-00049783, May 2005).

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning cost allocation, revenue assignment, and rate design for Pennsylvania Power and Light (Docket No. R-00049255, August 2004).

Expert report on economic damages in *United States v. Southern California Edison No. CIV. F-01-5167 OWW DLB (E.D. Cal).*, July 2004; deposition testimony provided September 2004.

Expert testimony on ability-to-pay provided in *United States v. Peter Thorson, Managed Investments, Inc., Construction Management, Inc., and Gerke Excavating, Inc.* (No. 03-C-0074), May 2004.

Expert testimony on ability-to-pay provided in *United States v. Paul A. Heinrich and Charles Vogel Enterprises, Inc.* (No. 03-C-0075-S), October 2003.

Expert testimony on ability-to-pay provided in the matter of Dearborn Refining Company (No. RCRA-05-2001-0019), February 2003.

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning recovery of purchased gas costs and revenue sharing for PFG Gas and Northern Penn Gas (Docket No. R-00027389, July 2002).

Expert report and testimony on economic damages in *Carol Marmo et al. v. IBP, Inc.*; expert report filed March 2002, deposition testimony given June 2002, September 2004, and testimony at trial given February 2005.

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning recovery of purchased gas costs and revenue sharing for National Fuel Gas Distribution Corporation (Docket No. R-00016789, March 2002).

On behalf of the Office of the Consumer Advocate, providing testimony before the United States Postal Rate Commission regarding cost allocation of city carrier street time costs. Docket No. R2000-1, July 11, 2000.

Expert report and declaration on ability-to-pay in re Indspec Chemical Corporation and Associated Thermal Services, Inc., and related testimony in U.S. EPA administrative court on February 24, 1998 (No. CAA-III-086).

Expert report on ability-to-pay in re Harrisburg Hospital and First Capital Insulation, Inc. and related testimony in U.S. EPA administrative court on October 8, 1997 (No. CAA-III-076).

EXHIBIT IEc-RD2

ELECTRONIC ATTACHMENTS

REFERENCED REMAND INTERROGATORY RESPONSES

PGW Responses to OCA-I-1***
PGW Responses to OCA-I-2***
PGW Responses to OSBA-I-1***
PGW Responses to OSBA-I-2
PGW Responses to OSBA-I-3
PGW Responses to OSBA-I-4
PGW Responses to OSBA-I-5
PGW Responses to OSBA-I-6
PGW Responses to OSBA-I-7
PGW Responses to OSBA-I-8
PGW Responses to OSBA-I-11***
PGW Responses to OSBA-I-13
PGW Responses to OSBA-I-14
PGW Responses to OSBA-I-15
PGW Responses to OSBA-I-16
PGW Responses to OSBA-I-17
PGW Responses to OSBA-I-18

*****Referenced Remand Interrogatory Responses are in excel format ONLY; therefore, will be served via electronic means ONLY, and will be served simultaneous to service of OSBA STATEMENT NO. RD-1, Remand Direct Testimony & Exhibits of Mark D. Ewen ONLY*****

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OCA Set I-0001
Date of Response: February 06, 2026

Question:

1. The Opinion and Order adopted in Docket No. R-2023-3037933, pages 138-139, indicates "that the interruptible customer class should be treated as firm customers in the cost of service study because their gas supply has not been interrupted for over twenty years."

a. Please explain whether this statement remains accurate;

b. Identify the date interruptible customers were interrupted over 20 years ago and the projected and actual heating degree days (HDDs) for the day of interruption;

c. For each year since interruptible customers were interrupted over 20 years ago, please identify the maximum daily HDDs experienced each year;

d. Please explain why PGW believes that it has been unnecessary to interrupt interruptible customers for more than 20 years;

e. Please explain whether PGW has improved the reliability of its distribution system since the interruption over 20 years ago to reduce the potential for interruptions;

f. What are the current criteria evaluated by PGW to determine whether it would be necessary to interrupt interruptible customers;

g. Please explain whether PGW would be willing to remove from its current tariff the ability to interrupt service to interruptible customers except in the event of a system malfunction or breakdown;

h. Please provide a summary of the interruptions imposed by the Company on firm customers since the interruption of interruptible customers over 20 years. Identify the reason for each interruption and the number of customers interrupted;

i. Please identify PGW's current tariff provisions which provide for the interruption of service to firm customers; and

j. Please identify the peak day and average daily throughput volumes of interruptible customers when they were interrupted over 20 years ago.

Attachments: 2
OCA_Set_I_0001_PEAK Days History.xlsx
OCA_Set_I_0001_History of BPS and LBS Interruptions_25 years_2001_2026.xls

Response:

a. The Rate IT class is technically not fully treated as firm customers for cost allocation and ratemaking purposes. First, for cost allocation purposes, there are several factors from which the Rate IT class is excluded such as Factor 1 (and 1A and 1B), Factor 4, and Factor 13. Customer classes like Rate IT can have unique or customized cost allocations based on how they are served by the utility. For example, the Rate IT class does not purchase gas like the firm transportation customer classes and therefore is excluded from Factor 1, 1A and 1B in the cost of service study. Second, for rate making purposes, the Rate IT customers are a separate class and rates are designed independently of the firm transportation customers' rates based on its own class's cost allocation. Lastly, the Rate IT class is not eligible for the riders or surcharges that firm transportation customers are charged.

b. PGW has not interrupted the present day class of interruptible customers over the past 22 years. Please see attached "History_of_BPS_and_LBS_Interruptions_25_years_2001_2026.xlxs" Previously, BPS and LBS bundled customers were interrupted as provided in the attachment. These customers purchased their natural gas from PGW. PGW does not have the data for the "actual heating degree days (HDDS) for the day of the interruption" due to the age of the data.

c. Please see the attached document which shows PGW's peak days Since 1997. PEAK_Days_History.xlsx

d. Over the last 3-5 years PGW has had sufficient supply assets to meet firm customers' demand experienced. Likewise, third party suppliers delivered the natural gas needed for their customers.

e. PGW has improved the reliability of the distribution system since bundled interruptible customers were last interrupted over 22 years ago. Please note that other factors such as current and future weather, supply assets such as pipeline, off system storage and on system LNG in addition to its distribution system play a part in PGW's decision on whether an interruption is necessary. See also PGW St. No. 7, Direct Testimony of Robert Smith, discussing the significant leak reductions for at-risk pipe and other general operations initiatives which have improved reliability and reduced the potential for interruptions.

f. Consistent with PGW's Gas Tariff, Pa. P.U.C. No. 2 at Page 157 (Character of Service), PGW has a number of criteria it evaluates in determining whether it is to interrupt interruptible customers including, but not limited to: 1) supplier deliveries; 2) the need to husband LNG in order to maintain PGW's existing ability to meet the demand of essential needs customers; 3) operational and safety considerations for demand on the distribution system, and 4) the potential for loss of upstream pipeline capacity.

g. As explained above, PGW cannot at this time, limit interruption to interruptible customers to "system malfunction or breakdown." PGW considers many factors and real world considerations which could necessitate an interruption to interruptible customers, as described in (f) above. If an IT customer was only interruptible if there were "system malfunction or breakdown," the lack of ability to interrupt IT customers could, in extreme circumstances, cause PGW to have to curtail essential needs customers.

h. PGW has not interrupted Firm Customers over the past 20 years except where necessary to effect localized repairs, maintenance, or safety purposes on a temporary basis consistent with PGW's Gas Service Tariff at Page 38, Section 6.2 which defines PGW's right to Discontinue, Interrupt, Curtail, or Deny Gas Service for safety or other reasons. For instance, PGW may perform work on a customer's service line due to a leak or other emergency related reason(s); however, PGW does not view this as an interruption but rather as a temporary measure needed to restore a customer's natural gas service so that it operates in a safe manner.

i. See PGW's Gas Service Tariff at Page 38.

j. Due to the age of the data requested, PGW could not locate the "peak day and average daily throughput volumes of interruptible customers" when such customers were last interrupted over 22 years ago.

Response provided by: Florian Teme, Vice President, Marketing, Sales and Energy; and Greg Herbert, Project Manager, Gannett Fleming Valuation and Rate Consultants, LLC

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OCA Set I-0002
Date of Response: February 06, 2026

Question:

1. Please provide a copy of the last cost of service study filed by PGW in this docket in Excel format.

Attachments: 2

OCA_Set_I_0002_OCA_01_02 Attachment Proposed Rates.xlsx
OCA_Set_I_0002_OCA_01_02 Attachment Present Rates.xlsx

Response:

Please see attached copies, OCA-01-2 Attachment Present Rates.xlsx and OCA-01-2 Attachment Proposed Rates.xlsx, of the last cost of service study filed by PGW in the 2023 rate case in Excel format. This was provided in response to OCA-01-3, where there was a small correction to the cost allocation study that was originally filed with the case. The correction made in the discovery response was minor and altered the results of the overall allocation among classes by less than 0.01%.

Response provided by: Greg Herbert, Project Manager, Gannett Fleming Valuation and Rate Consultants, LLC

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0001
Date of Response: March 04, 2026

Question:

For each current Rate IT customer, in MS Excel electronic format, please provide:

a. **Customer identifier, disguised as necessary**

b. **Rate class identifier (IT-A, etc.), as detailed at pages 113 and 115 of the tariff;**

c. **An indicator as to whether the customer is subject to the regular tariff rates specified on tariff page 115 or subject to a higher negotiated rate (also as described at tariff page 115);**

d. **Monthly deliveries for the past two years, including HDDs for the relevant billing periods;**

e. **Maximum daily interruptible transportation quantity as available (as specified at tariff page 111);**

f. **Total daily capacity of the customer's equipment as available (as specified at tariff page 111);**

g. **Design day demand, as used for system planning and for the cost of service allocation study ("CSAS");**

h. **Commencement date for service from PGW in any rate class;**

i. **Commencement date for service from PGW in Rate IT;**

j. Date(s), duration, magnitude and reason for the most recent interruption of service to the customer.

Attachments: 1
OSBA_Set_I_0001_OSBA_I_1 a_e.xlsx

Response:

a-e. Please see attached Excel document.

f. This data is not readily available.

g. Interruptible customers are planned to be off of our system on a design day. The COSS uses historical peak demand to allocate Peak Demand Costs.

h. This data is not readily available.

i. This data is not readily available.

j. PGW has improved the reliability of the distribution system since bundled interruptible customers were interrupted over 20 years ago. There has not been an interruption under Rate IT.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0002
Date of Response: March 04, 2026

Question:

Reference Rate IT tariff page 112: ***"In order to qualify for interruptible daily Transportation Service under this Rate Schedule, a Customer must: (1) have installed and operable alternate fuel equipment, including appropriate fuel storage capacity, capable of displacing the daily quantity of Gas subject to curtailment or interruption; or (2) or in the alternative demonstrate to the Company's sole satisfaction the ability to manage its business without the use of Gas during periods of curtailment or interruption."*** **For each current Rate IT customer as identified in the previous IR:**

a. **Please indicate whether the customer qualifies for Rate IT pursuant to alternative (1) or alternative (2) as described at page 112 of the tariff.**

b. **Please indicate whether PGW performed any physical test or inspection to confirm that the customer meets the criteria. If so, please provide the date of the inspection and nature of the evaluation**

Attachments: 0

Response:

a. Please see Excel provided with OSBA-I-1.

b. Customers are required to demonstrate that they meet the interruptibility requirements at the time of activation. As part of that process, PGW verifies that the customer has the required backup fuel capability. PGW has also conducted periodic compliance inspections, including a comprehensive review in 2017, and additional inspections scheduled for 2026.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0003
Date of Response: March 04, 2026

Question:

Reference Rate IT tariff page 112: ***"In order to qualify for interruptible daily Transportation Service under this Rate Schedule, a Customer must: (1) have installed and operable alternate fuel equipment, including appropriate fuel storage capacity, capable of displacing the daily quantity of Gas subject to curtailment or interruption; or (2) or in the alternative demonstrate to the Company's sole satisfaction the ability to manage its business without the use of Gas during periods of curtailment or interruption.***

"

a. **For Rate IT customers who rely on alternative fuel storage to meet their obligations under this provision, please specify the duration of interruption for which PGW requires alternative fuel storage capacity. Please provide the basis for your response.**

b. **For customers who rely on their ability to manage the business without gas, please detail the specific information and evidence required by PGW for customers to make the required demonstration.**

Attachments: 0

Response:

a. Rate IT customers utilizing stored alternate fuel must demonstrate the ability to operate on alternate fuel for a minimum of 24 consecutive hours at their contracted full interruptible load.

b. The customer must demonstrate the ability to cease gas usage for the duration of an interruption. This option is typically applicable to process loads that can be shut down or shifted, rather than essential heating or domestic hot water loads necessary for occupancy or life safety.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0004
Date of Response: March 04, 2026

Question:
If a Rate IT customer is interrupted, are city-gate gas deliveries for that customer available to PGW to meet its firm service gas supply requirements? If your response is in any way affirmative, please explain how the Rate IT customer is compensated for this service.

Attachments: 0

Response:

If PGW interrupts a customer, the IT supplier has no obligation to deliver gas to the city gate.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0005
Date of Response: March 04, 2026

Question:

Reference Rate IT tariff page 111: ***"Each Customer must contract for a minimum of 15,000 Dth/year or up to 10 Customers may aggregate their loads into a supplier pool that meets the 15,000 Dth/year requirement."***

a. **Please explain the relevance of aggregating gas supply loads into a supplier pool for eligibility in Rate IT.**

b. **Please indicate whether the aggregation of customers into supplier pools has any impact on PGW's cost to provide transportation service to Rate IT customers. Please explain any affirmative response fully.**

c. **Is the minimum size for Rate IT eligibility 2,500 Dth per year (as implied on tariff page 113)? Please explain.**

Attachments: 0

Response:

a. **These minimums are set because PGW incurs costs for every supplier on PGW's system due to the daily tasks of tracking nomination and confirmations and monthly tasks of billing and invoicing. Additionally, suppliers utilize pools to balance deliveries and meet nomination requirements. Suppliers also benefit from pooling.**

b. **Yes, since Rate IT customers are responsible for providing their own supply to PGW's city gate. PGW still has to track, confirm and account for**

each supplier's action on a daily basis. By aggregating customers into suppliers' pools, it reduces the man hours needed to do all of these actions.

c. **Yes, this is correct.**

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0006
Date of Response: March 04, 2026

Question:

Please state the specific circumstances under which PGW will interrupt a Rate IT customer. Please include any PGW manuals or operating procedure documents which support your response.

Attachments: 0

Response:

PGW's Tariff authorizes it to interrupt IT customers for reliability or economic reasons. PGW has improved the reliability of the distribution system since bundled interruptible customers were interrupted over 20 years ago. Please note that other factors such as current and future weather, supply assets such as pipeline, off system storage and on system LNG in addition to our distribution system play a part in PGW's decision on whether an interruption for reliability is necessary. Any interruption is ultimately at PGW's discretion and on a case-by-case basis.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0007
Date of Response: March 04, 2026

Question:

Please identify any limits on the number and/or duration of interruptions to Rate IT customers.

Attachments: 0

Response:

There is no specified limit on the number and/or duration of interruptions to Rate IT customers.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0008
Date of Response: March 04, 2026

Question:

Please indicate how Rate IT loads are considered in PGW's distribution system planning and operations. Please include PGW manuals or operating procedure documents which support your response.

Attachments: 0

Response:

PGW designs pipes on a block by block basis to be able to carry the full load of firm and interruptible customers. Interruptible customers may elect in the future to become firm customers. When proposing new main installations for interruptible customers, the customer bears the full responsibility for any installation or enlargement costs. Any future replacement projects, would need to consider those full loads. Annual throughput is utilized to model the projected load associated with a design day forecast. PGW uses the design day forecast to ensure that service to all customers can be maintained on the coldest expected day. For HP main replacement, the overall design day forecasted load can have an effect on the sizing of large diameter feeder mains, but there are also several other factors such as redundancy and reliability of supply. The overall peak design day demand has minimal effect on the sizing of individual low pressure main and services. Low pressure distribution mains are sized based on the annual loads associated with the number of properties, customers and potential future annual and peak loads on a specific segment of pipe being replaced.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0011
Date of Response: March 04, 2026

Question:
Regarding the Company's cost of service allocation study ("CSAS"):

a. **Please provide a working version of the CSAS in MS Excel electronic format using the methodology advocated by PGW for this proceeding.**

Please provide a working version of the CSAS provided in part (a) modified only to set the "extra" demand for Rate IT allocators to zero

Attachments: 1
OSBA_Set_I_0011_OSBA TO PGW_I_11 Attachment.xlsx

Response:

a. Please see response to OCA-01-02.
b. Please see 'OSBA TO PGW-I-11 Attachment

Response Provided by: Gregory R. Herbert, Project Manager, Rate Studies
Gannett Fleming Valuation and Rate Consultants, LLC

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0013
Date of Response: March 04, 2026

Question:

The Commonwealth Court Order requires, inter alia, explanation and clarification regarding *"Whether the Commission applied a new retrospective benefits or "value of service" principle to conclude that interruptible customers should pay for the benefits that they ultimately received from a utility service for purposes of rate allocation, and if so, whether that principle is consistent with cost causation principles or whether it is a new ratemaking principle that should replace or supplement cost causation as the operative ratemaking rationale in this unique situation, and . . . [w]hether employing a benefits principle can be squared with the Commission's duty to impose only "just and reasonable" rates considering the interruptible nature of rate IT customers and their investment in systems to allow for interruptions in the event that PGW does call for a curtailment."*

a. **Please confirm that PGW's Rate IT service was based on negotiated or alternative fuel value of service rates prior to Docket No. R-00061931. If you cannot confirm, please explain.**

Please provide PGW's evaluation as to whether interruptible service rates often reflect value-of-service considerations at other gas distribution utilities and in other jurisdictions

Attachments: 0

Response:

a. Confirmed. Prior to this proceeding, IT rates were set on a "margin" basis. See Order dated November 8, 2007.

b. PGW has not investigated rate-setting methodologies

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0014
Date of Response: March 04, 2026

Question:

Regarding the Company's cost of service allocation study ("CSAS"):

a. **Please identify the costs associated with the Universal Service Surcharge that are included in the CSAS and specify where they are allocated.**

b. **Please identify any costs associated with the Universal Service Surcharge that are *not* included the CSAS, and specify the magnitude of those costs.**

c. **Please identify the costs associated with the OPEB Surcharge that are included in the CSAS and specify where they are allocated.**

d. **Please identify any costs associated with the OPEB Surcharge that are *not* included in the CSAS, and specify the magnitude of those costs.**

Attachments: 0

Response:

For the following responses, please reference the CSASs Excel files provided in the response to OSBA TO PGW-I-11.

a. Costs associated with the Universal Service Charge (USC) on Schedule E of the CSAS on row 93 on tab "Sch E Alloc" in the Excel versions of the

CSAS, account 921 – Customer Programs – ELIRP, Senior Discounts, CRP Forgiveness. These costs are allocated on Factor 1A.

b. CRP Shortfall costs associated with the USC are excluded from CSAS because there are offsetting revenues entries for these costs which are both excluded from PGW's income statement and therefore excluded from the CSAS.

c. Costs associated with the OPEB Surcharge are shown on Schedule E of the CSAS on row 99 on tab "Sch E Alloc" in the Excel versions of the CSAS, account 999, OPEB Funding.

d. All costs associated with the OPEB Surcharge are included in the CSAS.

Response Provided by: Gregory R. Herbert, Project Manager, Rate Studies
Gannett Fleming Valuation and Rate Consultants, LLC

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0015
Date of Response: March 04, 2026

Question:

Please provide any cost basis for exempting Rate IT from the Universal Service Surcharge.

Attachments: 0

Response:

IT rates were initially established to be competitive in comparison with competitive alternatives, such as oil. When setting rates on a competitive basis it was not appropriate to then assign responsibility for surcharges on top of the “competitive” price. When the Commission ordered PGW to set rates for IT customers on a cost basis the question of whether the class should now be responsible for additional charges, including the Universal Service Surcharge was not addressed.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0016
Date of Response: March 04, 2026

Question:
Please provide any cost basis for exempting Rate IT from the OPEB Surcharge.

Attachments: 0

Response:

See PGW's Response to OSBA-I-15 Remand.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0017
Date of Response: March 04, 2026

Question:
Please provide any cost basis for exempting Rate IT from the DSIC.

Attachments: 0

Response:

Since IT customers were not subject to the USC surcharge when PGW's DSIC was approved, the Company believed that it was appropriate to take a consistent position on the application of other surcharges.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

Philadelphia Gas Works
Case Name: R-2023-3037933
Docket No(s): 2023 BRC Rate Case

Response to Discovery Request: OSBA Set I-0018
Date of Response: March 04, 2026

Question:
Please provide any cost basis for exempting Rate IT from the Weather Normalization Adjustment Charge, including but not limited to any evidence that Rate IT loads are not seasonal.

Attachments: 0

Response:

When WNA was implemented, Rate IT customers were not allocated the WNA. See also Respond to OSBA-I-15 Remand. To the best of PGW's information and belief, Rate IT customers have seasonal loads and are weather sensitive.

Response Provided by: Florian Teme, Vice President, Marketing, Sales and Energy

OSBA

WORKPAPERS

for

OSBA STATEMENT NO. 1-RD

REMAND DIRECT TESTIMONY & EXHIBITS

of

MARK D. EWEN

- MDE WP1: Compliance Proof of Revenue Analysis***
- MDE WP2: PGW CCOSS Model, Proposed Rates***
- MDE WP3: PGW CCOSS Model with Alternative Rate IT Mains Allocation***
- MDE WP4: Review of Rate IT Customer Loads and Characteristics***

*****OSBA Workpapers are in excel format <u>ONLY</u>; therefore, will be served via electronic means <u>ONLY</u>, and will be served simultaneous to service of OSBA STATEMENT NO. RD-1, Remand Direct Testimony & Exhibits of Mark D. Ewen <u>ONLY</u>*****

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	**Docket No. R-2023-3037933**
v.	:	
	:	
Philadelphia Gas Works	:	

VERIFICATION

I, Mark D. Ewen, hereby state that the facts set forth in the Remand Direct Testimony, labelled OSBA Statement No. 1-RD, and associated Exhibits IEc-RD1 and IEc-RD2, 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).

Date: March 19, 2026

Mark Ewen
Mark D. Ewen

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	**Docket Nos. R-2023-3037933**
v.	:	**C-2023-3038885**
	:	
Philadelphia Gas Works	:	

CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing have been served via email (*unless other noted below*) upon the following persons, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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Date: March 19, 2026

/s/ Rebecca Lyttle
Rebecca Lyttle
Assistant Small Business Advocate
Attorney ID No. 201399

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	**Docket Nos. R-2023-3037933**
v.	:	**C-2023-3038885**
	:	
Philadelphia Gas Works	:	

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Date: June 26, 2026

/s/ Rebecca Lyttle
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