



COMMONWEALTH OF PENNSYLVANIA

March 25, 2021

E-FILED

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

**Re: Pennsylvania Public Utility Commission, v. Pike County Light & Power Company
(Gas) / Docket No. R-2020-3022134**

Dear Secretary Chiavetta:

The Pennsylvania Public Utility Commission's Implementation Order at *Electronic Access to Pre-Served Testimony*, Docket No. M-2012-2331973, requires that all testimony furnished to the court reporter during a proceeding must subsequently be provided to the Secretary's Bureau.

As such, this letter will confirm that the Office of Small Business Advocate ("OSBA") per ALJ Long's Interim Order dated March 15, 2021 has filed the Direct Testimony of Robert Knecht, labeled OSBA Statement No. 1, the Rebuttal Testimony of Robert Knecht, labeled OSBA Statement 1-R and the Surrebuttal Testimony of Robert Knecht labeled OSBA Statement No. 1-S on behalf of the OSBA, in the above-captioned proceeding.

All known parties were previously served with the aforementioned Testimony. If you have any questions, please contact me.

Sincerely,

/s/ Sharon E. Webb

Sharon E. Webb
Assistant Small Business Advocate
Attorney ID No. 73995

Enclosures

cc: Robert D. Knecht
Parties of Record (Cover Letter and Certificate of Service Only)



COMMONWEALTH OF PENNSYLVANIA

February 2, 2021

The Honorable Mary D. Long
Pennsylvania Public Utility Commission
Piatt Place
301 5th Avenue, Suite 2020
Harrisburg, PA 17120

**Re: Pennsylvania Public Utility Commission, v. Pike County Light & Power Company
(Gas) / Docket No. R-2020-3022134**

Dear Judge Long:

Enclosed please find the Direct Testimony of Robert D. Knecht, labeled OSBA Statement No. 1, on behalf of the Office of Small Business Advocate (“OSBA”), in the above-captioned 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/ Sharon E. Webb

Sharon E. Webb
Assistant Small Business Advocate
Attorney ID No. 73995

Enclosures

cc: PA PUC Secretary Rosemary Chiavetta (Cover Letter & Certificate of Service only)
Robert D. Knecht
Parties of Record

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION

v.

PIKE COUNTY LIGHT & POWER
COMPANY (Gas Division)

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Docket No. R-2020-3022134

Direct Testimony and Exhibit of

ROBERT D. KNECHT

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Cost Allocation
Revenue Allocation
Rate Design

Date Served: February 2, 2021

Date Submitted for the Record: March 15, 2021

DIRECT TESTIMONY OF ROBERT D. KNECHT

1 **1. Introduction**

2 **Q. Mr. Knecht, please state your name and briefly describe your qualifications.**

3 A. My name is Robert D. Knecht. I am a Principal of Industrial Economics, Incorporated
4 ("IEc"), a consulting firm located at 2067 Massachusetts Avenue, Cambridge, MA 02140.
5 As part of my consulting practice, I have prepared analyses and expert testimony in the
6 field of regulatory economics on a variety of topics. I obtained a B.S. degree in Economics
7 from the Massachusetts Institute of Technology in 1978, and a M.S. degree in Management
8 from the Sloan School of Management at M.I.T. in 1982, with concentrations in applied
9 economics and finance. I am appearing in this proceeding on behalf of the Pennsylvania
10 Office of Small Business Advocate ("OSBA"). My résumé and a listing of recent expert
11 testimony that I have filed in utility regulatory proceedings are attached in Exhibit IEc-1.
12 I have represented OSBA in a number of proceedings before the Pennsylvania Public
13 Utility Commission ("Commission") over the past twenty five years, including gas utility
14 base rates proceedings for Pike County Light & Power Company in 2005, 2008 and 2013.¹

15 **Q. Please describe the purpose of this testimony.**

16 A. OSBA requested that I review the filing of Pike County Light & Power Company Gas
17 Division ("the Company" or "PCL&P") regarding cost allocation, revenue allocation and
18 rate design for its gas distribution service, and to evaluate whether small business
19 customers are being treated equitably.

20 **Q. Please summarize the Company's proposed rate increase in this proceeding.**

¹ Full disclosure: This testimony borrows liberally from other testimony that I have submitted in Pennsylvania, including my direct testimony in the Company's 2013 base rate proceeding.

1 A. PCL&P proposes to increase its annual gas distribution rate revenues by approximately
 2 \$260,000 or 34.7 percent for the forecast test year ending June 2021.² This increase is
 3 proposed to achieve a target return on equity of 9.75 percent and a weighted average return
 4 on rate base of 7.09 percent. The proposed increase would be achieved by assigning the
 5 increases among the rate classes as shown in Table IEC-1 below. The classes shown in
 6 Table IEC-1 are those used in the Company’s gas class cost of service study (“GCOSS”).
 7 In practice, however, the Company has only two rate classes: SC1 Residential and SC2
 8 Commercial. Tariff charges are not distinguished for the sub-classes shown in Table IEC-
 9 1.

Table IEC-1		
PCL&P Gas Proposed FTY Rate Increases		
	Amount (\$000)	Percent
Residential Space Heating	\$245.3	41.2%
Residential Domestic	\$7.6	41.2%
Residential Other	\$1.1	41.2%
Sub-Total SC1 Residential	\$253.7	41.2%
Commercial	\$2.6	3.8%
Commercial Space Heating	\$3.8	5.7%
Sub-Total SC2 Commercial	\$6.3	4.7%
Total	\$260.1	34.7%
Sources: RDK WP1G		

10 **Q. Please summarize your conclusions.**

11 A. My conclusions are as follows:

² The Company measures its rate increase by comparing the revenues at present rates for the historical test year (“HTY”) ending June 2020 to the revenues at proposed rates for the future test year (“FTY”) ending June 2021. As such, the Company’s reported increase includes the effects of changes in both billing determinants and tariff charges. Consistent with Pennsylvania practice, I attempt to consistently measure rate increases based on FTY billing determinants in this testimony, which avoids the distortive effects of year-to-year changes in billing determinants.

- 1 • The Company’s proposed methodology for classifying and allocating mains costs
2 in its gas class cost of service study (“GCOSS”) uses one of the standard industry
3 methods, which recognizes that there are economies of scale in gas distribution
4 for serving larger customers. That method, however, is not consistent with
5 Commission precedent. I developed an alternative GCOSS which incorporates
6 the implications of the mains allocation method most recently approved by the
7 Commission. The Commission’s method substantially increases costs assigned
8 to the commercial (SC2) rate class, and reduces costs assigned to the residential
9 (SC1) class.
- 10 • Certain other aspects of the Company’s GCOSS can be improved upon to more
11 accurately assign costs among the rate classes. These changes are included in my
12 alternative GCOSS.
- 13 • The Company’s revenue allocation proposal is reasonable if the Commission
14 approves the Company’s cost allocation method. However, if the alternative
15 GCOSS is adopted, the Company’s revenue allocation proposal would not be
16 appropriate. I develop an alternative revenue allocation proposal for that
17 eventuality in this testimony, which aligns revenues with allocated costs. This
18 alternative revenue allocation substantially increases rates for SC2 customers
19 relative to the Company’s proposal.
- 20 • The Company’s rate design proposal for the SC2 commercial class is reasonable
21 if its filed GCOSS methodology is approved. However, if the Commission’s
22 precedent for mains cost allocation is retained, the Company’s rate design for the
23 SC2 class should be modified to avoid increasing the current rate differential
24 between the first and second commodity charge blocks, to reflect the substantially
25 lower customer component of costs.

1 **2. Cost Allocation**

2 **Q. What is a utility cost allocation study?**

3 A. A utility cost allocation study, in this case the Company's GCOSS, is an analytical tool
4 that assigns the utility's test year total costs (i.e., the "revenue requirement") among the
5 various utility rate classes. Pennsylvania utilities typically use an "embedded cost"
6 approach to cost allocation, in which accounting book costs are directly assigned among
7 the rate classes, rather than a marginal cost approach. Cost allocation analysts generally
8 agree that costs should, to the extent practicable, be assigned among rate classes based on
9 "cost causation," such that costs caused by a particular class of customers are assigned to
10 that class. A cost allocation study usually involves a three step process, in which costs are
11 (a) segregated by function ("functionalization"), (b) further segregated by cost causation
12 factor, notably throughput, peak demand, "excess" demand, and/or customer count
13 ("classification"), and (c) allocated among the rate classes based on each class' contribution
14 to the cost causation factor ("allocation").

15 **Q. What purpose does the GCOSS serve in a utility rate proceeding?**

16 A. The GCOSS informs both the assignment of the rate increase among customer classes
17 ("revenue allocation") and the design of rates to recover the assigned revenues. Revenue
18 allocation is often used to move rate revenue more into line with allocated costs from the
19 GCOSS. For rate design, classified costs, such as customer-related and demand-related
20 costs, inform the development of specific rate charges, such as monthly customer and
21 demand charges.

22 **Q. Please describe the Company's filing with respect to cost allocation in this proceeding.**

23 A. The Company's cost allocation analysis was filed in Exhibits G-6 and G-7, and an
24 electronic version was provided in I&E-RS-2D. These analyses are based on the allocation
25 of embedded book costs.

26 The Company's cost allocation analysis is performed for the historical test year ("HTY")
27 ending June 2020, rather than for the future test year ("FTY") (or even a fully projected
28 future test year) as is normal utility practice in Pennsylvania. However, the Company has
29 also roughed out the implications of a FTY ECOSS, by taking the HTY allocated costs and

1 then reallocating the changes in revenues and costs between the FTY and HTY. This
2 approach is far from perfect, as it (a) lumps together many of the year-to-year revenue and
3 cost changes into aggregate accounts, and (b) fails to reflect changes in forecast loads,
4 demands and number of customers in the FTY. In effect, the Company allocates 2021
5 costs with 2020 allocation factors.

6 In addition, the key classification and allocation factors used in this year's GCOSS are
7 either identical to those used in the 2013 base rates case or are updated simply for changes
8 in use per customer. The most important of these parameters relate to the classification
9 and allocation of mains costs.

10 **Q. How have you addressed these problems with the Company's GCOSS?**

11 A. I constructed an alternative electronic version of the Company's GCOSS that replicates the
12 Company's results for the HTY and for the adjustments to estimate the FTY. This analysis
13 is provided in RDK WP1G.³ I then developed an alternative version of the GCOSS that
14 (a) modifies the Company's mains classification and allocation to be consistent with
15 Commission precedent, and (b) makes other modifications to the allocation methods
16 discussed below. This model is provided in RDK WP2G.

17 **Q. What specific aspects of PCL&P's cost allocation methodology do you address in this**
18 **proceeding?**

19 A. This testimony addresses the following methodological issues:

- 20 • Classification and allocation of mains distribution plant;
- 21 • Potential biases regarding limited accounting system detail for O&M and labor
22 costs;
- 23 • Allocation of customer service and sales O&M costs.

24 **Q. Turning to the first issue, please describe the key cost allocation issues that are related**
25 **to allocating gas mains costs.**

26 A. Mains represent a substantial share of overall system costs. For PCL&P, mains represent
27 60 percent of the Company's distribution gross plant. Moreover, cost allocation models

³ My electronic workpapers in executable MS Excel format are circulated with this testimony.

1 tend to use allocated distribution plant to drive the allocation of O&M costs, general plant
2 and A&G expenses, either directly or indirectly. Thus, the mains cost allocation method
3 affects much of the entire GCOSS. The importance of mains costs is magnified by the fact
4 that the various methodologies offered by cost allocation analysts produce enormous
5 variations in allocated cost, particularly for gas utilities that serve both small residential
6 and large industrial loads.

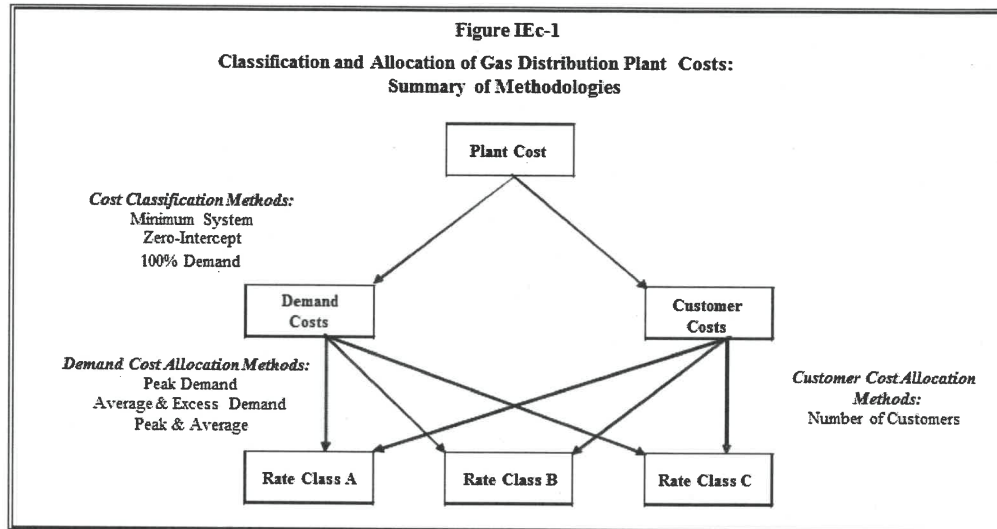
7 The key debates among cost allocation practitioners relate to both “classification” and
8 “allocation” of mains costs. As I indicated earlier, classification refers to the assignment
9 of mains costs into cost causation “buckets,” generally denoted as demand-related, energy-
10 related, or customer-related. Allocation involves the arithmetic operation of assigning the
11 costs in each bucket among the various rate classes.

12 In evaluating cost causation, it should be recognized that gas distribution mains are
13 installed to meet two basic objectives: (a) to connect the customer with the interstate
14 pipeline system or other gas supply sources, and (b) to be able to transport sufficient gas to
15 meet the demand of customers downstream under extreme peak conditions.

16 Having stated that, however, it is not easy to develop an analytical model capable of
17 reflecting these cost causation factors. Ideally, the cost of any particular segment of main
18 would only be allocated to those specific customers who are served downstream from that
19 segment. In practice, however, undertaking such an analysis would be detailed, costly and
20 time consuming. Nevertheless, with the significant improvements in computer modeling
21 of gas distribution systems, I would expect that this approach could be implemented in
22 2021. Alas, to my knowledge, no Pennsylvania natural gas utility has recently attempted
23 such an approach.⁴ And without significant efforts on the part of the utility, it is impossible
24 for outsiders to conduct this type of analysis.

⁴ UGI Gas did prepare such an analysis in 1995. However, in more recent base rates proceedings, (the new larger) UGI Gas abandoned that approach.

1 **Q. What are the more traditional approaches to mains cost classification and allocation?**
 2 A. In place of the detailed modeling approaches, various analytical models are used, generally
 3 involving aggregate cost “classification” and “allocation” methods. Figure IEc-1 below
 4 provides a schematic for the process, identifying the traditional alternative approaches.



5 The choice among the various methods shown in Figure IEc-1 generally focus on the
 6 following questions:

- 7 • What causation factors best correlate with mains costs?
- 8 • Are mains costs causally related to the number of customers? And, if so, how
 9 should the “customer component” of mains costs be derived?
- 10 • How should mains costs that are not causally related to number of customers
 11 be allocated among the various rate classes?

12 Regarding the first question, the traditional cost allocation parameters include throughput,
 13 peak demand, excess peak over average demand, and number of customers. As a matter

1 of terminology, a throughput allocation factor is equivalent to an “energy” allocator, a
2 “commodity” allocator, a “volumetric” allocator, and an “average demand” allocator.⁵

3 Regarding the second question, the common-sense argument (to which I generally
4 subscribe) is that more footage of mains must be installed to interconnect many small
5 customers than to connect one larger customer with the same aggregate load. This rationale
6 is particularly appealing for small to medium business customers who are often more
7 geographically concentrated in commercial areas, thereby requiring less mains footage.
8 This conceptual argument is supported by aggregate industry statistical analysis.⁶
9 Consequently, mains footage is causally related to the number of customers, and therefore
10 mains costs are partially customer-related.

11 Commission precedent indicates that the Commission has rejected the use of a customer
12 component for gas distribution utilities in Pennsylvania, in the most recent cases of which
13 I am aware (although they date to 2006/2007).⁷ However, more recent Commission
14 precedent for electric distribution utilities, where the conceptual arguments regarding cost
15 causation are similar, supports the recognition of a customer component for joint-use
16 distribution plant allocation.⁸

17 In this proceeding, the Company’s GCOSS includes a customer component when
18 classifying mains costs, based on a minimum system study (conducted for the last base

⁵ Average demand is generally measured as annual throughput divided by 365 days. As such, it is arithmetically equivalent to annual throughput when used as an allocation factor. The ratio of average demand to peak day demand is generally referred to as load factor. High load factor customers typically use gas for manufacturing process applications; low load factor customers often rely on gas primarily for heating purposes.

⁶ See, for example, a report prepared by Black & Veatch for Gaz Métropolitain, at http://publicsde.regie-energie.qc.ca/projets/235/DocPrj/R-3867-2013-B-0005-Demande-Piece-2013_11_15.pdf, pages 12-16.

⁷ I review this precedent in more detail below.

⁸ For example, PPL Electric used a minimum system methodology for many years for secondary system plant, and subsequently expanded the minimum system method to primary system plant in its 2010 and 2012 base rates cases. This methodology was fully litigated and explicitly approved by the Commission. *Pa. PUC v. PPL Electric Utilities Corp.*, Docket No. R-2010-2161694, at 46 (Order entered December 21, 2010), and *Pa. PUC v. PPL Electric Utilities Corp.*, Docket No. R-2012-2200597, at 113 (Order entered December 28, 2011.)

1 rates proceeding). The customer-related costs are allocated among the rate classes based
2 on number of customers.

3 **Q. What methods are in general use for allocating the demand-related portion of costs?**

4 A. The traditional allocation methods include three general approaches: a peak demand
5 method; a peak-and-average (“P&A”) method; and an average-and-excess (“A&E”) method.
6

7 Because mains must be sized to meet the design day peak demand of all downstream
8 customers, I conclude that the peak demand method is most consistent with cost causation.

9 Other analysts, however, favor the P&A method, in which allocation factors represent a
10 weighted average (most often 50/50) of a throughput allocator and a peak demand
11 allocator. Relative to the peak demand method, this approach assigns more cost to
12 customers who use gas on a more level basis throughout the year (high load factor
13 customers) and less cost to customers whose gas use is primarily for heating purposes. I
14 respectfully disagree with the use of this allocation method, since mains costs are not
15 causally related to average use. A main that serves a high load factor industrial customer
16 with a design day load of 10 mcf per day and a set of low load factor residential and small
17 commercial customers with a combined designed day demand of 10 mcf per day must be
18 sized to meet maximum demand of 20 mcf per day. Each class is equally responsible for
19 the cost of that main. A peak demand allocator would reflect that reality. By contrast, the
20 P&A allocator would assign a majority of the costs to the higher load factor industrial
21 customer.

22 The A&E allocation factor is a weighted average of average demand (i.e., throughput) and
23 “excess” demand. Excess demand is measured as the difference between peak demand and
24 average demand. Because this allocation factor consists of an average demand component
25 and a “peak minus average” demand component, it is typically more similar in magnitude
26 to a peak demand allocator than to a P&A allocator. However, this observation depends
27 on the weighting factor used to derive the A&E factor. Under specific conditions, namely
28 when the weighting factor is based on the system load factor and there is no diversity of
29 demand across classes, the A&E allocator is arithmetically identical to a pure peak demand

1 allocator. To the extent there is a standard practice for the A&E, it is to use a coincident
2 peak load factor weighting scheme, and to allocate the excess portion of costs using an
3 excess factor based on non-coincident class peaks.

4 In this proceeding, the Company uses a peak demand allocation factor for assigning the
5 portion of mains costs that are classified as demand-related. (The customer component of
6 mains costs is allocated based on number of customers.)

7 **Q. Please review Commission precedent with respect to mains cost allocation methods.**

8 A. In a case involving PPL Gas at Docket No. R-00061398, the Commission approved an
9 allocation of all mains costs using a variant on the A&E allocation method advanced by
10 the utility expert witness. In that proceeding, the approved weighting was 40 percent to
11 average demand and 60 percent to excess demand. This weighting was not based on system
12 load factor.⁹ Also, in a case involving the Philadelphia Gas Works (“PGW”) at Docket No.
13 R-00061931, PGW proposed to classify some mains costs as customer-related and the
14 balance as demand-related, and proposed to allocate demand-related costs using a peak
15 demand allocator. However, the Commission concluded that no mains costs should be
16 classified as customer-related, and that mains costs should be allocated using a variant of
17 the A&E allocation method advanced by the expert from what was then the Commission’s
18 Office of Trial Staff. In the PGW proceeding, the approved weighting was 50 percent to
19 average demand and 50 percent to excess demand. This weighting was also not based on
20 system load factor.¹⁰ Moreover, the Commission explicitly indicated that the allocation
21 should reflect “both annual and peak” demand. Going further back, the Commission
22 explicitly approved the use of the P&A method in a proceeding involving National Fuel
23 Gas Distribution at Docket No. R-00942991.

24 **Q. What approach do you take in this proceeding regarding mains cost allocation?**

⁹ PA PUC et al. v. PPL Gas Utilities Corporation, Docket No. R-00061398 (Order entered February 8, 2007), pages 112 – 114.

¹⁰ See PA PUC v. Philadelphia Gas Works, Docket No. R-00061931, Recommended Decision, July 24, 2007, page 63, and PA PUC v. Philadelphia Gas Works, Docket No. R-00061931 (Order Entered September 28, 2007), page 80.

1 A. As I indicated above, I believe that common sense implies that mains costs should reflect
2 a customer component to reflect scale economies. While I do not agree that the minimum
3 system method used by the Company is a theoretically accurate approach for making that
4 assessment, I acknowledge that it is one of the standard approaches. If the Commission
5 accepts the Company's mains cost allocation method in this proceeding, I have no material
6 disagreement with its overall proposals for revenue allocation and rate design.

7 However, in light of Commission precedent, I offer an alternative GCOSS that relies on
8 the A&E method most recently approved by the Commission. I use a 50/50 weighting for
9 that allocator, again based on the Commission's decision in the 2007 PGW proceeding.¹¹
10 The development and implications of this alternative are included in my alternative
11 GCOSS in RDK WP2G.

12 **Q. Let's move to a different cost allocation topic. Does PCL&P maintain detailed**
13 **records for its distribution O&M costs?**

14 A. It does not appear to. Excluding the A&G costs, the vast majority (86 percent) of PCL&P's
15 O&M costs are recorded in two accounts: 892 Service Lines and 902 Meter Reading.

16 This limitation is particularly problematic for developing the labor cost allocation factor.
17 I agree with the Company that it is relatively common practice for cost allocation analysts
18 to use a labor allocation factor to assign general plant and administrative and general
19 ("A&G") costs among the rate classes, on the theory that these overhead costs exist to
20 support utility labor. For PCL&P Gas however, that assumption is not reasonable. The
21 Company's cost allocation study develops a labor cost allocation factor based on \$119,000
22 in labor costs, and it uses that factor to allocate general plant costs of \$20,000 and A&G
23 costs of \$411,000. In effect, the Company is letting the tail wag the dog.

24 **Q. How do you address this concern?**

25 A. I modified the Company's allocation method in two ways.

¹¹ As a matter of arithmetic, this approach for PCL&P is equal to a peak and average allocator that is weighted at 67 percent peak demand and 33 percent average demand.

1 First, regarding the large pool of A&G costs, there are certain components that can be
2 allocated in a way that is more consistent with the associated functions. Specifically, the
3 A&G costs include a relatively large amount related to customer service, and I therefore
4 allocate those using the customer service allocator (discussed below). A&G costs also
5 include postage costs, which are more accurately allocated using the customer bills
6 allocator, as the magnitude of the cost item implies these are related to billing. Within the
7 outside services A&G account, I deemed that the legal, financial and regulatory services
8 were more related to supporting the overall operation than just supporting labor, so these
9 costs were allocated based on overall class revenue requirement.

10 Second, for general plant, I use total distribution plant as the allocation factor.¹² The
11 Company keeps more detailed records for its plant accounts than for the labor accounts,
12 and thus these are likely to better reflect the assets that are supported by general plant. I
13 also applied the distribution plant allocator to the maintenance of general plant costs
14 recorded in the A&G accounts.

15 These modifications are shown in my proposed GCOSS in RDK WP2G.

16 **Q. What is your concern regarding the allocation of customer service and sales O&M**
17 **costs?**

18 A. The Company applies an allocator that is based 50 percent on number of customers and 50
19 percent on annual energy consumption to both customer service O&M (Accounts 906 to
20 910) and sales O&M (Accounts 916 and 917). However, the Company's reported costs for
21 customer service are *de minimis*, possibly because a significant amount of customer service
22 costs are recorded in the A&G accounts as noted above. The Company's 50/50 weighting
23 is entirely judgmental, based on a conclusion that some larger customers require additional
24 customer service.

25 The FERC customer service accounts include costs in three general categories: providing
26 information to customers, customer assistance programs, and informational/instructional

¹² This adjustment has only a small impact on the gas utility, as general plant costs are small. However, because I propose a similar adjustment in the concurrent PCL&P Electric proceeding, I include it here.

1 advertising expenses.¹³ In general, costs for providing information to customers are usually
2 deemed to be customer related. Costs related to customer information systems and call
3 centers are the same for smaller customers as they are for larger customers. (In fact, smaller
4 customers may disproportionately use the call centers.) These costs should therefore be
5 allocated based on customer count. Similarly, informational advertising typically takes the
6 form of bill inserts, which are also customer-related costs.

7 Regarding sales costs, in my experience, sales efforts are primarily targeted at smaller
8 customers, and it is common for these costs to be allocated entirely based on customer
9 count. There is little need to target sales efforts at larger gas users. Thus, based on the
10 limited information available, I conclude that the large majority of customer service and
11 sales costs should be classified as customer-related and allocated using a customer
12 allocator.

13 The Company's 50/50 approach has the effect, at present rates, of imposing customer
14 services and sales costs on commercial customers that are more than double (per customer)
15 those for residential customers. I see little evidence supporting a conclusion that the
16 customer service/sales cost for an average SC2 customer is more than double that for a SC1
17 customer.

18 Absent a more detailed assessment of cost causation for these costs, I conclude that the
19 Company's allocation method substantially overstates the customer usage portion of these
20 costs, and therefore over-assigns costs to larger customers.

21 **Q. Have you made any adjustment in your cost allocation analysis for this bias?**

22 A. Based on judgment, I use an allocator for both customer service and sales costs that is
23 weighted 80 percent to customer and 20 percent to energy use. As utilities often allocate
24 all of these costs based on customer count, this adjustment is conservative.

25 **Q. How do the results of your modified cost allocation study compare with the**
26 **Company's results?**

¹³ See <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=054f2bfd518f9926aac4b73489f11c67&rgn=div5&view=text&node=18:1.0.1.3.34&idno=18>.

- 1 A. Table IEC-2 below compares the class rate of return at present rates under the two
2 approaches.

Table IEC-2		
Comparative HTY Class Rates of Return at Current Rates		
	PCL&P GCOSS	Alternative GCOSS
Residential Space Heating	4.2%	4.6%
Residential Domestic	-0.3%	0.1%
Residential Other	1.1%	1.7%
<i>Sub-Total SC1 Residential</i>	4.0%	4.5%
Commercial	18.7%	10.2%
Commercial Space Heating	7.2%	5.1%
<i>Sub-Total SC2 Commercial</i>	11.9%	7.5%
Total	5.1%	5.1%
Sources: RDK WP1G, RDK WP2G		

- 3 Overall, the net effect of the changes to the Company's method is to materially reduce costs
4 assigned to the SC1 classes and increase costs assigned to the SC2.

5 **3. Revenue Allocation**

6 **Q. What are the primary regulatory criteria for revenue allocation?**

- 7 A. The primary criterion used by most regulators for revenue allocation is cost of service. A
8 key revenue allocation objective of most utilities and regulators is to move class revenues
9 into line with allocated class costs, subject to any constraints associated with the other
10 criteria. In Pennsylvania, the Commonwealth Court has confirmed that cost of service
11 should be the "polestar" criterion for revenue allocation.¹⁴

¹⁴ Lloyd v. Pennsylvania Public Utility Commission, 904 A.2d 1010, 1020 (Pa. Cmwlth. 2006).

1 The secondary criteria most often used for revenue allocation are “value of service” and
2 “rate gradualism.”

3 The value of service criterion may be used to temper rate increases to customers or
4 customer classes who are perceived to give lower value to the utility service, generally
5 because they have a high price elasticity of demand. A high price elasticity typically results
6 when a customer has ready economic alternatives (such as alternative fuel, bypass,
7 relocation) or when a customer is in financial distress and cannot afford an increase.

8 Rate gradualism, or avoidance of rate shock, is a general principle that rates for one rate
9 class or one group of customers should not rise substantially faster than rates for other
10 customers or classes. Applying this criterion often takes the form of putting a limit on the
11 increase for any rate class to be no more than, say, 1.5 or 2.0 times the system average rate
12 increase.

13 **Q. How does PCL&P propose to allocate revenues in this proceeding?**

14 A. The Company’s revenue allocation is shown in Exhibit G-8, page 1, but the rationale is not
15 explained in testimony. As I understand it, the Company sets a minimum revenue increase
16 for the SC2 rate class at 1.41 times the system average rate of return or 10.03 percent.¹⁵
17 The balance is recovered from the SC1 class. However, because the Company’s revenue
18 increase includes both changes in volumes between the HTY and the FTY and increases in
19 tariff charges, the actual rate increase for the SC2 in the FTY is about 4.7 percent. This
20 leaves a 41.2 percent increase for the SC1 class. This approach results in the revenue
21 allocation shown in Table IEC-3 below:

¹⁵ At this writing, I do not understand the logic behind this calculation.

Table IEc-3 PCL&P Proposed Revenue Allocation Using PCL&P Filed GCOSS \$000				
	Increase to Cost-Based Rates*	Percent	Proposed Increase*	Percent
SC1 Residential	\$270.2	43.8%	\$253.7	41.2%
SC2 Commercial	(\$9.3)	-6.9%	\$6.3	4.7%
Total	\$261.0	34.8%	\$260.1	34.7%
* Excludes revenue increase from change in billing determinants Sources: RDK WP1G				

1 **Q. Do you agree with this approach?**

2 A. As I do not understand the approach, I can neither agree nor disagree. However, the end
3 results are not unreasonable, if the Company's GCOSS methodology is approved by the
4 Commission. As shown, moving rates fully into line with allocated costs would require
5 that a rate decrease be assigned to the SC2 class. Thus, a credible argument could be made
6 to set the increase for that class at zero or below. However, in the context of the enormous
7 rate increase put forward by the Company in this time of pandemic, a modest increase for
8 the SC2 class is understandable.

9 **Q. What is your revenue allocation proposal if the alternative GCOSS shown in RDK
10 WP2G is adopted?**

11 A. In that event, I recommend that rates be moved fully into line with allocated cost. Table
12 IEc-4 depicts the impact.

Table IEC-4				
Proposed Revenue Allocation Using Alternative GCOSS \$000				
	Increase to Cost-Based Rates*	Percent	Proposed Increase*	Percent
SC1 Residential	\$234.5	38.0%	\$234.5	38.0%
SC2 Commercial	\$23.5	17.6%	\$ 23.5	17.6%
Total	\$260.9	34.7%	\$260.9	34.7%
* Excludes revenue increase from change in billing determinants Sources: RDK WP1G				

1 **4. Rate Design for the SC2 Class**

2 **Q. Please describe the Company's proposal for SC2 rate design.**

3 A. The current SC2 base rate design consists of a fixed monthly customer charge and a two-
 4 tier declining block commodity charge, demarcated at 30 Mcf per month. The vast
 5 majority (93 percent) of revenues are derived from the commodity charge. Although the
 6 Company proposes to assign only a small increase to the SC2 class, it proposes to impose
 7 a 41.6 percent increase on the customer charge and a 2.1 percent increases to both
 8 commodity block charges. The Company's current and proposed tariff design is shown in
 9 Table IEC-5 below.

Table IEC-5			
PCL&P Proposed Rate Design: Rate SC2			
	Current	Proposed	Percent
Customer Charge (\$/mo.)	\$9.40	\$13.31	41.6%
First 30 Mcf/Month	\$4.603	\$4.698	2.1%
Over 30 Mcf/Month	\$3.051	\$3.114	2.1%
Note: The energy charges for non-demand metered customers and space heating would also increase by 47.2 percent. Source: RDK WP1G			

1 **Q. Is the proposed customer charge increase reasonable?**

2 A. To respond, I reviewed both the allocated costs and the practices of other Pennsylvania
3 NGDCs.

4 On a cost basis, the increase is justified, since the monthly customer cost for even a small
5 SC2 customer exceeds \$30 per month in the alternative GCOSS. Because the Company's
6 GCOSS includes a customer component to mains costs, the customer-related costs in that
7 analysis are even higher.¹⁶

8 Table IEC-6 below compares the current and proposed SC2 customer charge with those of
9 other Pennsylvania NGDCs. As shown, the PCL&P proposal would maintain a customer
10 charge below all of the larger Pennsylvania NGDCs.

11 Thus, I do not believe that the Company's proposed customer charge increase is
12 unreasonable.

	\$/month
PCL&P Gas Current	\$9.40
PCL&P Gas Proposed	\$13.31
National Fuel Gas Dist'n C&PA (< 250 mcf)	\$19.89
Peoples Natural Gas SGS (< 500 mcf)	\$20.00
Columbia Gas SGSS/SCD/SGDS	\$22.75
UGI Gas N/NT (current)	\$23.50
Philadelphia Gas Works GS-C	\$24.00
PECO Gas GC Current	\$28.55
Peoples Gas (TWP) SGS (<500 mcf)	\$35.00
PECO Gas GC Proposed	\$40.00
Sources: Company websites, current PECO proceeding	

¹⁶ I am not sure that the Company's calculation of customer related costs is correct, notably with respect to the revenue requirement for services. The Company's GCOSS workpapers appear to imply that the annual customer-related revenue requirement for services is \$462,000 on \$914,000 of services rate base. See Pike GCOS 10-19-20.xlsm, "Unbundled" worksheet, rows 475 and 488. Because the Company did not include the formulae for its derivation of customer-related costs, I am unable to identify the source for this apparent mismatch.

1 **Q. Please discuss the general rationale for a declining block volumetric charge.**

2 A. There are two generic reasons for such a charge. First, it is not uncommon for larger
3 customers in a commercial/industrial rate class to have higher load factors than smaller
4 customers. Because the volumetric charge is recovering peak-demand related costs, higher
5 load factor large customers have a lower cost per mcf to serve than smaller customers,
6 thereby justifying a lower rate for larger loads. The Company has not offered such an
7 argument in this proceeding.

8 Second, utilities often argue that the customer charge is set below the allocated customer
9 cost, and therefore the first block should be increased to better align customer-related costs
10 and revenues. This is the only argument put forward by the Company.¹⁷

11 **Q. Does the Company's rationale justify its proposal to retain the rate spread between**
12 **the two blocks?**

13 A. The Company's proposed price spread between the two blocks is \$1.584 per mcf. The
14 Company's proof of revenue indicates that the average billing determinant for the first
15 block is 10.9 mcf. These values imply an implicit customer charge markup in the declining
16 block tariff is about \$17.33 per month. When combined with the proposed customer charge
17 of \$13.31, the implicit customer charge is a little over \$30 per customer per month.

18 While this value remains well below the allocated customer cost for a small SC2 customer
19 in the Company's GCOSS, it is relatively close to the customer-related cost in the
20 alternative GCOSS in RDK WP2G. Moreover, if a larger increase is applied to the SC2
21 class as implied by the alternative GCOSS, the price spread between the blocks will
22 increase under the Company's approach.

23 I therefore recommend that, for the purposes of this proceeding, the tariff charge
24 differential between the two SC2 block charges be limited to its current level of \$1.552 per
25 mcf.

¹⁷ See OSBA-I-9.

1 Q. Does this conclude your direct testimony?

2 A. Yes, it does.

EXHIBIT IEc-1

RÉSUMÉ AND EXPERT TESTIMONY LIST

FOR

ROBERT D. KNECHT

Overview

Mr. Knecht has more than 35 years of practical economic consulting experience, focusing on the energy, utility, metals and mining industries. For the past 25 years, Mr. Knecht's practice has primarily involved providing analysis, consulting support and expert testimony in regulatory matters, primarily involving electric and natural gas utilities. Mr. Knecht's work includes many aspects of utility regulation, including industry restructuring, cost unbundling, cost allocation, rate design, rate of return, customer contributions, energy efficiency programs, smart metering programs, treatment of stranded costs and utility revenue requirement issues. He has worked for state advocacy agencies, industrial customer groups, law firms, regulatory agencies, government agencies and utilities, in both the United States and Canada. He has provided expert testimony in more than one hundred separate utility proceedings.

In addition to his work with regulated utilities, Mr. Knecht has consulted on international industry restructuring studies, prepared economic policy analyses, participated in a variety of litigation matters involving economic damages, and developed energy industry forecasting models.

Education

Master of Science, Management (Applied Economics and Finance), Sloan School of Management, M.I.T.

Bachelor of Science, Economics, Massachusetts Institute of Technology

Select Project Experience

For more than twenty years, Mr. Knecht has provided consulting services, analysis and expert testimony before the Pennsylvania Public Utility Commission on all manner of regulatory proceedings to the **PENNSYLVANIA OFFICE OF SMALL BUSINESS ADVOCATE**. In addition to expert testimony, Mr. Knecht has assisted OSBA with the development of public policy positions, litigation strategy, and longer term strategy.

For the **INDUSTRIAL GAS USERS ASSOCIATION**, Mr. Knecht provided consulting and expert witness services in a generic cost allocation proceeding involving Gaz Métro before the Régie de l'énergie in Québec.

For the **NEW BRUNSWICK PUBLIC INTERVENER**, Mr. Knecht provides consulting and expert witness services in a variety of regulatory proceeding before the New Brunswick Energy and Utilities Board involving New Brunswick Power, Enbridge Gas New Brunswick, and petroleum products. Mr. Knecht has addressed issues of load forecasting, costs forecasting, cost of capital, allocation of corporate overhead costs, utility cost allocation, revenue allocation, market-based rate design, cost-based rate design, and rate decoupling.

For **L'ASSOCIATION QUÉBÉCOISE DES CONSOMMATEURS INDUSTRIELS D'ÉLECTRICITÉ (AQCIE) AND LE CONSEIL DE L'INDUSTRIE FORESTIÈRE DU QUÉBEC (CIFQ)**, Mr. Knecht provided analysis, consulting advice and expert testimony before the Régie de l'énergie in regulatory matters involving Hydro Québec Distribution and TransÉnergie. This work includes revenue requirement, power purchasing, cost allocation, treatment of cross-subsidies, and rate design.

For the **INDEPENDENT POWER PRODUCERS SOCIETY OF ALBERTA**, Mr. Knecht provided consulting advice, analysis and expert testimony before the Alberta Energy and Utilities Board in a series of proceedings involving the restructuring of the electric utility industry, the unbundling of rates, and the development of transmission rates.



INDUSTRIAL ECONOMICS, INCORPORATED

ROBERT D. KNECHT

EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2012-2017

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
R-2016-2580030	Pennsylvania Public Utility Commission	UGI Penn Natural Gas	April 2017	Pennsylvania Office of Small Business Advocate	Test year, load forecast, O&M expenses, rate base, rate of return, cost allocation, rate design, EE&C program, capacity assignment
Matter 336	New Brunswick Energy & Utilities Board	New Brunswick Power	January 2017	New Brunswick Public Intervener	Financial forecast, equity requirement, depreciation life, variance mechanisms, cost allocation, rate design
Matter 338	New Brunswick Energy & Utilities Board	Generic	December 2016	New Brunswick Public Intervener	Retail petroleum margins
Matter 330	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	September 2016	New Brunswick Public Intervener	Revenue requirement, investment test, customer retention initiatives, cost allocation, rate design
R-2016-2537359	Pennsylvania Public Utility Commission	West Penn Power Company	July 2016	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design.
R-2016-2537355	Pennsylvania Public Utility Commission	Pennsylvania Power Company	July 2016	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design.
P-2016-2537609, 2537594	Pennsylvania Public Utility Commission	UGI Central Penn Gas, UGI Penn Natural Gas	July 2016	Pennsylvania Office of Small Business Advocate	Waiver of DSIC cap.
P-2016-2543523	Pennsylvania Public Utility Commission	UGI Utilities, Inc., Electric Division	July 2016	Pennsylvania Office of Small Business Advocate	Default service procurement.
R-2016-2529660	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania, Inc.	June 2016	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design.
R-2015-2469275	Pennsylvania Public Utility Commission	PPL Electric Utilities Corporation	May 2016	Pennsylvania Office of Small Business Advocate	Default service procurement plan.
R-2015-2518438	Pennsylvania Public Utility Commission	UGI Utilities, Inc., Gas Division	April 2016	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design, energy efficiency and conservation program.

EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2012-2017

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
P-2016-2521993	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania, Inc.	April 2016	Pennsylvania Office of Small Business Advocate	Waiver of DSIC cap.
M-2015-2477174	Pennsylvania Public Utility Commission	UGI Utilities, Inc., Electric Division	February 2016	Pennsylvania Office of Small Business Advocate	Energy efficiency and conservation plan review and development.
Matter No. 306	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	February 2016	New Brunswick Public Intervenor	Financial review, investment prudence, revenue requirement, cost allocation, rate design, market-based pricing.
P-2015-2511333, 2511351, 2511355, 2511356	Pennsylvania Public Utility Commission	Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, West Penn Power	January 2016	Pennsylvania Office of Small Business Advocate	Default service procurement plans, purchase of receivables.
P-2015-2501500	Pennsylvania Public Utility Commission	Philadelphia Gas Works	October 2015	Pennsylvania Office of Small Business Advocate	DSIC rate design under cash flow regulation, capital structure
P-2014-2459362	Pennsylvania Public Utility Commission	Philadelphia Gas Works	June 2015	Pennsylvania Office of Small Business Advocate	Demand side management programs, rate decoupling mechanism, incentive mechanism, cost-benefit analysis.
R-2015-2469275	Pennsylvania Public Utility Commission	PPL Electric Utilities	June 2015	Pennsylvania Office of Small Business Advocate	Misc. revenue requirement issues, cost allocation, rate design
R-2015-2468056	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	June 2015	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design, customer contribution policy
R-2015-2461373	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	April 2015	Pennsylvania Office of Small Business Advocate	Load balancing rates, reconciliation
R-2014-2456648	Pennsylvania Public Utility Commission	Peoples TWP LLP	March 2015	Pennsylvania Office of Small Business Advocate	Load balancing rates, reconciliation
R-3867-2013	Régie de l'énergie, Québec	Société en commandite Gaz Métro	February 2015	l'Association des Consommateurs de Gaz	Distribution cost allocation

EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2012-2017

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
R-3888-2014	Régie de l'énergie, Québec	Hydro Québec TransÉnergie	December 2014	AQIE/CIFQ	Transmission customer contribution policy
R-2014-2428744 R-2014-2428742	Pennsylvania Public Utility Commission	Pennsylvania Power Company, West Penn Power Company	November 2014	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design
M-2014-2430781	Pennsylvania Public Utility Commission	PPL Electric Utilities	October 2014	Pennsylvania Office of Small Business Advocate	Smart meter procurement, rate design
Matter No. 253	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	September 2014	New Brunswick Public Intervenor	Financial review, investment prudence, revenue requirement, cost allocation, rate design, market-based pricing.
P-2014-2417907	Pennsylvania Public Utility Commission	PPL Electric Utilities	July 2014	Pennsylvania Office of Small Business Advocate	Default service procurement, class eligibility, reconciliation
R-2014-2406274	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	June 2014	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design
R-2014-2407345	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	June 2014	Pennsylvania Office of Small Business Advocate	Customer contribution policy, alternative financing mechanism
R-2014-2408268	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2014	Pennsylvania Office of Small Business Advocate	Gas procurement sharing mechanism, cost allocation
R-2014-2397237	Pennsylvania Public Utility Commission	Pike County Light & Power (Electric)	April 2014	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design
R-2014-2397353	Pennsylvania Public Utility Commission	Pike County Light & Power (Gas)	April 2014	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation
R-2014-23999598	Pennsylvania Public Utility Commission	Peoples TW Phillips	March 2014	Pennsylvania Office of Small Business Advocate	Gas procurement, design day demand, cost allocation rate design, retainage
P-2013-2389572 (Remand)	Pennsylvania Public Utility Commission	PPL Electric Utilities	February 2014	Pennsylvania Office of Small Business Advocate	Time of use rates, net metering rates



INDUSTRIAL ECONOMICS, INCORPORATED

ROBERT D. KNECHT

EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2012-2017

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
Matter 225	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	January 2014	New Brunswick Public Intervenor	Financial review, investment prudence, revenue requirement, cost allocation, rate design, market-based pricing.
P-2013-2391368, P-2013-2391372, P-2013-2391375, P-2013-2391378	Pennsylvania Public Utility Commission	Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, West Penn Power	January 2014	Pennsylvania Office of Small Business Advocate	Default service procurement, cost allocation, rate design
Matter No. 214	New Brunswick Energy & Utilities Board	Generic	November 2013	New Brunswick Public Intervenor	Maximum retail margins for motor fuel and residential heating oil.
Matter No. 171	New Brunswick Energy & Utilities Board	New Brunswick Power	September 2013	New Brunswick Public Intervenor	Amortization method for deferral costs associated with refurbishing Point Lepreau Generating Station
C-2013-2367475	Pennsylvania Public Utility Commission	PPL Electric Utilities	August 2013	Pennsylvania Office of Small Business Advocate	Forecasting and reconciliation of default service electric costs and revenues.
P-2011-2277868, I-2012-2320323	Pennsylvania Public Utility Commission	Generic	August 2013	Pennsylvania Office of Small Business Advocate	Rate-making treatment for customers in overlapping NGDC service territories ("gas-on-gas").
P-2013-2356232	Pennsylvania Public Utility Commission	UGI Central Penn Gas, UGI Penn Natural Gas, UGI Utilities (Gas Division)	July 2013	Pennsylvania Office of Small Business Advocate	Program design, cost recovery and rate design for alternative system expansion financing pilot program ("GET Gas")
R-2013-2355886	Pennsylvania Public Utility Commission	Peoples TWP LLC	July 2013	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design
R-2013-2361764, R-2013-2361763, R-2013-2361771	Pennsylvania Public Utility Commission	UGI Central Penn Gas, UGI Penn Natural Gas, UGI Utilities (Gas Division)	July 2013	Pennsylvania Office of Small Business Advocate	Unaccounted-for gas.



INDUSTRIAL ECONOMICS, INCORPORATED

ROBERT D. KNECHT

EXPERT TESTIMONY SUBMITTED IN REGULATORY PROCEEDINGS: 2012-2017

DOCKET #	REGULATOR	UTILITY	DATE	CLIENT	TOPICS
Matter No. 178	New Brunswick Energy & Utilities Board	Enbridge Gas New Brunswick	July 2012	NB Public Intervenor	System expansion economic test, test year revenue requirement, cost allocation, rate design, treatment of stranded costs.
R-2012-2290597	Pennsylvania Public Utility Commission	PPL Electric Utilities	June 2012	Pennsylvania Office of Small Business Advocate	Cost allocation, revenue allocation, rate design
R-2012-2293303	Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	May 2012	Pennsylvania Office of Small Business Advocate	Treatment of pipeline credits
AUC ID #1633	Alberta Utilities Commission	Alberta Electric System Operator	April 2012	Powerex, Northpoint Energy Solutions, Cargill	Economic efficiency issues for allocation of constrained transmission capacity.
R-2012-2286447	Pennsylvania Public Utility Commission	Philadelphia Gas Works	April 2012	Pennsylvania Office of Small Business Advocate	Unaccounted-for gas retainage, reconciliation
R-2012-2281465	Pennsylvania Public Utility Commission	National Fuel Gas Distribution	March 2012	Pennsylvania Office of Small Business Advocate	Unaccounted-for gas retainage, gas price procurement and hedging
R-2011-2273539	Pennsylvania Public Utility Commission	Peoples TWP	March 2012	Pennsylvania Office of Small Business Advocate	Design day demand methodology
P-2011-2273650 P-2011-2273668 P-2011-2273669 P-2011-2273670	Pennsylvania Public Utility Commission	Metropolitan Edison, Pennsylvania Electric, Penn Power, West Penn Power	February 2012	Pennsylvania Office of Small Business Advocate	Default service procurement, retail market enhancement, rate design.
R-2011-2264771	Pennsylvania Public Utility Commission	PPL Electric Utilities	January 2012	Pennsylvania Office of Small Business Advocate	TOU Rates

Note: Dates shown reflect submission date for direct testimony.

Industrial Economics, Incorporated
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May 2017

EXHIBIT IEc-2

REFERENCED INTERROGATORY RESPONSES

I&E-RS-2-D

OSBA-I-9

Associated attachments to the above-referenced interrogatory responses are available on Pike County Light and Power Company's (Gas) Citrix website. If you encounter any difficulty accessing them, please contact the OSBA @ swebb@pa.gov

Pike County Light & Power Company 2020 General Base Rate Increase (Gas) Filing
Docket No. R-2020-3022134

**PIKE COUNTY LIGHT & POWER COMPANY (GAS)
RESPONSES TO BUREAU OF INVESTIGATION AND ENFORCEMENT'S
DATA REQUESTS, SET RS-1-D TO RS-10-D**

I&E-RS-2-D Provide a working excel copy of Pike County Power and Light (Gas) Exhibits G-6, G-7, and G-8 showing the cost of service studies, the proof of revenue and the bill comparisons.

RESPONSE: A working copy of Exhibits G-6 and G-7 are provided in the attached file "Pike GCOS 10-19-20.xlsm". A working copy of Exhibit E-8 is provided in the attached files "Pike Gas Rate Design 10-19-20.xlsx" and "Pike Gas Bill Comparison Rev 10-19-20.xls".

PROVIDED BY: Paul Normand, Debbie Gajewski (Cost of Service / Rate Panel)

DATE: November 24, 2020

**PIKE COUNTY LIGHT & POWER COMPANY (GAS)
RESPONSES TO OFFICE OF SMALL BUSINESS ADVOCATE
INTERROGATORIES SET I NOS. 1- 21**

9. Please provide the cost basis for the current and proposed block charge differential for SC2.

RESPONSE: The proposed SC2 block charge differential is based on the current approved block charge differential which is a discount of 33.72% for all CCF's over 300. The primary reason for maintaining this differential is that the current first block charge collects a small level of additional cost as a result of a highly deficient fixed cost recovery that promotes large subsidies within the class.

PROVIDED BY: Paul Normand, Debbie Gajewski (Cost of Service / Rate Panel)

DATE: December 15, 2020

EXHIBIT IEc-3

RDK ELECTRONIC WORKPAPERS

RDK WP1G: Replication of PCL&P GCOSS

RDK WP2G: Alternative GCOSS

*****Workpapers will be transmitted via separate e-mail attachment simultaneous to e-mail
service of this document*****

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PENNSYLVANIA PUBLIC UTILITY
COMMISSION**

v.

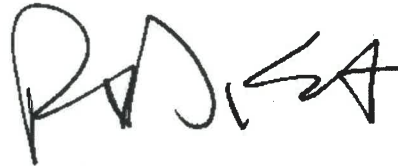
**PIKE COUNTY LIGHT & POWER
COMPANY (Gas Division)**

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Docket No. R-2020-3022134

VERIFICATION

I, Robert D. Knecht, hereby state that the facts set forth in my Direct Testimony labelled OSBA Statement No. 1 and associated Exhibits IEC-1 through IEC-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 19 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).



Date: February 2, 2021

Robert D. Knecht

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PENNSYLVANIA PUBLIC UTILITY
COMMISSION**

v.

**PIKE COUNTY LIGHT AND
POWER COMPANY (GAS)**

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DOCKET NO. R-2020-3022134

CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing have been served via email (*unless otherwise 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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The Honorable Mary D. Long
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malong@pa.gov

DATE: February 2, 2021

/s/ Sharon E. Webb

Sharon E. Webb
Assistant Small Business Advocate
Attorney ID No. 73995

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
	:	
v.	:	Docket No. R-2020-3022134
	:	
PIKE COUNTY LIGHT & POWER COMPANY (Gas Division)	:	
	:	

Rebuttal Testimony and Exhibit of

ROBERT D. KNECHT

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

**Cost Allocation
Revenue Allocation**

Date Served: February 22, 2021

Date Submitted for the Record: March 15, 2021

REBUTTAL TESTIMONY OF ROBERT D. KNECHT

1 **Q. Mr. Knecht, please state your name and briefly describe your qualifications.**

2 A. My name is Robert D. Knecht. I submitted direct testimony and associated exhibits earlier
3 in this proceeding and my qualifications were detailed therein.

4 **Q. Please describe the purpose of this testimony.**

5 A. This testimony first clarifies and corrects my direct testimony, with respect to (a) cost
6 allocation errors acknowledged by the Company and corrected in my exhibits, but not
7 explained in the text of my testimony, and (b) an inadvertent error in calculating total SC1
8 Residential costs.

9 Second, this testimony addresses the cost allocation and revenue allocation
10 recommendations of Dr. Karl Richard Pavlovic representing the Pennsylvania Office of
11 Consumer Advocate (“OCA”) and the Commission’s Bureau of Investigation and
12 Enforcement (“I&E”) Witness Eryan A. Sakaya.

13 **Q. Please address the clarification to your direct testimony.**

14 A. In response to OSBA-I-16 and OSBA-I-17, the Company acknowledged errors in its gas
15 class cost of service allocation study (“GCOSS”), regarding the allocation of Account 385
16 regulator costs and the functionalization of depreciation costs. Regarding the former, the
17 Company indicates that the house regulator component of Account 385 should have been
18 assigned only to the SC1 Residential class, and the industrial meters and regulators portion
19 of that account should have been assigned only to the SC2 non-residential class. Regarding
20 the latter, the Company acknowledges that depreciation expenses were mis-categorized to
21 Account 374 rather than 380. In my alternative version of the Company’s GCOSS
22 provided in RDK WP2G, I corrected both errors and flagged them in shaded green with
23 the other modifications that I made to the Company’s GCOSS. These changes resulted in
24 a material shift in costs away from the Residential class and to the Commercial class. The
25 issue regarding these corrections is that I did not explicitly include a description of them in
26 the text of my direct testimony.

1 Because these are errors acknowledged by the Company, because this change serves to
 2 increase costs to small business customers, and because this issue was highlighted in my
 3 electronic workpapers circulated with my direct testimony, I do not believe that my
 4 oversight has disadvantaged any party. Nevertheless, I apologize for the oversight and any
 5 associated confusion.

6 **Q. Please explain the error in your direct testimony.**

7 A. When correcting the Company’s treatment of house regulators in my alternative GCOSS,
 8 my simulation reversed the numerical sign for the costs assigned to the total SC1 class.
 9 Thus, while the sub-components for costs were accurate, the total SC1 values were not.
 10 The corrected electronic workpaper is provided with this testimony. Correcting this error
 11 does not affect the overall class rate of return, but it has a modest impact on overall cost
 12 allocation and revenue allocation, as shown in Table IEc-R1 below.¹ I regret any confusion
 13 caused by this error.

Table IEc-R1				
Impact of Corrections to RDK WP2G				
	SC1		SC2	
	Original	Corrected	Original	Corrected
Class RoR Present Rates	4.49%	4.49%	7.46%	7.46%
Cost-Based Rate Increase	\$234,487	\$237,423	\$23,532	\$23,551
Increase (Percent)	38.0%	38.5%	17.6%	17.6%
Sources: RDK WP2G, RDK WP2G Corrected				

14 **Q. Please describe the cost allocation recommendations of Dr. Pavlovic and Witness**
 15 **Sakaya.**

16 A. Both witnesses accept the Company’s GCOSS methodology except with respect to the
 17 allocation of mains costs (Account 376). Both witnesses reject the Company’s proposal

¹ The error in my direct testimony is shown in Table IEc-4, where both the “increase to cost-based rates” and the “proposed increase” values do not sum to the reported total.

1 to classify mains costs into customer-related and demand-related components using the
2 minimum system method.

3 Witness Sakaya proposes that all mains costs be allocated using a 50/50 peak-and-average
4 (“P&A”) methodology, in which mains costs are allocated half based on design day peak
5 demand and half based on average demand (or its arithmetic equivalent, annual
6 throughput).

7 Dr. Pavlovic recommends that all mains costs be allocated based on design day demand.

8 **Q. In your direct testimony, you developed an alternative GCOSS simulation using a**
9 **50/50 weighted average-and-excess (“A&E”) approach, based on Commission**
10 **precedent for natural gas distribution companies (“NGDCs”). Has this precedent**
11 **been updated?**

12 A. In part. In its Order Entered February 19, 2021 at Docket No. R-2020-3018835 involving
13 Columbia Gas of Pennsylvania, the Commission re-affirmed its policy that mains cost
14 allocation for NGDCs should not include a customer component for costs. It similarly re-
15 affirmed its policy that mains costs are causally related to both average annual demand and
16 peak demand, and it approved the use of a 50/50-weighted peak-and-average (“P&A”)
17 method for allocating gas mains costs, as advocated by OCA.² If applied to PCL&P, this
18 decision rejects the Company’s proposed cost allocation method.

19 However, in making this decision, the Commission also recognized that the A&E method
20 it had approved in its two most recent decisions regarding NGDC cost allocation was “. . .
21 of no significance here in that none of the Parties have submitted this type of methodology
22 for our consideration.”³ As such, the Commission has not expressly rejected the method it
23 had most recently approved, because that method was not presented as an option in the
24 Columbia proceeding.

² “Opinion and Order,” Pennsylvania Public Utility Commission, Docket No. R-2020-3018835, Order entered February 19, 2021, pages 187-218.

³ *Id.*, at 214.

1 In addition, the Commission determined that its precedent for including a customer
2 component of costs for electric distribution companies (“EDCs”) was not relevant to that
3 decision, citing to OCA’s argument that “. . . cost causation for EDCs and NGDCs are
4 different.”⁴

5 **Q. Have you modified your alternative GCOSS analysis to reflect this decision?**

6 A. No. First, as noted above, this decision does not explicitly reject the precedent upon which
7 I relied, since the A&E option was not considered. Second, insufficient time was available
8 for me to make the change. If necessary, I will develop a revised version of my alternative
9 GCOSS for surrebuttal testimony, consistent with the Commission’s decision.

10 **Q. Please address Witness Sakaya’s cost allocation and revenue allocation analysis in
11 more detail.**

12 A. Witness Sakaya begins not with the filed historical test year (“HTY”) GCOSS relied upon
13 by the Company, but with what is described as a future test year (“FTY”) GCOSS (provided
14 in response to I&E-RS-12-D). That GCOSS does update the cost values to reflect the FTY
15 cost claim, but it does not update any of the allocation factors. In effect, the I&E GCOSS
16 is a cost allocation study with FTY costs being allocated using HTY allocation factors.

17 Witness Sakaya then calculates the impact of replacing the Company’s mains cost
18 classification method with a 50/50 P&A approach, for the mains gross plant, mains
19 accumulated depreciation, and mains depreciation expense accounts. He applies these
20 adjustments to the balance of the Company’s “FTY” GCOSS and recalculates the class
21 rates of return at the Company’s proposed rates.⁵

22 From that analysis, Witness Sakaya concludes that the Company’s revenue allocation
23 proposal is not unreasonable.

24 **Q. Do you agree with Witness Sakaya’s approach?**

⁴ *Id.*, at 214-25.

⁵ In so doing, Witness Sakaya uses a simplified across-the-board income tax cost, rather than simulating the Company’s more complicated model.

1 A. For both theoretical and practical reasons, I do not. Witness Sakaya’s approach has a
2 number of disadvantages.

3 First, by rejecting the classification of mains costs into customer and demand components,
4 Witness Sakaya rejects the idea that it is less costly per unit of demand to serve larger and
5 more geographically concentrated customers than smaller more dispersed customers.
6 Moreover, the P&A allocation factor relies substantially on average demand, which is not
7 causally related to mains costs. Mains must be sized to meet peak demand and interconnect
8 customers, and the costs are not affected by whether the main is used at a 25 percent
9 utilization rate or a 95 percent utilization rate. Nevertheless, my disagreement in this
10 respect is presumably moot, as the Commission has reaffirmed its support for a method
11 that rejects the idea of economies of scale for serving larger customers and relies on the
12 principle that mains costs are causally related to average demands.⁶

13 After that, Witness Sakaya’s approach is generally biased in favor of Commercial
14 customers. First, in making the adjustment to a P&A allocation factor, Witness Sakaya
15 adjusts only the direct plant-related costs. However, a variety of other costs in the
16 Company’s GCOSS model are affected by how mains costs are allocated, including plant
17 accounts 374 and 378, certain adjustments to rate base, distribution operating costs, some
18 distribution maintenance costs (Account 887), and some A&G costs. Witness Sakaya’s
19 approach does not recognize these impacts. Second, Witness Sakaya does not adjust for
20 the errors acknowledged by the Company addressed above. Third, Witness Sakaya does
21 not incorporate the other changes that I recommend in my alternative GCOSS.

22 For those reasons, I conclude that my alternative GCOSS is a more accurate evaluation of
23 allocated costs within the context of Commission precedent regarding mains cost
24 classification and allocation. Of course, the differences in my alternative GCOSS from
25 Witness Sakaya’s analysis also explains why my proposed revenue allocation under my

⁶ One hopes that NGDCs will not actually start designing their distribution systems to meet load that is halfway between average and peak demand.

1 alternative GCOSS assigns more costs to Commercial customers than Witness Sakaya
2 proposes.

3 **Q. Please address Dr. Pavlovic's cost allocation and revenue allocation analysis in more**
4 **detail.**

5 A. Dr. Pavlovic did not provide his electronic workpapers nor does his filed testimony contain
6 any detailed tabular output from his cost allocation analysis. However, using my replicated
7 version of the Company's GCOSS, I simply adjusted the mains classification factor to
8 being 100 percent demand, and I was able to replicate the summary results in Dr. Pavlovic's
9 summary Table 1. This electronic model is provided in electronic format with this
10 testimony as RDK WP1-RG. From that analysis, Dr. Pavlovic concludes that significantly
11 more of the rate increase should be recovered from the Commercial class than that proposed
12 by the Company. He then offers a revenue allocation proposal at a significantly reduced
13 revenue requirement. Dr. Pavlovic indicates that to develop this revenue allocation
14 proposal, he relies on the same method used by the Company, but he provides neither tables
15 nor workpapers supporting his calculations.⁷

16 **Q. Do you agree with Dr. Pavlovic's cost allocation method?**

17 A. No. I have the same concerns regarding Dr. Pavlovic's method as those listed above
18 regarding Witness Sakaya's approach, except that I agree at a theoretical level with Dr.
19 Pavlovic that all demand-related mains costs should be allocated using a design day peak
20 allocation factor. The Commission, however, does not.

21 **Q. Is Dr. Pavlovic's revenue allocation proposal consistent with his recommended**
22 **GCOSS?**

23 A. It does not appear to be, although it is difficult to determine because Dr. Pavlovic provides
24 a revenue allocation proposal only at a substantially reduced revenue requirement. To
25 evaluate his proposal, I began with his revenue allocation proposal and scaled it up to the
26 full revenue increase required by the Company. Since that revenue requirement includes
27 both the effect of changes in billing determinants between the HTY and the FTY, I then

⁷ As I indicated in my direct testimony, I am also unable to make any sense of the Company's revenue allocation methodology.

backed out the impact of the billing determinants, leaving Dr. Pavlovic’s implied net full requirements revenue allocation.⁸ I then compared this to the cost-based increase from his GCOSS. These calculations are shown in Table IEC-R2 below. As shown, Dr. Pavlovic proposes an increase for the SC2 Commercial class that is nearly double the cost-based increase implied by the GCOSS method that he favors.

Table IEC-R2			
OCA Revenue Allocation Proposal			
	SC1	SC2	Total
OCA Proposal (Table 2)	\$87,380	\$9,921	\$97,301
Scaled Up to Full Increase*	\$266,331	\$30,239	\$296,570
Less Billing Det. Effect**	(\$29,131)	(\$6,465)	(\$35,595)
Implied OCA Net Rev. Increase	\$237,200	\$23,774	\$260,974
OCA GCOSS Cost Shortfall	\$248,768	\$12,206	\$260,974
*Proportional scaleup.			
** See proof of revenue analysis in RDK WP1-RG.			
Sources: RDK WP1-RG, OCA Statement No. 2			

Thus, if the Commission accepts the Dr. Pavlovic’s GCOSS methodology, the rate increase for the SC2 class should be approximately half that proposed by Dr. Pavlovic.

However, as I indicated earlier, my other adjustments to my alternative GCOSS methodology are generally unfavorable to the SC2 Commercial class. Based on my alternative GCOSS, my cost-based revenue allocation is virtually identical to that offered by Dr. Pavlovic, the values are compared on a comparable basis.

Q. At the end of the day, what are the revenue allocation proposals of the parties?

⁸ Both the Company and Dr. Pavlovic use the confusing approach of defining the rate increase as the difference between proposed rates at FTY billing determinants less current rates at HTY billing determinants. Some of that increase is therefore related to growth in the billing determinants between the HTY and FTY, and are not a result of increased tariff charges. Neither witness Sakaya nor I follow this approach.

1 A. Table IEc-R3 below provides my comparison, at this time. In making this comparison, I
 2 have generally relied on the FTY revenue increase at FTY billing determinants for tariff
 3 rates only.

Table IEc-R3			
Revenue Allocation Comparison (\$000)			
	SC1	SC2	Total
Customer-Demand GCOSSs			
PCL&P Filed (Exh. G8)	\$253.7	\$6.3	\$260.1
RDK Customer-Demand	\$253.7	\$6.3	\$260.1
A&E and P&A GCOSSs			
I&E Sakaya (E3S5p1)	\$254.9	\$6.3	\$260.3
OCA GCOSS* (RDK WP1-RG)	\$248.8	\$12.2	\$261.0
OCA Adjusted** (Table IEc-R1)	\$237.2	\$23.8	\$261.0
RDK Alt. GCOSS (Table IEc-R1)	\$237.4	\$23.5	\$260.9
* Reflects the cost-based increase under OCA's proposed GCOSS.			
** Adjusted for presentation purposes to reflect the full FTY proposed increase and exclude effects of changes in billing determinants.			
Sources: RDK WP1G, RDK WP2G Corrected, RDK WP1-RG, OCA Statement No. 2, I&E Statement No. 3			

4 **Q. Does this conclude your rebuttal testimony?**

5 A. Yes, it does.

EXHIBIT IEc-R1

RDK REBUTTAL ELECTRONIC WORKPAPERS

RDK WP2G Alternative GCOSS Corrected

RDK WP1-RG OCA Proposed GCOSS for PCL&P

***Electronic Workpapers will be emailed as separate attachments simultaneous to Rebuttal
Testimony***

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PENNSYLVANIA PUBLIC UTILITY
COMMISSION**

v.

**PIKE COUNTY LIGHT & POWER
COMPANY (Gas Division)**

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Docket No. R-2020-3022134

VERIFICATION

I, Robert D. Knecht, hereby state that the facts set forth in my Rebuttal Testimony labelled OSBA Statement No. 1-R and associated Exhibit IEC-R1 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 19 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).



Date: February 22, 2021

Robert D. Knecht



COMMONWEALTH OF PENNSYLVANIA

March 4, 2021

The Honorable Mary D. Long
Pennsylvania Public Utility Commission
Piatt Place
301 5th Avenue, Suite 2020
Harrisburg, PA 17120

**Re: Pennsylvania Public Utility Commission, v. Pike County Light & Power Company
(Gas) / Docket No. R-2020-3022134**

Dear Judge Long:

Enclosed please find the Surrebuttal Testimony of Robert D. Knecht, labeled OSBA Statement No. 1-S and Exhibit, on behalf of the Office of Small Business Advocate (“OSBA”), in the above-captioned 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/ Sharon E. Webb

Sharon E. Webb
Assistant Small Business Advocate
Attorney ID No. 73995

Enclosures

cc: PA PUC Secretary Rosemary Chiavetta (Cover Letter & Certificate of Service only)
Robert D. Knecht
Parties of Record

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION

v.

PIKE COUNTY LIGHT & POWER
COMPANY (Gas Division)

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Docket No. R-2020-3022134

Surrebuttal Testimony of

ROBERT D. KNECHT

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Cost Allocation
Revenue Allocation

Date Served: March 4, 2021

Date Submitted for the Record: March 15, 2021

SURREBUTTAL TESTIMONY OF ROBERT D. KNECHT

1 **Q. Mr. Knecht, please state your name and briefly describe your qualifications.**

2 A. My name is Robert D. Knecht. I submitted direct testimony, rebuttal testimony, and
3 associated exhibits earlier in this proceeding, and my qualifications were detailed therein.

4 **Q. Please describe the purpose of this testimony.**

5 A. This surrebuttal testimony responds to the rebuttal testimony of (a) Rate Panel representing
6 Pike County Light & Power Company (Gas Division) (“PCL&P” or “the Company”), and
7 Dr. Karl Richard Pavlovic, representing the Pennsylvania Office of Consumer Advocate
8 (“OCA”).

9 Acronyms and initialisms defined in my direct testimony are used in this surrebuttal with
10 the same meaning.

11 **Q. In your direct testimony, you corrected your alternative GCOSS for errors that the
12 Company had acknowledged in OSBA-I-16 and OSBA-I-17. Did either the Company
13 or Dr. Pavlovic correct their GCOSS analyses for these errors?**

14 A. No. Neither party addresses those admitted errors in rebuttal.

15 **Q. In your direct testimony you voiced concerns regarding the Company’s allocation of
16 customer service and sales O&M costs, and you incorporated a modification into your
17 alternative GCOSS. Did either the Company or Dr. Pavlovic address those issues in
18 rebuttal?**

19 A. No.

20 **Q. At page 7 of the Rate Panel rebuttal testimony, the Company indicates that it
21 disagrees with your proposal for classifying and allocating mains costs. Please
22 respond.**

23 A. The Company mis-interprets my direct testimony. As I indicated in that testimony, I agree
24 that mains costs are, in part, causally related to customer count, due to the additional mains
25 footage required to serve multiple smaller customers. I also indicated that I agreed with
26 the Company that the demand portion of mains costs should be allocated with a design day

1 demand allocator, and that those costs are not causally related to average demand (or,
2 equivalently) annual throughput. I also indicated that, if the Commission is willing to
3 accept the “customer-demand” approach to NGDC mains cost causation put forward by
4 the Company, I had no disagreements with the Company’s cost allocation and revenue
5 allocation proposals.¹

6 Unfortunately, my judgment is that there is virtually no chance that the Commission will
7 accept the customer-demand method. The Commission has consistently rejected the
8 inclusion of a customer component of costs for NGDC cost allocation and has recently
9 done so again in the Columbia Gas matter at Docket No. R-2020-3018835. In fact, in that
10 case, the Commission rejected the customer-demand method even when it was averaged
11 with an alternative “peak-and-average” method with zero customer component.

12 Being a pragmatist, and having little desire to relitigate mains cost classification in every
13 base rate case for every NGDC in the Commonwealth, I developed an alternative GCOSS
14 that relied on a mains cost allocation method that was consistent with Commission
15 precedent. I understand the Company’s desire to take a principled stand, and I agree with
16 the Company as a matter of cost causation. In fact, I agree with the Company that the
17 A&E allocation factor, as applied by the Commission in the 2007 PGW, is not consistent
18 with cost causation.

19 Unfortunately, however, the Commission takes a very different view.

20 **Q. Dr. Pavlovic claims that your use of the A&E allocation method is not consistent with**
21 **Commission precedent in the 2007 PGW matter because the A&E method does not**
22 **use both annual and peak demands. Is that accurate?**

23 **A.** No, on all counts.

24 First, I was a participant in the 2007 PGW matter, and the A&E allocator I use in this case
25 is methodologically identical to the allocator approved by the Commission in that matter.

¹ OSBA Statement No. 1 at 11.

1 Second, Dr. Pavlovic fails to recognize that there is an arithmetic relationship between the
2 A&E allocator, and a “peak-and-average” allocator, in terms of how much of the cost is
3 allocated based on average demand and how much is based on peak demand.² While the
4 factors vary depending on system load factor, the 50/50 A&E allocator that I use in my
5 alternative GCOSS is algebraically equal to an allocation factor that is based 33 percent on
6 average demand and 67 percent on peak demand.³ Thus, the A&E allocation factor
7 approved by the Commission in the PGW 2007 matter is, in fact, consistent with the
8 Commission’s ruling that costs be allocated based both on average demand and peak
9 demand.

10 Finally, it is curious that Dr. Pavlovic claims that my allocation method is not consistent
11 with Commission precedent in the 2007 PGW matter, as his recommended approach is
12 based solely on design day demand. While I agree with Dr. Pavlovic as theoretical matter
13 for cost causation, the Commission does not.

14 **Q. Does the rebuttal testimony of either the Rate Panel or Dr. Pavlovic result in any**
15 **modifications to the recommendations in your direct testimony?**

16 A. No. My analysis and recommendations either go unrebutted, or they result from
17 disagreements about whether Commission precedent should be respected in this
18 proceeding.

19 **Q. Does this conclude your surrebuttal testimony?**

20 A. Yes, it does.

² Other experts representing the OCA understand this arithmetic. See, e.g., OCA Statement No. 4R, Glenn A. Watkins, Docket No. R-2020-3018929), page 10. In that testimony, Mr. Watkins correctly cites to the equivalence of a 50/50 A&E allocator with a P&A allocator that is based 67 percent on peak demand and 33 percent on average demand. A similar quantitative result applies in the current case because system load factors for the two NGDCs are similar.

³ OSBA Statement No. 1, page 11, footnote 11.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PENNSYLVANIA PUBLIC UTILITY
COMMISSION**

v.

**PIKE COUNTY LIGHT & POWER
COMPANY (Gas Division)**

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Docket No. R-2020-3022134

VERIFICATION

I, Robert D. Knecht, hereby state that the facts set forth in my Surrebuttal Testimony labelled OSBA Statement No. 1-S 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 19 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).



Date: March 4, 2021

Robert D. Knecht

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY
COMMISSION

v.

PIKE COUNTY LIGHT AND
POWER COMPANY (GAS)

DOCKET NO. R-2020-3022134

CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing have been served via email (*unless otherwise 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 25, 2021

/s/ Sharon E. Webb

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