October 17, 2022

E-FILED

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

**Re: Pennsylvania Public Utility Commission v. Citizens' Electric Company of
         Lewisburg / Docket No. R-2022-3032369**

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") has e-filed the Direct Testimony and Exhibits of Robert D. Knecht, labeled
OSBA Statement No. 1, Rebuttal Testimony and Exhibits of Robert Knecht, labeled OSBA
Statement No. 1-R, and the Surrebuttal Testimony and Exhibit 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

July 25, 2022

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

The Honorable Charece Z. Collins
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
400 North Street 2nd Floor West
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission v. Citizens' Electric Company of Lewisburg / Docket No. R-2022-3032369

Dear Judge Vero and Judge Collins:

   Enclosed please find the Direct Testimony and Exhibits 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: Robert D. Knecht
       Mark Ewen

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
	:	
v.	:	Docket No. R-2022-3032369
	:	
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA	:	
	:	

Direct Testimony and Exhibits of

ROBERT D. KNECHT

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Cost Allocation
Revenue Allocation
Rate Design

Date Served: July 25, 2022

Date Submitted for the Record: October 17, 2022

DIRECT TESTIMONY OF ROBERT D. KNECHT

1   **1.   <u>Witness Identification and Summary of Conclusions</u>**

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

3   A.   My name is Robert D. Knecht. I am an independent consultant. Much of my practice

4   involves analysis and the preparation of expert testimony in the field of regulatory

5   economics. For 32 years, I was a Principal of Industrial Economics, Incorporated ("IEc"),

6   a consulting firm located at 2067 Massachusetts Avenue, Cambridge, MA 02140, and I

7   served as Treasurer of that firm for 15 years. I obtained a B.S. degree in Economics from

8   the Massachusetts Institute of Technology in 1978, and an M.S. degree in Management

9   from the Sloan School of Management at M.I.T. in 1982, with concentrations in applied

10   economics and finance.

11   I am appearing in this proceeding on behalf of the Pennsylvania Office of Small Business

12   Advocate ("OSBA"). I have represented the OSBA before the Pennsylvania Public Utility

13   Commission in a variety of matters since 1994. My résumé and a listing of the expert

14   testimony that I have filed in utility regulatory proceedings during the past five years are

15   attached in Exhibit RDK-1.

16   **Q.   Please describe your assignment in this matter.**

17   A.   The OSBA requested that I review the filing of Citizens' Electric Company of Lewisburg,

18   PA ("Citizens" or "the Company"), to evaluate whether the rates proposed for small

19   business customers are consistent with sound economics and regulatory principles. My

20   evaluation is generally limited to issues of cost allocation, revenue allocation and rate

21   design.

22   **Q.   How is the balance of your testimony organized?**

23   A.   This testimony is organized as follows:

24   • Section 2 provides a brief overview of the rate classes under which small and

25   medium businesses take service.

1   •   Section 3 presents my limited evaluation of the Company's allocated class cost of
2   service study ("ACOSS").

3   •   Section 4 reviews the Company's proposed allocation of the rate increase ("revenue
4   allocation") among the various rate classes.

5   •   Section 5 reviews the Company's proposed rate design for the rate classes under
6   which small and medium businesses take service.

7 **2.**   **General Service Rate Classes**

8 **Q.**   **Please describe Citizens' general service tariff categories.**

9 A.   Citizens has two active rate classes under which small/medium businesses take service,
10   namely Schedule GLP-1 General Light and Power Service ("GLP-1") and Schedule GLP-
11   3 General Light and Power Service 50 Kilowatts Minimum ("GLP-3").

12   GLP-1 is "general service," and it is the catch-all category for electric consumers who do
13   not qualify for any of the other rate categories. It is sometimes denoted as "commercial"
14   by the Company.   Thus, the GLP-1 class does not include Schedule RS residential
15   customers (individual residences or individually metered units in multi-family buildings),
16   and it does not include the family farms that meet the eligibility restrictions for residential
17   service. Similarly, the GLP-1 customers do not meet the minimum billing demand and
18   other service requirements for Rate GLP-3, nor are they lighting customers that are eligible
19   for service under Schedules MBL or OL.

20   Citizens expects to serve 1,125 GLP-1 customers in the fully projected future test year
21   ("FPFTY") ending December 31, 2023.   I expect that there are a wide variety of types of
22   customers, load sizes and load patterns within the GLP-1 class. On average, the monthly
23   electric consumption for a GLP-1 is forecast at 1,961 kWh/month, which is about 60
24   percent larger than the average residential load. Citizens' Witness Howard S. Gorman's
25   analysis indicates that the GLP-1 class can exhibit class non-coincident peaks ("NCPs") in
26   either the winter or the summer season, although the more recent information shows

| 1 | summer peaks.[1] Witness Gorman's analysis also generally indicates that the NCP class |
| 2 | load factor GLP-1 is modestly higher than that for residential class.[2] |

3	GLP-3 service is general service for larger customers with a minimum billing demand of
4	50 kW, taking three-phase service at 230 volts or higher. GLP-3 includes service at both
5	primary (at least 600 volts) and secondary voltage. The Company may refer to this class
6	as "industrial," although there do not appear to be any business classification requirements
7	for service. The forecast average monthly consumption is over 90,000 kWh, which is
8	nearly 50 times the size of the average GLP-1 customer. Witness Gorman's analysis
9	indicates, however, that the load factor for GLP-3 is similar in magnitude to that for GLP-
10	1. Witness Gorman also indicates that the GLP-3 class non-coincident peak occurs in the
11	summer or in mid-autumn, suggesting that peak demands may be related to agricultural
12	activities.

13	In addition to these two active classes, Citizens continues to allow "grandfathered"
14	customers to take service under Schedule SH Space Heating. Eligibility in this class
15	involves the customer having separate metering for space heating equipment, and it can
16	include loads related to air conditioning and water heating if that equipment is also used
17	for those purposes. Citizens' tariff indicates that this rate class is "in the process of
18	elimination," but the Company appears to be in no hurry to do so as the tariff has been
19	closed to new entrants for more than 40 years.

| 20 | **3.**   **Cost Allocation** |

21	**Q.** **What is the purpose of a utility's allocated cost of service study ("ACOSS")?**
22	A. The most important criterion for setting regulated utility rates is the cost incurred by the
23	utility for providing the service.[3] To assign costs to specific customers, utilities aggregate
24	customers into rate classes, within which the customers have reasonably similar load sizes,

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[1] See Attachment OCA-II, at "II-5_NCP." GLP-1 exhibited winter peaks in 2015 and 2018, and summer peaks in 2019, 2020, and 2021.

[2] See RDK WP1, "AllocFctr" worksheet for the calculations.

[3] The Commonwealth Court affirmed this basic principle, referring to cost of service as the "polestar" criterion. Lloyd v. Pennsylvania Public Utility Commission, 904 A.2d 1010, 1020 (Pa. Cmwlth. 2006).

1		seasonal consumption, peak demand patterns, and other characteristics. An ACOSS is an
2		analytical tool with which the utility's total cost (or "revenue requirement") is allocated
3		among each of the rate classes. These allocated costs are then used as a key input in
4		determining the total revenues that the utility plans to recover from each rate class through
5		tariff rates.

In using the results from an ACOSS to develop class revenue requirements, utilities and regulatory authorities usually have a longer-term goal of moving the revenue recovered from each class as close as possible to the costs allocated to that class. Thus, rate classes whose revenues substantially exceed allocated costs are assigned either relatively low rate increases or rate decreases. Rate classes whose revenues are well below allocated costs are assigned relatively larger rate increases than those classes whose revenues are only slightly below allocated costs.

In addition to class revenue requirement issues, an ACOSS can provide useful cost information regarding the specific nature of utility tariff charges. In particular, an ACOSS provides a cost basis for the relative magnitude of the various individual tariff charges, including the customer charge, demand charges and commodity charges.

Q.   How does an ACOSS assign costs to the various rate classes?

A.   The underlying principle of an ACOSS is that costs are assigned to the rate classes that *cause* the utility to incur those costs. This principle of cost causation is both equitable and economically efficient. It is equitable because costs are borne by those customers who cause them. It is economically efficient because the price signal for consumption from a particular rate class is reasonably consistent with the cost incurred by the utility to provide the service. In that way, the consumer receives the correct price signal for determining whether he should purchase more or less of the utility service. In effect, the consumer balances the value that he receives from the purchase of that service against the utility's cost of providing the service.

Q.   What issue is most debated with respect to electric utility distribution company ("EDC") cost allocation?

A.   The most contentious issue regarding EDC cost allocation usually revolves around the "classification" and "allocation" of joint use distribution plant costs, including substations, poles, overhead and underground lines, and transformers. This debate arises for several reasons.

- First, this plant represents a substantial portion of the overall distribution plant, making the issue of critical importance to the overall allocation of rate base. Moreover, because O&M costs are substantially allocated in proportion to the allocation of plant, the allocation of plant has a large impact on the allocation of O&M costs.

- Second, unlike meters and service line plant, this plant represents "joint use" costs, meaning that multiple rate classes rely on the same plant. These costs therefore generally cannot be directly assigned to the specific rate class which uses the plant. Rather, the costs must be allocated using some reasonable factors based on cost causation.

- Third, the economics literature provides little theoretical support for the allocation of such costs, other than to state that the allocated costs should lie somewhere between the short-run marginal cost of providing service and the standalone cost of serving any particular customer, group of customers or customer class. These guidelines leave considerable leeway for allocating electric distribution plant costs.

- Fourth, the various methodologies offered by cost allocation analysts produce a wide range of cost allocation outcomes.
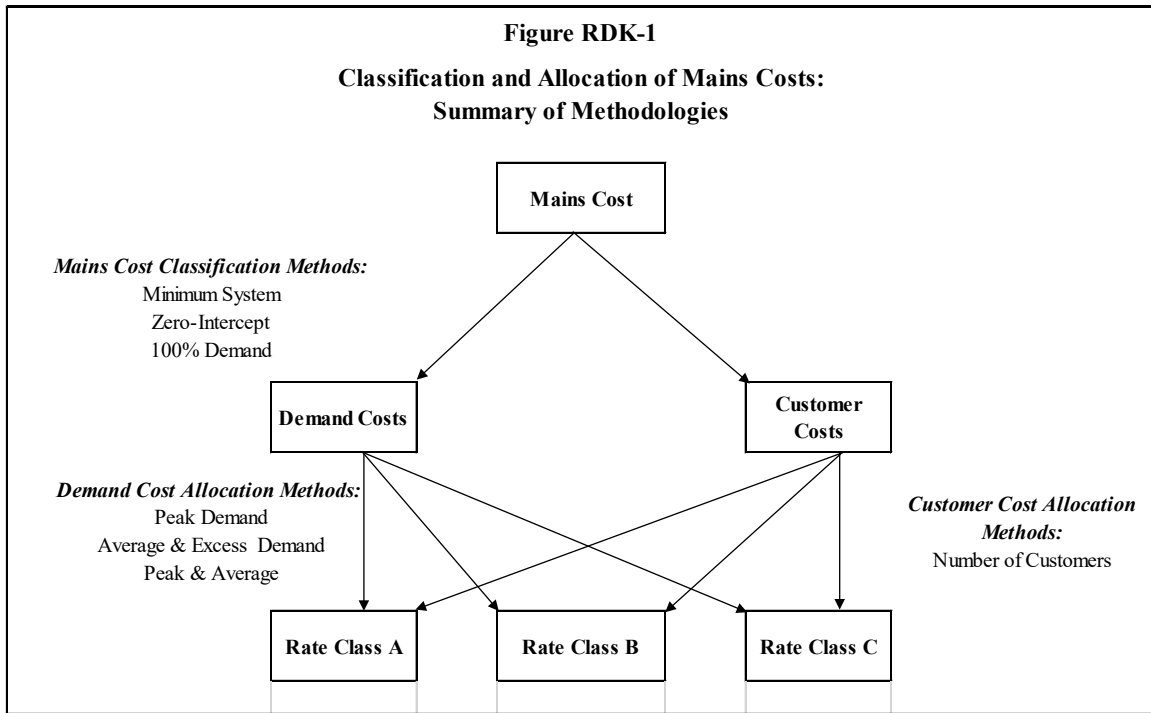
The debate for allocating joint use distribution plant costs generally revolves around which factors best reflect "cost causation." These factors typically fall into three categories: peak demand, annual energy usage (or its arithmetic equivalent, average demand), and number of customers. These three "classification" factors are generally abbreviated as "demand," "energy" and "customer."

1   **Q.   Please describe the issues involved in the classification and allocation of joint-use**
2   **electric distribution plant costs.**

3   A.   An electric distribution system must be designed to meet two objectives. First, the poles,
4   wires and transformers must be large enough to be able to deliver power from the
5   transmission grid to customer premises at the time when the load on each component of
6   the system is the highest. Second, the system must be designed to interconnect all the
7   EDC's customers.

8   A two-step process is generally used to recognize how these system design considerations
9   cause costs to be incurred and to assign costs to rate classes. First, distribution plant costs
10   are *classified* into "demand-related" and "customer-related" components, to reflect both
11   the peak demand and size of system design considerations. Second, each component of
12   the classified costs is *allocated* among the various rate classes. Customer-related costs are
13   generally allocated on the basis of the number of customers, or the number of customers
14   weighted by relative cost (e.g., for meters and service drops). Demand-related costs are
15   allocated on the basis of some measure of customer peak demand.

16   Figure RDK-1 below depicts this two-step process schematically, and identifies the
17   primary methodologies used by cost allocation analysts for each step. In my experience,
18   all these methods are in general use, although experts disagree about which method best
19   reflects cost causation.

Figure RDK-1

Classification and Allocation of Mains Costs:
Summary of Methodologies

Mains Cost

Mains Cost Classification Methods:
Minimum System
Zero-Intercept
100% Demand

Demand Costs

Customer Costs

Demand Cost Allocation Methods:
Peak Demand
Average & Excess Demand
Peak & Average

Customer Cost Allocation Methods:
Number of Customers

Rate Class A

Rate Class B

Rate Class C

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1 **Q.** **Please briefly discuss the electric distribution plant cost *classification* methods shown**
2 **in Figure RDK-1.**

3 A. The "minimum system" approach is based on the idea that the customer-related component
4 of costs should represent those costs that would be incurred to meet minimal demand levels.
5 It is calculated by determining what the cost of the electric distribution system would be if
6 only minimum-sized poles, wires and transformers were installed. The ratio of the cost of
7 this minimum system to the cost of the actual system is deemed to be the percentage of the
8 cost of the actual system that is customer-related. All costs incurred in excess of the
9 minimum system are considered demand-related.

10 The minimum system approach is often criticized for failing to recognize that a minimum
11 system has some load carrying capability, and therefore overstates the customer-related
12 component of costs. This critique is addressed by some analysts using a "zero-intercept"
13 methodology. In a zero-intercept approach, the minimum system is based not on the cost
14 of the actual minimum-sized plant, but on the implicit cost of plant with zero load carrying
15 capability. The cost of a zero-capacity transformer, for example, is determined using
16 statistical methods, which show a mathematical relationship between the cost of a
17 transformer and its capacity.

1		A second criticism of both the minimum system and zero-intercept methods is that it is not
2		clear that the customer portion of costs, as measured in this method, does in fact vary over
3		the longer term with number of customers. There is conceptual appeal in the argument that
4		it costs less per unit of demand to attach one customer with a 100 kW load than to attach
5		20 customers with 5 kW loads, since serving the smaller customers will generally require
6		more poles, more conductor feet, and more (smaller) transformers. However, neither the
7		minimum system nor the zero-intercept method attempts to measure these scale economies
8		that are related to system topology.

9   Finally, the "100% demand" approach assumes that all distribution costs are demand-
10   related, and that there is no customer component at all. This method simply assumes that
11   there are no economies of scale related to serving larger customers on the distribution
12   system, and that all customers have the same cost per unit of peak demand.

13 **Q.**   **What is Commission precedent in Pennsylvania for classification of joint-use**
14   **distribution plant?**

15 A.   To my knowledge, the most recent direct Commission precedent is from a 2012 PPL
16   Electric base rates case, in which the Commission approved the use of a "minimum system"
17   classification approach for both primary and secondary voltage distribution plant.[4] This
18   method included an adjustment for line transformers, to reflect the load carrying capability
19   of the minimum system. This decision was based, in part, on the methodologies put
20   forward in NARUC's 1972 Electric Utility Cost Allocation Manual ("NARUC Manual").

21   This methodology was confirmed in the fully litigated 2018 UGI Electric base rates
22   proceeding, in which the Commission cited to its decision in PPL Electric and to the
23   NARUC Manual.[5]

24 **Q.**   **Please address the issues relating to the *allocation* of distribution plant costs.**

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[4] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2012-2290597, Order Entered December 28, 2012, pages 105- 113.

[5] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2017-2640058, Order Entered October 25, 2018, 159-160.

1   A.   The most common methods for allocating the demand component of electric distribution

2   plant costs are either a peak demand method or the average-and-excess ("A&E") demand

3   method. Under the peak demand method, costs are allocated based on each class's

4   contribution to peak demand. Peak demand methods include coincident peak ("CP"), non-

5   coincident peak ("NCP") and individual customer maximum demand ("ICMD") methods.

6   Under the CP method, costs are allocated based on each class's contribution to a measure

7   of the diversified system peak. That is, the peak demand for each class represents that

8   class' share of demand at the system peak. For NCP, costs are generally allocated based

9   on the diversified sum of peak demands within each class. That is, the NCP allocator

10   reflects maximum demand for the class. Some classes may peak in the winter and some in

11   the summer, and the NCP will reflect the respective peaks, regardless of when the system

12   peak occurs. For ICMD, costs are allocated based on the undiversified sum of each

13   individual customer's peak demand within each class.[6] For electric utilities, generation

14   and transmission demand-related costs are more commonly allocated using a diversified

15   CP method, whereas distribution costs are more commonly allocated using NCP and ICMD

16   methods.[7]

17   The A&E method allocates demand costs based on a weighted average of "average

18   demand," which is proportional to annual energy consumption, and "excess demand,"

19   which is the difference between peak demand and average demand. Depending on the

20   weighting method used, the A&E allocator is often similar to a peak demand allocator,

21   because it is based on an "average demand" measure and a "peak minus average demand"

22   measure.

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[6] Load diversity refers to the fact that not all customers experience their peak demand at the same time. Thus, for example, it is not necessary to build electric generation capacity sufficient to meet the sum of the individual peak demands of every single customer on the grid. These "benefits of diversity" necessarily decrease as the electric plant in service gets physically closer to individual customers and therefore serves few customers with little diversity. While generation capacity can reflect the benefits of diversity from all customers and rate classes, local transformers and service drops must generally be sized to meet individual customer peaks.

[7] For distribution system costs, some analysts argue that distribution costs related to peak periods should be allocated using multiple on-peak hours, and that there should be geographic differences in when these high usage hours occur. As smart meters become more prevalent, this approach becomes more technically feasible.

1   In addition, in Pennsylvania and elsewhere, some experts advocate the use of a peak-and-
2   average ("P&A") allocation method for demand costs. In this method, costs are allocated
3   based on a weighted average of average demands and peak demands. As no aspects of
4   electric utility distribution systems are sized to meet average demand, this method has no
5   theoretical economic appeal.

6 **Q. What is the Company's approach to cost allocation in this proceeding?**

7 A.   The Company's cost allocation methodology and the associated ACOSS are presented by
8   Mr. Howard S. Gorman at Exhibit HSG-1 Schedule E (updated July 11, 2022).   The
9   Company's updated ACOSS was also provided in working electronic format at that time.

10   For cost classification, the Company applies a minimum system analysis to its secondary
11   voltage plant, and it adjusts the demand allocator for line transformers to reflect the peak
12   load carrying capability of the minimum system.   For the primary voltage system, which
13   represents a significant majority of distribution plant costs, the Company uses a 100 percent
14   demand classification approach.

15   For cost allocation purposes, the Company generally relies on NCP demand allocators. In
16   so doing, the Company segregates its system into primary and secondary voltage
17   categories, consistent with standard practice.   The primary system demand allocators
18   include all customer loads, whereas the secondary system demand allocators exclude loads
19   served at primary voltage.   For Citizens, the only customers served at primary voltage are
20   in the GLP-3 rate class, and these customers represent roughly half of that class's load.

21 **Q. Do you agree with the Company's methods for joint-use distribution plant allocation?**

22 A.   I agree that distribution plant costs, particularly secondary voltage distribution plant,
23   should have both a customer and a demand component, for the cost causation reasons
24   discussed earlier, and based on Commission precedent. However, both traditional industry
25   practice and relatively recent Commission decisions imply that primary system costs
26   should also include both a customer component and a demand component.[8] The Company,

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[8] Regarding Commission precedent, the example of PPL Electric is discussed in detail below.

1 however, classifies all primary system costs as 100 percent demand-related, and thus is
2 inconsistent with Commission precedent and with the dictates of the NARUC Manual.

3 As a conceptual matter, I prefer the use of a zero-intercept approach to the minimum system
4 approach for distribution plant cost classification, because the zero-intercept approach
5 addresses the problem of the load-carrying capability of the minimum system. However,
6 because the zero-intercept approach for an EDC is more complicated, more data intensive
7 and sometimes more subjective than a minimum system analysis, the minimum system
8 approach is often preferred. Moreover, Commission precedent supports use of the
9 minimum system method in Pennsylvania. Thus, I do not object to the use of a minimum
10 system method in this proceeding.

11 I also agree that a peak demand method is appropriate for allocating the demand-related
12 portion of distribution plant costs. An electric distribution system must be sized to meet
13 peak demands, or customers will see their electric use constrained during peak periods. I
14 also agree that Citizens' use of the class NCP allocator for primary system distribution
15 costs is consistent with industry practice, and it reflects a measure of the load diversity that
16 the electric distribution system experiences at primary voltage.[9]

17 However, at the secondary voltage level, there are few benefits of load diversity for poles,
18 conductors and transformers. These assets must generally be sized to meet the peak
19 demands of a very few customers within a narrow geographic area. Thus, a better allocator
20 would be a sum of individual customer peaks allocator.

21 **Q. Are Citizens' cost classification methods consistent with the practices of other**
22 **Pennsylvania EDCs and industry practice?**
23 A. While I do not believe that the Company's methods are outside the range of industry
24 practice, a reasonable case can be made that some component of primary system plant

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[9] As a theoretical matter, the NCP is not well justified.   Plant assets that are located near customers must be sized to meet the individual customer peaks for customers in that geographic area, not the diversified sum of class peaks. Plant assets that are "deeper" in the system, notably substations, must be sized to meet the diversified demand of all customers "downstream" from those assets, from all classes, not from a single class. Thus, a cost-based allocation approach should be more reflective of coincident peak ("CP") demands for deep system assets, and sum of individual customer demands ("ICMD") for local assets. Nevertheless, using the NCP allocator is traditional and widespread, perhaps because it is something of a compromise between the two alternatives.

1	should be classified as customer-related, rather than classifying all primary system plant as
2	demand-related. In that respect, my experience in Pennsylvania EDC cost allocation is as
3	follows:

4   For many years, PPL Electric used an approach that is conceptually similar to that offered
5   by the Company in this proceeding, in that it used 100 percent demand classification for
6   its primary system and a minimum system approach for secondary distribution plant.
7   However, PPL Electric modified its method to include a customer component for its
8   primary distribution system (excluding substations). The Commission explicitly approved
9   the revised method in December 2012.[10]

10   In addition, the FirstEnergy EDCs use a minimum system methodology for distribution
11   plant cost classification (excluding substations), applying the analysis to both primary and
12   secondary systems.[11]

13   Duquesne Light generally uses the same approach as that advanced by Citizens (with some
14   additional complexity related to its urban network), as the Duquesne Light ACOSS was
15   also prepared by Witness Gorman.

16   Finally, the Commission has relatively recently approved the classification approach used
17   at UGI Electric, which incorporates a customer classification for both primary and
18   secondary voltage systems.[12]

19   Moreover, the NARUC manual for electric cost allocation specifies that distribution plant
20   costs have both a demand and a customer component, and it identifies the minimum system
21   approach as one of the standard methods. It indicates that the minimum system should be
22   applied to both primary and secondary distribution plant (excluding substations). The
23   manual further supports the use of NCP and individual customer demands as allocation

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[10] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2012-2290597, Order Entered December 28, 2012, pages 105-113.

[11] OSBA Statement No. 1, Docket No. R-2016-2537349 et al., pages 9-15.

[12] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2017-2640058, Order Entered October 25, 2018, 159-160.

1		factors for distribution demand-related costs.[13] The Commission has cited to the NARUC
2		Manual in support of its decisions in PPL Electric and UGI Electric.

3	Q.	**Have you conducted a detailed review of the Company's ACOSS?**
4	A.	I have not. Under normal circumstances, I would develop an ACOSS model that attempts
5		to replicate the Company's results, conduct discovery, and undertake a review of the details
6		to the Company's allocation method. That effort was not possible in this proceeding due
7		to time and resource constraints. My analysis was therefore limited to a review of Witness
8		Gorman's testimony, and limited review of the associated exhibits. As I did not replicate
9		the Company's ACOSS model, I cannot confirm that it is calculating accurately (nor can I
10		conclude that it is not). In developing an alternative simulation of the model, however, I
11		observed that the model was not easily rerun even with only a simple change, and I was
12		obligated to makes certain adjustments to allow it to calculate.

13	Q.	**Based on this limited review, do you have any significant methodological or numerical**
14		**concerns with the Company's ACOSS?**
15	A.	As I indicated earlier, the Company's classification of primary voltage distribution plant is
16		not consistent with Commission precedent for PPL Electric, nor is it consistent with the
17		NARUC Manual. As I also indicated, a sum of individual customer peak demands would
18		be a more appropriate allocator for the demand component of line transformers than the
19		NCP method used by the Company.

20		In addition, I observed that Witness Gorman's testimony (pages 21-22) indicates that line
21		transformers are classified into demand-related and customer-related components, using a
22		minimum system method. Moreover, Witness Gorman's workpaper at Schedule D3
23		appears to indicate that he intended to classify line transformers at 65.1 percent demand-
24		related, 34.9 percent customer-related. However, as shown at Schedule E-4C (CU), zero
25		line transformer costs are classified as customer-related. At this time, I assume that this
26		discrepancy is simply an inadvertent error.

27	Q.	**How have you addressed these issues.**

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[13] "Electric Utility Cost Allocation Manual," National Association of Regulatory Utility Commissioners, January 1992, pages 86-92, and 96-97.

1 A. Using the Company's electronic cost allocation model, I modified the classification of line
2 transformers to be consistent with Witness Gorman's testimony.

3 At this writing, I do not have sufficient information to derive the minimum system
4 classification parameters for distribution plant, to make that consistent with Commission
5 precedent for Pennsylvania. However, modifying the ACOSS to reflect a customer
6 component of primary system costs would generally serve to reduce the costs for the GLP-
7 1 and GLP-3 rate classes, and increase costs for the other classes, particularly the
8 residential class. As explained in the revenue allocation section below, however, rate
9 increases for the residential class in this proceeding are already constrained by the principle
10 of rate gradualism, and further corrections to the ACOSS will not affect revenue allocation.
11 I therefore recommend that classification of primary system distribution plant for Citizens
12 be deferred until the next base rates proceeding.

13 **Q.** **What are the results of your alternative ACOSS simulation?**
14 A. Table RDK-1 below shows class rates of return at present rates for the Company's ACOSS
15 and my alternative simulation. As shown, the change that I incorporated into my analysis
16 serve to reduce costs for the classes with larger customers (GLP-3, SH and, to a lesser
17 extent, GLP-1), and modestly increase costs assigned to the other classes.
18

Table RDK-1 Comparative Cost Allocation Results Class Rates of Return at Present Rates		
Class	Citizens	RDK
RS	(0.9%)	(1.2%)
SH	(0.7%)	0.9%
GLP-1	8.5%	8.7%
GLP-3	7.4%	8.9%
MBL	(5.9%)	(5.9%)
OL	3.7%	3.8%
Total	**1.7%**	**1.7%**
Source: Exhibit HSG-1, Schedule E1 (CU), RDK WP1		

1	**4.**	**Revenue Allocation**
2	**Q.**	**What is revenue allocation?**
3	A.	Revenue allocation is the assignment of the dollar net increase or decrease to each of the
4		Company's rate classes in a base rates proceeding. In contrast, *rate design* determines how
5		the allocated revenue is recovered from individual ratepayers within each class. From a
6		cost recovery standpoint, revenue allocation addresses *inter-class* cross-subsidization
7		issues, while rate design addresses *intra-class* cross-subsidization issues.
8	**Q.**	**What are the primary economic and regulatory criteria for revenue allocation?**
9	A.	In general, allocated cost is the primary criterion used by regulators in the revenue
10		allocation process. Most utilities and regulators adopt a policy in a base rates proceeding
11		of attempting to move revenues more into line with allocated costs by varying the
12		magnitude of the rate increases for the individual classes. However, regulators also subject
13		the rate increases to other non-cost criteria of ratemaking. Of the traditional rate design
14		criteria, the most common non-cost considerations in the revenue allocation process are:

- 15 · the *gradualism* principle (or avoidance of "rate shock"), in which large rate
- 16 increases for individual customers or classes of customers are avoided; and

- 17 · the *value of service* principle, which is often used to mitigate rate increases
- 18 for customers or customer classes with relatively price-elastic demand. [14]

19		Using these criteria, the utility will develop a proposal for assigning the increase in the
20		revenue requirement among the classes that reflects both cost and non-cost considerations.
21		With this proposal, the ACOSS can be simulated at both present and proposed rates to
22		evaluate the magnitude of "progress" has been made toward the policy of achieving cost-
23		based rates.
24	**Q.**	**How does the Company interpret the principle of rate gradualism in this proceeding?**

---

[14] See, for example, Principles of Public Utility Rates, Second Edition, Bonbright, Danielsen, Kamerschen, 1988, pages 383 to 387. Note that the criteria in this text apply to the overall development of a utility rate structure. The criteria that I discuss in this testimony are those that apply to the revenue allocation portion of the process, which is only one aspect of the overall development of utility rates.

1   A.   The Company indicates that it believes that rate gradualism requires an upper limit on the
2   base rate increase for any class to be 1.5 times the system average increase.[15]   At the
3   Company's proposed increase of 19.5 percent, the upper limit is therefore 29.2 percent. I
4   have no disagreement with this proposal as stated, although it appears that the Company
5   has, in fact, imposed a less flexible standard to the detriment of small business customers.

6   **Q.**   **What approach does the Company use for measuring the progress toward cost-based**
7   **rates associated with its revenue allocation proposal.**

8   A.   For many years, participants in Pennsylvania utility regulatory proceedings have relied on
9   a metric known as the "indexed rate of return," or "relative rate of return." For many years,
10   I have opposed the use of the indexed rate of return as a metric of progress, because that
11   metric can imply that a particular revenue allocation proposal results in progress when it
12   does not. My evaluation of the issues and potential failures of the indexed rate of return
13   is presented in Appendix A.

14   In evaluating progress, the Company does indeed rely on the indexed rate of return metric.
15   However, the Company also evaluates progress using the dollar subsidy method, as shown
16   at Exhibit HSG-1 Schedule B6-4 (CU). Consistent with the analysis in Appendix A,
17   Witness Gorman's use of the dollar subsidy method shows far less progress toward cost-
18   based rates than that implied by the flawed indexed rate of return metric. (As explained
19   in Appendix A, the Commission has also explicitly approved the use of the dollar subsidy
20   metric.)

21   For my evaluation, I rely on what I consider to be a neutral evaluation of progress toward
22   cost-based rates, namely the revenue-cost ratio. As explained in more detail in Appendix
23   A, this approach will generally show results that lie between the two methods used by the
24   Company, although its results are generally much closer to those of the dollar subsidy
25   method.

26   **Q.**   **Is the Company's proposed revenue allocation consistent with its own ACOSS and**
27   **rate gradualism restrictions?**

---

[15] Citizens' Statement No. 1 at 31.

1	A.	The Company's revenue allocation proposal is (mostly) directionally consistent with its
2		ACOSS results. It proposes to assign the upper bound increase of 29.2 percent to the MBL
3		class, recognizing its extremely low revenue-cost ratio. Citizens then proposes to assign
4		increases to the other two under-recovering classes, RS and SH, but at only about 1.2 to
5		1.25 times system average. For reasons that are not clear, Citizens proposes to assign an
6		increase to the Rate OL class that is well below system average, causing the class to go
7		from a position of modestly under-recovering costs to a position of further under-
8		recovering (based on the Company's cost allocation method).

9	Based on the results of my alternative COSS, the increase for the SH class is more than
10	sufficient to move revenues into line with allocated cost, whereas the increase for the RS
11	class is far short of that necessary for cost-based rates. While the Company does not so
12	indicate, it would appear that Citizens applied a different gradualism standard to the RS
13	class than that applied to other classes. This approach reduces the Company's ability to
14	move rates for the GLP-1 and GLP-3 classes into line with allocated cost.

15	The Company's revenue allocation proposal is summarized in Table RDK-2 below, with
16	supporting calculations in RDK WP3.

Table RDK-2					
Citizens' Revenue Allocation Proposal					
			Revenue-Cost Ratio		
	Increase ($000)	Increase (Percent)	Current Rates	Proposed Rates	Progress
RS	763.6	24.3%	91.9%	95.6%	46%
SH	6.0	23.4%	92.2%	95.2%	38%
GLP-1	112.7	11.4%	122.4%	114.2%	37%
GLP-3	99.3	11.4%	118.9%	110.8%	43%
MBL	6.0	29.1%	36.4%	39.3%	5%
OL	11.6	13.6%	94.4%	89.8%	-82%
Total	**999.3**	**19.5%**	**100.0%**	**100.0%**	--
Cost analysis is based on the Company's ACOSS model					
Source: RDK WP3.					

1   As shown, the Company's proposal makes modest progress toward bringing revenues into

2   line with allocated cost for the primary rate classes (RS, GLP-1 and GLP-3), but still falls

3   well short of achieving cost-based rates.

4   **Q.   Did you develop an alternative revenue allocation?**

5   A.   I did, based on the results of my alternative ACOSS.   The details of my proposal are

6   shown in RDK WP1, in the "Total" worksheet.   My approach to developing this proposal

7   was the following. First, I calculated the rate increase needed for class revenues to equal

8   allocated cost. I then limited the increase to be no more than 1.5 times the system average

9   for any rate class. Finally, I reallocated the shortfall associated with the rate gradualism to

10   the remaining rate classes (GLP-1 and GLP-3), in proportion to those class's respective

11   revenue requirements.   The effect of this proposal is to move rates for the RS class much

12   more into line than under the Company's proposal, while allowing for greater progress

13   toward cost-based rates for the other major classes, GLP-1 and GLP-3. The MBL class, of

14   course, continues to fall far short of costs, and the SH and OL classes will make modest

15   contributions to the shortfall from the RS and MBL classes. A summary is shown in Table

16   RDK-3 below.

Table RDK-3					
RDK Revenue Allocation Proposal					
			Revenue-Cost Ratio		
	Increase ($000)	Increase (Percent)	Current Rates	Proposed Rates	Progress
RS	917.3	29.2%	91.1%	98.5%	83%
SH	7.5	29.2%	97.0%	104.9%	>100%
GLP-1	25.2	2.6%	122.9%	105.5%	76%
GLP-3	18.6	2.1%	123.4%	105.5%	77%
MBL	6.0	29.2%	36.4%	39.4%	5%
OL	24.9	29.2%	94.5%	102.3%	>100%
Total	**999.3**	**19.5%**	**100.0%**	**100.0%**	--

Cost analysis is based on alternative RDK ACOSS.
Source: RDK WP1.

		5.	**Rate Design Issues**

1   **5.**   <u>**Rate Design Issues**</u>

2   **Q.**   **What is the Company's proposed rate design for the GLP-1 rate class?**

3   A.   The Company proposes to retain the existing tariff design for the GLP-1 class, which

4   consists of a monthly fixed customer charge, a per-kW demand charge and a per-kWh

5   energy charge. A little over half the revenues are collected from the demand charge, with

6   the balance of revenues reasonably balanced between the other two charges. Its proposal

7   is summarized in Table RDK-4 below, and shown in more detail in RDK WP2.

Table RDK-4 Citizens Rate Design Proposal for GLP-1			
	Current Charge	**Proposed Charge**	**Percent**
Customer Charge ($/mo)	$15.00	$16.00	6.7%
Demand Charge ($/kW/mo)	$3.45	$3.89	12.8%
Energy Charge (cents/kWh)	0.889	1.00	12.5%
Class Average (cents/kWh)	**3.72**	**4.15**	**11.4%**
Source: RDK WP2			

8   **Q.**   **Do you have any disagreement with the Company's rate design proposal for GLP-1?**

9   A.   I do not. The Company's proposed increase for the customer charge is more than justified

10   by the customer component of costs in the ACOSS. In fact, even if the rate increase for

11   GLP-1 is substantially scaled back (as it should be), I have no objection to the proposed

12   modest increase to the customer charge.

13   While the ACOSS contains little in the way of "energy-related" costs, I do not object to

14   the Company retaining its combined demand/energy charge structure, to mitigate the

15   impact on low load factor customers within the class. For the very low load factor

16   customers, it is unlikely that the customer billing peak matches the class NCP used in the

17   cost allocation study. Since a perfect matching of billing demands and cost causation

18   demands is not practical, the use of an energy charge to reduce the burden on low load

19   factor customers is reasonable. As the Company proposes to apply similar increases to

20   the demand and energy charge, it is essentially retaining the existing approved tariff

21   structure.

| 1 | **Q.** | **Please summarize the Company's rate design proposal for the GLP-3 class.** |

1 **Q.** **Please summarize the Company's rate design proposal for the GLP-3 class.**

2 A. The GLP-3 tariff consists of a monthly fixed customer charge, a per kW demand charge

3   (with ratchet), and a declining block "Wright" load factor tariff. The Company does not

4   propose any changes to its basic rate design approach, as summarized in Table RDK-5

5   below.

Table RDK-5			
Citizens Rate Design Proposal for GLP-3			
	Current Charge	Proposed Charge	Percent
Customer Charge ($/mo)	$51.00	$55.00	7.8%
Demand Charge ($/kW/mo)	$4.92	$5.49	11.6%
First 30 kWh/kW (cts/kWh)	0.8697	0.9500	9.2%
Over 30 kWh/kW (cts/kWh)	0.0947	0.1060	12.0%
Class Average (cents/kWh)	**2.02**	**2.25**	**11.4%**
Source: RDK WP2			

6 **Q.** **Do you have any disagreement with the Company's rate design proposal for GLP-3?**

7 A. At this time, I do not understand the Company's strategy for rate design for this class. The

8   Company's filing does not provide any explanation for this tariff, and the tariff itself has

9   some peculiar features.

10   First, I note that the demand charge produces the vast majority of class revenues (90

11   percent, including the ratchet). This suggests that the Company was in the process of

12   phasing out the energy charges in this tariff and making it strictly customer/demand based.

13   However, the Company does not appear to be following that strategy in this proceeding, as

14   it assigns generally proportionate increases to the energy charges.

15   Second, the tariff includes a "Wright" load factor energy charge, in which the charges vary

16   based on the billing load factor of the customer. The Wright tariff is similar to a combined

17   demand/energy charge, in that it charges higher per-kWh rates for low load factor

18   customers, but it also tends to protect extremely low load factor customers within the class

19   from extreme impacts related to a demand charge. However, the Citizens tariff has only

20   two blocks, with a very small size for the first block. At 30 kWh per kW, any customer

1		with a monthly billing load factor of about 4 percent will fill up the first block and pay the
2		balance at the much lower second block charge. Thus, for all intents and purposes, the
3		current GLP-3 Wright tariff charges are virtually identical to a demand charge of about 23
4		cents per kW, and an energy charge of .0947 cents per kWh. As the latter approach would
5		be much simpler and understandable for customers, I am unsure why the Company retains
6		this tariff structure.
7		Thus, for the purposes of this testimony, I recommend that Citizens provide its rationale
8		for the structure of the GLP-3 tariff in its rebuttal testimony, and explain any longer term
9		plans it has for the evolution of this tariff.
10	Q.	**Does this conclude your direct testimony?**
11	A.	Yes, it does.

<center>**APPENDIX A**</center>

<center>**MEASURES OF PROGRESS TOWARD COST BASED RATES**</center>

<center>**PENNSYLVANIA UTILITY COST AND REVENUE ALLOCATION**</center>

1   **<u>Introduction</u>**

2   The Pennsylvania Commonwealth Court held that cost of service is "the polestar" criterion

3   for assigning a utility rate increase among the various rate classes.[16]   Parties to Pennsylvania base

4   rates proceedings generally agree that this criterion implies that the revenues for each class at the

5   rates approved by the Commission should be closer to allocated costs than the rates in place when

6   the rate case is filed. Thus, parties to the proceeding will typically compare some metric for cost

7   recovery under "proposed rates" with that same metric for cost recovery under "current rates."

8   This comparison can show (a) *whether* the proposed rates result in class revenues that are closer

9   to allocated costs, and (b) *how much* progress the proposed rates make toward moving class

10 revenues toward allocated costs.

11   While different metrics are used for this analysis, the most common metric in Pennsylvania

12 is the "indexed rate of return" metric (also called the "relative rate of return" or "unitized rate of

13 return" metric). This appendix demonstrates why the indexed rate of return is not a reliable metric

14 for identifying whether proposed rates are closer to allocate costs than current rates, and that even

15 where the indexed rate of return correctly implies that there is progress toward cost-based rates, it

16 is not a reliable indicator of the amount of progress that is achieved.[17] This appendix also compares

17 the indexed rate of return to three other metrics for evaluating progress toward cost-based rates,

18 namely the dollar subsidy, the rate of return differential, and revenue-cost ratio metrics.

---

[16] <u>Lloyd v. Pennsylvania Public Utility Commission</u>, 904 A.2d 1010, 1020 (Pa. Cmwlth. 2006).

[17] This problem with the indexed rate of return metric was identified in OSBA-sponsored testimony at least as early as 1994. This critique has been presented in expert testimony many times since.   No credible rebuttal to these basic conclusions has been submitted, but the widespread use of this metric continues.

The Structure of the Cost Allocation Study

1

2   The indexed rate of return metric is derived from the method that is most often used for

3   utility cost allocation in Pennsylvania. When a utility or regulator develops a revenue requirement

4   for a test year, it simply sums all of the individual cost items for that year, including operating and

5   maintenance ("O&M"), administrative and general ("A&G"), depreciation, taxes other than

6   income, income taxes and allowed return on rate base. Thus, the objective of a cost allocation

7   study should be to simply allocate each of these cost elements to the various rate classes. Because

8   the allowed return and associated income tax are derived from rate base, the cost allocation study

9   allocates all net plant and other rate base items to the various rate classes, and the return and income

10   taxes can then be allocated in proportion to rate base.

11   Cost allocation studies in Pennsylvania, however, are most often conducted on a class rate

12   of return basis. That is, the cost allocation study calculates a class rate of return by taking revenues,

13   deducting the allocated O&M, A&G, depreciation and taxes other than income, to produce a pre-

14   tax class net income. Income taxes are then most often allocated based on the calculated pre-tax

15   class income, and a net income by class value is derived by difference. The allocated pre-tax and

16   net income figures are thus not a cost of capital, but represent the implied return provided by each

17   class under the revenues (current or proposed) used in the cost allocation study. These net income

18   values are then divided by the allocated rate base, to produce percentage class rates of return.[18]

19   Thus, with this approach to cost allocation, there is a desire by utilities and regulators to develop

20   a metric for evaluating progress toward cost-based rates that is based on the class rates of return

21   produced by the cost allocation study.

Defining Progress Toward Cost-Based Rates

22

23   It is not necessarily obvious what it means to "move rates more into line with allocated

24   cost" between current and proposed rates. At the simplest level, one could argue that if the current

25   rate revenues for a particular class are below the allocated cost for that class at the full proposed

---

[18] Some Pennsylvania utilities also calculate cost of service using a "levelized rate of return" method, in which return and income tax costs are allocated such that each class produces the system average rate of return.   This approach is arithmetically equivalent to allocating return and income tax costs in proportion to rate base, as described above.

1 revenue requirement, any increase in rates will move that class's revenues closer to allocated cost.

2 However, the objective of this exercise is to measure the progress toward cost-based rates for each

3 rate class compared to that for all of the other classes. Thus, a revenue allocation proposal must

4 be evaluated for its impact on all of the rate classes.

5 Also at the simplest level, of course, a proposed revenue allocation will by definition move

6 rates more into line with allocated cost if each class's revenues are moved exactly to the full

7 proposed allocated cost of service. Or, equivalently, rates are exactly cost-based when each class's

8 revenues are set such that the class produces the system average rate of return. Therefore, there is

9 no question that moving a class exactly to an indexed rate of return of unity (1.0) is necessarily

10 consistent with making rates more cost based.

11 In many base rate proceedings, however, moving rates fully into line with allocated costs

12 cannot be achieved due to consideration of other rate design factors, most notably "rate

13 gradualism," which serves to limit the increase for any particular class of customers in any rate

14 proceeding, and has the aim of gradually moving rates into line with allocated cost.

15 Thus, in terms of determining whether a particular rate proposal moves rates into line with

16 allocated cost, this appendix takes the position that there is progress toward cost-based rates if the

17 proposed relative rate increases across the various classes, when followed for a number of base

18 rates proceedings (in which there is no change in the relative cost structure), will eventually result

19 in cost-based rates. Thus, for any particular metric, it is important to consider not only the

20 difference between the metric and current rates and proposed rates in one base rates case, but also

21 what that metric will imply going into the next base rates case.

22 As shown further in the numerical example below, this standard for defining progress

23 implies that for classes with revenues below allocated cost at current rates (or, equivalently, with

24 a class rate of return below system average), progress can only be achieved by assigning that class

25 a rate increase above the system average increase. This, of course, is just plain common sense. If

26 a class is under-recovering costs, it should be assigned an above average increase. As shown

27 below, however, the indexed rate of return metric fails at common sense.

The Numerical Example

2   This appendix takes the approach of defining a specific numerical example, and showing

3   the implications of various different metrics on different rate increase scenario. The calculations

4   associated with this example are also provided in MS Excel electronic format (RDK WP4), and

5   parties are able to simulate alternative examples to evaluate the rigor of this analysis.

6   The example attached to this appendix shows the arithmetic impacts of a single two-class

7   utility example under four different rate increase proposals. Each page shows the implications of

8   a different revenue-cost metric, namely the indexed rate of return, dollar subsidy, differential rate

9   of return, the revenue-cost ratio and the normalized revenue-cost ratio.

10   The example involves two rate classes, A and B, in which each generates the same revenue

11   at current rates, but in which Class A has a moderately higher cost to serve. The four rate increase

12   scenarios are (I) an across-the-board increase in which both classes get the same percentage

13   increase, (II) a scenario with a moderately higher percentage increase for Class B, and (III) a

14   slightly higher percentage increase for Class A, and (IV) a moderately higher percentage increase

15   for Class B.

16   The common-sense answer is that the across-the-board scenario (I) should show no

17   progress toward cost-based rates, Scenario II should indicate that revenues are moving farther

18   away from costs, and Scenarios III and IV should show that revenues are moving slightly and

19   modestly closer to allocated costs. The discussion of each metric below highlights where the

20   metric produces results that are at odds with these expectations.

21   To evaluate the question as to whether there is consistent progress toward cost-based rates,

22   the metrics are evaluated at both proposed rates in the "current" base rates proceeding, and for

23   what the values would imply going into the next base rates case after a uniform increase in costs.

The Indexed Rate of Return Metric

25   The indexed rate of return metric is measured as the class rate of return divided by the

26   system average rate of return, at current and proposed rates. If revenues are fully in line with

allocated costs, the class indexed rate of return is unity (1.0). Thus, if a class has an indexed rate of return at present rates that is higher than system average, it is deemed to be over-recovering costs, and conversely, where the indexed rate of is below unity, the class is under-recovering allocated costs.

As a standalone measure for relative cost performance, there is nothing wrong with the indexed rate of return metric – for any particular system average rate of return scenario, the farther a class's indexed rate of return is from unity, the farther it is from allocated costs.

Moreover, since an indexed rate of return of unity represents cost-based rates, it is conceptually appealing to conclude that if the indexed rate of return moves closer to unity, there is progress toward cost-based rates. Moreover, it is similarly appealing to conclude that progress toward cost-based rates could be measured by how much closer the index gets toward unity between current and proposed rates. Unfortunately, this intuitive approach fails in the actual arithmetic.

Utilities have used this argument for decades in Pennsylvania. While it is not clear why alternative methods have not been adopted, it may be that the metric is attractive to both utilities and regulators in that it tends to show significant progress toward cost-based rates when in fact there is little such progress. This then allows utilities to claim that they are following the cost standard without having to make politically unpopular decisions regarding differentiating rate increases among the various rate classes.

When applied in an actual example, the indexed rate of return fails even the simplest test. In the example shown, the current rates class rates of return are 2.50% and 5.71% for Classes A and B respectively, producing indexed rates of return of 0.625 and 1.429 relative to the system average return of 4.00%. When a 30% increase is applied to both classes, the system average rate of return rises to 8.00%, and the class returns rise to 6.25% and 10.00% respectively, yielding indexed rates of return of 0.781 and 1.250.

Thus, despite the fact that both classes get the same percentage increase and common sense says that there should be no progress toward cost-based rates, the indexed rate of return metric not only implies that there is progress, but that there is significant progress. The Class A indexed rate

1   of return moves from 0.625 to 0.781, which appears to imply that the class has moved 42 percent

2   of the way to cost-based rates.[19]

3   The fallacy of this logic is shown in the implications for the next rate case. When costs

4   increase, the system average rate of return falls back to its lower level and the indexed rate of

5   return metrics all shift farther away from unity. Thus, as shown, an across-the-board increase in

6   the current rate case followed by an across-the-board cost increase for the next case will

7   demonstrate that, in fact, there is no progress toward cost-based rates and the indexed rates of

8   return are right back where they started.

9   The other revenue increase scenarios show similar problems with the indexed rate of return

10   metric. In Scenario II, despite a smaller percentage increase for the higher-cost Class A, the

11   indexed rate of return again implies that there is progress toward cost-based rates, which is

12   obviously nonsense. This is again demonstrated by the implications for the next base rates case,

13   which understandably show that rates are farther out of line than they were going into the current

14   rate case. It is simply unreasonable to believe that assigning larger percentage increases to the rate

15   class that is already over-recovering costs will somehow reduce inter-class subsidies.   And yet

16   that is the implication of the indexed rate of return metric.

17   In Scenarios III and IV, the indexed rate of return does produce the correct directional

18   answer, namely that rates are moving more into line with allocated cost.   But the indexed rate of

19   return metric implies that both scenarios result in enormous progress toward cost-based rates, when

20   in fact there is relatively little progress, particularly in Scenario III.   As shown in the example,

21   despite a small differential in the rate increases, the indexed rate of return implies that revenues

22   have moved 50 percent of the way toward allocated cost.   Realistically, however, as shown in the

23   implications for the next base rates case, the actual progress is much lower.

24   Thus, the indexed rate of return metric is a wholly unreliable guide for evaluating progress

25   toward cost-based rates in a utility rate proceeding, because it (a) may show progress toward cost-

---

[19] "Progress" is measured by how much the metric has moved divided by how far it needs to move to become fully cost-based.   Thus, in the residential class example, the index moves from 0.625 to 0.781, a difference of 0.156, compared to moving fully to cost-based rates, which would require the index to move from 0.625 to 1.000, a difference of 0.375. Progress is measured as 0.156/0.375, or 42 percent.

1 based rates when in fact revenues are moving farther away from costs, and (b) will overstate the

2 magnitude of progress toward cost-based rates when progress is occurring.

3 **The Dollar Subsidy Method**

4   While the indexed rate of return metric is the most common approach used by Pennsylvania

5 utilities, the Commission has also supported the use of the dollar subsidy metric. In an order

6 involving the City of Bethlehem – Water Department, the Commission concluded:

7   "As noted by the OSBA, the proper yardstick for measuring the degree of
8   movement toward cost of service is the change in the absolute level of class
9   subsidies at present and proposed rates."[20]

10   In the dollar subsidy method, the total cost to provide service is calculated using the method

11 described above, in which each component to cost, including return and income taxes, is allocated

12 to each cost. The difference between current rate revenues and the allocated cost is the dollar

13 subsidy.[21]

14   In allocating the return and income tax costs under the "current rates" evaluation, the values

15 used represent only the return that the utility would achieve and the income taxes that it would

16 incur if it were assigned no rate increase. These values therefore do not represent the utility cost

17 of capital, but simply residual values of what is left from current rate revenues after O&M, A&G,

18 depreciation and other taxes are deducted.

19   When the dollar subsidy metric is applied to the four alternative revenue allocation

20 proposals in the attached example, it implies the following:

21   • For the across-the-board increase, the dollar subsidy metric indicates that the dollar
22   value of the revenue-cost difference increases under proposed rates, implying that rates

---

[20] *Pennsylvania Public Utility Commission v. City of Bethlehem -- Water Department*, Docket No. R-2020-3020256, Order entered April 15, 2021, at 36.

[21] This appendix uses the term "subsidy" as the difference between revenues and fully allocated cost in a utility cost allocation study. Theoretical economics generally defines subsidy based on incremental cost concepts, rather than fully allocated cost.

are moving farther away from costs.   In dollar terms, that conclusion is correct, although in percentage terms the subsidies remain the same.

- When a larger increase is assigned to Class B, the dollar subsidy metric indicates correctly that rates are moving farther away from allocated cost, and that the problem will be worse with the next base rates proceeding.

- When a modestly larger increase is assigned to Class A, the dollar subsidy metric implies that there is no progress toward cost-based rates in the current rate proceeding, and that the situation will be worse in the next base rates case. In effect, even though the slightly higher rate increase for Class A will (eventually) lead to cost-based rates, the dollar subsidy method implies that there is no progress.

- When a materially larger increase is assigned to Class A, the dollar subsidy metric correctly indicates that there is progress toward cost-based rates.

Thus, overall, the dollar subsidy metric will tend to slightly understate progress toward cost-based rates, but the distortion is far smaller (and in the opposite direction) of that of the indexed rate of return metric.

<u>The Differential Rate of Return</u>

The differential rate of return metric is similar to the indexed rate of return metric, in that both approaches calculate class rates of return and current and proposed rates, and compares each class's return to the system average.   However, where the indexed rate of calculates the *ratio* of class to average return, the differential rate of return calculates the *difference* between class and average rates of return.   In the indexed rate of return, cost-based rates are achieved with an indexed rate of return of unity (1.0); for the differential rate of return, cost-based rates are achieved with a differential rate of return of zero.

When applied to the four revenue allocation scenarios in the example, the differential rate of return produces results that are nearly the same as the dollar subsidy method.   That is, the differential rate of return calculation will slightly understate progress toward cost-based rates, but the results are much less distorted than those from the indexed rate of return metric.

Revenue-Cost Ratio

The revenue cost ratio is similar to the dollar subsidy metric, except rather than taking the difference between revenues and allocated costs, it takes the ratio of revenues to allocated cost. Like the indexed rate of return, cost-based rates are achieved at a revenue-cost ratio of unity (1.0 or 100 percent).

Unlike the indexed rate of return metric, however, the revenue-cost ratio generally does not distort the implications of a revenue allocation proposal. As shown in the example, in all four revenue allocation proposals, the revenue-cost ratio correctly indicates when there is progress toward cost-based rates and when there is not.

The only downside to this unadjusted revenue-cost ratio approach is that the progress toward cost-based rates in the current case is not the same as that going into the next base rates case. This results because the mix of operating costs allocated to each class is different from the mix of rate base costs. This minor distortion is addressed in the final metric below.

Normalized Revenue-Cost Ratio

The normalized revenue-cost ratio makes a technical correction to the revenue-cost ratio metric to reduce the distortion associated with using a non-cost parameter, namely the residual return and income tax costs, as a measure of cost at current rates. This metric uses fully allocated costs including the utility's allowed return on capital as the cost metric at both current and proposed rates. In this metric, however, the revenues at current rates are "normalized" by applying the system average rate increase to each class. Thus, in this metric, the current rates revenue-cost ratio is the revenues that would be earned from each class if an across-the-board rate increase were applied divided by the fully allocated class revenue requirement. This is then compared to the revenue-cost ratio that results from the actual proposed revenue allocation.

As shown in the attached example, this metric correctly shows the progress toward cost-based rates in each of the scenarios, and it also correctly predicts what each class' revenue-cost performance will be going into the next base rates case if there is no change in the underlying cost structure.

1   **Summary**

2   The indexed rate of return is a metric that has intuitive appeal, in that cost-based rates are

3   achieved when the index is at unity (1.0), and that it would seem therefore that moving the index

4   closer to 1.0 would represent progress toward cost-based rates.

5   Alas, it is not that simple.   As shown in the examples attached, and as evidenced in

6   hundreds of utility rate proceedings in Pennsylvania, the indexed rate of return is not a reliable

7   metric for gauging progress toward cost-based rates for any particular revenue allocation proposal.

8   It may give a directionally correct answer, and it may not.   And even when it does correctly show

9   progress, it implies that there is much more progress toward cost-based rates than actually exists.

10   Of the five metrics evaluated in this review, the indexed rate of return is the only metric to

11   fail the test and imply that there is progress toward cost-based rates when there is none, and even

12   when rates are moving substantially away from allocated cost.

13   All the other metrics evaluated in this review are superior to the indexed rate of return

14   approach.   The dollar subsidy and differential rate of return have a modest disadvantage in that

15   they may imply that there is no progress toward cost-based rates when in fact some small progress

16   is occurring. This is a relatively modest disadvantage since the distortion is much smaller than

17   that in the indexed rate of return, and moreso because it will encourage Pennsylvania utilities and

18   regulators to adopt revenue allocation proposals that are more aggressive in moving revenues into

19   line with allocated cost, consistent with the legal standard that cost of service be the polestar

20   criterion.

21   Overall, however, the revenue-cost metric, particularly the normalized revenue-cost

22   metric, does not suffer from the distortions of any of the other methods, and is the most reliable of

23   the methods on offer.

EXHIBIT RDK-1

RÉSUMÉ AND EXPERT TESTIMONY LIST

FOR

ROBERT D. KNECHT

Overview

Mr. Knecht has more than 40 years of economic consulting experience, focusing on the energy, utility, metals and mining industries. For the past 30 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 consulted to 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.

Mr. Knecht served as a Principal of IEc for 33 years, and as its Treasurer for 15 years. He is currently an independent consultant who remains affiliated with IEc.

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 25 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 ATTORNEY GENERAL OF THE STATE OF RHODE ISLAND, Mr. Knecht provided consulting and expert witness services in an acquisition proceeding involving PPL Corporation's proposed acquisition of Narragansett Electric from National Grid. Mr. Knecht's testimony addressed financial, economic, environmental, tax, operating cost and rate implications.

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.

EXHIBIT RDK-2

RDK WORKPAPERS

RDK WP1: Alternative Version of Citizens' ACOSS

RDK WP2: Revenue Proof and Other Calculations

RDK WP3: Citizens' ACOSS with Revenue Allocation Calculations

RDK WP4: Metrics of Progress Toward Cost-Based Rates.

*** Eletronic Workpapers in excel format will be distributed via email attachement simultaneous to service of Direct Testimony***

PENNSYLVANIA PUBLIC UTILITY	:	
COMMISSION	:	
	:	
v.	:	**Docket No.** **R-2022-3032369**
	:	
CITIZENS' ELECTRIC COMPANY OF	:	
LEWISBURG, PA	:	

VERIFICATION

I, Robert D. Knecht, hereby state that the facts set forth in my Direct Testimony labelled OSBA Statement No. 1 and associated Exhibits RDK-1 and RDK-2 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: July 25, 2022

_____
Robert D. Knecht

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2022-3032369
	:	
Citizens' Electric Company of Lewisburg	:	

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).

The Honorable Eranda Vero
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Pennsylvania Public Utility Commission
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/s/ Sharon E. Webb

DATE: July 25, 2022

_____

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

August 16, 2022

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

The Honorable Charece Z. Collins
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
400 North Street 2nd Floor West
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission v. Citizens' Electric Company of Lewisburg / Docket No. R-2022-3032369

Dear Judge Vero and Judge Collins:

Enclosed please find the Rebuttal Testimony and Exhibits of Robert D. Knecht, labeled OSBA Statement No. 1-R, 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: Robert D. Knecht
       Mark Ewen
       Parties of Record

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

PENNSYLVANIA PUBLIC UTILITY COMMISSION	: : :	
v.	: :	Docket No. R-2022-3032369
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA	: : :	

Rebuttal Testimony and Exhibits of

ROBERT D. KNECHT

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

**Cost Allocation
Revenue Allocation**

Date Served: August 16, 2022

Date Submitted for the Record: October 17, 2022

1   **1.   <u>Introduction</u>**

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

3   A.   My name is Robert D. Knecht. I am appearing in this proceeding on behalf of the

4   Pennsylvania Office of Small Business Advocate ("OSBA"). I submitted direct testimony

5   and associated exhibits earlier in this proceeding, and my qualifications were detailed

6   therein.

7   **Q.   Please describe the purpose of this rebuttal testimony.**

8   A.   This rebuttal testimony addresses certain aspects of the direct testimony submitted by

9   Pennsylvania Office of Consumer Advocate ("OCA") witness Dr. Karl Richard Pavlovic

10   and the Commission's Bureau of Investigation and Enforcement ("I&E") witness Esyan

11   A. Sakaya, on matters of cost allocation and revenue allocation.

12   Cost allocation and revenue allocation issues are addressed sequentially below.

13   **2.   <u>Cost Allocation</u>**

14   **Q.   Please summarize the positions of the parties in this proceeding regarding cost**

15   **allocation.**

16   A.   As I indicated in my direct testimony, the Company filed a detailed allocated cost of service

17   study ("ACOSS"), in both pdf and MS Excel electronic format.   The Company

18   subsequently updated its ACOSS to reflect certain changes and corrections to the

19   Company's filed position, in documents with the suffix "CU." I generally relied on the

20   CU ACOSS as a starting point for my review of the cost allocation methods used by the

21   Company.[1]

22   Regarding the allocation of joint use distribution system assets, the Company classified its

23   primary system assets as 100 percent demand-related, and its secondary system assets as

---

[1] As I explained in my direct testimony, the electronic version of the CU ACOSS that was provided to me does not solve properly, and I needed to make certain modest modifications to the code in order to develop an alternative simulation.

part demand-related and part customer-related, using a combination of minimum system and zero load methods.[2]   This method resulted in only a relatively small share of distribution plant being classified as customer-related. In total, the costs for joint-use distribution plant assets in Accounts 364 (poles, etc.), 365 (overhead conductors), 366 (underground lines) and 368 (line transformers), approximately 23% of the costs are classified as customer-related. For line transformers, the Company also adjusted the demand allocator to account for the load carrying capability of the minimum system transformer.

In my direct testimony, I observed that the Company's method for classifying primary system costs was consistent neither with Commission precedent nor the NARUC Electric Utility Cost Allocation Manual, in that it did not attempt to estimate a customer component for those costs.   For the purposes of this proceeding, however, I accepted the Company's method, although I modified the Company's electronic model for an apparent inconsistency between the model and the Company's testimony regarding the classification of line transformers.

I&E Witness Sakaya relies on the Company's filed ACOSS.

OCA Witness Pavlovic opposes the classification of secondary distribution assets into customer and demand components.   Dr. Pavlovic's testimony includes the cover page of what Dr. Pavlovic indicates is a simulation of the Company's ACOSS model, in which distribution plant costs in Accounts 364, 365 and 366 are classified as 100 percent demand-related.

Q.   Did Dr. Pavlovic rely on the updated "CU" ACOSS?

A.   From the summary page, it appears that Dr. Pavlovic relied on the original filing, rather than the corrected/updated versions

---

[2] The Company determines the zero-load component based on the fixed labor cost associated with equipment installation.   This approach understates the cost of a minimum system as it is normally employed and as it was approved in the PPL Electric and UGI Electric COSS analyses approved by the Commission.   In my direct testimony at page 11, I incorrectly indicated that Citizens relied entirely on a minimum system approach for all joint use distribution plant assets.

1	Q.	Have you been provided with a full printout or the electronic model for Dr. Pavlovic's
2		ACOSS simulation?
3	A.	I have not.

4	Q.	Were you able to replicate Dr. Pavlovic's results?
5	A.	Although I attempted to replicate the results using the Company's originally filed ACOSS,
6		I was unable to do so. This may be due to a variety of factors, including the problems with
7		the electronic model, the actual classification method used by the Company (as opposed to
8		its stated method), and/or how Dr. Pavlovic adjusted the Company's demand allocator for
9		line transformer costs, to reflect the fact that no minimum system classification is applied.[3]
10		Also, in attempting to replicate Dr. Pavlovic's results, I identified what appears to be
11		another glitch in the Company's ACOSS, namely in the development of the classification
12		factor used for miscellaneous distribution expenses.[4] This error has only a small impact
13		on overall allocated costs, but I will correct my simulation of the Company's ACOSS
14		model in surrebuttal testimony should that prove necessary.

15	Q.	Dr. Pavlovic cites to the Bonbright text in support of the hypothesis that joint use
16		distribution plant should not be classified as partly customer-related. Was the
17		Commission aware of the Bonbright hypothesis when it approved the use of the
18		minimum system method for both primary and secondary system assets?
19	A.	Yes. Arguments similar to those advanced by Dr. Pavlovic in this proceeding were also
20		advanced in the PPL Electric and UGI Electric matters. See OCA Statement No. 3
21		(Watkins) at 14 in Docket No. R-2012-2290597, and OCA Statement No. 4 (Mierzwa) at
22		10-11 in Docket No. R-2017-2640058. The Commission simply declined to interpret
23		Professor Bonbright's hypothesis as justifying the elimination of any customer component
24		for joint use electric distribution plant costs in those proceedings.

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[3] There is obviously no need to adjust the demand allocator for line transformers for the load carrying ability of the minimum system (as the Company does) if the minimum system construct is not used (as Dr. Pavlovic proposes).

[4] Specifically, see the Company's electronic ACOSS model in the "Classfctr" worksheet at cells G40 to I41 for the SEC-OH_UG classifier.   Note that the formulae for the classified plant in the "Commodity" and "Customer" categories relies on the incorrect cells in the "Classify" worksheet for those plant items.

1	Q.	**Dr. Pavlovic argues that, for a given geographical area, doubling the number of**
2		**customers will have no impact on the costs for the system. Dr. Pavlovic uses that logic**
3		**to conclude that there is no customer component of costs, and that all distribution**
4		**plant should be classified as demand-related. Is this argument sufficient justification**
5		**to reject both Commission precedent and the NARUC Manual?**
6	A.	In my view, it is not. This argument is essentially a marginal or incremental cost argument,
7		which suggests that once the system is built, adding load may increase costs but adding
8		customers within the geographic footprint does not. As such, this argument ignores the
9		cost causation factors that were relevant for constructing the distribution system within the
10		geographical area in the first place. Pennsylvania, by contrast, is an embedded cost
11		jurisdiction in which all costs are allocated to rate classes based on long-term cost causation
12		factors.
13		Second, this argument ignores the cost causation factors that are associated with expanding
14		the distribution system to larger geographical areas, or even to in-fill existing geographic
15		areas. When the electric distribution system is extended, it is likely that serving many
16		small and more geographically diverse customers will cost more per kW of demand than
17		extending the system to serve a few larger customers. Thus, even on an incremental cost
18		basis, a customer component to distribution costs is justified.
19		Finally, Dr. Pavlovic's argument ignores the common-sense conclusion that commercial
20		customers tend to be larger and located in more geographically concentrated business
21		districts, while smaller residential customers are more spread out and are thus more costly
22		to serve per kW.
23		The zero-load and minimum system methods are imperfect, but so are all cost allocation
24		methods for joint use utility plant. The advantage of the zero-load and minimum system
25		methods is that they reflect the underlying economic reality that there are economies of
26		scale for serving larger customers who tend to be more geographically concentrated than
27		the smaller customers who tend to be more dispersed. The 100 percent demand
28		classification simply assumes that such economies do not exist.

1	Q.	**Are there practical reasons for the Commission to retain its approved methods for**
2		**distribution plant classification in this proceeding?**
3	A.	I believe so. Adopting the methodology proposed by Dr. Pavlovic will generally result in
4		a significant shift in costs from residential and the smaller commercial customers to large
5		commercial/industrial customers in each electric distribution utility to which it is applied.
6		Such a shift will be particularly acute at some of the larger EDCs in Pennsylvania that
7		classify both primary and secondary distribution plant into customer and demand
8		components (e.g., PPL Electric and the FirstEnergy companies). To my knowledge, large
9		commercial and industrial interests are not represented in this proceeding. Thus, to the
10		extent the Commission is considering a departure from its established practice (and thus
11		reversing its decisions in PPL Electric and UGI Electric), I encourage it to do so in a
12		proceeding where all interests are represented, particularly those interests who would be
13		most affected by the change.

14	Q.	**In the event the Commission is considering adopting Dr. Pavlovic's proposed**
15		**approach, have you developed an ACOSS with a zero customer component for joint**
16		**use distribution plant?**
17	A.	I have. My zero-customer-component ACOSS is provided in RDK WPR1. It is based on
18		the Company's CU ACOSS, with the following modifications:

- Cells V133:X134 in the "Classify" worksheet are modified to allow the model to solve (a modification that I also made in RDK WP1);

- Cell U24 in the "Classify" worksheet is modified to use the "Trans-Min" classification factor, for the reasons explained in my direct testimony;

- Cells G75:I78 in the "ClassFctr" worksheet are modified to classify all joint use distribution plant (including line transformers) as 100 percent demand related;

- Cells H40:I41 in the "ClassFctr" worksheet are modified to correctly source the commodity and customer costs from the "Classify" worksheet;

- Cell E24 of the "SecnDem" worksheet is modified to allocate line transformer demand costs using the secondary demand allocator, without the adjustment for

| 1 | the load carrying capability of the minimum system.   This change is then passed |
| 2 | downward in that worksheet to cells E44, E80 and E113. |

| 3 | Table RDK-R1 below shows the class rate of return at present rates from the Company's |
| 4 | ACOSS, Dr. Pavlovic's ACOSS summary, and RDK WPR1. |

Table RDK-R1 Comparative Cost Allocation Results Class Rates of Return at Present Rates			
Class	**Citizens CU**	**OCA KRP-2**	**RDK WPR1**
RS	(0.9%)	0.8%	(0.4%)
SH	(0.7%)	(5.8%)	(2.9%)
GLP-1	8.5%	7.8%	8.1%
GLP-3	7.4%	3.5%	5.6%
MBL	(5.9%)	(1.9%)	(6.2%)
OL	3.7%	6.1%	3.6%
Total	**1.7%**	**2.3%**	**1.7%**
Source: Exhibit HSG-1, Schedule E1 (CU), RDK WPR1, OCA Statement No. 3, Exhibit KRP-2			

5 **Q.   What are the implications of a COSS with a zero customer component?**

6 A.   Because the Company's ACOSS model classifies only a relatively small portion of

7   distribution plant as customer-related, the changes proposed by Dr. Pavlovic have a modest

8   impact on allocated costs, with no change in the overall pattern.[5] For the major classes,

9   the RS class continues to exhibit a class rate of return well below system average, while

10   the GLP-1 and GLP-3 classes exhibit rates of return well in excess of system average. Dr.

11   Pavlovic's proposed method would modestly shift costs from the RS and GLP-1 classes

12   (with smaller customers) to the GLP-3 class (with larger customers). For the other classes,

13   Dr. Pavlovic's method similarly has little impact, with SH and MBL continuing to exhibit

---

[5] As I indicated earlier, if this method is adopted for all Pennsylvania EDCs, the impacts will generally be substantially larger, because other EDCs classify a larger share of distribution plant as customer-related.

| 1 | rates of return far below system average, and Rate OL showing a return modestly above |
| 2 | system average. |

3   **3.   Revenue Allocation**

4   **Q.   What are the positions of the parties regarding revenue allocation in this proceeding?**

5   A.   I compiled a workpaper that compares the revenue allocation proposals of the Company,

6   Dr. Pavlovic, and Witness Sakaya with my own, provided in RDK WPR2.   These

7   proposals can be summarized as follows:

8   •   The Company's proposed revenue allocation is reasonably consistent with its

9   ACOSS, but is relatively restrained in moving rates into line with allocated cost;

10   •   My revenue allocation proposal relies on the Company's ACOSS modified for a

11   change to the classification of line transformer costs, and is relatively aggressive in

12   moving rates into line with allocated cost subject to the constraint that rate increases

13   not exceed 1.5 times the system average for any class;

14   •   Dr. Pavlovic offers a revenue allocation proposal that is purportedly based on the

15   results of the OCA ACOSS;

16   •   At the full proposed rate increase (just short of $1.0 million), Witness Sakaya relies

17   on the Company's ACOSS model and its revenue allocation proposal, with a small

18   shift in revenue responsibility ($12,000) from the GLP-1 class to the Rate OL class.

19   However, Witness Sakaya recognizes that, even with the small adjustment, the

20   Company's proposed revenue allocation would result in the GLP-1 and GLP-3

21   classes continuing to produce revenue well in excess of allocated cost. Witness

22   Sakaya therefore offers a "first dollar relief" proposal in which the first $200,060

23   of reduction from the proposed rate increase be credited to the revenue

24   responsibility of the GLP-1 and GLP-3 classes. If the allowed increase is reduced

25   by $200,060, the rate increase for GLP-1 and GLP-3 would fall to zero. If the

26   reduction is more than $200,060, Witness Sakaya proposes that the RS, SH and OL

27   increases be reduced proportionately. RDK WPR2 shows the implications of

| 1 | Witness Sakaya's proposal at the full proposed increase, a reduction of $200,060, |
| 2 | and a reduction of the overall increase to $600,000. |

3 **Q.   What is your view of Witness Sakaya's proposal?**

4 A.   The $200,060 "first dollar relief" proposal represents about 20 percent of the Company's

5   proposed overall increase. In most electric and gas base rates proceedings in Pennsylvania,

6   I would expect the awarded increase to be at least 20 percent below the proposed increase,

7   based simply on experience. If that were the case, Witness Sakaya's proposal would be

8   quite effective at moving rates into line with allocated costs for the GLP-1 and GLP-3

9   classes. However, in this proceeding, the Company's $1.0 million increase does not

10   represent its fully claimed costs, and thus it implicitly has already "been given a haircut."

11   Thus, the allowed increase may not be materially below the proposed increase.   In fact,

12   I&E's proposed increase for Citizens is $930,452, a reduction of only about $69,000 from

13   the Company's proposed increase.[6]

14   If there is little reduction to the Company's proposed increase, Witness Sakaya's proposed

15   first dollar relief mechanism will do little to address the substantial over-recovery of costs

16   by the GLP-1 and GLP-3 rate classes in the Company's revenue allocation proposal.   I

17   therefore cannot support Witness Sakaya's proposal, unless the Commission adopts a

18   material reduction in the proposed rate increase.

19 **Q.   What is your response to Dr. Pavlovic's proposal?**

20 A.   I disagree with Dr. Pavovic's proposal for two reasons.   First, Dr. Pavlovic relies on the

21   OCA ACOSS model, that is not consistent with cost causation or Commission precedent

22   for the classification of joint use distribution plant.   As such, Dr. Pavlovic's proposal

23   should not be adopted.

24   Second, Dr. Pavlovic's proposed revenue allocation is not particularly consistent with the

25   cost allocation philosophy of the OCA ACOSS. I evaluated the class revenue-cost ratios

26   at present and OCA-proposed rates in RDK WPR1, as summarized in Table RDK-R2

27   below:

---

[6] I&E Statement No. 1 (Walker) at 3.

Table RDK-R2 Implications of OCA ACOSS Method and OCA Revenue Allocation Revenue-Cost Ratios			
Class	Current Rates	Proposed Rates	Progress
RS	93.1%	95.3%	31%
SH	85.8%	107.9%	155%
GLP-1	121.6%	110.9%	49%
GLP-3	113.2%	114.6%	-10%
MBL	36.1%	42.7%	10%
OL	94.1%	87.5%	-112%
Total	**100.0%**	**100.0%**	--
Source: RDK WPR1			

1   As shown, Dr. Pavlovic's proposal results in only a small amount of progress toward cost-
2   based rates for the RS class, moderate progress for the GLP-1 class, and moves revenues
3   and costs farther apart for the GLP-3 class. Note also that Dr. Pavlovic's proposed revenue
4   allocation results in increases for the SH and MBL classes of 50% and 42% respectively,
5   more than double the system average increase. The Commission may view such increases
6   as exceeding the limits for rate gradualism.

7   As Dr. Pavlovic's proposed increases do not appear to be consistent with the OCA
8   proposed ACOSS methodology, I recommend that Dr. Pavlovic's proposed revenue
9   allocation be rejected.

10   **Q.**   **Does this conclude your rebuttal testimony?**
11   A.   Yes, it does.

EXHIBIT RDK-R1

RDK WORKPAPERS

RDK WPR1: Citizens' UC ACOSS with Zero Customer Component

RDK WPR2: Revenue Allocation Comparison

Please note that workpapers in excel format will be distributed via email attachment simultaneous to service of Rebuttal Testimony

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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PENNSYLVANIA PUBLIC UTILITY		:	
COMMISSION		:	
		:	
v.		:	**Docket No. R-2022-3032369**
		:	
CITIZENS' ELECTRIC COMPANY OF		:	
LEWISBURG, PA		:	

<div align="center">

VERIFICATION

</div>

I, Robert D. Knecht, hereby state that the facts set forth in my Rebuttal Testimony labelled OSBA Statement No. 1-R and associated Exhibits RDK-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: August 16, 2022

Robert D. Knecht

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2022-3032369
	:	
Citizens' Electric Company of Lewisburg	:	

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).

The Honorable Eranda Vero
Administrative Law Judge
Pennsylvania Public Utility Commission
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/s/ Sharon E. Webb

DATE: August 16, 2022

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

September 6, 2022

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

The Honorable Charece Z. Collins
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
400 North Street 2nd Floor West
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission v. Citizens' Electric Company of Lewisburg / Docket No. R-2022-3032369

Dear Judge Vero and Judge Collins:

Enclosed please find the Surrebuttal Testimony and Exhibit of Robert D. Knecht, labeled OSBA Statement No. 1-S, 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: Robert D. Knecht
      Mark Ewen
      Parties of Record

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
	:	
v.	:	Docket No. R-2022-3032369
	:	
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA	:	
	:	

Surrebuttal 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: September 6, 2022

Date Submitted for the Record: October 17, 2022

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 am appearing in this proceeding on behalf of the

3 Pennsylvania Office of Small Business Advocate ("OSBA"). I submitted direct testimony,

4 rebuttal testimony and associated exhibits earlier in this proceeding, and my qualifications

5 were detailed therein.

6 **Q. Please describe the purpose of this surrebuttal testimony.**

7 A. This surrebuttal testimony corrects certain errors in my earlier testimony and addresses the

8 rebuttal testimony of Company witness Mr. Howard A. Gorman on matters of cost

9 allocation, revenue allocation and rate design.

10 **Q. Mr. Knecht, in both your direct testimony and rebuttal testimony you referred to**

11 **difficulties in simulating the Company's allocated cost of service study ("ACOSS")**

12 **model. Has this issue been resolved?**

13 A. Yes. This problem resulted from my own misunderstanding of how the Company's

14 ACOSS model was designed and how it should properly be simulated. I apologize to Mr.

15 Gorman and to the Company for my error in this respect, and I regret any confusion caused

16 by my misunderstanding. I do not believe, however, that my alternative simulations of the

17 model presented in my direct and rebuttal testimony were materially inaccurate.

18 Nevertheless, I have updated and corrected my analysis in this surrebuttal.

19 **Q. In your direct testimony, you concluded that the Company had inadvertently used**

20 **the incorrect classification factor for line transformers in its filed ACOSS model (the**

21 **revised "CU" version).   Did the Company correct that factor in its rebuttal**

22 **testimony?**

23 A. Yes. In rebuttal, the Company submitted a revised ACOSS simulation reflecting various

24 changes to the Company's claimed revenue requirement, and it included that correction.[1]

---

[1] Citizens' Statement No. 1-S at 11.

1	Q.	**In your direct testimony, you expressed a concern that the Company's classification**
2		**of primary voltage system distribution plant was not consistent with Commission**
3		**precedent, and you recommended that the issue be addressed in the Company's next**
4		**base rates proceeding. Has the Company agreed to do so?**
5	A.	Yes. Mr. Gorman indicates that the Company will examine this issue in its next base rates
6		proceeding.[2]

7	Q.	**In your direct testimony, you indicated that using a sum of individual customer**
8		**demands allocator for secondary voltage system demand-related costs would better**
9		**reflect cost causation than the Company's non-coincident peak ("NCP") approach.**
10		**Does the Company agree?**
11	A.	Mr. Gorman agrees to the extent that this issue "deserves consideration," but that the data
12		requirements would be large and the impacts would likely be small. As I did not
13		recommend any adjustment to the ACOSS in this proceeding, I recommend only that the
14		Company evaluate this issue in its next base rates proceeding.

15	Q.	**In your rebuttal testimony, you flagged another inadvertent error in the Company's**
16		**classification formulae, regarding the classification of miscellaneous distribution**
17		**expenses. Was that error corrected in the Company's rebuttal?**
18	A.	It was not, because the Company was not aware of it at the time rebuttal was prepared. As
19		I indicated in my rebuttal, the impact of this error is quite small. Nevertheless, my
20		surrebuttal workpaper RDK WPS1 represents a re-simulation of the Company's ACOSS
21		model with this correction.

22	Q.	**At the end of the day, what are the implications of the various changes to the**
23		**Company's ACOSS model results?**
24	A.	Table RDK-S1 below presents a comparison of class rates of return at present rates for four
25		scenarios:

26 •   The Company's filed ("CU") ACOSS;

---

1   • My direct testimony version of the Company's ACOSS;

2   • The Company's rebuttal ACOSS;

3   • My surrebuttal version of the ACOSS, with the minor adjustment to the
4   classification factor.

Table RDK-S1 Comparative Cost Allocation Results Class Rates of Return at Present Rates				
Class	Citizens CU	RDK Direct	Citizens Rebuttal	RDK Surrebuttal
RS	(0.9%)	(1.2%)	(1.2%)	(1.2%)
SH	(0.6%)	0.9%	0.9%	1.2%
GLP-1	8.5%	8.7%	8.8%	8.8%
GLP-3	7.4%	8.9%	8.9%	9.1%
MBL	(5.9%)	(5.9%)	(5.9%)	(5.9%)
OL	3.7%	3.8%	3.8%	3.8%
Total	1.7%	1.7%	1.8%	1.8%
Source: Exhibit HSG-1, Schedule E1 (CU), RDK WP1, Exhibit HSG-1R Schedule E-1(R), RDK WPS1				

5   As shown in Table RDK-1, the corrections to the ACOSS model result in only modest
6   changes to the general pattern. However, the changes reinforce the finding that the GLP-
7   1 and GLP-3 classes are already producing returns that substantially exceed the Company's
8   rate of return at proposed rates (6.7%), implying that a rate reduction for those classes
9   would be necessary to achieve cost-based rates.[3]

10   **Q.   Turning to revenue allocation, in your direct testimony, you concluded that the**
11   **Company's proposal was directionally consistent with the ACOSS results, but was**

---

[3] Note also that the differences between my direct ACOSS and the Company's rebuttal ACOSS are minor, since both reflect the change to the line transformer classifier but not the change to the miscellaneous expenses classifier. I therefore conclude that my misunderstanding of the ACOSS model functionality did not distort the results that I presented.

1		**unduly cautious in its efforts to move rates into line with allocated costs. You**
2		**therefore proposed an alternative revenue allocation that resulted in more progress**
3		**toward cost-based rates. How does the Company respond?**
4	A.	The Company does not contest my analysis, but concludes that my proposal would result
5		in a 29.3 percent increase for the average residential customer and that higher usage
6		customers would see increases over 30 percent. Mr. Gorman concludes that these results
7		are "clearly unacceptable."
8	**Q.**	**What is your response to that rebuttal?**
9	A.	I am surprised that the Company concludes that my proposal involves an excessive rate
10		increase for the residential class, as I relied on the Company's stated standard. Specifically,
11		the Company repeatedly indicates that a 1.5 times system average increase represents the
12		upper bound for revenue allocation:

> *The proposed revenue allocation is fair and reasonable because each rate class makes*
> *significant progress toward the system average return, . . . , meeting the goal of moving*
> *each class closer to cost of service; and no class receives an increase greater than*
> *1.50X the average, meeting the goal of mitigating extreme impacts. In addition, all*
> *classes except MBL and OL (lighting classes) have significant reductions in the subsidy*
> *paid or received.*[4]

> *While the Company agrees that the most relief should go to the classes producing the*
> *highest return at current rates, this would cause some classes to have increases more*
> *than 1.50X the average. The Company supports providing first-dollar relief to GLP-1*
> *and GLP-2 [sic] provided that no class is increased more than 1.5X the average.*[5]

23		My proposed revenue allocation for the residential class represented an average class
24		increase exactly 1.5 times the system average. As such, it complies with the Company's
25		proposed standard for revenue allocation. Moreover, it is generally consistent with practice
26		in Pennsylvania, where limits of 1.5 times to 2.0 times system average are often cited.
27		Thus, it appears that the Company has a different upper bound for rate increases when they

---

[4] Citizens' Statement No. 1 at 31.

[5] Citizens' Statement No. 1-R at 9.

| 1 | | apply to residential customers than when they apply to other classes of customers. In my |
| 2 | | view, such a policy constitutes undue discrimination. |

3		In addition, Mr. Gorman's reference to the impacts of my proposal on individual customers
4		within the residential class is not on point. First, I made no proposal for residential class
5		rate design. Differentiated rates of increase within the residential class result from the
6		Company's rate design proposal, not mine. Second, in my experience in Pennsylvania, the
7		"rule of thumb" upper bound for revenue allocation of 1.5 or 2.0 times system average
8		applies to revenue allocations at a class level, and not to individual customers. As such,
9		these rules anticipate that there will also be intra-class impacts, and thus the increases for
10		some individual customers will necessarily be higher (and lower) than the class average.

11	**Q.**	**Has the Company made any changes to its revenue allocation proposal?**
12	A.	In response to I&E Witness Sakaya (and directionally consistent with my revenue
13		allocation proposal, the Company modified its revenue allocation to increase revenues
14		from the Rate OL class and reduce the revenues from the GLP-1 and GLP-3 classes. While
15		the increase to the Rate OL class is material in percentage terms (over 10 percent of current
16		revenues), the reductions to the GLP-1 and GLP-3 classes are minimal (under one-half of
17		one percent).

18		The implications of the Company's revised revenue allocation proposals for progress
19		toward cost-based rates are shown in Table RDK-S2 below, based on the ACOSS in RDK
20		WPS1. As shown, the Company's proposal is generally consistent with that from its filed
21		case, namely that it results in some progress toward cost-based rates, but not as much as
22		could reasonably be achieved within its own limits for rate gradualism.

Table RDK-S2
Implications of Citizens' Rebuttal Revenue Allocation:
Revenue-Cost Ratios

Class	Current Rates	Proposed Rates	Progress
RS	91.0%	94.7%	41%
SH	97.7%	100.8%	137%
GLP-1	123.0%	114.2%	38%
GLP-3	124.0%	115.1%	37%
MBL	36.4%	39.3%	5%
OL	94.5%	98.3%	69%
Total	**100.0%**	**100.0%**	--
Source: RDK WPS1			

1 **Q.** **Have you modified your revenue allocation to reflect the Company's rebuttal and the**
2 **changes to the ACOSS model?**

3 A. I have. A summary of my alternative proposal is shown in Table IEc-S3 below, compared
4 to the Company's rebuttal revenue allocation proposal. Details are provided in electronic
5 workpaper RDK WPS1. My revised revenue allocation proposal reflects the costs
6 allocated to each class, plus the following adjustments:

7 • The increase to the residential class is limited to 1.4 times system average, below the
8 Company's limit of 1.5 times system average. With this increase, and based on the
9 Company's rate design philosophy for the residential class, I calculate that all
10 residential customers whose average annual usage is less than 150% of the average
11 residential customer use will not face an increase that is more than 1.5 times the system
12 average. As 150% of the average residential class usage is about 1850 kWh per month,
13 that limit should include a large majority of residential customers.[6] Thus, I believe this
14 proposal addresses Mr. Gorman's concern regarding excessive increases for some
15 residential customers.

---

[6] See RDK WPS2 "RevPrf RDK" tab for supporting calculations for the residential class (Rate RS).

1   • Increases for the SH and OL classes are limited to no more than that necessary to reach
2   allocated costs; i.e., they produce a revenue-cost ratio of 100 percent.

3   • The increase for the MBL class remains at 1.5 times the system average, consistent
4   with both my direct testimony and the Company's proposal.

5   • The shortfall is assigned to the GLP-1 and GLP-3 classes, in proportion to class revenue
6   requirement.

Table RDK-S3 Comparative Revenue Allocation Proposals				
	Citizens' Rebuttal		RDK Surrebuttal	
Class	Increase	Percent	Increase	Percent
RS	$763,641	24.3%	$856,423	27.3%
SH	$5,998	23.4%	$5,731	22.3%
GLP-1	$108,487	11.0%	$61,750	6.3%
GLP-3	$95,117	10.9%	$47,054	5.4%
MBL	$5,971	29.1%	$5,997	29.2%
OL	$20,671	24.3%	$22,501	26.4%
Total	$999,884	19.5%	$999,456	19.5%
Note: Percentages refer to the percentage increase in base rate revenues between present and proposed rates Source: RDK WPS1				

7 **Q. Does your surrebuttal proposal result in substantially more progress toward cost-**
8   **based rates than the Company's rebuttal proposal?**

9 A. Yes, it does. As shown in Table RDK-S4 below, this alternative proposal will generally
10   move rates about 60 percent of the way toward cost-based rates for the major rate classes,
11   compared to progress of about 40 percent under the Company's rebuttal proposal (which
12   is shown in Table RDK-S2).

Table RDK-S4			
Implications of RDK Surrebuttal Revenue Allocation:			
Revenue-Cost Ratios			
Class	Current Rates	Proposed Rates	Progress
RS	91.0%	96.9%	66%
SH	97.7%	100.0%	100%
GLP-1	123.0%	109.4%	59%
GLP-3	124.0%	109.4%	61%
MBL	36.4%	39.4%	5%
OL	94.5%	100.0%	100%
Total	**100.0%**	**100.0%**	--

1 **Q.** **Please address the Company's position regarding a scaleback of the overall rate**
2 **increase, and Witness Sakaya's proposal for "first dollar relief" ("FDR") for the**
3 **GLP-1 and GLP-3 classes.**

4 A. Witness Sakaya proposed that the first $200,060 of any reduction to the Company's
5 claimed overall increase (approximately $1.0 million) be deducted from the increases to
6 the GLP-1 and GLP-3 classes. In the passage I quoted earlier, Mr. Gorman acknowledges
7 that a scaleback should disproportionately be assigned to the class with the highest rates of
8 return, he objects to the I&E proposal because it could result in increases for some classes
9 that are more than 1.5 times the system average.

10 In effect, the Company has acknowledged that the GLP-1 and GLP-3 classes should be
11 assigned a smaller percentage of the overall rate increase, but that the FDR approach may
12 result in an unacceptable distribution of rate increases across the classes. Mr. Gorman is,
13 of course, correct as a matter of arithmetic. Moreover, as I indicated in my rebuttal
14 testimony, the I&E FDR approach is only effective in addressing the over-recovery of costs
15 from the GLP-1 and GLP-3 classes if there is a material reduction in the allowed increase.
16 As the Company has not reduced its claimed increase at all, the FDR mechanism is unlikely
17 to be effective to address this inequity.

1   In contrast, adopting my proposed revenue allocation and applying a traditional

2   "proportional scaleback" approach will not result in the problem to which Mr. Gorman

3   cites, because the relationship between increases for the various classes is the same before

4   and after the scaleback.   That is, under my proposal, if the residential class increase is 1.4

5   times the system average at the full increase, it will remain at 1.4 times the system average

6   after a proportional scaleback.

7   **Q.   Can you provide a comparison of the parties' revenue allocation proposals (inclusive**

8   **of the FDR scalebacks) at a reduced increase of $930,000?**

9   A.   My understanding of the parties' positions is shown in Table RDK-S5 below, with the

10   detailed calculations provided in RDK WPS3.   Note that the Company's proposed increase

11   for the MBL class is limited to 1.5 times the system average, as stated in its rebuttal

12   testimony.   The Company's FDR would not result in any other class's increase exceeding

13   the Company's 1.5 times limit.

14   The FDR proposals from I&E and the Company are based on the following testimony:

> *"If the Commission grants less than the Company's requested increase, I*
> *recommend that the first $200,060 reduction be applied to the GLP-1 and GLP-3*
> *classes. The $200,060 first dollar reduction will eliminate the $100,720 increase*
> *remaining for the GLP-1 class described above, and $99,340 increase proposed*
> *for the GLP-3 class . . . The proposed ROR for the GLP-1 class is 1.68, and the*
> *proposed ROR for the 3 GLP-3 class is 1.52, both well above the target ROR of*
> *1.00. Therefore, it is reasonable to apply the first $200,060 of the scale back to the*
> *GLP-1 and GLP-3 5 classes."[7]*

> *"Mr. Sakaya proposes that first $200,060 of reductions below the nearly*
> *$1,000,000 requested by the should eliminate the increases for GLP-1 and GLP-*
> *3. While the Company agrees that the most relief should go to the classes*
> *producing the highest return at current rates, this would cause some classes to*
> *have increases more than 1.50X the average. The Company supports providing*
> *first-dollar relief to GLP-1 and GLP-2* [sic] *provided that no class is increased*
> *more than 1.5X the average."[8]*

30   To apply the I&E and Citizens' FDR to the GLP-1 and GLP-3 classes, I allocated the relief

31   in proportion to each party's proposed increase for those two classes.   However, because

---

[7] I&E Statement No. 3 at 17-18.

[8] Citizens' Statement No. 1-R. Mr. Gorman's statement is repeated, as it states clearly the Company's positions
with respect to both the limits for rate gradualism and the applicability of a first-dollar relief revenue scaleback.

1   the Company's proposal is not clear as to how its FDR would be implemented, I have
2   included the implications of a proportional scaleback to the Company's filed ("CU")
3   proposal.

Table RDK-S5 Comparative Revenue Allocation Proposals With Proposed Scalebacks					
	OCA: Proportional	OSBA Surr.: Proportional	I&E: FDR	Citizens' Proportional	Citizens' FDR
RS	648,802	796,907	763,641	710,269	763,641
SH	11,973	5,333	5,997	5,578	5,998
GLP-1	82,263	57,459	65,846	100,905	71,458
GLP-3	170,233	43,784	64,944	88,469	62,652
MBL	7,930	5,580	5,971	5,553	5,580
OL	8,799	20,937	23,601	19,226	20,671
Total	**930,000**	**930,000**	**930,000**	**930,000**	**930,000**
Source: RDK WPS3					

4   **Q.   Turning to rate design, you recommended in your direct testimony that the Company**
5   **clarify its rate design strategy for Rate GLP-3 and whether the tariff structure should**
6   **be simplified.   How did the Company respond?**

7   A.   The Company did not offer an explanation for its proposed tariff in rebuttal, but Mr.
8   Gorman agreed to ". . . recommend the Company commit to present such an evaluation in
9   its next rate case."[9] Because this exercise may involve a change in the structure of the Rate
10   GLP-3 tariff, I do not object to deferring this issue to the next base rates proceeding, thereby
11   allowing the Company to design and evaluate rate design alternatives. However, it is not
12   clear from Mr. Gorman's testimony that the Company has indeed committed to undertaking
13   such an evaluation.   I therefore recommend that the Commission require it to do so.

14   **Q.   Does this conclude your surrebuttal testimony?**
15   A.   Yes, it does.

---
[9] Citizens' Statement No. 1-R at 13.

EXHIBIT RDK-S1

RDK WORKPAPERS

RDK WPS1: Citizens' ACOSS Model with Minor Correction

RDK WPS2: Citizens' Rebuttal Proof of Revenue

RDK WPS3: Revenue Allocation Comparison with FDR

Workpapers in Excel format will be distributed via email simultaneous to service of Surrebuttal Testimony

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	
	:	
v.	:	**Docket No. R-2022-3032369**
	:	
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA	:	
	:	

VERIFICATION

I, Robert D. Knecht, hereby state that the facts set forth in my Surrebuttal Testimony labelled OSBA Statement No. 1-S and associated Exhibit RDK-S1 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: September 6, 2022   _____

                                                    Robert D. Knecht

1

Pennsylvania Public Utility Commission	:	
	:	
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	:	
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/s/ Sharon E. Webb

DATE: September 6, 2022
_____
Sharon E. Webb
Assistant Small Business Advocate
Attorney ID No. 73995

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/s/ Sharon E. Webb

DATE: October 17, 2022

_____
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