I&E Statement No. 1
Witness: Christopher Keller

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Direct Testimony

of

Christopher Keller

Bureau of Investigation and Enforcement

Concerning:

Operating and Maintenance Expenses
Taxes Other Than Income
Cash Working Capital

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Christopher Keller. My business address is Pennsylvania Public Utility Commission, Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission (Commission) in the Bureau of Investigation & Enforcement (I&E) as a Fixed Utility Financial Analyst.

Q. SUMMARIZE YOUR EDUCATION AND EMPLOYMENT HISTORY.

A. An outline of my education and employment history is attached as Appendix A.

Q. PLEASE DESCRIBE THE ROLE OF I&E IN RATE PROCEEDINGS.

A. I&E is responsible for protecting the public interest in proceedings before the Commission. I&E's analysis in this proceeding is based on its responsibility to represent the public interest. This responsibility requires balancing the interests of ratepayers, the regulated utility, and the regulated community as a whole.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my direct testimony is to review the base rate filing of PECO

Energy Company – Gas Division (PECO or Company), and make recommended adjustments to PECO's proposed operating and maintenance (O&M) expenses and cash working capital for the fully projected future test year (FPFTY) ending December 31, 2025. I also present the overall I&E recommended revenue requirement based on my adjustments and the adjustments of the other I&E witnesses.

Q. DOES YOUR DIRECT TESTIMONY INCLUDE AN EXHIBIT?

A. Yes. I&E Exhibit No. 1 contains schedules that support my direct testimony.

Q. PLEASE SUMMARIZE YOUR RECOMMENDED O&M ADJUSTMENTS.

A. The following table summarizes my recommended O&M adjustments.

	Company Claim	I&E Adjustment	I&E Recommended Allowance
O&M Expenses:			
Rate Case Expense	$1,072,000	($604,218)	$467,782
Payroll Expense	$52,481,000	($1,443,000)	$51,038,000
Payroll Taxes	$4,463,000	($122,655)	$4,340,345
Employee Benefits Expense (Net of Pension Expense)	$7,710,000	($306,000)	$7,404,000
Pension Expense	$973,000	($572,407)	$400,593
ESBC Employee Severance Expense	$95,247	($95,247)	$0
Employee Activity Cost	$192,530	($144,001)	$48,529
Incentive Compensation	$4,961,000	($396,110)	$4,564,890
Amort. of Interest on Unspent MGP Funds & FTAC	($662,000)	$372,909	($289,091)
Energy Efficiency & Conservation	$3,077,500	($350,000)	$2,727,500
Total O&M Expense Adjustments		($3,660,729)	
Rate Base Adjustments:			
Cash Working Capital	$13,737,000	($517,000)	$13,220,000
Total Rate Base Adjustments		($517,000)	

OVERALL I&E RECOMMENDED REVENUE REQUIREMENT

Q. WHAT TEST YEARS HAS PECO USED IN THIS PROCEEDING?

A. PECO used the year ended December 31, 2023 as the historic test year (HTY), the year ending December 31, 2024 as the future test year (FTY), and the year ending December 31, 2025 as the FPFTY in this proceeding.

Q. SUMMARIZE THE COMPANY'S OVERALL CLAIMED REVENUE REQUIREMENT.

A. The Company's base rate case filing was submitted on March 28, 2024, requesting an increase of $111,348,000 to claimed present rate revenues of $746,445,000 resulting in a total overall revenue requirement of $857,793,000.[1]

Q. WHAT IS I&E'S TOTAL RECOMMENDED REVENUE REQUIREMENT?

A. I&E's total recommended revenue requirement for the Company is $821,259,000. This recommended revenue requirement represents an increase of $74,814,000 to claimed present rate revenues of $746,445,000. This total recommended allowance incorporates my adjustments made in this direct testimony to O&M expenses and cash working capital and those recommended adjustments made in the direct testimony of I&E witnesses Anthony Spadaccio[2] and Ethan Cline.[3]

[1] PECO Exhibit MJT-1, Schedule A-1, p. 1.
[2] I&E Statement No. 2.
[3] I&E Statement No. 3.

PECO Energy Company - Gas Division		TABLE I			
R-2024-3046932		INCOME SUMMARY			
($ in Thousands)					
	12/31/25	INVESTIGATION & ENFORCEMENT			
	Proforma	[----------			
	Present Rates	Adjustments	Present Rates	Allowances	Proposed
	$	$	$	$	$
Operating Revenue	746,445	0	746,445	74,814	821,259
Deductions:					
O&M Expenses	428,619	-3,536	425,083	276	425,359
Depreciation	118,762	0	118,762		118,762
Taxes, Other	9,067	-123	8,944	231	9,175
Income Taxes:					
Current State	-3,538	313	-3,225	5,937	2,712
Current Federal	-13,190	756	-12,434	14,358	1,924
Deferred Taxes/AMT	2,379	0	2,379		2,379
ITC	-5	0	-5		-5
Total Deductions	542,094	-2,590	539,504	20,802	560,306
Income Available	204,351	2,590	206,941	54,012	260,953
Rate Base	3,524,007	-11,848	3,512,159	0	3,512,159
Rate of Return	5.80%		5.89%		7.43%

RATE CASE EXPENSE

Q. BRIEFLY DESCRIBE THE NATURE AND TYPES OF EXPENDITURES TYPICALLY ALLOWED AS A PART OF A REGULATED UTILITY'S OVERALL RATE CASE EXPENSE.

A. The nature and types of individual expenditures that comprise a utility's allowable claim for rate case expense are those directly incurred to compile, present, and defend a utility's request for a base rate increase before the Commission. The actual expenditures and estimated costs typically found in an allowable rate case

expense claim include legal fees for outside counsel, fees to outside consultants, and the cost of printing, document assembly, and postage.

Q. HOW HAS THE COMMISSION TRADITIONALLY TREATED RATE CASE EXPENSE FOR RATEMAKING PURPOSES?

A. The Commission has historically stated that it considers prudently incurred rate case expense as an ongoing expense, occurring at irregular intervals, related to the rendering of utility service. The Commission has also cited the importance of considering the involved utility's history regarding the frequency of rate case filings as an essential element to determine the normalized level of rate case expense for ratemaking purposes.

Q. HOW IS THE FREQUENCY OF RATE CASE FILINGS DETERMINED?

A. The frequency is determined by calculating the average number of months between the utility's most recent rate case filings.

Q. WHAT IS THE COMPANY'S CLAIM FOR RATE CASE EXPENSE?

A. PECO's claim for rate case expense is $1,072,000.[4]

[4] PECO Exhibit MJT-1, Schedule D-7, p. 61.

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. PECO has estimated its total rate case expense amount to be $2,144,000 and is requesting an amortization period of two years (24 months).[5] PECO states that rate case expense should amortized rather than normalized as rate case expense is a one-time expense associated with this filing. PECO also states that its basis for a two-year recovery period is that it expects to file another rate case in two to three years.[6] This produces an amortized claim of $1,072,000 ($2,144,000 ÷ 2).

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No. I have two areas of disagreement with PECO's claim. First, I disagree with PECO's attempt to amortize, rather than normalize, its rate case expense claim at any amount. Second, I disagree with the Company's claimed two-year recovery period.

Q. WHAT IS YOUR RECOMMENDATION FOR RATE CASE EXPENSE?

A. I recommend that PECO's rate case expense be normalized over a period of 55 months resulting in an annual expense of $467,782 [($2,144,000 ÷ 55 months) x 12 months], or a reduction of $604,218 ($1,072,000 - $467,782) to the Company's claim.

[5] PECO Exhibit MJT-1, Schedule D-7, p. 61.
[6] I&E Exhibit No. 1, Schedule 1.

Q. YOUR FIRST ISSUE IDENTIFIED ABOVE PERTAINS TO THE REQUIREMENT THAT RATE CASE EXPENSE SHOULD BE NORMALIZED RATHER THAN AMORTIZED. BRIEFLY DISCUSS THE CONCEPT OF NORMALIZATION.

A. Normalization is a ratemaking concept that describes the transformation of an operating expense that recurs at irregular intervals into a "normal" annual test year expense allowance. Normalization specifically addresses the prospective recovery of an ongoing expense that recurs sporadically. Allowed normalized expenses are no different than any other O&M expense in that a company is given the opportunity to achieve full recovery.

Q. PLEASE EXPLAIN THE CONCEPT OF AMORTIZATION.

A. Amortization is an accounting procedure that extinguishes an atypical, nonrecurring expense over a pre-determined number of years by charging to operations, a pro rata share based on the selected amortization period. Although a claim for an unrecovered normalized expense would be disallowed if requested in a subsequent rate case, because the base rate case gives the opportunity to reevaluate and reset the normalized level of expense, an amortized expense allowance could be claimed in succeeding rate cases as long as there is a remaining unamortized balance.

Q. IS PECO'S PROPOSED AMORTIZATION OF RATE CASE EXPENSE IMPROPER?

A. Yes. PECO's rate case expense claim should be normalized, and done so over a period of 55 months, rather than the proposal to amortize the claim over 24 months, because it is an ongoing expense that recurs at irregular intervals (the precise circumstances for normalization treatment of an expense). It is well settled that for ratemaking purposes the Commission normalizes rate case expense; therefore, the Company's requested amortization must be rejected.

Q. YOUR SECOND ISSUE RELATES TO PECO'S CLAIMED TWO-YEAR RECOVERY PERIOD FOR RATE CASE EXPENSE. WHY DO YOU DISAGREE WITH THE PROPOSED TWO-YEAR RECOVERY PERIOD?

A. I disagree with the claimed two-year recovery period because it is not supported by the Company's historic filing frequency. The proposed recovery period fails to properly rely upon PECO's historic filing frequency and is speculative in nature. As such, it should not be relied upon to determine the appropriate period to apply the normalization treatment.

Q. FURTHER EXPLAIN YOUR RECOMMENDED 55-MONTH NORMALIZATION PERIOD FOR RATE CASE EXPENSE.

A. In contrast to the Company's proposed two-year period, I recommend a 55-month normalization period which is a reasonable interval given PECO's actual base rate

filing history. The Company's three most recent base rate case filing dates and corresponding details for the current filing are as follows:[7]

Docket No.	Date Filed	Interval
R-2024-3046932	March 28, 2024	23 months
R-2022-3031113	March 31, 2022	18 months
R-2020-3018929	September 30, 2020	125 months
R-2010-2161592	March 31, 2010	

Using the Company's last three base rate case filing dates and the date of the current filing, an average interval is computed to be 55 months ((23 mo. + 18 mo. + 125 mo.) ÷ 3 intervals). PECO's requested 24-month recovery period is unsupported by the Company's historic filing record. Thus, its proposed two-year recovery period should be rejected as it would result in an unreasonable and unsupported increase in rates.

Q. HAVE OTHER UTILITIES BEEN GRANTED A NORMALIZATION PERIOD BASED ON SPECULATION OF FUTURE FILINGS, AND IF SO, WHAT WAS THE RESULT?

A. Yes. In 2012, the Commission granted PPL Electric Utilities Corporation (PPL) permission to normalize its rate case expense over a 24-month period based on

[7] I&E Exhibit No. 1, Schedule 2.

PPL's representations regarding its expected timing of future base rate case filings.[8] That base rate case was filed on March 30, 2012; however, despite PPL's representations, PPL did not file its next rate case until March 31, 2015, which was 36 months after the 2012 rate case filing. It should be noted that I&E's recommended normalization period in the 2012 PPL proceeding was a 32-month interval based on PPL's historic filing frequency.[9] The I&E recommendation in that instance produced a much more accurate result than relying on PPL's stated future intention to file a rate case.

Q. ARE THERE ANY COMMISSION DECISIONS THAT SUPPORT YOUR RECOMMENDATION FOR A RATE CASE FILING INTERVAL BASED ON HISTORIC FILING FREQUENCY?

A. Yes. The following six cases are the most recent instances where the Commission used the company's historic average filing frequency.

First, in a base rate case filed by Emporium Water Company, the Commission adopted the I&E recommended historic filing frequency finding in favor of I&E's recommended five-year normalization period based on a historic average filing frequency that was rounded down from 64 months.[10]

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[8] *PA. PUC v. PPL Electric Utilities Corporation*, Docket No. R-2012-2290597, pp. 47-48 (Order Entered December 28, 2012).

[9] I&E Statement No. 2, pp. 13-14 at Docket No. R-2012-2290597.

[10] *PA PUC v. Emporium Water Company*, Docket No. R-2014-2402324, p. 50 (Order Entered January 28, 2015).

Second, in a base rate case filed by the City of DuBois, the Commission agreed with I&E's recommendation to use a historic filing frequency finding in favor of I&E's recommended 64-month normalization period, which matched the actual historic filing frequency.[11]

Third, in a base rate case filed by Columbia Gas of Pennsylvania, Inc., the Commission held that the normalization period should align with the historic data rather than the company's intent to file its next rate case.[12]

Fourth, in a base rate case filed by PECO Energy Company – Gas Division, the Commission granted I&E's recommended five-year normalization period rather than PECO's claim based on a three-year period because the Commission determined a normalization period based on actual historic filing frequency is more reliable than future speculation.[13]

Fifth, in a base rate case filed by Philadelphia Gas Works (PGW), the Commission agreed with I&E's recommended 53-month normalization period rather than PGW's claim based on a three-year period because the Commission determined a normalization period based on actual historic filing frequency and not based on PGW's future intention to file a rate case.[14]

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[11] *PA PUC v. City of DuBois - Bureau of Water*, Docket No. R-2016-2554150, pp. 65-66 (Order Entered March 28, 2017); *PA PUC v. City of DuBois - Bureau of Water*, Docket No. R-2016-2554150, p. 13 (Order Entered May 18, 2017).

[12] *PA PUC v. Columbia Gas,* Docket No. R-2020-3018835, Opinion and Order, pp. 78-79 (Order Entered February 19, 2021).

[13] *PA PUC v. PECO Energy Company- Gas Division*, Docket No. R-2020-3018929, Opinion and Order, pp. 117-119 (Order Entered June 22, 2021).

[14] *PA PUC v. Philadelphia Gas Works*, Docket No. R-2023-3037933, Opinion and Order, pp. 65-66 (Order Entered November 9, 2023).

Finally, in the most recent base rate case filed by Columbia Water Company, the Commission held that the normalization period should align with the historic filing frequency rather than that company's intent to file its next rate case and the intent to file a base rate case does not justify deviating from the Commission's practice of relying on historical filing frequency.[15]

PAYROLL EXPENSE

Q. WHAT IS INCLUDED IN PAYROLL EXPENSE?

A. The Company's payroll expense claim includes amounts for regular wages and overtime wages.

Q. WHAT IS PECO'S CLAIM FOR PAYROLL EXPENSE?

A. The Company's claim for payroll expense is $52,481,000.[16]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. PECO based its claim on the HTY headcount of 696 employees, which is adjusted to reflect a projected headcount of 705 employees by the end of the FPFTY. PECO's claim also includes adjustments for the annualization of wage increases of 2.50% and 3.00% for union and non-union employees. Additionally, PECO's claim includes wage increases effective January 1, 2026 and March 1, 2026, which

[15] *PA PUC v. Columbia Water Company*, Docket No. R-2023-3040258, Opinion and Order, p. 34 (Order Entered January 18, 2024).
[16] PECO Exhibit MJT-1, Schedule D-6. pp. 57-58.

are after the end of the FPFTY. Finally, PECO's claim includes an adjustment to include a normalized cash payment to union employees.[17]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM FOR PAYROLL EXPENSE?

A. No.

Q. WHAT IS YOUR RECOMMENDATION FOR PAYROLL EXPENSE?

A. I recommend an allowance of $51,038,000 for payroll expense, or a reduction of $1,443,000 ($52,481,000 - $51,038,000) to PECO's claim.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on two adjustments: (1) adjusting PECO's payroll expense claim for removing $42,000 for a normalized one-time union contract payment made in 2021;[18] and (2) removing the January 1, 2026 and March 1, 2026 wage increases for union employees and non-union employees, respectively which are after the end of the FPFTY 2025 amounting to $1,401,000 ($635,000 + $766,000).[19] These adjustments result in a reduction of $1,443,000 ($42,000 + $1,401,000) to the Company's claim, or a recommended allowance of $51,038,000 ($52,481,000 - $1,443,000).

[17] PECO Statement No. 3, pp. 30-32 and PECO Exhibit MJT-1, Schedule D-6. pp. 57-58.
[18] PECO Exhibit MJT-1, Schedule D-6, p. 58, line 10.
[19] PECO Exhibit MJT-1, Schedule D-6. p. 57, line 15.

Q. PLEASE EXPLAIN YOUR RECOMMENDED REMOVAL OF THE ONE-TIME UNION CONTRACT PAYMENT.

A. PECO paid a ratification bonus of $1,000 to each bargaining union member for a union contract that was ratified in March 2021. The total payment for the union contracts was $1,303,000 and the amount that was allocated to the Gas Operations was $249,000. PECO normalized this amount over six years, which is the length of the union contract. This results in an annual expense of approximately $42,000.[20] I recommend that the union contract payment be disallowed as it is considered to be retroactive ratemaking and the Commission has disallowed this payment claimed by the Company in a prior base rate case.

Q. BRIEFLY EXPLAIN THE CONCEPT OF RETROACTIVE RATEMAKING.

A. Retroactive ratemaking is the future collection of a prior period cost. Ratemaking, by its nature is prospective. "The rule against retroactive ratemaking prohibits a public utility commission from setting future rates to allow a utility to recoup past losses."[21] The union contract payment is a past expense payment for an employee action that occurred in the past. Generally, recovery of these costs constitutes retroactive ratemaking and should be disallowed.

[20] PECO Statement No. 3, pp. 35-36.
[21] *Popowsky v. Pub. Util. Comm'n*, 642 A.2d 648, 650-51.

Q. WERE THERE ANY RECENT COMMISSION ORDERS RELATED TO THE COMPANY'S ONE-TIME UNION CONTRACT PAYMENT CLAIM?

A. Yes. In the Company's 2020 base rate case, the Commission rejected the Company's claim for the union contract payment that was paid in 2015. Regarding the one-time union contract payment, the Commission stated that, "We find the elimination of the past costs for the one-time bonus paid in 2015 to be reasonable."[22]

Q. PLEASE EXPLAIN YOUR RECOMMENDED DISALLOWANCE OF THE PAY INCREASES EFFECTIVE JANUARY 1, 2026 AND MARCH 1, 2026.

A. PECO includes wage increases that are to occur on January 1, 2026 and March 1, 2026 for union employees and non-union employees, respectively totaling $1,401,000 ($635,000 + $766,000).[23] These 2026 salary and wage increases are outside the FPFTY and should not be allowed for ratemaking purposes. It is inappropriate to allow increases in expenditures, plant additions, or projected revenue declines that occur after the end of the FPFTY in a base rate case utilizing an FPFTY. The FPFTY already allows for the projection of a full year of expenses and plant additions beyond the effective date of new rates. Allowing adjustments of this type that occur after the FPFTY would misalign data presented for the establishment of base rates to the benefit of the Company and to the harm of

[22] *PA PUC v. PECO Energy Company – Gas Division*, Docket No. R-2020-3018929, p. 81 (Order Entered June 22, 2021).

[23] PECO Exhibit MJT-1, Schedule D-6. p. 57, line 15.

ratepayers.

In summary, the Company is proposing to include post-FPFTY pay increases that occur in 2026 on an annualized basis in its FPFTY 2025 base rate claims, which is inappropriate and would place an unreasonable burden on ratepayers.

PAYROLL TAXES

Q. WHAT IS INCLUDED IN PAYROLL TAXES?

A. Payroll taxes generally fall into two categories: deductions from employees' salaries and wages, and taxes paid by the employer based on employees' salaries and wages. The Company has made a claim in this filing for its share of those payroll taxes (social security and Medicare taxes, federal and state unemployment taxes).

Q. WHAT IS THE COMPANY'S CLAIM FOR PAYROLL TAXES?

A. In its filing, PECO's claim for payroll tax expense is $4,463,000.[24]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

[24] PECO Exhibit MJT-1, Schedule D-16, p. 70, line 6.

Q. WHAT IS YOUR RECOMMENDATION FOR PAYROLL TAXES?

A. I recommend an allowance of $4,340,345 for payroll taxes, or a reduction of $122,655 ($4,463,000 - $4,340,345) to the Company's claim.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. I recommend a payroll tax adjustment in line with my recommended payroll expense reduction of $1,443,000 based on removing the one-time union contract payments and removing post-FPFTY pay increases as explained in the payroll section above.

Q. HOW DID YOU CALCULATE YOUR RECOMMENDED ALLOWANCE?

A. I calculated my recommended allowance for payroll taxes by applying the Company's effective payroll tax rate of 8.50%.[25] I multiplied my recommended total payroll expense adjustment of $1,443,000 by this payroll tax rate to determine my recommended payroll tax adjustment of $122,655 ($1,443,000 x 0.0850).

[25] PECO Exhibit MJT-1, Schedule D-16, p. 71, line 3.

EMPLOYEE BENEFITS EXPENSE (NET OF PENSION EXPENSE)

Q. WHAT IS INCLUDED IN THE COMPANY'S CLAIM FOR EMPLOYEE BENEFITS EXPENSE?

A. The employee benefits expense claim includes pension, post-retirement benefits, health insurance, 401K plan, disability insurance, workers' compensation, tuition reimbursement, and other benefits.[26]

Q. WHAT IS THE COMPANY'S CLAIM FOR EMPLOYEE BENEFITS EXPENSE?

A. The Company is claiming employee benefits expense (Account No. 926) of $8,683,000.[27]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. The Company indicates its claim for employee benefits is based on a budget expense per employee of $11,000.[28]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM FOR EMPLOYEE BENEFITS EXPENSE?

A. No.

[26] I&E Exhibit No. 1, Schedule 3, p. 3.
[27] PECO Exhibit MJT-1, Schedule D-4, p. 50.
[28] PECO Exhibit MJT-1, Schedule D-8, p. 62.

Q. HOW ARE YOU ADDRESSING EMPLOYEE BENEFITS EXPENSE?

A. I am addressing a portion of benefits expense claim of $7,710,000 ($8,683,000 - $973,000) excluding the pension expense claim of $973,000, which is discussed separately in the next section below.

Q. WHAT IS YOUR RECOMMENDATION FOR EMPLOYEE BENEFITS (NET OF PENSION EXPENSE)?

A. I recommend an allowance of $7,404,000 or a reduction of $306,000 ($7,710,000 - $7,404,000) to the Company's claim.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on the Company's supported amount for employee benefits net of pension expense of $7,404,000,[29] which is less than what the Company states is the total employee benefits expense claim net of pension expense.

PENSION EXPENSE

Q. WHAT IS INCLUDED IN PENSION EXPENSE?

A. PECO offers its employees a retirement pension benefit by participating in multi-employer Exelon Corporation Retirement Program (plan) and contributes its

[29] PECO Exhibit MJT-1, Schedule D-8 and I&E Exhibit No. 1, Schedule 3, p. 3.

allocated portion of pension expense to this plan every year.

Q. WHAT IS THE COMPANY'S CLAIM FOR PENSION EXPENSE?

A. PECO's pension expense claim is $973,000.[30]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. The Company's claim is based on the cash contribution method, which PECO has used consistently. The Company's FPFTY claim for pension expense is included in employee benefits expense (Acct. 926). The FPFTY claim is based on a five-year average of pension contributions from 2021 through FPFTY 2025 which includes the FTY 2024 and FPFTY 2025 projected pension expenses.[31]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

Q. WHAT IS YOUR RECOMMENDATION FOR PENSION EXPENSE?

A. I recommend an allowance of $400,593 for pension expense, or a reduction of $572,407 ($973,000 - $400,593) to the Company's claim.

[30] PECO Exhibit MJT-1, Schedule D-9. p. 63, line 13.
[31] PECO Exhibit MJT-1, Schedule D-9, p. 63.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on the Company's projected cash contribution in the FPFTY. Below is the combined pension cost for PECO Gas and Electric divisions:

2021	$17,267,000
2022	$15,222,000
HTY 2023	$1,408,000
FTY 2024	$2,878,000
FPFTY 2025	$3,300,000

As shown above, the Company used the years 2021 and 2022 in determining the five-year average of cash contributions which are outliers compared to the cash contributions in 2023 and the projected cash contributions for FTY 2024 and FPFTY 2025 in calculating the five-year average of $8,015,000 with 19.15% allocated to the Company and 36.61% of that amount being capitalized resulting in an expense claim of $973,000 ($8,015,000 x 19.15% x 63.39%). I believe it is inappropriate and unreasonable to use the five-year average in determining the Company's claim as 2021 and 2022 cash contributions are outliers.

Therefore, I recommend using the combined PECO Gas and Electric divisions' FPFTY expected cash contribution of $3,300,000 in determining my recommendation. This results in a recommended allowance of $400,593, or a reduction of $572,407 ($973,000 - $400,593) to the Company's claim. My recommendation is calculated as follows:

Total FPFTY Expected Cash Contribution		$3,300,000
% Allocated to Company	x	19.15%
Total Amount Allocated to Company		$631,950
% Allocated to Expense (100% - 36.61%)	x	63.39%
I&E Recommended Allowance		$400,593

EBSC EMPLOYEE SEVERANCE EXPENSE

Q. WHAT IS EXELON BUSINESS SERVICES COMPANY (EBSC) EMPLOYEE SEVERANCE EXPENSE?

A. PECO has allocated normal retirement expenses of Exelon's executives, which is part of the EBSC's allocated costs. Generally, severance expense includes the nonrecurring expenses for the separation of an employee from employment at a company. These expenses can include continuing salary or wages, benefits, and placement services to assist a former employee in finding a new position.

Q. WHAT IS THE COMPANY'S CLAIM FOR EBSC EMPLOYEE SEVERANCE EXPENSE?

A. The Company's claim for EBSC employee severance expense is $95,247.[32]

[32] PECO Volume VI, SDR-RR-43.

Q. WHAT IS THE BASIS OF THE COMPANY'S CLAIM?

A. The Company's claim is based on historical trend.[33]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM FOR EBSC EMPLOYEE SEVERANCE EXPENSE?

A. No.

Q. WHAT IS YOUR RECOMMENDATION FOR EBSC EMPLOYEE SEVERANCE EXPENSE?

A. I recommend disallowance of the entire claim of $95,247 for EBSC employees severance expense.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. Primarily, per PECO's Service Level Agreement,[34] EBSC's service costs are allocated to PECO based on employees' time spent, the employees' pay rates, materials, cost causative, and Modified Massachusetts formula. It is, therefore, inappropriate for PECO to claim an allocated portion of EBSC employees' severance expense for ratemaking, when the EBSC employees' direct service costs are charged and claimed based on time spent and an hourly rate. Additionally, it is unreasonable to claim employees' indirect cost (retirement/severance expense), as

[33] PECO Volume VI, SDR-RR-43.
[34] PECO Volume VI, SDR-RR-51, Attachment SDR-RR-51(a.3).

these costs are not related to provision of utility service. Finally, in the filing PECO states that there is no actuarial study available for the basis of the FPFTY claim.[35]

EMPLOYEE ACTIVITY COSTS

Q. WHAT IS INCLUDED IN EMPLOYEE ACTIVITY COSTS?

A. Employee activity costs include amounts for employee service awards, employee townhall/road shows, picnics, celebrations, other employee compact expenses, and employee network groups.[36]

Q. WHAT IS THE COMPANY'S CLAIM FOR EMPLOYEE ACTIVITY COSTS?

A. PECO's claim for employee activity costs is $192,530. [37]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. The Company's claim was based on its budget for employee activity costs in the FPFTY.[38]

[35] PECO Volume VI, SDR-RR-43.
[36] PECO Volume VI, SDR-RR-30.
[37] PECO Volume VI, SDR-RR-30.
[38] PECO Volume VI, SDR-RR-30.

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

Q. WHAT IS YOUR RECOMMENDATION FOR EMPLOYEE ACTIVITY COSTS?

A. I recommend an allowance of $48,529 for employee activity costs or a reduction of $144,001 ($192,530 - $48,529) to the Company's claim.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on the removal of entertainment expenses of $144,001.[39] Employee entertainment expenses are not an operational cost necessary to provide safe and reliable service to the Company's ratepayers. Therefore, ratepayers should not be required to fund the Company's decision to entertain its employees.

INCENTIVE COMPENSATION

Q. WHAT INCENTIVE COMPENSATION?

A. Incentive compensation is additional money or other rewards that are supplementary to base pay.

[39] PECO Volume VI, SDR-RR-30.

Q. WHAT IS THE COMPANY'S CLAIM FOR INCENTIVE COMPENSATION?

A. The Company's claim for incentive compensation is $4,961,000.[40]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. The Company's claim is based on business activities and related cost elements such as payroll, employee benefits, and outside contracting costs, which were distributed to FERC accounts based upon the actual distribution of costs experienced by the Company during calendar year ended December 31, 2023, and the Company does not budget O&M expenses by FERC accounts.[41]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

Q. WHAT IS YOUR RECOMMENDATION FOR THE COMPANY'S INCENTIVE COMPENSATION CLAIM?

A. I recommend an allowance of $4,564,890 or a reduction of $396,110 ($4,961,000 - $4,564,890) to the Company's claim.

[40] I&E Exhibit No. 1, Schedule 4, p. 3.
[41] I&E Exhibit No. 1, Schedule 4, p. 2.

Q. WHAT IS THE BASIS OF YOUR RECOMMENDATION?

A. My recommendation is based on applying a three-year average of the Company's capitalization percentage for incentive compensation to the Company's FPFTY claim. In the Company's response to I&E-RE-8,[42] the Company provided the expensed, capitalized, and total incentive compensation for the years 2021, 2022, HTY 2023, FTY 2024, and the FPFTY. Below is the capitalization percentage for the above referenced years:

	2021	2022	2023	2024	2025
Capitalized	$3,722,000	$3,551,000	$4,364,000	$2,873,000	$2,724,000
Expensed	$5,950,000	$5,377,000	$5,668,000	$4,882,000	$4,961,000
Total	$9,672,000	$8,928,000	$10,032,000	$7,755,000	$7,685,000
Capitalization Percentage	38.5%	39.8%	43.5%	37.0%	35.4%

As shown above, the Company applies a lower capitalization percentage for the FTY and FPFTY compared to 2021, 2022, and HTY 2023 without any justification for the decrease. My recommendation to use the most recent three-year historical average better reflects the actual capitalization percentage for the FTY and FPFTY based on the Company's recent capitalization history for incentive compensation. Additionally, applying the three-year historical average of 40.6% ((38.5% + 39.8% + 43.5%) ÷ 3) is being conservative given the capitalization percentage has trended upward in recent years.

[42] I&E Exhibit No. 1, Schedule 4, p. 2.

Q. PLEASE EXPLAIN HOW YOU CALCULATED YOUR RECOMMENDATION.

A. I multiplied the total incentive compensation amount claimed by the Company of $7,685,000 by the three-year capitalization percentage average of 40.6% which results in a recommendation for incentive compensation capitalized of $3,120,110 ($7,685,000 x 40.6%) and incentive compensation expensed of $4,564,890 ($7,685,000 x 59.4%), or a reduction of $396,110 ($4,961,000 - $4,564,890) to the Company's claim.

AMORTIZATION OF INTEREST ON UNSPENT MGP FUNDS AND FTAC

Q. WHAT ARE THE INTEREST ON UNSPENT MGP FUNDS AND FINAL FEDERAL TAX ADJUSTMENT CREDIT (FTAC)?

A. The Company is reflecting two adjustments to pay interest on the monthly balance of MGP funds that are not yet spent on remediation activities and for small under collection balance related to the Company's FTAC.[43]

Q. WHAT IS THE COMPANY'S CLAIM?

A. The Company is claiming a reduction in rates of ($662,000).[44]

[43] PECO Statement No. 3, pp. 41-42 and Statement No. 8, p. 12.
[44] PECO Exhibit MJT-1, Schedule D-14, p. 68.

Q. WHAT IS THE BASIS OF THE COMPANY'S CLAIM?

A. The Company is requesting a two-year amortization of the interest on the monthly balance of MGP funds of ($1,387,000) and the FTAC amount of $63,000, resulting in an annual refund of ($662,000) [(-$1,387,000 + $63,000) / 2 years]. This two-year interval is based on the requested rate case expense amortization period of two years.[45]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

Q. WHAT DO YOU RECOMMEND?

A. I recommend an allowance of ($289,091) or an increase of $372,909 [($662,000) + $289,091] to the Company claim.

Q. WHAT IS THE BASIS OF YOUR RECOMMENDATION?

A. I recommend a recovery period of 55 months which is in line with the Company's historic filing frequency as explained above and calculated as follows: [($1,325,000 ÷ 55 months) x 12 months] = ($289,091). The Company's filing frequency clearly supports a 55-month recovery period.

[45] I&E Exhibit No. 1, Schedule 5.

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

Q. WHAT IS THE ENERGY EFFICIENCY AND CONSERVATION PROGRAM?

A. As explained by Company witness Doreen L. Masalta,[46] the Energy Efficiency and Conservation (EE&C) program is currently implemented pursuant to the settlement approved by the Commission in PECO's 2020 base rate case at Docket No. R-2020-3018929. Under this program, the following programs are offered to the customers:

Current Rebate Offer	Rebate Amount
ENERGY STAR®+ Natural Gas Furnace	$600 per unit
ENERGY STAR® Natural Gas Furnace	$350 per unit
ENERGY STAR®+ Natural Gas Combi Boiler	$1,000 per unit
ENERGY STAR® Natural Gas Boiler	$350 per unit
ENERGY STAR® Natural Gas Tankless Water Heater*	$400 per unit
ENERGY STAR® Natural Gas Storage Tank Water Heater	$125 per unit
ENERGY STAR® Natural Gas Clothes Dryer	$15 per unit
* New measure to be implemented in second quarter of 2024.	

Under the current EE&C program, the Company recovers an annual program cost of $2,727,500 through gas distribution base rates and the unspent amount from the $2,727,500 is credited back to the following year's Universal Service Fund Charge.[47]

[46] PECO Statement No. 9, pp. 3-4.
[47] PECO Statement No. 9, pp. 9-10.

Q. WHAT IS THE COMPANY'S CLAIM FOR THE EE&C PROGRAM COST?

A. PECO's EE&C program cost claim is $3,077,500.[48]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. The Company is proposing to increase its EE&C budget by $350,000 to support the projected growth in customer participation from 2023 levels, to perform a future evaluation, measurement, and verification (EM&V) study, and increase customer education activities, and to have the flexibility to move funding to the Safe and Efficient Program (SEHP) to meet the needs of SEHP customers. The Company states that its projected growth can be attributed to the Company making significant progress in customer participation through customer education efforts and an increase in the number of measures available to customers. The Company also states that it will perform an EM&V study in 2024 which is consistent with the Company's statement in the last base rate case. Finally, the Company states that the flexibility to move funding to SEHP will allow the Company to continue to effectively manage the EE&C budget at the program level by expanding the flexibility to shift funding towards SEHP.[49]

[48] PECO Exhibit MJT-1, Schedule D-11.
[49] PECO Statement No. 9, pp. 11-15.

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

Q. WHAT IS YOUR RECOMMENDATION FOR EE&C PROGRAM COSTS?

A. I recommend an allowance of $2,727,500 for EE&C program costs, or a reduction of $350,000 ($3,077,500 - $2,727,500) to the Company's claim.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on disallowance of the additional budget amount of $350,000. With the exception of 2023, the Company has experienced significant unspent EE&C funding on average of 42.64% of annual customer funding for the EE&C program during 2021 and 2022. Even with the inclusion of 2023, the three-year average of unspent funding was still unreasonably high at 29.95% as shown in the table below:[50]

Program Year	Unspent Funding	Total Program Budget	Funding Unspent %
2021	$1,217,228	$2,367,750	51.41%
2022	$955,225	$2,727,500	35.02%
2023	$170,797	$2,727,500	6.26%
2021-2022 Average	$1,086,227	$2,547,625	42.64%
2021-2023 Average	$781,083	$2,607,583	29.95%

[50] PECO Statement No. 9, p. 9, Table 1.

The Company's current EE&C program also appears to be unsuccessful in encouraging customer participation for three reasons. First, customer participation in the EE&C program has been quite low at approximately 1.5% with 7,709 customers participating in 2023[51] as compared with the total residential customer count of approximately 507,197 as of December 31, 2023[52] with customer participation for 2021 and 2022 being even lower at less than 1% customer participation. Second, as discussed above, the Company was not able to fully spend the annual EE&C funding over the last three years and was required to refund back approximately on an average 29.95% of customer funding collected from 2021 through 2023 in rates annually as shown in the table above. Third, the Company's forecast for customer participation for the FTY and FPFTY are 5,899 and 6,379,[53] respectively which are significantly less than the number of customers that participated in 2023 of 7,709.

Therefore, it is inappropriate to increase EE&C program costs due to the limited success in recent years of the current EE&C program in addition to a projected decrease in customer participation in the FTY and FPFTY when compared to the HTY. Finally, collecting additional funding from all residential customers for the benefits of a small number of participants will put an unreasonable burden on the rates of all residential customers.

[51] PECO Statement No. 9, p. 9, Table 1.
[52] PECO Statement No. 1, p. 3.
[53] PECO Exhibit DLM-2.

CASH WORKING CAPITAL

Q. WHAT IS A CASH WORKING CAPITAL (CWC) ALLOWANCE FOR RATEMAKING PURPOSES?

A. CWC includes the amount of funds necessary to operate a utility during the interim between the rendition of service, including the payment of related expenses, and the utility's receipt of revenue in payment of services rendered.

Q. HOW DOES THE COMPANY CALCULATE ITS CWC CLAIM?

A. PECO calculates its CWC by using a lead/lag study. A lead/lag study measures the differences in time between: (1) the time services are rendered until payment of those services is received, and (2) the time between the point when a utility has incurred an expense and the actual payment of the expense. Stated another way, the lead/lag study measures how many days exist on average between the midpoint of the service period and the date the payment is made.

Q. WHAT IS THE COMPANY'S CWC CLAIM?

A. The Company's claim for CWC is $13,737,000.[54]

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIM?

A. PECO's claim is based on a HTY lead/lag study, applying total revenues and total

[54] PECO Exhibit MJT-1, Schedule A-1, p. 1.

expenses for the FPFTY ending December 31, 2025.

Q. DO YOU AGREE WITH THE COMPANY'S CLAIM?

A. No.

Q. WHAT DO YOU RECOMMEND?

A. I recommend a total allowance of $13,220,000 or a decrease of $517,000 ($13,737,000 - $13,220,000) to the Company's claim.[55]

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on my adjustments to O&M expenses as discussed above.

Q. IS YOUR RECOMMENDED CWC ALLOWANCE A FINAL RECOMMENDATION?

A. No. All adjustments to PECO's claims for revenues, expenses, taxes, and rate base must be continually brought together in the Administrative Law Judge's Recommended Decision and again in the Commission's Final Order. This process, known as iteration, effectively prevents the determination of a precise calculation until all adjustments have been made to the Company's claim.

[55] I&E Exhibit No. 1, Schedule 6, p. 1.

Q. WHAT O&M ADJUSTMENTS DID YOU INCORPORATE WHEN DETERMINING A RECOMMENDED CWC ALLOWANCE?

A. All O&M adjustments that are cash-based expense claims should be included when determining the Company's CWC requirement. Therefore, I have included cash-based O&M recommendations when computing the overall recommended CWC allowance.

Q. SUMMARIZE WHERE EACH OF THE RECOMMENDED O&M EXPENSE ADJUSTMENTS ARE REFLECTED IN THE CWC COMPUTATIONS.

A. Payroll - Expense Lag Days:

I recommended a reduction to labor expense of $1,443,000 which is reflected as a reduction to the Payroll Expense Lag Days calculation.[56]

Pension – Expense Lag Days:

I recommended a reduction to pension expense of $572,407 which is reflected as a reduction to the Pension Expense Lag Days calculation.[57]

Other Expenses – Expense Lag Days:

The following recommended adjustments[58] are reflected in the Other O&M

[56] I&E Statement No. 1, p. 3.
[57] I&E Statement No. 1, p. 3.
[58] I&E Statement No. 1, p. 3.

Expenses - Expense Lag Days calculation:[59] rate case expense adjustment of $604,218, payroll taxes adjustment of $122,655, ESBC employee severance expense adjustment of $95,247, employee benefits expense (net of pension expense) adjustment of $306,000, employee activity cost adjustment of $144,001, incentive compensation adjustment of $396,110, an upward adjustment for the amortization of interest on unspent MGP funds FTAC of $372,909, and energy efficiency and conservation adjustment of $350,000 as discussed above, producing a total decrease of $1,645,322 to the Other Expenses Lag Days calculation.[60]

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

[59] I&E Exhibit No. 1, Schedule 6, p. 1, line 10.
[60] I&E Exhibit No. 1, Schedule 6, p. 2.

Professional and Educational Experience
Christopher Keller

Professional Experience

January 2014 to Present
Fixed Utility Financial Analyst
Pennsylvania Public Utility Commission, Harrisburg, Pennsylvania
Bureau of Investigation & Enforcement

September 2008 to January 2014
Insurance Company Financial Analyst
Pennsylvania Insurance Department, Harrisburg, Pennsylvania
Bureau of Licensing & Financial Analysis

Education and Training

FAI Utility Finance and Accounting for Financial Professionals, Boston, MA
May 21-23, 2014

York College of Pennsylvania, York, Pennsylvania
Master of Business Administration, Finance Concentration, 2008
Bachelor of Science, Accounting, 2006

Testimony Submitted

I have testified and/or submitted testimony in the following proceedings:

- Docket No. R-2024-3046523 – Duquesne Light Company (ROR)
- Docket No. R-2023-3044549 – Peoples Natural Gas Company LLC (O&M)
- Docket No. R-2023-3040258 – Columbia Water Company (O&M and ROR)
- Docket No. R-2023-3040290 – UGI Utilities, Inc. – Gas Division (1307(f))
- Docket No. R-2022-3037368 – UGI Utilities, Inc. – Electric Division (O&M)
- Docket No. R-2022-3035730 – National Fuel Gas Distribution Corporation (O&M)
- Docket No. R-2022-3031340 – York Water Company – Water (ROR)
- Docket No. R-2022-3032806 – York Water Company – Wastewater (ROR)
- Docket No. R-2022-3032300 – Valley Energy, Inc. (ROR)
- Docket No. R-2022-3031704 – Borough of Ambler – Water Department (ROR)
- Docket No. R-2022-3032242 – UGI Utilities, Inc. – Gas Division (1307(f))
- Docket No. R-2022-3031211 – Columbia Gas of Pennsylvania, Inc. (ROR)
- Docket No. A-2021-3026132 – Aqua Pennsylvania Wastewater, Inc. – Acquisition of the Wastewater Collection and Conveyance System Assets of East Whiteland Township (1329)
- Docket No. P-2021-3030012 – Metropolitan Edison Company (DSP)
- Docket No. P-2021-3030013 – Pennsylvania Electric Company (DSP)

Professional and Educational Experience
Christopher Keller

Testimony Submitted (Continued)

I have testified and/or submitted testimony in the following proceedings:

- Docket No. P-2021-3030014 – Pennsylvania Power Company (DSP)
- Docket No. P-2021-3030021 – West Penn Power Company (DSP)
- Docket No. R-2021-3026116 – Borough of Hanover – Water (ROR)
- Docket No. R-2021-3025206 – Community Utilities of Pennsylvania – Water Division (ROR)
- Docket No. R-2021-3025207 – Community Utilities of Pennsylvania – Wastewater Division (ROR)
- Docket No. R-2021-3025652 – UGI Utilities, Inc. – Gas Division (1307(f))
- Docket No. R-2021-3024750 – Duquesne Light Company (O&M and ROR)
- Docket No. R-2021-3024296 – Columbia Gas of Pennsylvania, Inc. (ROR)
- Docket No. R-2020-3018929 – PECO Energy Company – Gas Division (ROR)
- Docket No. P-2020-3020914 – Twin Lakes Utilities, Inc. (529 Proceeding)
- Docket No. R-2020-3018835 – Columbia Gas of Pennsylvania, Inc. (ROR)
- Docket No. R-2020-3019680 – UGI Utilities, Inc. (1307(f))
- Docket No. P-2020-3019356 – PPL Electric Utilities Corporation (DSP)
- Docket No. R-2019-3015162 – UGI Utilities, Inc. – Gas Division (ROR)
- Docket No. R-2019-3010955 – City of Lancaster – Sewer Fund (O&M)
- Docket No. R-2019-3009647 – UGI Utilities, Inc. – Gas Division (1307(f))
- Docket No. R-2018-3006818 – Peoples Natural Gas Company LLC (O&M)
- Docket No. R-2018-3000124 – Duquesne Light Company (O&M)
- Docket No. R-2018-3001631 – UGI Central Penn Gas, Inc. (1307(f))
- Docket No. R-2018-3001632 – UGI Penn Natural Gas, Inc. (1307(f))
- Docket No. R-2018-3001633 – UGI Utilities, Inc. (1307(f))
- Docket No. R-2018-2645938 – Philadelphia Gas Works (1307(f))
- Docket No. P-2017-2637855 – Metropolitan Edison Company (DSP)
- Docket No. P-2017-2637857 – Pennsylvania Electric Company (DSP)
- Docket No. P-2017-2637858 – Pennsylvania Power Company (DSP)
- Docket No. P-2017-2637866 – West Penn Power Company (DSP)
- Docket No. R-2017-2602627 – UGI Central Penn Gas, Inc. (1307(f))
- Docket No. R-2017-2602638 – UGI Utilities, Inc. (1307(f))
- Docket No. R-2017-2586783 – Philadelphia Gas Works (O&M)
- Docket No. R-2017-2587526 – Philadelphia Gas Works (1307(f))
- Docket No. I-2016-2526085 – Delaware Sewer Company (529 Proceeding)
- Docket No. R-2016-2531550 – Citizens' Electric Company (O&M)
- Docket No. R-2016-2531551 – Wellsboro Electric Company (O&M)
- Docket No. R-2016-2537349 – Metropolitan Edison Company (CWC and CAP)
- Docket No. R-2016-2537352 – Pennsylvania Electric Company (CWC and CAP)

Professional and Educational Experience
Christopher Keller

Testimony Submitted (Continued)

I have testified and/or submitted testimony in the following proceedings:

- Docket No. R-2016-2537355 – Pennsylvania Power Company (CWC and CAP)
- Docket No. R-2016-2537359 – West Penn Power Company (CWC and CAP)
- Docket No. R-2016-2543311 – UGI Central Penn Gas, Inc. (1307(f))
- Docket No. R-2015-2518438 – UGI Utilities, Inc. – Gas Division (CWC and USP)
- Docket No. P-2015-2511333 – Metropolitan Edison Company (DSP)
- Docket No. P-2015-2511351 – Pennsylvania Electric Company (DSP)
- Docket No. P-2015-2511355 – Pennsylvania Power Company (DSP)
- Docket No. P-2015-2511356 – West Penn Power Company (DSP)
- Docket No. R-2015-2468056 – Columbia Gas of Pennsylvania, Inc. (O&M)
- Docket No. P-2014-2404341 – Delaware Sewer Company (529 Investigation)
- Docket No. R-2014-2452705 – Delaware Sewer Company (O&M)
- Docket No. R-2014-2428304 – Borough of Hanover – Water (O&M)
- Docket No. R-2014-2419774 – Wellsboro Electric Company (Customer Choice Support Charge)
- Docket No. R-2014-2420279 – UGI Central Penn Gas, Inc. (1307(f))

Assisted with the Following Cases

- Docket No. R-2017-2631441 – Reynolds Water Company (ROR)
- Docket No. R-2016-2580030 – UGI Penn Natural Gas, Inc. (ROR)
- Docket No. R-2014-2462723 – United Water Pennsylvania (CWC)
- Docket No. R-2014-2428742 – West Penn Power Company (CWC)
- Docket No. R-2014-2428743 – Pennsylvania Electric Company (CWC)
- Docket No. R-2014-2428744 – Pennsylvania Power Company (CWC)
- Docket No. R-2014-2428745 – Metropolitan Edison Company (CWC)
- Docket No. R-2013-2397353 – Pike County Light & Power Company (Gas) (O&M)
- Docket No. R-2013-2397237 – Pike County Light & Power Company (Electric) (O&M)

I&E Exhibit No. 1
Witness: Christopher Keller

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany

the

Direct Testimony

of

Christopher Keller

Bureau of Investigation and Enforcement

Concerning:

Operating and Maintenance Expenses
Taxes Other Than Income
Cash Working Capital

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I - RE

Response Date: April 29, 2024

IE-I-RE-14

Reference PECO Volume II, Exhibit MJT-1, Schedule D-7 concerning rate case expense. Provide the following:

A. Copies of all current outside service contract agreements for rate case-related services.
B. Invoices/receipts for the rate case-related expenses incurred to date for the current filing and continue to provide updates for invoices as they are incurred.
C. Justification for the PECO's claimed two-year amortization period.
D. Explanation why it is appropriate to amortize, rather than normalize, rate case expense.
E. Identify any claimed expenses related to a prior rate case proceeding and explain the basis for inclusion.
F. A breakdown of rate case expense for the last completed filing.

RESPONSE:

A. Refer to Confidential Attachment IE-I-RE-14(a) for copies of the contracts.

B. Refer to Confidential Attachment IE-I-RE-14(b) for copies of the invoices.

C. The rate case expenses are one-time expenses associated with this filing and the Company projects that it will need to file another rate case in two to three years, which formed the basis for the two-year normalization period.

D. Refer to response to part C.

E. There are no expenses related to a prior rate case proceeding included in this claim.

F. Refer to the Company's response to III-A-20-Gas.

THE CONFIDENTIAL ATTACHMENTS TO THIS RESPONSE ARE BEING PROVIDED ONLY SUBJECT TO THE EXECUTION OF A SUITABLE STIPULATED PROTECTIVE AGREEMENT WITH THE RECIPIENT PENDING THE ISSUANCE OF A PROTECTIVE ORDER IN THIS CASE. PECO WILL PROVIDE A STIPULATED PROTECTIVE AGREEMENT DEEMED SUITABLE TO THE COMPANY FOR EXECUTION, WHICH IS SIMILAR TO THE STIPULATED PROTECTIVE AGREEMENT EMPLOYED IN PECO'S PRIOR BASE RATE CASE.

Responsible Witness: Michael J. Trzaska

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I - RE

Response Date: April 29, 2024

IE-I-RE-13

Reference PECO Volume II, Exhibit MJT-1, Schedule D-7 concerning rate case expense. Provide the following information for the last three base rate cases filed with the Commission by company:

A. Docket number, date of filing, and method of resolution (i.e., settlement or litigation).

B. Requested rate case expense and the actual rate case expense incurred and a breakdown of actual expenses incurrent by category (e.g., consulting services, legal fees, miscellaneous costs) for each case listed in response to Part A above.

RESPONSE:

Refer to the table below in response to parts A. and B. for the Company's last three gas base rate cases.

Docket Number	**Date of Filing**	**Method of Resolution**	**Requested Rate Case Expense**	**Actual Rate Case Expense**	**Effective Date of Rate Increase**
R-2022-3031113	March 31, 2022	Settlement	$1,700,000	$1,259,135	January 1, 2023
R-2020-3018929	September 30, 2020	Litigation	$1,559,325	$1,927,445	July 1, 2021

R-2010-2161592	March 31, 2010	Settlement	$2,200,000	$1,141,074	January 1, 2011

Responsible Witness: Michael J. Trzaska

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I - RE

Response Date: April 29, 2024

IE-I-RE-11

Reference PECO Volume IV, Defined Filing Requirements, Section 53.53 Balance Sheet & Operating Statement Section III-A-21 and PECO Volume II, Exhibit MJT-1, Schedule D-8 concerning employee benefits. Provide the following:

A. Breakdown of employee benefits expensed and capitalized by year for the years December 31, 2021, 2022, 2023, 2024 YTD, 2024 FTY claim, and 2025 FPFTY claim for each type of benefit broken down by union and non-union.

B. Breakdown of the number of employees participating in the PECO's benefits by company by union and non-union and by category of operating expense for the years December 31, 2021, 2022, 2023, 2024 YTD, 2024 FTY claim, and 2025 FPFTY claim.

C. Total amount of wages attributable to employees participating in the PECO's benefits broken down by company by union and non-union and by category, by year for the years December 31, 2021, 2022, 2023, 2024 YTD, 2024 FTY claim, and 2025 FPFTY claim.

D. Provide PECO Volume 2, Exhibit MJT-1, Schedule D-8 with any supporting schedules used in Microsoft Excel format with all formulas intact.

RESPONSE:

A. Refer to Attachment IE-I-RE-11(a) for employee benefits costs charged to expense and capitalized. PECO does not make the distinction between union and non-union in its forecast of incentive costs.

B. The table below shows the number of eligible employees participating in the Company's benefits:

Eligible Employees	2021	2022	HTY 2023	YTD 2024	FTY 2024	FPFTY 2025
Non-Union	135	150	156	160	156	156
Union	226	242	253	250	253	253
	361	392	409	410	409	409

C. PECO's systems currently do not have the capability to provide the requested payroll data broken into union and non-union components.

D. Refer to the Company's response to IE-I-RE-17.

Responsible Witness: Marissa Humphrey

PECO Gas

Benefit Costs

	2021	2022	HTY 2023	YTD 2024	FTY 2024	FPFTY 2025
Expense						
Medical	3,893	4,009	3,893	1,092	4,279	4,482
Dental	229	221	220	53	249	261
Vision	0	0	0	(0)	-	-
Other Benefit Plan & Excess Benefits Savings Plan	53	70	96	25	172	176
401 k Plan	1,530	1,574	1,732	442	1,867	1,992
Disability Plan	87	97	96	23	129	133
ESPP	162	164	174	44	204	213
Worker's Comp	109	108	90	0	126	128
	6,064	6,243	6,302	1,679	7,026	7,386
Capitalized						
Medical	2,955	3,181	3,337	973	2,698	2,614
Dental	174	176	188	48	157	152
Vision	0	0	0	(0)	-	-
Other Benefit Plan & Excess Benefits Savings Plan	130	136	137	15	108	103
401 k Plan	1,210	1,245	1,458	394	1,177	1,162
Disability Plan	66	77	82	21	81	77
ESPP	6	6	5	0	129	124
Worker's Comp	-	-	-	-	80	75
	4,541	4,821	5,208	1,450	4,431	4,307

I&E Exhibit No. 1
Schedule 3
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Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I - RE

Response Date: April 29, 2024

IE-I-RE-8

Reference PECO Volume VI, SDR-RR-27 concerning Incentive Compensation:

A. Provide a copy of all PECO profit sharing, incentive compensation, and bonus pay plans.

B. Include each plan's criteria for participant eligibility and each plan's established criteria/goals that are to be met for payout.

C. For each of the compensation plans, identify all accounts to which the costs are recorded.

D. Identify the amounts expensed and the amounts capitalized by year by year ended December 31, 2021, 2022, HTY 2023, FTY 2024, and FPFTY 2025 for each type of compensation broken down by union and non-union.

E. Breakdown of incentive compensation by financial results, safety results, and qualitative results by year ended December 31, 2021, 2022, HTY 2023, FTY 2024, and FPFTY 2025 claim for each type of compensation and broken down by union and non-union.

F. For Parts C, D, and E, for portions of incentive compensation not directly incurred by PECO (amounts allocated from parent company or affiliates), provide a detailed explanation and supporting documentation, including but not limited to calculations used to determine incentive compensation allocated to PECO for all time periods

mentioned above in Part E.

G. Identify the schedule number, expense line item, and FERC account number that includes incentive expense claim in the FPFTY 2025.

RESPONSE:

A. Refer to the attachments to SDR-RR-27 for copies of plan documents.

B. Refer to the attachments to SDR-RR-27 for participant eligibility and payout criteria.

C. The costs charged to expense would follow where labor was being charged. Cost that are capitalized would be recorded in account 107 Construction Work in Progress.

D. Refer to Attachment IE-I-RE-8(d) for incentive compensation costs charged to expense and capitalized. PECO does not make the distinction between union and non-union in its forecast of incentive costs.

E. Attachment IE-I-RE-8(e) breaks down incentive compensation by performance goal.

F. The information provided in parts C, D, & E applies solely to PECO and does not include amounts allocated by PECO's parent company or affiliates.

G. The pre-adjustment expenses by FERC account for the FTY and FPFTY were determined using PECO's budgets for the twelve-month periods ending December 31, 2024 and December 31, 2025, respectively, as a starting point. Budgeted expenses, which were prepared based on business activities and related cost elements such as payroll, employee benefits, and outside contracting costs, were distributed to FERC accounts based upon the actual distribution of costs experienced by the Company during calendar year-ended December 31, 2023.

Responsible Witness: Marissa Humphrey

PECO Gas

($ in thousands)		2018	2019	2020	2021	2022	HTY 2023	FTY 2024	FPFTY 2025
O&M Expense									
Annual Incentive Plan	Short Term	3,615	4,241	5,143	4,902	4,762	4,984	4,097	4,165
Stock Comp	Long Term	562	93	221	497	101	137	653	632
Cash Awards (RCA, LTPP, LTPCA)	Long Term	-	-	587	551	513	547	133	163
Total Expense		4,177	4,333	5,951	5,950	5,377	5,668	4,882	4,961
Capitalized									
Annual Incentive Plan	Short Term	2,297	3,024	3,593	3,441	3,360	4,119	2,576	2,423
Stock Comp	Long Term	120	21	58	137	33	49	50	62
Cash Awards (RCA, LTPP, LTPCA)	Long Term	-	-	148	144	157	196	247	239
Total Capitalized		2,416	3,045	3,799	3,722	3,551	4,364	2,873	2,724

Costs classified as Long Term are for those plans which have a vesting period or other requirement that defers payment for more than 12 months.

I&E Exhibit No. 1
Schedule 4
Page 3 of 4

PECO
Annual Incentive Plan by Performance Criteria

	2021		2022		HTY 2023		FTY 2024	FPFTY 2025
KPI	**Projected**	**Actual**	**Projected**	**Actual**	**Projected**	**Actual**	**Projected**	**Projected**
Total O&M Expense ($M)	35.0%	29.4%	35.0%	42.6%	35%	42.4%	35%	35%
Value Based Engagements	5.0%	10.0%	5.0%	10.0%	5%	10.0%	5%	5%
Adopting Safety Best Practices	5.0%	10.0%	5.0%	10.0%	5%	10.0%	5%	5%
SAIFI 2.5 Beta Method - Outage Frequency	10.0%	11.6%	10.0%	14.1%	10%	12.0%	10%	10%
SAIDI 2.5 Beta Method					10%	10.7%	10%	10%
CAIDI 2.5 Beta Method - Outage Duration	10.0%	0.0%	10.0%	6.3%				0%
Service Level	10.0%	20.0%						0%
First Contact Resolution			10.0%	5.1%	10%	11.8%	10%	10%
Call Center Satisfaction	10.0%	20.0%	10.0%	9.0%	10%	9.3%		
CEMI4 (3.5 Beta)							10%	10%
Customer Satisfaction Index (CSI)	10.0%	20.0%	10.0%	7.1%	10%	8.8%	10%	10%
Gas Odor Response	5.0%	6.7%	5.0%	6.7%	5%	5.0%	5%	5%
Subtotal	100.0%	127.7%	100.0%	110.8%	100%	119.9%	100%	100%
Board Discretionary Limiter		-7.7%						
Payout Percentage	100.0%	120.0%	100.0%	110.8%	100%	119.9%	100%	100%

I&E Exhibit No. 1
Schedule 4
Page 4 of 4

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set II - RE

Response Date: May 14, 2024

IE-II-RE-31

Reference PECO Volume II, Exhibit MJT-1, Schedule D-14 concerning the final Federal Tax Adjustment Credit (FTAC), provide the following:

A. Supporting documentation for the $63,000 final FTAC recovery.

B. Basis for applying a two-year amortization period.

RESPONSE:

A. Refer to Attachment IE-II-RE-31(a).
B. The Company projects that it will need to file another rate case in two to three years, which formed the basis for the two-year normalization period.

Responsible Witness: Michael J. Trzaska

PECO Gas Operations
Before The Pennsylvania Public Utility Commission
FPFTY Ending December 2025
($ in Thousands)
C-4 CWC Summary

I&E Exhibit No. 1
Schedule 6
Page 1 of 2

-- I&E Modified --

Line No.	Description	Reference	(1) FPFTY Expenses		(2) (Lead)/Lag Days	(3) Dollar-Days	(4)
1	**Working Capital Requirement**						
2							
3	Revenue Lag Days				48.86		
4							
5	Expense Lag						
6	Payroll (Dist Only)		$51,038	(a)	13.58	$693,260	
7	Pension Expense		401	(b)	(167.00)	(66,917)	
8	Commodity Purchased - Gas		260,915		33.24	8,671,521	
9	Payment to Suppliers		82,479		56.21	4,636,002	
10	Other Expenses		110,228	(c)	40.07	4,417,063	
11	Total O&M and POR Payments	SUM L6 to L10	$505,060			$18,350,928	
12							
13	O&M Expense / POR Payment Lag Days				36.33		
14							
15	Net (Lead)/Lag Days	L3 - L13			12.52		
16							
17	Days in Current Year				365		
18							
19	Operating Expenses Per Day		$1,384				
20							
21	Working Capital for O&M Expense		$17,327				
22							
23	Average Prepayments		$2,733				
24	Accrued Taxes		1,896				
25	Interest Payments		(8,736)				
26							
27	Total Working Capital Requirement	SUM L21 to L25	$13,220				
28							
29	Pro Forma O&M Expense		$428,619				
30	Uncollectible Expense		2,378				
31	Pro Forma Cash O&M Expense	L29 - L30	$426,241				

(a) Ref: I&E Statement No. 1, Page 3 for Payroll Expense Adjustment
(b) Ref: I&E Statement No. 1, Page 3 for Pension Expense Adjustment
(c) Ref: I&E Exhibit No. 1, Schedule 6, p. 2

PECO Energy Company - Gas Division
Cash Working Capital Other Expenses Adjustment
For the Twelve Months Ended December 31, 2025

		I&E Recommendded Adjustment
1	Rate Case Expense	$ (604,218)
2	Payroll Taxes	(122,655)
3	ESBC Employee Severance Expense	(95,247)
4	Employee Benefits Exp (Net of Pension Exp)	(306,000)
5	Employee Activity Cost	(144,001)
6	Incentive Compensation	(396,110)
7	Amortization of Interest on Unspent MGP Funds and FTAC	372,909
8	Energy Efficiency & Conservation	(350,000)
9	Total	$ (1,645,322)

Ref: I&E Statement No. 1, p. 3

I&E Statement No. 1-R
Witness: Christopher Keller

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Rebuttal Testimony

of

Christopher Keller

Bureau of Investigation & Enforcement

Concerning:

Operating & Maintenance Expenses
Low-Income Usage Reduction Program

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Christopher Keller. My business address is Pennsylvania Public Utility Commission, Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission (Commission) in the Bureau of Investigation & Enforcement (I&E) as a Fixed Utility Financial Analyst.

Q. ARE YOU THE SAME CHRISTOPHER KELLER WHO SUBMITTED THE DIRECT TESTIMONY CONTAINED IN I&E STATEMENT NO. 1 AND I&E EXHIBIT NO. 1?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to address the direct testimonies of: (1) Local 614 of the International Brotherhood of Electrical Workers (Union) witness James Glenn concerning operating and maintenance (O&M) expenses proposed by PECO Energy Company – Gas Division (PECO or Company); and (2) Tenant Union Representative Network and Coalition for Affordable Utility

Services and Energy Efficiency in Pennsylvania (TURN/CAUSE-PA) witness Elizabeth Marx concerning her recommended increase to PECO's Low Income Usage Reduction Program (LIURP) budget.

Q. DOES YOUR REBUTTAL TESTIMONY INCLUDE AN EXHIBIT?

A. Yes. I&E Exhibit No. 1-R contains schedules that support my rebuttal testimony.

RESPONSE TO UNION WITNESS JAMES GLENN

Q. SUMMARIZE MR. GLENN'S RECOMMENDATION FOR CLAIMED PAY INCREASES WITH EFFECTIVE DATES THAT FALL AFTER THE END OF THE FPFTY.

A. Mr. Glenn asserts that pay increases that will take effect after the end of the FPFTY should be approved because they are known and measurable costs in line with federal policy to encourage the practice and procedure of collective bargaining.[1]

Q. DO YOU AGREE THAT FOR THESE REASONS THE POST-FPFTY PAY INCREASES SHOULD BE APPROVED BY THE COMMISSION FOR RATEMAKING?

A. No. Mr. Glenn's reasons do not support the Commission granting post-FPFTY pay increases for ratemaking. The Company elected to file a base rate case with a

[1] Union Statement No. 1, pdf pp. 5-6.

FPFTY ending December 31, 2025. To properly utilize this FPFTY, the Company should adhere to a matching principle wherein the rate base, revenues, and expenses claimed for ratemaking purposes align with this test year period. As stated in my direct testimony, allowing expense adjustments that occur after the FPFTY end would misalign data presented for establishing rates.[2] This methodology does nothing to discourage the practice and procedure of collective bargaining and focuses on the proper matching of rate base, revenues, and expenses allowable for inclusion in the FPFTY period for the proper setting of customer rates.

Q. DO YOU HAVE ANY OTHER AREAS TO ADDRESS ASSOCIATED WITH MR. GLENN'S RECOMMENDATIONS RELATED TO PAYROLL?

A. Yes. Mr. Glenn recommends the Commission require PECO to file annual reports with the Commission entitled Annual Workforce Planning Reports at the beginning of each calendar year discussing staffing actions, issues and challenges addressed, etc., up through the filing of the next base rate case.[3]

Q. DO YOU HAVE ANY OPPOSITION TO THE RECOMMENDED REQUIREMENT FOR ANNUAL WORKFORCE PLANNING REPORTS?

A. No. Since the Union indicates that PECO "has admitted it already tracks these

[2] I&E Statement No. 1, pp. 16-17.
[3] Union Statement No. 1, pdf pp. 8-9.

numbers"[4] it does appear that it would not produce any additional cost to ratepayers. However, a clear deadline for such reporting would need to be established since the deadline of "at the beginning of each calendar year" is not specific enough. Additionally, the Union has not indicated that the reports should be filed directly with all parties in the instant proceeding, which I believe is necessary, because merely stating the reports be filed "with the Commission" again lacks needed specificity.

RESPONSE TO TURN/CAUSE-PA WITNESS ELIZABETH MARX

Q. SUMMARIZE MS. MARX'S DIRECT TESTIMONY CONCERNING PECO'S LIURP BUDGET.

A. First, Ms. Marx asserts that PECO's LIURP is not adequately funded or appropriately available to reduce unnecessarily high usage and correspondingly unaffordable energy burdens which will be further exasperated by any approved rate increase.[5] Second, she states that PECO's LIURP serves significantly less of those in need as compared to pre-COVID-19 numbers and in 2023 serviced just over 1% of eligible households.[6] Third, she asserts that PECO has a disproportionately low LIURP budget compared to other natural gas distribution companies (NGDCs) considering the number of residential customers served.[7]

[4] Union Statement No. 1, pdf p. 9.
[5] TURN/CAUSE-PA Statement No. 1, pp. 32-33.
[6] TURN/CAUSE-PA Statement No. 1, p. 33.
[7] TURN/CAUSE-PA Statement No. 1, pp. 33-34.

Therefore, Ms. Marx recommends that PECO should increase its annual LIURP budget by $1,850,000 to $5,000,000 along with actively recruiting households for participation and collaborating with external entities that provide complementary services.[8]

Q. BRIEFLY DESCRIBE THE STATUS OF PECO'S 2019-2028 UNIVERSAL SERVICE AND ENERGY CONSERVATION PLAN AS AMENDED.

A. Amendments as of October 30, 2023, to PECO's 2019-2028 Universal Service and Energy Conservation Plan (2019-2028 USECP) were recently approved by the Commission.[9] The Company's 2019-2028 USECP contains detailed provisions for low-income customers' eligibility criteria, assistance, the cost recovery mechanism, annual budget, etc. for each of the programs for the electric and gas customers.

Q. WHAT IS PECO'S ANNUAL LIURP BUDGET IN THE 2019-2028 USECP?

A. Page 15 of the 2019-2028 USECP shows an annual LIURP budget of $2,250,000 starting in 2023.[10]

[8] TURN/CAUSE-PA Statement No. 1, pp. 35-38.

[9] *PECO Energy Company Universal Service and Energy Conservation Plan for 2019-2028* at Docket No. M-2018-3005795 and *PECO Energy Company Petition to Amend Universal Service and Energy Conservation Plan for 2019-2028* at Docket No. P-2023-3044165 (Order Entered December 7, 2023).

[10] https://www.puc.pa.gov/media/2690/peco_2019_usecp_10-2023.pdf. Accessed July 3, 2024.

Q. DO YOU AGREE WITH MS. MARX THAT THE COMPANY SHOULD INCREASE ITS LIURP BUDGET BY $1,850,000 IN THIS PROCEEDING?

A. No. While Ms. Marx's recommendation is well-intentioned, it is inappropriate to consider such a significant increase in the LIURP budget in this base rate proceeding.

Q. WHY DO YOU DISAGREE WITH MS. MARX'S RECOMMENDATION?

A. Even though since 2018, PECO has exhausted its annual LIURP budgets in all recent years other than 2020,[11] it is inappropriate to grant an increase in the annual LIURP budget without consideration and evaluation of all other related programs and comments of all stakeholders and interested parties.

Q. ARE THERE ANY RECENT COMMISSION DECISIONS THAT SUPPORT YOUR ARGUMENT?

A. Yes. Most recently the Commission stated the following related to a decision concerning universal service issues in the Aqua, Pennsylvania, Inc. base rate case,[12]

> Our decision on this issue is consistent with prior decisions in which we have determined that it was not appropriate to consider proposals relating to a public utility's energy burdens, CAP, and other universal service program issues within the context of a base rate proceeding, finding that such proposals are more properly considered in a public utility's Universal Service and Energy Conservation Plan (USECP) proceeding.

[11] I&E Exhibit No. 1-R, Schedule 1.

[12] *PA Public Utility Commission et al. v. Aqua Pennsylvania, Inc.*, Docket No. R-2021-3027386, p. 333 (Order Entered May 16, 2022).

Additionally, in the PECO's last base rate case proceeding, the Commission did not consider CAUSE-PA's proposals related to the Customer Assistance Plan (CAP) and other universal service program issues within the context of the base rate proceeding because they would be more properly considered in its USECP proceeding.[13] In that proceeding, the Commission also referenced the 2020 Columbia Gas of Pennsylvania, Inc. (Columbia Gas) proceeding[14] where it concluded, "that energy burdens should not be considered separately from other parts of the Company's CAP and universal service programs but should be considered as part of the Company's entire universal service plan, including the need for changes and associated costs."[15]

Q. IS THERE ANY ADDITIONAL GUIDANCE THAT SUPPORTS YOUR RECOMMENDATION?

A. Yes. The Notice of Proposed Rulemaking for the *Initiative to Review and Revise the Exhibit Low-Income Usage Reduction Program (LIURP) Regulations at 52 Pa. Code §§ 58.1-58.18*, states,

> [A] LIURP budget can only be revised through a USECP proceeding initiated pursuant to the periodic USECP review process or in response to a petition to amend a USECP earlier than the periodic USECP review process.[16]

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[13] *PA Public Utility Commission v. PECO Energy Company – Gas Division*, Docket No. R-2020-3018929, pp. 195-196 (Order Entered June 22, 2021).

[14] *PA Public Utility Commission v. Columbia Gas of Pennsylvania, Inc.*, Docket No. R-2020-3018835, p. 160 (Order Entered February 19, 2021).

[15] *PA Public Utility Commission v. PECO Energy Company – Gas Division*, Docket No. R-2020-3018929, p. 195 (Order Entered June 22, 2021).

[16] Notice of Proposed Rulemaking for the *Initiative to Review and Revise the Exhibit Low-Income Usage Reduction Program (LIURP) Regulations at 52 Pa. Code §§ 58.1-58.18*, p. 36 (Order Entered May 18, 2023).

Further, it states as follows,

> As LIURP is a ratepayer-funded program, considerations impacting its budget determination should be open to scrutiny and comment. USECP proceedings allow all interested parties to provide comments, raise questions, and review information justifying the proposed change to the LIURP budget in an on-the-record proceeding. [17]

Q. WERE THERE ANY RECENT STATEMENTS MADE THAT SUPPORT YOUR RECOMMENDATION?

A. Yes. In Public Meeting on September 21, 2023, Commissioner John F. Coleman, Jr. (Commissioner Coleman) issued a statement to the 2022 UGI Utilities, Inc. – Electric Division (UGI Electric) base rate case at Docket No. R-2022-3037368, et al.,[18] regarding his concerns related to USECPs expressing:

> I am becoming increasingly uncomfortable with the modification to universal service programs within base rate cases, especially in base rate cases that result in black box settlements…the design, budgeting, and administration of universal service programs is a complex undertaking for our public utilities… [and the] complexity… [is] best addressed in USECP proceedings.[19]

Commissioner Coleman also cited the 2023 Order for LIURP Regulations,[20] adding:

> In that Order, the Commission stated "[t]he appropriateness, effectiveness, and prudence of the cost of universal service is determined in a USECP proceeding. How those universal service costs are recovered is addressed in a rate case." Also

[17] Notice of Proposed Rulemaking for the *Initiative to Review and Revise the Exhibit Low-Income Usage Reduction Program (LIURP) Regulations at 52 Pa. Code §§ 58.1-58.18*, p. 37 (Order Entered May 18, 2023).

[18] *PA Public Utility Commission v. UGI, Utilities Inc. – Electric Division*, Docket No. R-2022-3037368, et al., Statement of Commissioner John F. Coleman, Jr., September 21, 2023.

[19] Id., p. 2.

[20] *Initiative to Review and Revise the Existing Low-Income Usage Reduction Program (LIURP) Regulations at 52 Pa. Code §§ 58.1—58.18*, Docket No. L-2016-2557886 (Order entered May 18, 2023).

> in that Order, the Commission stated that requiring LIURP budgets to be set in USECP proceedings is intended "to ensure that modifications conform to regulatory or policy-level considerations." It may be time to expand this reasoning to encompass all universal service programs – their designs and costs.[21]

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS ABOUT MS. MARX'S DIRECT TESTIMONY?

A. Yes. Due to the length, depth, and number of issues addressed in Ms. Marx's direct testimony, lack of response to any topic or recommendation should not be interpreted as agreement with her recommendations.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

[21] *PA Public Utility Commission v. UGI, Utilities Inc. – Electric Division*, Docket No. R-2022-3037368, et al., Statement of Commissioner John F. Coleman, Jr., September 21, 2023, pp. 2-3.

I&E Exhibit No. 1
Witness: Christopher Keller

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany

the

Rebuttal Testimony

of

Christopher Keller

Bureau of Investigation and Enforcement

Concerning:

Operating and Maintenance Expenses
Taxes Other Than Income
Cash Working Capital

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
The Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
CAUSE-PA Set I

Response Date: May 28, 2024

CAUSE-PA-I-26

Please indicate for each year from 2018 to date in 2024:

a. Whether PECO Gas exhausted its LIURP budget;
b. The total amount of budgeted LIURP dollars for PECO Gas;
c. The total amount of spent LIURP dollars for PECO Gas;
d. If PECO Gas's LIURP budget was exhausted, the number of LIURP applicants that did not receive LIURP services despite having been found LIURP eligible.

RESPONSE:

a. PECO exhausted its annual gas LIURP budget for 2018-2019 and 2021-2023. In 2020, due to pandemic-related restrictions, PECO did not exhaust its annual LIURP gas budget. See the September 2022 MEAF Accounting Final Letter filed with the Commission (available at https://www.puc.pa.gov/pcdocs/1758698.pdf).

b. The annual LIURP Gas budget for 2018-2022 was $2.25M per year and for 2023 it was $3.15M.

c. For January through March 2024, the amount of spent LIURP dollars for PECO Gas was $916,500. Please refer to the response to subpart (a) for the additional time periods requested.

d. Customers who do not receive services in a specific year will be addressed in a subsequent year providing they continue to remain eligible.

Responsible Witness: Jacqueline F. Golden

I&E Statement No. 1-SR
Witness: Christopher Keller

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2023-3046932

Surrebuttal Testimony

of

Christopher Keller

Bureau of Investigation & Enforcement

Concerning:

Operating and Maintenance Expenses
Taxes Other Than Income
Cash Working Capital

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Christopher Keller. My business address is Pennsylvania Public Utility Commission, Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission (Commission) in the Bureau of Investigation & Enforcement (I&E) as a Fixed Utility Financial Analyst.

Q. ARE YOU THE SAME CHRISTOPHER KELLER WHO SUBMITTED THE DIRECT TESTIMONY CONTAINED IN I&E STATEMENT NO. 1 AND I&E EXHIBIT NO. 1?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of PECO Energy Company – Gas Division (PECO or Company) witnesses Amy E. Hamilton,[1] Marissa Humphrey,[2] Michael J. Trzaska,[3] and Doreen L. Masalta[4] and

[1] PECO Statement No. 1-R.
[2] PECO Statement No. 2-R.
[3] PECO Statement No. 3-R.
[4] PECO Statement No. 9-R.

Local 614 of the International Brotherhood of Electrical Workers (Union) witness James Glenn.[5]

Q. DOES YOUR SURREBUTTAL TESTIMONY INCLUDE AN EXHIBIT?

A. Yes. I&E Exhibit No. 1-SR contains schedules that support my surrebuttal testimony. In this surrebuttal testimony, I will also make references to my direct testimony[6] and its accompanying exhibit.[7]

SUMMARY OF I&E OVERALL UPDATED POSITION

Q. PLEASE SUMMARIZE THE COMPANY'S UPDATED OVERALL CLAIMED REVENUE REQUIREMENT.

A. In rebuttal testimony, the Company updated its requested increase presenting an increase of $110,194,000 to present rate revenues of $746,448,000, resulting in a total overall revenue requirement of $856,642,000.[8]

Q. PLEASE SUMMARIZE YOUR ADJUSTMENTS AS CONTAINED IN THIS SURREBUTTAL TESTIMONY.

A. The following table summarizes my recommended adjustments to PECO's updated position.

---

5 Union Statement No. 1-R.
6 I&E Statement No. 1.
7 I&E Exhibit No. 1.
8 PECO Exhibit MJT-1 Revised, Schedule A-1.

	Company Claim	I&E Adjustment	I&E Recommended Allowance
O&M Expenses:			
Rate Case Expense	$1,072,000	($604,218)	$467,782
Payroll Expense	$52,481,000	($1,443,000)	$51,038,000
Payroll Taxes	$4,463,000	($122,655)	$4,340,345
Pension Expense	$973,000	($572,407)	$400,593
ESBC Employee Severance Expense	$95,247	($95,247)	$0
Employee Activity Cost	$192,530	($144,001)	$48,529
Incentive Compensation	$4,961,000	($396,110)	$4,564,890
Amort. of Interest on Unspent MGP Funds & FTAC	($666,000)	$375,382	($290,618)
Energy Efficiency and Conservation	$3,077,500	($350,000)	$2,727,500
Total O&M Expense Adjustments		($3,352,256)	
Rate Base Adjustments			
Cash Working Capital	$13,764,000	($510,000)	$13,254,000
Total Rate Base Adjustments		($510,000)	

Q. WHAT IS I&E'S TOTAL UPDATED RECOMMENDED REVENUE REQUIREMENT?

A. I&E's updated total recommended revenue requirement for the Company is $821,594,000. This recommended revenue requirement represents an increase of $75,146,000 to the Company's updated claimed present rate revenues of $746,448,000. This total recommended increase incorporates adjustments made in this testimony and those made in the surrebuttal testimony of other I&E witnesses.

The following table summarizes the I&E surrebuttal position:

PECO Energy Company - Gas Division		TABLE I			
R-2024-3046932		INCOME	SUMMARY		
($ in Thousands)					
	12/31/25	INVESTIGATION & ENFORCEMENT			
	Proforma	[----------			----------
	Present Rates	Adjustments	Present Rates	Allowances	Proposed
	$	$	$	$	$
Operating Revenue	746,448	0	746,448	75,146	821,594
Deductions:					
O&M Expenses	428,963	-3,229	425,734	277	426,011
Depreciation	118,441	0	118,441		118,441
Taxes, Other	9,067	-123	8,944	232	9,176
Income Taxes:					
Current State	-3,528	270	-3,258	5,963	2,705
Current Federal	-13,146	650	-12,496	14,422	1,926
Deferred Taxes/AMT	2,384	0	2,384		2,384
ITC	-5	0	-5		-5
Total Deductions	542,176	-2,432	539,744	20,894	560,638
Income Available	204,272	2,432	206,704	54,252	260,956
Rate Base	3,512,702	-510	3,512,192	0	3,512,192
Rate of Return	5.82%		5.89%		7.43%

RATE CASE EXPENSE

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR RATE CASE EXPENSE.

A. In direct testimony, I recommended rate case expense be normalized over a period of 55 months resulting in an annual expense of $467,782 [($2,144,000 ÷ 55 months) x 12 months], or a reduction of $604,218 ($1,072,000 - $467,782) to the Company's claim. I disagreed with the Company's attempt to amortize, rather than normalize, its rate case expense claim and the Company's claimed two-year normalization period because it was not supported by the Company's historic filing frequency, was speculative in nature, and the Commission has agreed with

I&E that the normalization period be based on actual historic filing frequency rather than future speculation.[9]

Using the Company's last three base rate case filing dates and the date of the current filing, an average interval is computed to be 55 months ((23 mo. + 18 mo. + 125 mo.) ÷ 3 intervals). The Company's requested 24-month recovery period is not supported by its historic filing record. Thus, the claimed two-year recovery period should be rejected as it would result in an unreasonable and unsupported increase in rates.

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR RATE CASE EXPENSE?

A. Yes. Company witness Michael J. Trzaska disagrees with my recommendation that rate case expense be normalized over a 55-month period.

Q. PLEASE SUMMARIZE MR. TRZASKA'S RESPONSE.

A. Mr. Trzaska asserts that PECO will need to file another rate case in two to three years because the Company will need to invest approximately $786 million in additional gas distribution plant between January 1, 2024 and December 31, 2025 and will experience yearly increases to O&M expenses. Therefore, the Company used the normalization period of two years for rate case expense. Mr. Trzaska also

[9] I&E Statement No. 1, pp. 5-13.

states that the Company has an actual filing history of 24 months or shorter since 2020 and my inclusion of the Company's 2010 is unreasonable.[10]

Q. DID MR. TRZASKA RESPOND TO YOUR ASSERTION THAT RATE CASE EXPENSE SHOULD BE NORMALIZED AND NOT AMORTIZED FOR RATEMAKING?

A. No. However, he references it as a normalized expense in rebuttal testimony. Thus, it appears that he agrees with me.

Q. DO YOU AGREE WITH MR. TRZASKA'S RESPONSE THAT THE TWO-YEAR NORMALIZATION BASED ON THE COMPANY'S EXPECTED INVESTMENT IN ADDITIONAL GAS DISTRIBUTION PLANT AND YEARLY INCREASES IN O&M EXPENSES IS SUFFICIENT?

A. No. As stated in my direct testimony, the Commission has cited the importance of considering the involved utility's history regarding the frequency of rate case filings as an essential element in determining the normalized level of rate case expense for ratemaking purposes.[11] While the Commission allows utilities to normalize this expense, it is not appropriate to do so over a time period that is based on mere speculation of future filings or a simple statement that the

[10] PECO Statement No. 3-R, p. 10.
[11] I&E Statement No. 1, p. 6.

Company plans to file another rate case within two years based on forecasted additional gas distribution plant and yearly increases in O&M expenses.

Additionally, as stated in my direct testimony, the 2012 PPL Electric Utilities Corporation (PPL) base rate case[12] actually demonstrates that the use of historic filing frequency is more reliable as PPL was granted a 24-month normalization period, but it did not file its next base rate case until March 31, 2015[13] which was 36 months after the 2012 base rate case proceeding. In contrast, I&E's recommendation of 32-months based on historic filing frequency was more accurate.[14]

Q. DOES USING A HISTORIC FILING FREQUENCY CAPTURE CHANGES TO A COMPANY'S RATE CASE FILING INTERVAL?

A. Yes. Through the filing of more frequent or less frequent rate cases, a company's normalization period will naturally align with the current trend in filing history. Since changes in filing frequency are reflected in the historic normalization period, it is unnecessary to base a rate case expense claim on speculation as to when the next filing will occur. Additionally, I referenced six cases in my direct testimony that support this methodology in determining a company's historic filing frequency.[15]

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[12] PA PUC v. PPL Electric Utilities Corporation, Docket No. R-2012-2290597, pp. 47-48 (Order Entered December 28, 2012).

[13] PA PUC v. PPL Electric Utilities Corporation, Docket No. R-2015-2469275, p. 3 (Order Entered November 19, 2015).

[14] I&E Statement No. 1, pp. 10-11.

[15] I&E Statement No. 1, pp. 11-12.

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR RATE CASE EXPENSE?

A. No. I continue to recommend an allowance of $467,782 for rate case expense based on a 55-month normalization period as the Company's historic filing frequency does not support the claimed two-year normalization period.[16]

PAYROLL EXPENSE

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR PAYROLL EXPENSE.

A. In direct testimony, I recommended an allowance of $51,038,000 for payroll expense, or a reduction of $1,443,000 ($52,481,000 - $51,038,000) to PECO's claim. My recommendation was based on adjusting PECO's payroll expense claim to remove $42,000 for a normalized one-time union contract payment made in 2021 and to remove the January 1, 2026 and March 1, 2026 wage increases for union employees and non-union employees totaling $1,401,000, which are effective after the end of the FPFTY. I recommended that the union contract payment be disallowed as it is considered to be retroactive ratemaking and the Commission has disallowed this payment claimed by the Company in a prior base rate case. I recommended that the 2026 salary and wage increases be disallowed for ratemaking purposes because of effective dates after the end of the FPFTY that

[16] I&E Statement No. 1, pp. 5-13.

would place an unreasonable burden on ratepayers.[17]

Q. DID ANY WITNESSES RESPOND TO YOUR RECOMMENDATION FOR PAYROLL EXPENSE?

A. Yes. Company witness Michael J. Trzaska and Union witness James Glenn disagree with my payroll expense recommendation.

Q. SUMMARIZE MR. TRZASKA'S AND MR. GLENN'S RESPONSES.

A. Mr. Trzaska disagrees with my recommendation to remove the January 1, 2026 and March 1, 2026 wage increases for union employees and non-union employees as they are known and measurable and will occur shortly after the end of the FPFTY and some of the increases are associated with collective bargaining agreements that PECO is contractually obligated to incur. Mr. Trzaska also states that the non-union employee wage increases will occur before the Company's next base rate case that the Company plans to file in the next two to three years. Mr. Trzaska asserts that the Company has consistently paid a union contract ratification bonus to union employees with the most recent being in March 2021 that the Company proposes to normalize over six years, claiming this is Commission practice. Mr. Trzaska states that the union contract ratification bonus is a recurring expense and should be included. Finally, he argues that these

[17] I&E Statement No. 1, pp. 13.17.

expense claims allow PECO a fair opportunity to earn the rate of return used to set rates in this proceeding for the period those rates are in effect.[18]

Mr. Glenn asserts that pay increases going into effect after the end of the FPFTY should be approved because they are known and measurable costs in line with federal policy to encourage the practice and procedure of collective bargaining.[19] Mr. Glenn also states that the one-time union contract payment should be included as ratepayers benefit from the stability of the contractual relationship with the union and the ratification of the Collective Bargaining Agreement.[20]

Q. WHAT IS YOUR RESPONSE TO MR. TRZASKA'S AND MR. GLENN'S REBUTTAL TESTIMONY REGARDING THE PAY INCREASES EFFECTIVE AFTER THE END OF THE FPFTY?

A. I disagree entirely with Mr. Trzaska's arguments. His argument that the pay increases are incurred shortly after the end of the FPFTY is not factually correct. Those claimed pay increases are annualized, and the Company is claiming a full year of the increases that applies through the end of 2026. His argument that the expenses are known, measurable, and contractually liable is also flawed. For example, lease agreements may be signed for multiple years, but the associated expenses should not be claimed for periods after the end of an FPFTY.

[18] PECO Statement No. 3-R, pp. 6-7.
[19] Union Statement No. 1-R, pdf pp. 2-3.
[20] Union Statement No. 1-R, pdf p. 4.

As stated in my direct testimony, it is inappropriate to allow increases in expenditures, plant additions, or projected revenue declines that occur after the end of the FPFTY in a base rate case utilizing an FPFTY. The FPFTY already allows for the projection of a full year of expenses and plant additions beyond the effective date of new rates. Allowing adjustments of this type that occur after the FPFTY would misalign data presented for the establishment of base rates to the benefit of the Company and to the harm of ratepayers.[21] Finally, Mr. Trzaska's argument that these operating expenses should be allowed for PECO to earn a proper rate of return is flawed because operating expenses are not subject to rate of return like rate base.

I also disagree with Mr. Glenn's assertion that pay increases should be allowed in this proceeding for raises with effective dates after the end of the FPFTY. Saying that such raises are just and reasonable, known and measurable, and not unreasonable or imprudent fails to address my concerns. Additionally, as discussed in my rebuttal testimony, Mr. Glenn's reasons do not support the Commission granting post-FPFTY pay increases for ratemaking. The Company elected to file a base rate case with a FPFTY ending December 31, 2025. To properly utilize this FPFTY, the Company should adhere to a matching principle wherein the rate base, revenues, and expenses claimed for ratemaking purposes align with this test year period. Allowing expense adjustments that occur after the FPFTY end would misalign data presented for establishing rates. This

[21] I&E Statement No. 1, pp. 16-17.

methodology does nothing to discourage the practice and procedure of collective bargaining and focuses on the proper matching of rate base, revenues, and expenses allowable for inclusion in the FPFTY period for the proper setting of customer rates.[22] Finally, I disagree with Mr. Glenn concerning his citations of federal policy and state law about union negotiations because I never presented arguments about the legality or illegality of such pay increases themselves; I only presented testimony on the inclusion of these pay increases in rates.

Q. WHAT IS YOUR RESPONSE TO MR. TRZASKA'S AND MR. GLENN'S REBUTTAL TESTIMONY REGARDING THE ONE-TIME UNION CONTRACT PAYMENT?

A. Neither Mr. Trzaska nor Mr. Glenn has provided any new information that would cause me to change my recommendation. As discussed in my direct testimony, the one-time union contract payment is considered to be retroactive ratemaking as it is the future collection of a prior period cost. Ratemaking, by its nature is prospective. "The rule against retroactive ratemaking prohibits a public utility commission from setting future rates to allow a utility to recoup past losses."[23] The union contract payment is a past expense payment for an employee action that occurred in the past. Generally, recovery of these costs constitutes retroactive ratemaking and should be disallowed. Additionally, the Commission has

[22] I&E Statement No. 1-R, pp. 2-3.
[23] *Popowsky v. Pub. Util. Comm'n*, 642 A.2d 648, 650-51.

disallowed this exact payment claimed by the Company in its 2020 base rate case.[24]

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR PAYROLL EXPENSE?

A. No. For all the reasons stated above and in my direct testimony, I continue to recommend an allowance of $51,038,000 for payroll expense, or a reduction of $1,443,000 ($52,481,000 - $51,038,000) to PECO's claim..

PAYROLL TAXES

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR PAYROLL TAXES.

A. In direct testimony, I recommended an allowance of $4,340,345 for payroll tax expense, or a reduction of $122,655 ($4,463,000 - $4,340,345) to the Company's claim. My recommendation captured my payroll expense reduction for the one-time union contract payments and removal of the post-FPFTY pay increases. My recommended adjustment was calculated using the Company's effective payroll tax rate of 8.50%.[25]

[24] I&E Statement No. 1, pp. 15-16.
[25] I&E Statement No. 1, pp. 17-18.

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR PAYROLL TAXES?

A. Yes. Company witness Michael J. Trzaska disagrees with my payroll tax expense recommendation for the same reasons that he disagrees with my payroll expense recommendation.[26]

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR PAYROLL TAXES?

A. No. I continue to recommend an allowance of $4,340,345 for payroll tax expense, or a reduction of $122,655 ($4,463,000 - $4,340,345) to the Company's claim based on removal of the one-time union contract payments and the post-FPFTY pay increases from payroll expense as stated above and in my direct testimony.

EMPLOYEE BENEFITS EXPENSE (NET OF PENSION EXPENSE)

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR EMPLOYEE BENEFITS EXPENSE.

A. In direct testimony, I recommended an allowance of $7,404,000 or a reduction of $306,000 ($7,710,000 - $7,404,000) to the Company's claim. My recommendation was based on the Company's supported amount for employee benefits net of pension expense of $7,404,000, which is less than what the Company stated is the total employee benefits expense claim net of pension

[26] PECO Statement No. 3-R, p. 7.

expense.[27]

Q. DID ANY WITNESS RESPOND TO YOUR RECOMMENDATION FOR EMPLOYEE BENEFITS EXPENSE (NET OF PENSION EXPENSE)?

A. Yes. Company witness Michael J. Trzaska and Union witness James Glenn disagree with my employee benefits expense (net of pension expense) recommendation. Mr. Trzaska states that my recommendation did not include the other post-retirement benefits (OPEB) costs of $377,000 and that the schedule I referenced only represents a subset of employee benefits expense that excludes OPEBs which are included in Company Exhibit MJT-1 Revised, Schedule D-4.[28] Mr. Glenn simply asserts that the Union does not agree with my recommendation, and that the Company has supported its claim.[29]

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR EMPLOYEE BENEFITS EXPENSE (NET OF PENSION EXPENSE)?

A. Yes. I accept Mr. Trzaska's explanation about OPEB expense and am withdrawing my recommended adjustment to employee benefits expense (net of pension expense).

[27] I&E Statement No. 1, pp. 19-20.
[28] PECO Statement No. 3-R, p. 9.
[29] Union Statement No. 1-R, pdf p. 3.

PENSION EXPENSE

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR PENSION EXPENSE.

A. In direct testimony, I recommended an allowance of $400,593 for pension expense, or a reduction of $572,407 ($973,000 - $400,593) to the Company's claim. My recommendation was based on the Company's projected cash contribution in the FPFTY as opposed to a five-year average of pension contributions from 2021 through FPFTY 2025 which includes the FTY 2024 and FPFTY 2025 projected pension expenses. The Company used the years 2021 and 2022 in determining the five-year average of cash contributions which are outliers and would make it inappropriate and unreasonable to use the five-year average in determining the Company's claim.[30]

Q. DID ANY WITNESS RESPOND TO YOUR RECOMMENDATION FOR PENSION EXPENSE?

A. Yes. Company witness Michael J. Trzaska and Union witness James Glenn responded to my pension expense recommendation. Mr. Trzaska states that pension expense is subject to variability based on annual actuarial analysis and the use of a five-year average is appropriate since actual contributions are impacted by a number of factors beyond the Company's control.[31] Mr. Glenn states that the

[30] I&E Statement No. 1, pp. 20-23.
[31] PECO Statement No. 3-R, p. 8.

Company used historical data to average pension costs and that my recommendation is only put forth to reduce the amount.[32]

Q. WHAT IS YOUR RESPONSE TO MR. TRZASKA AND MR. GLENN?

A. It is not appropriate to use a multi-year average for pension expense that includes two forward looking projections given that pension expense has declined from 2021 to 2023, and the forward-looking projections are significantly less than the actual expenses from 2021 to 2023. The multi-year average is unnecessary because an actuary would consider these factors referenced by Mr. Trzaska that are beyond the Company's control when determining yearly contributions and would have considered them when determining the declining contributions and the 2025 FPFTY projected contribution. For these reasons, and considering the annual decline in actual contributions, my recommendation should be adopted.

With respect to Mr. Glenn, I would respond that Mr. Glenn's contention that my approach is merely to reduce the claim could just as easily be directed at the Company's claim insomuch that its purpose in including two outlier years of historic data was done so only to increase the claim amount. As Mr. Glenn's statement simply rejects my logic in using the actuarial projections for the FTY and FPFTY, which more accurately identifies the expenses expected to be experienced in the FPFTY, his position should be rejected.

[32] Union Statement No. 1-R, pdf p. 3.

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR PENSION EXPENSE?

A. No. I continue to recommend an allowance of $400,593 for pension expense, or a reduction of $572,407 ($973,000 - $400,593) to the Company's claim for the reasons discussed above and in my direct testimony.

EBSC EMPLOYEE SEVERANCE EXPENSE

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR EXELON BUSINESS SERVICES COMPANY (EBSC) EMPLOYEE SEVERANCE EXPENSE.

A. In direct testimony, I recommended disallowance of the entire claim of $95,247 for EBSC employees severance expense. My recommendation was based on it being inappropriate for PECO to claim an allocated portion of EBSC employees' severance expense for ratemaking, when the EBSC employees' direct service costs are charged and claimed based on time spent and an hourly rate. Additionally, it is unreasonable to claim employees' indirect cost (retirement/severance expense), as these costs are not related to provision of utility service. Finally, in the filing PECO states that there is no actuarial study available for the basis of the FPFTY claim.[33]

[33] I&E Statement No. 1, pp. 23-25.

Q. DID ANY WITNESS RESPOND TO YOUR RECOMMENDATION FOR EBSC EMPLOYEE SEVERANCE EXPENSE?

A. Yes. Company witness Marissa Humphrey and Union witness James Glenn disagree with my ESBC employee severance expense recommendation. Ms. Humphrey confirms that EBSC employee costs are allocated to PECO based on, among other things: (a) the time employees spent assisting PECO, and (b) the Modified Massachusetts formula. She then states that EBSC employees provide significant savings to the Company in business areas including information technology, supply, commercial operations, finance, human resources, government, external affairs, public policy, legal, corporate governance, strategy, and communications. Furthermore, PECO obtains the services of EBSC employees, per its Service Level Agreement with EBSC, at competitive rates that have generated significant savings to customers. Additionally, Ms. Humphrey states that PECO should also share EBSC employees' overall compensation plan, which may include severance compensation as such expense enables the Company to efficiently terminate low performers and upgrade talent when necessary. Ms. Humphrey states that severance expense relates to providing utility service as it allows EBSC to competitively hire and retain individuals who provide service to PECO. Finally, Ms. Humphrey states that the Company's claim is reasonable as it is based on historical expenses and estimates and that the Company budgeted significantly less than any amount experienced in recent prior years.[34]

[34] PECO Statement No. 2-R, pp. 10-12.

Mr. Glenn states that he supports the recovery of the ESBC severance service expense because it provides ratepayers a significant benefit and limits liability exposure to PECO which prevents potential legal fees, saving ratepayers money.[35]

Q. WHAT IS YOUR RESPONSE TO MS. HUMPHREY AND MR. GLENN?

A. As discussed in my direct testimony[36] and confirmed by Ms. Humphrey, per the Service Level Agreement, EBSC's service costs are allocated to PECO based on employees' time spent, the employees' pay rates, materials, cost causative, and Modified Massachusetts formula. Therefore, it is inappropriate for PECO to claim an allocated portion of EBSC employees' severance expense for ratemaking, when the EBSC employees' direct service costs are charged and claimed on the basis of time spent and an hourly rate for services rendered. Additionally, it is unknown how severance cost is calculated or projected and allocated to PECO because a severance payment is due when an employee retires or resigns per the appointment contract with EBSC, which is also subject to or contingent upon fulfilment of appointment terms by the concerned employees to receive the severance payment.

I also agree with the Office of Consumer Advocate (OCA) that this expense should be borne by shareholders since it is a cost associated with individuals no longer providing service to the utility.[37] Furthermore, as noted by OCA, the

[35] Union Statement No. 1-R, pdf pp. 3-4.
[36] I&E Statement No. 1, pp. 24-25.
[37] PECO Statement No. 2-R, p. 10.

Company has indicated no plans to terminate employees in the FPFTY,[38] thus this expense is not known and measurable. Therefore, it is speculative to claim severance expense when there is uncertainty about its payment at a future date. Finally, the fact that a 2022 Management Audit found no issue with the expense does not mean it should be funded by ratepayers.

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR EBSC EMPLOYEE SEVERANCE EXPENSE?

A. No. I continue to recommend disallowance of the entire claim of $95,247 for EBSC employees severance expense for the reasons discussed above and in my direct testimony.

EMPLOYEE ACTIVITY COSTS

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR EMPLOYEE ACTIVITY COSTS.

A. In direct testimony, I recommended an allowance of $48,529 for employee activity costs or a reduction of $144,001 ($192,530 - $48,529) to the Company's claim. My recommendation was based on the removal of entertainment expenses of $144,001 as employee entertainment expenses are not an operational cost necessary to provide safe and reliable service to the Company's ratepayers and

[38] *Id.*

should not be required to fund the Company's decision to entertain its employees.[39]

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR EMPLOYEE ACTIVITY COSTS?

A. Yes. Company witness Amy E. Hamilton disagrees with my employee activity costs recommendation. Ms. Hamilton states that the Company's claim for employee activity costs is based on a range of activities that have significant benefits for employee morale and productivity. Ms. Hamilton states that the Commission has recognized the importance of employee events in contributing to a utility's workplace environment. Ms. Hamilton states that employee activity costs increase employee engagement and celebrate the workforce. Finally, she asserts that this directly benefits the Company's customers as it helps PECO hire and retain employees.[40]

Q. WHAT IS YOUR RESPONSE TO MS. HAMILTON?

A. While I understand that some modest level of employee recognition is wise and appropriate, the level of expense is not prudent and if the Company wants to fund such costly events, shareholders should be required to fund them at that level. Based on the Company's headcount in the FPFTY of 705, the Company's claim of

[39] I&E Statement No. 1, pp. 25-26.
[40] PECO Statement No. 1-R, pp. 24-25.

$192,530 represents a cost of roughly $273 per employee ($192,530 ÷ 705 employees). If the Company wants to have events for its employees at this price, shareholders should be required to fund the events. Finally, as stated in my direct testimony, employee entertainment expenses are not an operational cost necessary to provide safe and reliable service to the Company's ratepayers. Therefore, ratepayers should not be required to fund the Company's decision to entertain its employees.[41]

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR EMPLOYEE ACTIVITY COSTS?

A. No. I continue to recommend an allowance of $48,529 for employee activity costs or a reduction of $144,001 ($192,530 - $48,529) to the Company's claim based on the removal of entertainment expenses of $144,001.

INCENTIVE COMPENSATION

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR INCENTIVE COMPENSATION.

A. In direct testimony, I recommended an allowance of $4,564,890 or a reduction of $396,110 ($4,961,000 - $4,564,890) to the Company's claim. My recommendation was based applying a three-year average of the capitalization percentage for incentive compensation as it better reflects the actual capitalization

[41] I&E Statement No. 1, pp. 25-26.

percentage for the FTY and FPFTY based on the Company's recent capitalization history for incentive compensation.[42]

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR INCENTIVE COMPENSATION?

A. Yes. Company witness Marissa Humphrey responded to my incentive compensation recommendation. Ms. Humphrey disagrees with my recommendation to apply a three-year average of the Company's capitalization percentage for incentive compensation and states capitalization percentages are based on work performed and that my adjustment does not align with the actual work that the Company is expected to complete in the FPFTY. Finally. Ms. Humphrey states that if there was a downward adjustment to the expense portion, that a corresponding increase to rate base would need to be made.[43]

Q. WHAT IS YOUR RESPONSE TO MS. HUMPHREY?

A. As stated in my direct testimony, the Company applies a lower capitalization percentage for the FTY and FPFTY compared to 2021, 2022, and HTY 2023. My recommendation to use the most recent three-year historical average better reflects the actual capitalization percentage for the FTY and FPFTY based on the Company's recent capitalization history for incentive compensation which was

[42] I&E Statement No. 1, pp. 26-29.
[43] PECO Statement No. 2-R, p. 8.

also conservative given the capitalization percentage has trended upward in recent years.[44] Additionally, Ms. Humphrey does not provide any support that the actual work the Company is expected to complete in the FPFTY that would apply to the Company's claim for incentive compensation would result in a higher capitalization percentage in the FPFTY.

Finally, if I were to make a corresponding upward adjustment to the capitalized portion based on my three-year capitalization percentage as Ms. Humphrey suggests, I would also need to make corresponding downward adjustments for the capitalized portion to my payroll expense, payroll tax expense, and employee benefits expense adjustments, which would more than offset the increase in capitalized incentive compensation. For example, as shown in my direct testimony, the capitalized and expensed portions of incentive compensation claimed by the Company were $2,724,000 and $4,961,000, respectively with a total claim of $7,685,000.[45] If I were to apply my recommended capitalization percentage of 40.6% to the Company's total claim of $7,685,000, this would have resulted in a recommended capitalized incentive compensation amount of $3,120,110 ($7,685,000 x 40.6%), or an increase of $396,110 ($3,120,110 - $2,724,000) to capitalized incentive compensation.

As discussed earlier in my surrebuttal testimony, I recommend a downward adjustment to payroll expense of $1,443,000. In the Company's response to OCA-

[44] I&E Statement No. 1, p. 28.
[45] I&E Statement No. 1, p. 28.

VII-25,[46] the Company provided the expensed, capitalized, and total payroll for the years 2021, 2022, HTY 2023, FTY 2024, and the FPFTY. I used this to determine a capitalization percentage of 36.6% for base payroll and overtime (OT) payroll based on the 2025 budget. With this information, I would have then recommended a downward adjustment to capitalized payroll of approximately $833,000 ($2,276,000 x 36.6%) which would more than offset the increase in the capitalized portion of incentive compensation as shown below:

(In Thousands)	Expense	Capitalized	Total
Base Payroll	$43,384	$24,881	$68,265
OT Payroll	$7,402	$4,455	$11,857
Total	$50,786	$29,336	$80,122
Capitalization Percentage	63.4%	36.6%	100%
I&E Recommended Adj.	$1,443	$833	$2,276

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR INCENTIVE COMPENSATION?

A. No. I continue to recommend an allowance of $4,564,890 or a reduction of $396,110 ($4,961,000 - $4,564,890) to the Company's claim based on applying a three-year average of the Company's capitalization percentage for incentive compensation to the Company's FPFTY claim as it better reflects the actual capitalization percentage for the FTY and FPFTY based on the Company's recent capitalization history for incentive compensation.

[46] I&E Exhibit No 1-SR, Schedule 1.

AMORTIZATION OF INTEREST ON UNSPENT MGP FUNDS AND FTAC

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR THE AMORTIZATION OF INTEREST ON UNSPENT MANUFACTURED GAS PLANT (MGP) FUNDS AND FINAL FEDERAL TAX ADJUSTMENT CREDIT (FTAC).

A. In direct testimony, I recommended an allowance of ($289,091) or an increase of $372,909 [($662,000) + $289,091] to the Company claim. My recommendation was based a recovery period of 55 months which is in line with the Company's historic filing frequency as explained above.[47]

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR THE AMORTIZATION OF INTEREST ON UNSPENT MGP FUNDS AND FTAC?

A. Yes. Company witness Michael J. Trzaska disagrees with my recommendation for the same reasons he disagrees with my rate case expense adjustment.[48]

Q. DID THE COMPANY PROVIDE AN UPDATE TO THE AMORTIZATION OF INTEREST ON UNSPENT MGP FUNDS AND FTAC?

A. Yes. The Company is also now requesting an additional $7,000 to be normalized over two years for an additional annual expense of $3,500 ($7,000 ÷ 2). The

[47] I&E Statement No. 1, pp. 29-30.
[48] PECO Statement No. 3-R, pp. 10-11.

additional $7,000 is for refunds to additional rate classes. As a result, the Company's updated claim is $1,332,000 ($1,325,000 + $7,000), which the Company continues to propose normalizing over two years for an annual expense of $666,000 ($1,332,000 ÷ 2).

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR THE AMORTIZATION OF INTEREST ON UNSPENT MGP FUNDS AND FTAC?

A. Yes. I continue to recommend a recovery period of 55 months which is based on my recommendation for rate case expense. However, my updated recommendation, based on acceptance of the additional amount for the amortization of interest on unspent MGP funds and FTAC, results in an allowance of ($290,618) [($1,332,000 ÷ 55 months) x 12 months], or an increase of $375,382 [($666,000) + 290,618] to the Company's claim.

ENERGY EFFICIENCY AND CONSERVATION PROGRAM

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR THE ENERGY EFFICIENCY AND CONSERVATION (EE&C) PROGRAM.

A. In direct testimony, I recommended an allowance of $2,727,500 for EE&C program costs, or a reduction of $350,000 ($3,077,500 - $2,727,500) to the Company's claim. My recommendation was based on disallowance of the

additional budget amount of $350,000 as the Company has experienced significant unspent EE&C funding and the Company's current EE&C program also appears to be unsuccessful in encouraging customer participation.[49]

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR THE EE&C PROGRAM?

A. Yes. Company witness Doreen L. Masalta responded to my EE&C program recommendation. Ms. Masalta states that the customer participation rate is a poor metric to judge the success of the EE&C program. Rather, it should be based on gas savings. Ms. Masalta recognizes that customer participation was lower in 2021 and 2022 but explains that ongoing continued education advertising campaigns to promote the Company's EE&C program through social media and advertising in campaigns has resulted in an increase in customer participation since 2021. Ms. Masalta states that the lower customer participation levels in the FTY and FPFTY is due to the Company's plan to cease promoting the smart thermostat measure, which accounted for 40% of program participation in 2023, as this program has been determined to not be cost effective. Ms. Masalta states that the Company has seen an increase in interest for other rebates which are for higher amounts. Ms. Masalta asserts that the 2021 and 2022 unspent budget amounts are not representative of current and forecasted spending levels where she notes that participation increases by 88% from 2022 to 2023, and the Company spent 94% of

[49] I&E Statement No. 1, pp. 29-30.

its budget in 2023. Ms. Masalta opines that the Company expects to exhaust its EE&C program budget in 2024 based on customer participation through June 2024 where it is projected that estimated savings in 2025 is expected to increase by over 4,000 Mcf from 2023 and 2024, or an 8% increase in estimated savings. Finally, Ms. Masalta states that the increase is necessary to sustain growth in the program in both participation and cost savings and disallowing the increase in funding for the program would result in limited customer participation and restrict growth of the program.[50]

Q. WHAT IS YOUR RESPONSE TO MS. MASALTA?

A. As discussed in my direct testimony[51] the Company has experienced significant unspent EE&C funding on average of 42.64% of annual customer funding for the EE&C program during 2021 and 2022. Ms. Masalta is correct that the Company spent more than 94% of its EE&C budget in 2023 and the Company projects that it will spend its EE&C budget in 2024, but this does not mean that the prior two years should be ignored. One year of nearly spending its EE&C budget and a second year where the Company is *on pace* to exhaust its budget in 2024 is not a reason to increase the EE&C budget at this time.

Also, as discussed in my direct testimony,[52] the Company's current EE&C program also appears to be unsuccessful in encouraging customer participation.

[50] PECO Statement No. 9-R, pp. 2-8.
[51] I&E Statement No. 1, p. 33.
[52] I&E Statement No. 1, p. 33.

Customer participation in the EE&C program has been quite low at approximately 1.5% with 7,709 customers participating in 2023 as compared to the total residential customer count of approximately 507,197 as of December 31, 2023, with customer participation for 2021 and 2022 being even lower at less than 1% customer participation. The Company's forecasts for customer participation for the FTY and FPFTY are 5,899 and 6,379, which are significantly less than the number of customers that participated in 2023 of 7,709, which Ms. Masalta acknowledges. While Ms. Masalta notes that while participation will be lower in the FTY and FPFTY, the increase in other rebates with higher rebate amounts will make up the difference is largely speculative as the Company only has six months of data to support this claim.[53]

Q. DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDATION FOR THE EE&C PROGRAM?

A. No. I continue to recommend an allowance of $2,727,500 for EE&C program costs, or a reduction of $350,000 ($3,077,500 - $2,727,500) to the Company's claim, which is based on disallowance of the additional budget amount of $350,000. It is inappropriate to increase EE&C program costs due to the limited success in recent years of the current EE&C program in addition to a projected decrease in customer participation in the FTY and FPFTY when compared to the HTY. Finally, collecting additional funding from all residential customers for the

[53] PECO Statement No. 9-R, pp. 5-6.

benefits of a small number of participants will put an unreasonable burden on the rates of all residential customers.

CASH WORKING CAPITAL

Q. SUMMARIZE YOUR RECOMMENDATION IN DIRECT TESTIMONY FOR CASH WORKING CAPITAL (CWC).

A. In direct testimony, I recommended a total allowance of $13,220,000 or a decrease of $517,000 ($13,737,000 - $13,220,000) to the Company's claim. My recommendation was based on my adjustments to O&M expenses.[54]

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION FOR CASH WORKING CAPITAL?

A. Yes. Company witness Michael J. Trzaska responded to my CWC recommendation. Mr. Trzaska states that CWC should be adjusted if the Company is not awarded its full claim.[55]

Q. DID THE COMPANY PROVIDE AN UPDATE TO CWC?

A. Yes. The Company's updated claim for CWC is $13,764,000.[56] Mr. Trzaska states that CWC has been adjusted to reflect updated 13-month averages for

[54] I&E Statement No. 1, pp. 35-38.
[55] PECO Statement No. 3-R, p. 5.
[56] PECO Exhibit MJT-1 Revised, Schedule A-1, p. 1.

materials and supplies, gas storage, customer deposits, customer advances for construction, and prepaid expenses.[57]

Q. DO YOU AGREE WITH THE COMPANY'S UPDATED CLAIM?

A. No.

Q. DO YOU HAVE AN UPDATE RELATED TO YOUR RECOMMENDED ADJUSTMENTS TO O&M EXPENSES?

A. Yes. All O&M expense adjustments that are cash-based expense claims are included when determining the Company's overall CWC requirement. Therefore, I have included cash-based O&M recommendations when computing the overall recommended CWC allowance.

Q. SUMMARIZE WHERE EACH OF THE RECOMMENDED O&M EXPENSE ADJUSTMENTS ARE REFLECTED IN THE CWC COMPUTATIONS.

A. Payroll - Expense Lag Days:

I recommended a reduction to labor expense of $1,443,000 which is reflected as a reduction to the Payroll Expense Lag Days calculation.[58]

[57] PECO Statement No. 3-R, p. 5.
[58] I&E Statement No. 1-SR, p. 3.

Pension – Expense Lag Days:

I recommended a reduction to pension expense of $572,407 which is reflected as a reduction to the Pension Expense Lag Days calculation.[59]

Other Expenses – Expense Lag Days:

The following recommended adjustments[60] are reflected in the Other O&M Expenses - Expense Lag Days calculation:[61] rate case expense adjustment of $604,218, payroll taxes adjustment of $122,655, ESBC employee severance expense adjustment of $95,247, employee activity cost adjustment of $144,001, incentive compensation adjustment of $396,110, an upward adjustment for the amortization of interest on unspent MGP funds FTAC of $375,382, and energy efficiency and conservation adjustment of $350,000 as discussed above, producing a total decrease of $1,336,849 to the Other Expenses Lag Days calculation.[62]

Summary of I&E-Updated Recommended CWC Allowance:

Q. BASED ON THE ABOVE SURREBUTTAL TESTIMONY, WHAT IS YOUR UPDATED RECOMMENDED ALLOWANCE FOR CWC?

A. Based on reflecting all of I&E's recommended adjustments as discussed above, my updated recommendation for CWC is an allowance of $13,254,000 or a

[59] I&E Statement No. 1-SR, p. 3.
[60] I&E Statement No. 1, p. 3.
[61] I&E Exhibit No. 1-SR, Schedule 2, p. 1, line 10.
[62] I&E Exhibit No. 1-SR, Schedule 2, p. 2.

decrease of $510,000 ($13,764,000 - $13,254,000) to the Company's revised claim.[63]

Q. IS YOUR UPDATED RECOMMENDATION FOR CWC A FINAL RECOMMENDED ALLOWANCE?

A. No. Similar to what I stated in direct testimony, all adjustments to the Company's claims must be continually brought together in the Administrative Law Judge's Recommended Decision and again in the Commission's Final Order. This process, known as iteration, effectively prevents the determination of a precise calculation until all adjustments have been made to the Company's claims.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

[63] I&E Exhibit No. 1-SR, Schedule 2, p. 1, line 27.

I&E Exhibit No. 1-SR
Witness: Christopher Keller

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany

the

Surrebuttal Testimony

of

Christopher Keller

Bureau of Investigation and Enforcement

Concerning:

Operating and Maintenance Expenses
Taxes Other Than Income
Cash Working Capital

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set VII

Response Date: May 07, 2024

OCA-VII-25

Payroll. Please provide for each of the years 2018, 2019, 2020, 2021, 2022, 2023, the test year, and included in the FTY and the FPFTY, the amount of base pay, overtime, incentive compensation and the amount of other pay broken down in the most detailed format available including the amount charged to capital, amount charged to expense and amounts charged to other (specify). If any of the other is ultimately expensed, provide the amount ultimately expensed in each year.

RESPONSE:

Refer to Attachment OCA-VII-25(a).

Responsible Witness: Marissa Humphrey

I&E Exhibit No. 1-SR
Schedule 1
Page 2 of 2

PECO
Gas Labor Data
(Thousands of Dollars)

	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Budget	2025 Budget
Capital Base Payroll	$ 21,398	$ 23,066	$ 23,909	$ 26,525	$ 27,047	$ 30,909	$ 25,995	$ 24,881
Capital Overtime	4,718	4,677	5,452	5,717	5,780	5,958	6,244	4,455
Capital Pensions & Benefits	4,791	5,036	4,647	5,300	3,891	3,854	4,293	4,790
Capital Incentives	2,465	2,990	3,788	3,854	3,579	3,994	3,103	2,960
Expense Base Payroll	32,993	33,174	34,880	35,948	36,755	37,424	42,001	43,384
Expense Overtime	8,768	7,090	8,820	8,742	9,292	8,067	6,780	7,402
Expense Pensions & Benefits	7,279	7,016	6,692	7,078	5,230	4,631	6,805	8,214
Expense Incentives	4,120	4,269	5,876	5,865	5,288	5,539	5,492	5,585
Total	**$ 86,532**	**$ 87,318**	**$ 94,064**	**$ 99,029**	**$ 96,862**	**$ 100,376**	**$ 100,713**	**$ 101,671**

PECO Gas Operations
Before The PAPUC
FPFTY Ending Dec. 2025
($ in Thousands)
C-4 CWC Summary

I&E Exhibit No. 1-SR
Schedule 2
Page 1 of 2

PECO Exhibit MJT-1-Revised
Schedule C-4
Page 1 of 1
UPDATE 07-16-24

-- I&E Modified --

Line No.	Description	Reference	(1) FPFTY Expenses		(2) (Lead)/Lag Days	(3) Dollar-Days	(4)
1	**Working Capital Requirement**						
2							
3	Revenue Lag Days				48.86		
4							
5	Expense Lag						
6	Payroll (Dist Only)		$51,038	(a)	13.58	$693,260	
7	Pension Expense		401	(b)	(167.00)	(66,917)	
8	Commodity Purchased - Gas		260,915		33.24	8,671,521	
9	Payment to Suppliers		82,479		56.21	4,636,002	
10	Other Expenses		110,880	(c)	40.07	4,443,206	
11	Total O&M and POR Payments	SUM L6 to L10	$505,712			$18,377,072	
12							
13	O&M Expense / POR Payment Lag Days				36.34		
14							
15	Net (Lead)/Lag Days	L3 - L13			12.52		
16							
17	Days in Current Year				365		
18							
19	Operating Expenses Per Day		$1,386				
20							
21	Working Capital for O&M Expense		$17,342				
22							
23	Average Prepayments		$2,733				
24	Accrued Taxes		1,887				
25	Interest Payments		(8,708)				
26							
27	Total Working Capital Requirement	SUM L21 to L25	$13,254				
28							
29	Pro Forma O&M Expense		$428,963				
30	Uncollectible Expense		2,378				
31	Pro Forma Cash O&M Expense	L29 - L30	$426,585				

(a) Ref: I&E Statement No. 1-SR, Page 3 for Payroll Expense Adjustment

(b) Ref: I&E Statement No. 1-SR, Page 3 for Pension Expense Adjustment

(c) Ref: I&E Exhibit No. 1-SR, Schedule 2, p. 2

PECO Energy Company - Gas Division
Cash Working Capital Other Expenses Adjustment
For the Twelve Months Ended December 31, 2025

		I&E Recommendded Adjustment
1	Rate Case Expense	$ (604,218)
2	Payroll Taxes	(122,655)
3	ESBC Employee Severance Expense	(95,247)
4	Employee Activity Cost	(144,001)
5	Incentive Compensation	(396,110)
6	Amortization of Interest on Unspent MGP Funds and FTAC	375,382
7	Energy Efficiency & Conservation	(350,000)
8	Total	$ (1,336,849)

Ref: I&E Statement No. 1-SR, p. 3

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2024-3046932
PECO Energy Company – Gas Division	:	
	:	

VERIFICATION OF CHRISTOPHER KELLER

I, **Christopher Keller**, on behalf of the Bureau of Investigation and Enforcement, hereby verify that **I&E Statement No.1**, **I&E Exhibit No. 1**, **I&E Statement No. 1-R**, **I&E Statement No. 1-SR**, and **I&E Exhibit No. 1-SR,** were prepared by me or under my direct supervision and control.

Furthermore, the facts contained therein are true and correct to the best of my knowledge, information and belief and I expect to be able to prove the same if called to the stand at any evidentiary hearing held in this matter.

This Verification is made subject to the penalties of 18 Pa. C.S. § 4904 relating to unsworn falsification to authorities.

Signed in Harrisburg, Pennsylvania, this 6th day of August 2024.

/s/ Christopher Keller
Christopher Keller

I&E Statement No. 2
Witness: Anthony Spadaccio

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Direct Testimony

of

Anthony Spadaccio, CRRA

Bureau of Investigation & Enforcement

Concerning:

Rate of Return

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Anthony Spadaccio. My business address is Pennsylvania Public Utility Commission, Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission (Commission) in the Bureau of Investigation & Enforcement (I&E) as a Fixed Utility Financial Analyst Supervisor.

Q. WHAT IS YOUR EDUCATION AND PROFESSIONAL EXPERIENCE?

A. My educational and professional experience is set forth in Appendix A, which is attached.

Q. PLEASE DESCRIBE THE ROLE OF I&E IN RATE PROCEEDINGS.

A. I&E is responsible for representing the public interest in rate and other proceedings before the Commission. I&E's analysis in this proceeding is based on its responsibility to represent the public interest. This responsibility requires balancing the interests of ratepayers, the utility company, and the regulated community as a whole.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my direct testimony is to address the rate of return, including capital structure, cost of long-term debt, the cost of equity, and the overall fair rate of return for PECO Energy Company – Gas Division (PECO or Company) for the fully projected future test year (FPFTY) ending December 31, 2025.

Q. DOES YOUR DIRECT TESTIMONY INCLUDE AN EXHIBIT?

A. Yes. I&E Exhibit No. 2 contains schedules that support my direct testimony.

BACKGROUND

Q. WHAT IS THE GENERAL DEFINITION OF RATE OF RETURN IN THE CONTEXT OF A RATE CASE?

A. Rate of return is one of the components of the revenue requirement formula. Rate of return is the amount of revenue an investment generates in the form of net income. It is typically expressed as a percentage of the amount of an asset base at a particular point in time, which in base rate proceedings, is the projected rate base balance at the end of the FPFTY.

Q. WHAT IS THE REVENUE REQUIREMENT FORMULA?

A. The revenue requirement formula used in base rate cases is as follows:

$$RR = E + D + T + (RB \times ROR)$$

Where:

RR = Revenue Requirement

E = Operating Expenses

D = Depreciation Expense

T = Taxes

RB = Rate Base

ROR = Overall Rate of Return

In the above formula, the rate of return is expressed as a percentage. The calculation of that percentage is independent of the determination of the appropriate rate base value for ratemaking purposes. As such, the appropriate total dollar return is dependent upon the proper computation of the rate of return and the proper valuation of the Company's rate base.

Q. WHAT CONSTITUTES A FAIR AND REASONABLE OVERALL RATE OF RETURN?

A. A fair and reasonable overall rate of return is one that will allow the utility an opportunity to recover those costs prudently incurred by all classes of capital used to finance the rate base during the prospective period in which its rates will be in effect.

The *Bluefield Water Works & Improvements Co. v. Public Service Comm. of West Virginia,* 262 U.S. 679, 692-93 (1923), and the *Federal Power Commission et al v. Hope Natural Gas Co.,* 320 U.S. 591, 603 (1944) cases set forth the principles that are generally accepted by regulators throughout the country as the appropriate criteria for measuring a fair rate of return:

1. A utility is entitled to a return similar to that being earned by other enterprises with corresponding risks and uncertainties, but not as high as those earned by highly profitable or speculative ventures.
2. A utility is entitled to a return level reasonably sufficient to assure financial soundness.
3. A utility is entitled to a return sufficient to maintain and support its credit and raise necessary capital.
4. A fair return can change (increase or decrease) along with economic conditions and capital markets.

Q. EXPLAIN HOW THE OVERALL RATE OF RETURN IS TRADITIONALLY CALCULATED IN BASE RATE PROCEEDINGS.

A. In base rate proceedings, the overall rate of return is traditionally calculated using the weighted average cost of capital method. To calculate the weighted average cost of capital, a company's capital structure must first be determined by comparing the percentage of each capitalization component, which has financed rate base, to total capital. Next, the effective cost rate of each capital structure component must be determined. The historical component of the cost rate of debt can be computed accurately, and any future debt issuances are based on estimates. The cost rate of common equity is not fixed and is more difficult to measure. Because of this difficulty, a proxy group is used as discussed later in this testimony. Then, each capital structure component percentage is multiplied by its

corresponding effective cost rate to determine the weighted capital component cost rate. The table in the *"I&E Position"* section below demonstrates the interaction of each capital structure component and its corresponding effective cost rate. Finally, the sum of the weighted cost rates produces the overall rate of return. This overall rate of return is multiplied by the rate base to determine the return portion of a company's revenue requirement.

COMPANY'S RATE OF RETURN CLAIM

Q. WHO IS THE COMPANY'S RATE OF RETURN WITNESS?

A. Paul R. Moul is the primary witness addressing rate of return. Throughout his direct testimony (PECO Statement No. 5), Mr. Moul provides his analysis for the claimed capital structure, cost of common equity, and overall rate of return for PECO. Additionally, Amy E. Hamilton, Vice President of Gas Operations for PECO, provides testimony regarding the Company's "Management Performance" claims (PECO Statement No. 1).

Q. PLEASE SUMMARIZE MR. MOUL'S RECOMMENDATIONS FOR THE COMPANY'S RATE OF RETURN CLAIM.

A. Mr. Moul recommends the following rate of return for the Company based on its FPFTY ending December 31, 2025:[1]

[1] PECO Exhibit PRM-1, Schedule 1, p. 1.

PECO Energy Company - Gas Division Summary of Cost of Capital			
Type of Capital	**Ratio**	**Cost Rate**	**Weighted Cost**
PECO Energy Company - Gas Division			
Long-Term Debt	46.60%	4.58%	2.13%
Common Equity	53.40%	11.15%	5.95%
Total	100.00%		8.08%

I&E POSITION

Q. PLEASE SUMMARIZE YOUR RATE OF RETURN RECOMMENDATION FOR THE COMPANY.

A. I recommend the following rate of return for the Company:[2]

I&E Summary of Cost of Capital			
Type of Capital	**Ratio**	**Cost Rate**	**Weighted Cost**
PECO Energy Company - Gas Division			
Long-Term Debt	46.60%	4.58%	2.13%
Common Equity	53.40%	9.93%	5.30%
Total	100.00%		7.43%

PROXY GROUP

Q. WHAT IS A PROXY GROUP AS USED IN BASE RATE CASES?

A. A proxy group is a set of companies that have similar traits as compared to the

[2] I&E Exhibit No. 2, Schedule 1.

subject utility. This group of companies acts as a benchmark for determining the subject utility's rate of return in a base rate case.

Q. WHAT ARE THE REASONS FOR USING A PROXY GROUP?

A. A proxy group's cost of equity is used as a benchmark to satisfy the long-established guideline of utility regulation that seeks to provide the subject utility with the opportunity to earn a return similar to that of enterprises with corresponding risks and uncertainties.

A proxy group is typically utilized since the use of data exclusively from one company may be less reliable. The lower reliability occurs because the data for one company may be subject to events that can cause short-term anomalies in the marketplace. The rate of return on common equity for a single company could become distorted in these circumstances and would therefore not be representative of similarly situated companies. Therefore, a proxy group has the effect of smoothing out potential anomalies associated with a single company.

Q. WHAT CRITERIA DID YOU USE IN SELECTING YOUR GAS UTILITY PROXY GROUP?

A. The criteria for my proxy group was designed to select companies that are representative of PECO. I applied the following criteria to Value Line's "Natural Gas Utility" company group:

1. Fifty percent or more of the company's revenues must be generated from the regulated gas utility industry.
2. The company's stock must be publicly traded.
3. Investment information for the company must be available from more than one source, which includes Value Line.
4. The company must not be currently involved in an announced merger or the target of an acquisition.
5. The company must have four consecutive years of historic earnings data.
6. The company must be operating in a state that has a deregulated gas utility market.

Q. WHAT CRITERIA DID MR. MOUL USE IN SELECTING THE COMPANIES THAT FORMULATE HIS GAS GROUP?

A. Mr. Moul began with the natural gas utilities contained in Value Line's Investment Survey. From there, he eliminated one company, UGI Corp. (UGI), due to its diversified businesses, which includes six reportable segments. These various business segments include propane, international liquefied petroleum gas segments, natural gas utility, energy services, and electric generation. Beyond his rationale for excluding UGI Corp., Mr. Moul has not provided a list of criteria used to determine the remainder of his Gas Group.[3]

[3] PECO Statement No. 5, p. 5, lines 2-11.

Q. WHAT PROXY GROUP DID YOU USE IN YOUR ANALYSIS?

A. I included the following seven companies in my proxy group:

Atmos Energy Corp.	ATO
Chesapeake Utilities	CPK
NiSource Inc.	NI
New Jersey Resources Corp.	NJR
Northwest Natural Gas Co.	NWN
One Gas Inc.	OGS
Spire Inc.	SR

Q. WHAT PROXY GROUP DID MR. MOUL USE IN HIS ANALYSIS?

A. Mr. Moul's Gas Group consists of the following eight companies:[4]

Atmos Energy Corp.	ATO
Chesapeake Utilities	CPK
New Jersey Resources Corp.	NJR
NiSource Inc.	NI
Northwest Natural Gas Co.	NWN
One Gas Inc.	OGS
Southwest Gas Holdings Inc	SWX
Spire Inc.	SR

Q. DO YOU AGREE WITH MR. MOUL'S GAS PROXY GROUP?

A. Not entirely. While Mr. Moul's Gas Group included all seven of the companies in my proxy group, I have excluded one company he uses.

[4] PECO Exhibit PRM-1, Schedule 3, p. 2.

Q. PLEASE IDENTIFY THE COMPANY MR. MOUL HAS INCLUDED THAT YOU DO NOT AND EXPLAIN WHY YOU HAVE EXCLUDED IT FROM YOUR PROXY GROUP.

A. The company Mr. Moul included in his Gas Group that I have excluded from my proxy group is Southwest Gas Holdings, Inc. as this company did not meet my first criterion that fifty percent or more of the company's revenues must be generated from the regulated gas utility industry. This is important because revenues represent the percentage of cash flow a company receives from each business line related to providing a good or service. If less than fifty percent of revenues come from the regulated gas sector, the companies are not comparable to the subject utility as they do not provide a similar level of regulated business. Therefore, this company should be removed from the proxy group.

CAPITAL STRUCTURE

Q. WHAT IS A CAPITAL STRUCTURE?

A. A capital structure represents how a firm has financed its rate base with different sources of funds. The primary sources of funding are long-term debt and common equity.

Q. WHAT IS THE COMPANY'S CLAIMED CAPITAL STRUCTURE?

A. The Company's claimed capital structure is summarized in the table below:[5]

PECO Energy Company - Gas Division Capital Structure - December 31, 2025	
Long-Term Debt	46.60%
Common Equity	53.40%
Total	**100.00%**

Q. WHAT IS THE BASIS FOR THE COMPANY'S CLAIMED CAPITAL STRUCTURE?

A. Mr. Moul opines that the Company's capitalization and capital structure ratios reflect the issuances and maturities of long-term debt as well as future financing in the Future Test Year and the FPFTY. Further he claims that the capital structure ratios are consistent with the Company's current investment grade credit ratings. Mr. Moul ultimately reasons that since rate setting is prospective, the rate of return should reflect known and reasonably foreseeable changes throughout the course of the test year.[6]

[5] PECO Statement No. 5, p. 23, lines 15-16 and PECO Exhibit PRM-1, Schedule 5.
[6] PECO Statement No. 5, p. 20, ln. 15 through p. 23, ln. 18.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S CAPITAL STRUCTURE?

A. I recommend using the Company's claimed capital structure as presented in the table above.

Q. WHAT IS THE BASIS FOR YOUR CAPITAL STRUCTURE RECOMMENDATION?

A. Although I believe a capital structure of 50% long-term debt and 50% common equity is optimal when trying to balance the financial integrity of a utility as well as trying to control costs to ratepayers, in this proceeding, I recommend using the Company's claimed capital structure as it falls within the range of my proxy group's 2023 (most recently available) capital structures. The most recent five-year average range contains individual company capital structure ratios from 38.19% to 56.62% long-term debt and 34.74% to 59.95% equity, with an overall five-year average of 46.21% long-term debt and 45.18% common equity.[7] PECO only employs short-term debt to support its working capital needs and temporarily finance its capital spending programs in the near-term. Therefore, I believe it is reasonable to exclude short-term debt and employ the Company's recommended capital structure.

[7] I&E Exhibit No. 2, Schedule 2.

However, it is worth noting that the Company's equity ratio is well above the average and near the highest end of the proxy group's equity ratios. In fact, six of the seven companies in my proxy group have a capital structure wherein the equity ratio is less than 50% for the most recent five-year average, and five of the seven are below the 50% mark in the most recently published year (2023). This equity heavy capital structure must be recognized when considering PECO's financial risk, as higher equity ratios generally correspond with lower financial risk as Mr. Moul himself concedes.[8]

For consideration when examining the Company's overall financial risk, the example below illustrates the cost savings to ratepayers if the Company were to employ an optimal 50% long-term debt and 50% common equity capital structure in its cost of capital while maintaining its claimed return on equity and rate base:

[8] PECO Statement No. 5, p. 17, lines 16-19.

PECO Energy Company - Gas Division Summary of Cost of Capital			
Type of Capital	**Ratio**	**Cost Rate**	**Weighted Cost**
AS FILED CAPITAL STRUCTURE			
Long-Term Debt	46.60%	4.58%	2.13%
Common Equity	53.40%	11.15%	5.95%
Total	100.00%		8.08%
50/50 OPTIMAL CAPITAL STRUCTURE			
Long-Term Debt	50.00%	4.58%	2.29%
Common Equity	50.00%	11.15%	5.58%
Total	100.00%		7.87%
Difference In The Overall Rate of Return (8.08% - 7.87% = 0.21%)			0.21%
Impact Prior to Gross Up (Claimed Rate Base* x Difference In The Overall Rate of Return) ($3,524,007,000 x .0021)			$7,400,415
Gross Revenue Conversion Fator**			1.383
Total Impact To Ratepayers ($7,400,415 x 1.383)			**$10,234,774**
*PECO Exhibit MJT-1, Schedule A-1, Line 15. **PECO Exhibit MJT-1, Schedule A-1, Line 43.			

In this example, if the Company were to employ a 50/50 capital structure and no change to the requested return on equity (with which I do not agree and discuss in more detail below), the cost savings to ratepayers would be $10,234,774. While I understand achieving and maintaining an exact 50/50 capital structure is not always feasible, this example is intended to demonstrate PECO's financial security as compared to its peers and prove that Mr. Moul's various "add-ons" to his cost of equity calculations are unnecessary.

COST OF LONG-TERM DEBT

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S COST RATE OF LONG-TERM DEBT?

A. I recommend using the Company's claimed long-term debt cost rate of 4.58% for the FPFTY.[9]

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION TO USE THE COMPANY'S CLAIMED COST RATE OF LONG-TERM DEBT?

A. The Company's claimed cost rate of long-term debt appears reasonable, especially when considering recent inflation and the current interest rate environment. It falls within my proxy group's 2023 (most recent data available) implied long-term debt cost range of 2.24% to 5.57%, with an average implied long-term debt cost of 4.28%. Additionally, Mergent Bond Record's A-Rated Public Utility Bond Yields have been fluctuating between 5.13% and 6.34%, with an average of 5.58% from March 2023 to March 2024.[10] Therefore, I believe that the Company's claim, which is between these two metrics, is representative of the utility industry and recommend it be used in this proceeding.

[9] PECO Statement No. 5, p. 24, lines 19-21 and Exhibit PRM-1, Schedule 6, p. 3.
[10] I&E Exhibit No. 2, Schedule 3.

COST OF COMMON EQUITY

COMMON METHODS

Q. WHAT METHODS ARE COMMONLY PRESENTED BY UTILITIES IN DETERMINING THE COST OF COMMON EQUITY?

A. Four methods commonly presented to estimate the cost of common equity are the Discounted Cash Flow (DCF), the Capital Asset Pricing Model (CAPM), the Risk Premium (RP) Method, and the Comparable Earnings (CE) Method.

Q. WHAT IS THE THEORETICAL BASIS FOR THE DCF METHOD?

A. The DCF method is the "dividend discount model" of financial theory, which maintains that the value (price) of any security or commodity is the discounted present value of all future cash flows. The DCF method assumes that an investor's value of a financial asset is determined by its earning power, or its ability to generate future cash flows.

Q. WHAT IS THE THEORETICAL BASIS FOR THE CAPM?

A. The CAPM describes the relationship of a stock's investment risk and its market rate of return. It identifies the rate of return investors expect so that it is comparable with returns of other stocks of similar risk. This method hypothesizes that the investor-required return on a company's stock is equal to the return on a "risk free" asset plus an equity premium reflecting the company's investment risk. In the CAPM, two types of risk are associated with a stock: (1) firm-specific risk

(unsystematic risk); and (2) market risk (systematic risk), which is measured by a firm's beta. The CAPM allows for investors to receive a return only for bearing systematic risk. Unsystematic risk is assumed to be diversified away, and therefore, does not earn a return.

Q. WHAT IS THE THEORETICAL BASIS FOR THE RP METHOD?

A. The theoretical basis for the RP method is a simplified version of the CAPM. The RP method's theory is that common stock is riskier than debt, thus, investors require a higher expected return on stocks than bonds. In the RP approach, the cost of equity is made up of the cost of debt and a risk premium. While the CAPM uses the market risk premium, it also directly measures the systematic risk of a company or proxy group through the use of beta. The RP method does not measure the specific risk of a company.

Q. WHAT IS THE THEORETICAL BASIS FOR THE CE METHOD?

A. The CE method utilizes the concept of opportunity cost. This means that investors will likely dedicate their capital to the investment offering the highest return with similar risk to alternative investments. Unlike the DCF, CAPM, and the RP methods, the CE method is not market-based and relies upon historic accounting data. The most problematic issue with the CE method is determining what constitutes comparable companies.

I&E RECOMMENDED METHOD TO EMPLOY

Q. WHAT METHOD DO YOU RECOMMEND USING TO DETERMINE AN APPROPRIATE COST OF COMMON EQUITY FOR PECO?

A. I recommend using the DCF method as the primary method to determine the cost of common equity. Additionally, I provide a CAPM analysis to be used as a comparison, not as a check, to the DCF results. This Commission has historically relied mostly upon the DCF results in base rate proceedings, including as recently as 2017, 2018, 2020, and 2021.[11]

Q. PLEASE EXPLAIN WHY YOU CHOSE TO EMPLOY THE DCF TO DETERMINE YOUR RECOMMENDED RETURN ON EQUITY.

A. I recommend using the DCF for a variety of reasons. The DCF is appealing to investors since it is based upon the concept that the receipt of dividends in addition to expected appreciation is the total return requirement determined by the market.[12] The use of a growth rate and expected dividend yield are also strengths of the DCF, as this recognizes the time value of money and is forward-looking.

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[11] *Pa. PUC v. City of DuBois – Bureau of Water*; Docket No. R-2016-2554150 (Order Entered March 28, 2017). *See generally* Disposition of Cost Rate Models, pp. 96-97; *Pa. PUC v. UGI Utilities, Inc. – Electric Division;* Docket No. R-2017-2640058 (Order Entered October 25, 2018). *See generally* Disposition of Cost of Common Equity, p. 119; *Pa. PUC v. Wellsboro Electric Company;* Docket No. R-2019-3008208 (Order Entered April 29, 2020). *See generally* Disposition of Primary Methodology to Determine ROE, pp. 80-81; *Pa. PUC v. Citizens Electric Company of Lewisburg, PA;* Docket No. R-2019-3008212 (Order Entered April 29, 2020). *See generally* Disposition of Cost of Common Equity, pp. 91-92. *Pa. PUC v. Columbia Gas of Pennsylvania, Inc.;* Docket No. R-2020-3018835 (Order Entered February 19, 2021). *See generally* Disposition of Cost of Common Equity, p. 131; Pa. PUC v. PECO Energy Company – Gas Division; Docket No. R-2020-3018929 (Order Entered June 22, 2021). See generally Disposition of Return of Rate on Common Equity, p. 171.

[12] David C. Parcell, "The Cost of Capital – A Practitioner's Guide," 2020 Edition, p. 153.

The use of the utility's own, or in this case the proxy group's, stock prices and growth rates directly in the calculation also causes the DCF to be industry and company specific. Finally, current inflationary and economic trends are most certainly reflected in a stock's price, which is used in determining the dividend yield, and by analysts who generate forecasted earnings growth rates. Therefore, the DCF contains the most up-to-date projected information of any model and is the superior method for determining the rate of return for the current economic market because it measures the cost of equity directly.

Q. PLEASE EXPLAIN WHY YOU CHOSE TO USE THE CAPM AS A COMPARISON TO THE DCF IN YOUR ANALYSIS.

A. I have included a CAPM analysis only as a comparison, and not as a basis, for my recommendation because both the CAPM and the DCF include inputs that allow the results to be specific to the utility industry. However, the CAPM is based on the performance of U.S. Treasury bonds and the performance of the market as measured through the S&P 500 and is company-specific only through the use of beta. Beta reflects a stock's volatility relative to the overall market, thereby incorporating an industry-specific aspect to the CAPM, but only as a measure of how reactive the industry is compared to the market as a whole. Although changes in the utility industry are more likely to be accurately reflected in the DCF, which uses the companies' actual prices, dividends, and growth rates, I have also included the results of my CAPM analysis because changes in the market,

whether as a whole or specific to the utility industry, can affect the outcome of each method in different ways. Though I have provided the results of my CAPM analysis as a comparison, and not as a check, it does have several disadvantages and should not be given comparable weight to the DCF.

Q. EXPLAIN THE DISADVANTAGES OF THE CAPM.

A. Beta, which is the only company-specific variable in the CAPM model, measures the *historical* volatility of a stock compared to the *historical* overall market return. Reliance on historical values is especially problematic now given the recent impacts of the COVID-19 pandemic and subsequent interest rate environment on economic conditions. Therefore, the DCF method is the superior method for determining the rate of return for the current economic market and measuring the cost of equity directly. The CAPM, and similarly the RP method, are less reliable indicators because they measure the cost of equity indirectly and risk premiums vary depending on the debt and equity being compared.

Q. IS THERE ANY ACADEMIC EVIDENCE THAT QUESTIONS THE CREDIBILITY OF THE CAPM MODEL?

A. Yes. An article, "Market Place; A Study Shakes Confidence in the Volatile-Stock Theory," which appeared in the *New York Times* on February 18, 1992, summarized a CAPM study conducted by professors Eugene F. Fama and

Kenneth R. French.[13] Their study examined the importance of beta, CAPM's risk factor, in explaining returns on common stock. In CAPM theory a stock with a higher beta should have a higher expected return. However, they found that the model did not do well in predicting actual returns and suggested the use of more elaborate multi-factor models.

A more recent article, "The Capital Asset Pricing Model: Theory and Evidence," which appeared in the *Journal of Economic Perspectives,* states that "the attraction of the CAPM is that it offers powerful and intuitively pleasing predictions about how to measure risk and the relation between expected return and risk. Unfortunately, the empirical record of the model is poor - poor enough to invalidate the way it is used in applications."[14] As a result, I conclude that the CAPM's relevance to the investment decision making process does not carry over into the regulatory rate setting process.

Q. PLEASE EXPLAIN WHY YOU HAVE CHOSEN TO EXCLUDE THE RP METHOD FROM YOUR ANALYSIS.

A. The RP method is excluded because it is a simplified version of the CAPM and is subject to the same faults explained above. Most importantly, unlike the CAPM, the RP method does not recognize company-specific risk through beta.

[13] Berg, Eric N. "Market Place; A Study Shakes Confidence in the Volatile-Stock Theory" *The New York Times*, 18 Feb 1992: *nytimes.com* Web. 23 Mar 2016.

[14] Fama, Eugene F. and French, Kenneth R., "The Capital Asset Pricing Model: Theory and Evidence." *Journal of Economic Perspectives* (2004): Volume 18, Number 3, pp. 25-46.

Q. EXPLAIN WHY YOU HAVE CHOSEN TO EXCLUDE THE CE METHOD IN YOUR ANALYSIS.

A. The CE method is excluded because the choice of which companies are comparable is highly subjective, and it is debatable whether historic accounting values are representative of the future. Moreover, its historical usage in this regulatory forum has been minimal.

Q. ARE THERE ANY RECENT COMMISSION ORDERS THAT DEVIATE FROM THE HISTORICAL USE OF THE DCF AS THE PRIMARY METHOD IN DETERMINING A COMPANY'S RETURN ON EQUITY?

A. Yes. The Commission indicated in the 2021 Aqua Pennsylvania, Inc. (Aqua) base rate case order that its method "for determining Aqua's ROE shall utilize both I&E's DCF and CAPM methodologies"[15] and that "I&E's DCF and CAPM produce a range of reasonableness for the ROE…,"[16] which deviates from the historical Commission practice of primarily relying on the DCF. Most recently, the Commission's Columbia Water Company (Columbia Water) base rate case order relied on the results of I&E's DCF and CAPM analyses for determining Columbia Water's ROE.[17]

[15] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 154 (Order entered May 16, 2022).

[16] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 178 (Order entered May 16, 2022).

[17] *Pa. PUC v. Columbia Water Company,* Docket No. R-2023-3040258, p. 105 (Order entered January 18, 2024).

Q. SHOULD THE COMMISSION'S USE OF THE CAPM AS A CEILING FOR A "RANGE OF REASONABLENESS" APPLY IN THIS PROCEEDING?

A. No. In a report issued by Regulatory Research Associates, a group within S&P Global Market Intelligence,[18] Aqua's return on equity of 10.00% is stated as being above the national average for water utility base rate cases and above the Distribution System Improvement Charge (DSIC) authorized by the Commission of 9.80%[19] for water and wastewater utilities based on a period ended March 31, 2022. The above referenced report also states that the average return on equity for water utility base rate cases that have been completed during the first four months of 2022 was 9.63% and for the twelve months ended April 30, 2022 was 9.53% which are well below the 10.00% return on equity authorized by the Commission for Aqua. Although this is related to the water utility industry only, it demonstrates the problem associated with using the CAPM as a ceiling for determining a utility's return on equity.

In the Columbia Water order, the Commission noted that I&E's DCF and CAPM produced a range of reasonableness for the ROE from 7.84% to 11.09% and approved an ROE of 9.75% as reasonable and appropriate for that company,

[18] Regulatory Research Associates, "Commission authorizes management performance bonus for Aqua Pennsylvania," *S&P Global Market Intelligence*, May 16, 2022. CIQ Pro: RRA Regulatory Focus: Commission authorizes management performance bonus for Aqua Pennsylvania (spglobal.com) (Accessed January 23, 2024).

[19] PA Public Utility Commission, Bureau of Technical Utility Services Report on the Quarterly Earnings of Jurisdictional Utilities for the Year Ended March 31, 2022, approved at Public Meeting on August 4, 2022 at Docket No. M-2022-3032561.

which is based upon consideration of a variety of factors such as increasing inflation leading to increases in interest rates and capital costs.[20] I respectfully disagree with the Commission's basis (current inflation and interest rates) for determining Columbia Water's ROE of 9.75%. While I cannot dispute the recent economic conditions with respect to increased interest rates and government bond yields, it is important to note that all companies, including regulated utilities, are impacted by high interest rates. Notably, per the most recent monthly Blue Chip Financial Forecasts,[21] the 2024-2025 inflation rates by two measures are forecasted to be slightly over 2% as shown in the table below:

	Q2 2024	**Q3 2024**	**Q4 2024**	**Q1 2025**	**Q2 2025**	**Q3 2025**
Consumer Price Index	2.90%	2.40%	2.30%	2.30%	2.20%	2.30%
PCE Price Index	2.40%	2.20%	2.10%	2.20%	2.10%	2.10%

It is my understanding that the Federal Reserve intends to cut interest rates toward the end of 2024 through 2025. This coupled with the forecasted lower-inflation rates would have the effect of reducing potential inflation and interest rate risks in capital costs during the FPFTY, when PECO's rates will be in effect.

Additionally, it is important to note that unlike unregulated companies, public utilities may file rate cases to address unforeseen or increased expenses and/or revenue shortfalls due to changes in market conditions.

[20] *Pa. PUC v. Columbia Water Company,* Docket Nos. R-2023-3040258, pp.108-109 (Order entered January 18, 2024).

[21] Blue Chip Financial Forecasts Vol. 43, No. 4, April 1, 2024.

Lastly, as I explained above, the CAPM should not be used as a primary method, and it should only be used as a comparison and not as a check of the DCF or to establish a "reasonable range" due to the concerns I stated above. Therefore, I disagree with providing the CAPM comparable weight to the DCF method.

SUMMARY OF THE COMPANY'S RESULTS

Q. WHAT ARE THE RESULTS OF THE COMPANY'S COST OF EQUITY ANALYSES?

A. Mr. Moul employed the DCF, CAPM, RP, and CE methods in analyzing the Company's cost of equity. He makes several adjustments to his results, which include consideration of risk and leverage.[22] Ultimately, Mr. Moul opines that a cost of equity of 11.15% is warranted due to PECO's risk characteristics, so it can compete in the capital markets, attain reasonable credit quality, sustain its cash flow, and be recognized for the accomplishments of the Company's management.[23]

I&E RECOMMENDATION

Q. WHAT IS YOUR RECOMMENDED COST OF COMMON EQUITY FOR PECO?

A. Based upon my analysis, I recommend a cost of common equity of 9.93%.[24]

[22] PECO Exhibit PRM-1, Schedule 1, p. 2.
[23] PECO Statement No. 5, p. 54, ln. 9 through p. 55, ln. 3.
[24] I&E Exhibit No. 2, Schedule 1.

Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?

A. My recommendation is based on the use of the DCF method. As explained herein, I used my CAPM result only to present to the Commission a comparison to my DCF results. My DCF analysis uses a spot dividend yield, a 52-week dividend yield, and earnings growth forecasts.

DISCOUNTED CASH FLOW

Q. PLEASE EXPLAIN YOUR DCF ANALYSIS.

A. My analysis employs the constant growth DCF model as portrayed in the following formula:

$$K = D_1/P_0 + g$$

Where:

K	=	Cost of equity
D_1	=	Dividend expected during the year
P_0	=	Current price of the stock
g	=	Expected growth rate

When a forecast of D_1 is not available, D_0 (the current dividend) must be adjusted by one half of the expected growth rate to account for changes in the dividend paid in period one. As forecasts for each company in my proxy group were available from Value Line, no dividends were adjusted for the purpose of my analysis.

Q. PLEASE EXPLAIN HOW YOU DEVELOPED THE DIVIDEND YIELDS USED IN YOUR DCF ANALYSIS.

A. A representative dividend yield must be calculated over a time frame that avoids the problems of both short-term anomalies and stale data series. For my DCF analysis, the dividend yield calculation places equal emphasis on the most recent spot and the 52-week average dividend yields. The following table summarizes my dividend yield computations for the proxy group:[25]

Proxy Group - Average Dividend Yields	
Spot	4.09%
52-week Average	3.86%
Average	**3.98%**

Q. WHAT INFORMATION DID YOU RELY UPON TO DETERMINE YOUR EXPECTED GROWTH RATE?

A. I have used five-year projected growth rate estimates from Value Line, Yahoo! Finance, and Zacks.

[25] I&E Exhibit No. 2, Schedule 4.

Q. WHAT WERE THE RESULTS OF YOUR FORECASTED EARNINGS GROWTH RATES?

A. The expected average growth rates for my gas proxy group ranged from 4.65% to 7.60% with an overall average of 5.95%.[26]

Q. WHAT IS THE RESULT OF YOUR DCF ANALYSIS BASED ON YOUR RECOMMENDED DIVIDEND YIELD AND GROWTH RATE?

A. The results of my DCF analysis are calculated as follows:[27]

K	=	D_1/P_0	+	g
9.93%	=	3.98%	+	5.95%

CAPITAL ASSET PRICING MODEL

Q. PLEASE EXPLAIN YOUR CAPM ANALYSIS.

A. My analysis employs the traditional CAPM as portrayed in the following formula:

$$K = R_f + \beta(R_m - R_f)$$

Where:

K = Cost of equity

R_f = Risk-free rate of return

[26] I&E Exhibit No. 2, Schedule 5.
[27] I&E Exhibit No. 2, Schedule 6.

R_m = Expected rate of return on the overall stock market

β = Beta measures the systematic risk of an asset

Q. WHAT IS BETA AS EMPLOYED IN YOUR CAPM ANALYSIS?

A. Beta is a measure of the systematic risk of a stock in relation to the rest of the stock market. A stock's beta is estimated by calculating the linear regression of a stock's return against the return on the overall stock market. The beta of a stock with a price pattern identical to that of the overall stock market will equal one. A stock with a price movement that is greater than the overall stock market will have a beta that is greater than one and would be described as having more investment risk than the market. Conversely, a stock with a price movement that is less than the overall stock market will have a beta of less than one and would be described as having less investment risk than the overall stock market.

Q. HOW DID YOU DETERMINE YOUR BETA FOR YOUR CAPM ANALYSIS?

A. In estimating an equity cost rate for my proxy group, I used the average of the betas for the companies as provided in the Value Line Investment Survey. The average beta for my proxy group is 0.86.[28]

[28] I&E Exhibit No. 2, Schedule 7.

Q. WHAT RISK-FREE RATE OF RETURN HAVE YOU USED FOR YOUR FORECASTED CAPM ANALYSIS?

A. I have chosen to use the risk-free rate of return (R_f) from the projected yield on 10-year Treasury Notes. While the yield on the short-term T-Bill is a more theoretically correct parameter to represent a risk-free rate of return, it can be extremely volatile. The volatility of short-term T-Bills is directly influenced by Federal Reserve policy. At the other extreme, the 30-year Treasury Bond exhibits more stability but is not risk-free. Long-term Treasury Bonds have substantial maturity risk associated with market risk and the risk of unexpected inflation. Long-term treasuries normally offer higher yields to compensate investors for these risks. As a result, I chose to use the yield on the 10-year Treasury Note because it mitigates the shortcomings of the other two alternatives. Additionally, the Commission has historically agreed with I&E and recognized the 10-year Treasury Note as the superior measure of the risk-free rate of return.[29]

The forecasted yield on the 10-year Treasury Note, as seen in Blue Chip Financial Forecasts, is trending downward from 4.00% in the third quarter of 2024 to 3.80% in the third quarter of 2025, and it is forecasted to be 3.90% from 2025-

[29] *Pa. PUC v. UGI Utilities, Inc. – Electric Division;* Docket No. R-2017-2640058 (Order Entered October 25, 2018). *See generally* Disposition of Capital Asset Pricing Model (CAPM), p. 99; *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, p. 154 (Order entered May 16, 2022); *Pa. PUC v. Columbia Water Company;* Docket No. R-2023-3040258 (Order Entered January 18, 2024). *See generally* Disposition of Cost of Common Equity, pp. 107-108.

2029. For my CAPM analysis, I used 3.88%, which is the average of all the yield forecasts I observed.[30]

Q. HOW DID YOU DETERMINE THE ESTIMATED RETURN ON THE OVERALL STOCK MARKET EMPLOYED IN YOUR CAPM ANALYSIS?

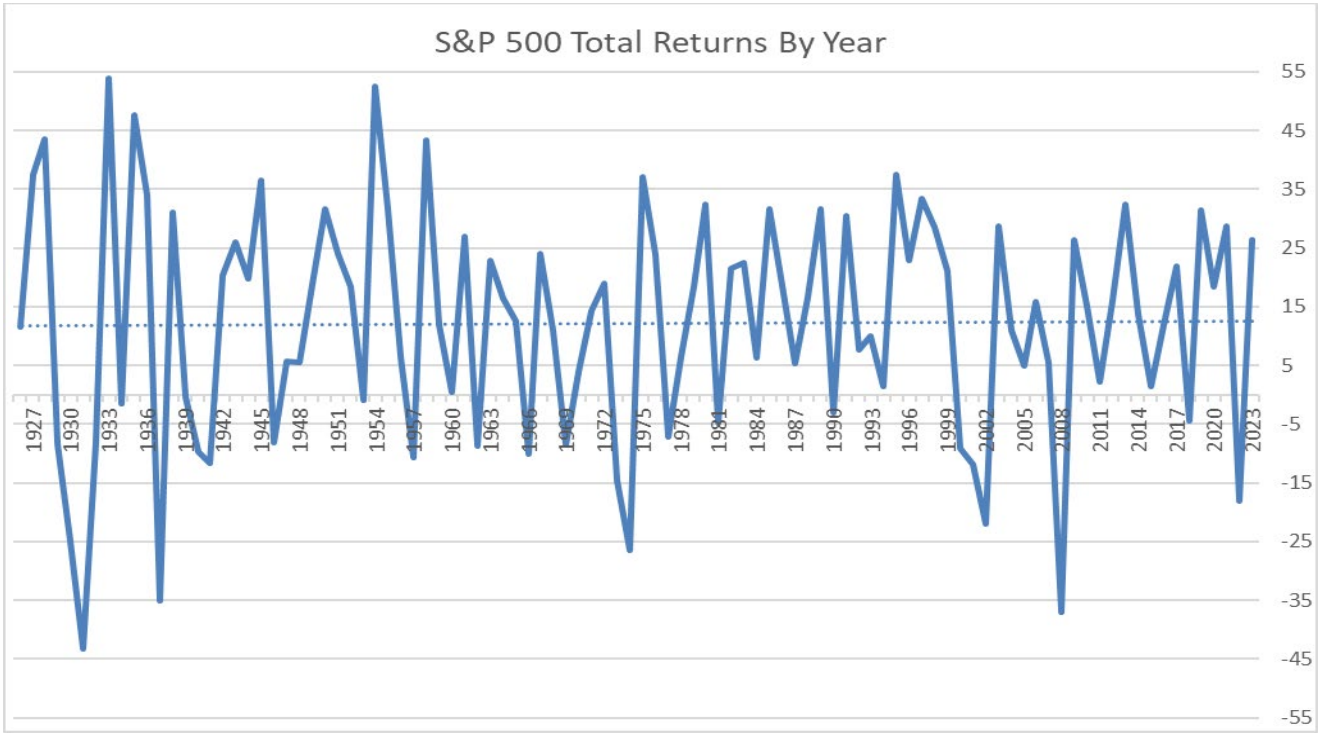
A. To arrive at an estimated return on the overall stock market, I observed Value Line's approximately 1700 stocks and the historical returns of the S&P 500. Value Line expects its universe of approximately 1700 stocks to have an average yearly return of 11.83% over the next three to five years based on a forecasted dividend yield of 2.10% and a yearly index appreciation of 45%. The S&P 500 Index has an average return of 12.16% over the past 98 years (1926-2023).[31] I have averaged these two figures which results in an estimated market return of 12.00%.[32]

Q. HAVE YOU RECENTLY CHANGED YOUR APPROACH TO ESTIMATE A RETURN ON THE OVERALL STOCK MARKET IN PRIOR PROCEEDINGS?

A. Yes. It is important to note that I have recently incorporated the historical returns of the S&P 500 into my estimated overall market return calculation for a few reasons. First, the sources I have historically employed such as Yahoo! Finance

[30] I&E Exhibit No. 2, Schedule 8.
[31] I&E Exhibit No. 2, Schedule 9.
[32] I&E Exhibit No. 2, Schedule 10.

and Morningstar no longer consistently offer projected growth rates for the S&P 500 to pair with projected dividend yields as they have in the recent past. Additionally, the trendline for the returns over the past 98 years has been relatively flat and stable as shown below:



Therefore, I believe it is reasonable to utilize this data in my calculation of the expected overall market return. Notably, Mr. Moul similarly employs the historical S&P 500 returns in his analysis.[33]

[33] PECO Exhibit PRM-1, Schedule 12.

Q. WHAT IS THE COST OF EQUITY RESULT FROM YOUR CAPM ANALYSIS?

A. The result of my analysis is as follows:[34]

K	=	R_f	+	$\beta(R_m - R_f)$
10.86%	=	3.88%	+	0.86 (12.00% - 3.88%)

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING YOUR CAPM ANALYSIS?

A. Yes. As discussed earlier in my testimony, my recommended cost of equity is based upon my DCF analysis. I only present a CAPM analysis to the Commission as a comparison and not for recommendation purposes as the inputs are highly subjective, and other than beta, not company or industry specific.

Q. IS IT NECESSARY TO APPLY THE CAPM WITH SIMILAR WEIGHT TO THE DCF WHEN DETERMINING A SPECIFIC RETURN ON EQUITY DUE TO RECENT INFLATIONARY TRENDS?

A. No. My use of the DCF as a primary method in determining an appropriate return on equity already sufficiently takes inflationary trends into consideration. As

[34] I&E Exhibit No. 2, Schedule 11.

mentioned above, the DCF includes a spot stock price in the dividend yield calculation and analysts who generate forecasted earnings growth almost certainly take inflation into consideration as well, so it contains the most up-to-date projected information of any model. In other words, the inputs of the DCF capture all known economic factors, including inflation.

Q. DID YOU QUANTIFY THE NUMBER OF BASIS POINTS BETWEEN YOUR DCF AND CAPM RESULTS TO ILLUSTRATE THE FINANCIAL IMPACT BETWEEN USING EACH MODEL?

A. Yes. The difference between my DCF and CAPM analysis is 93 basis points.[35] As demonstrated below, relying on the results of the CAPM is unnecessary and creates undue hardship for PECO's ratepayers.

Q. BASED ON THE COMPANY'S FILED RATE BASE AND CLAIMED CAPITAL STRUCTURE, WHAT IS THE VALUE OF AN ADDITIONAL 93 BASIS POINTS TO THE COST OF EQUITY BASED ON THE DIFFERENCE IN RESULTS BETWEEN YOUR CAPM ANALYSIS (10.86%) AND YOUR DCF ANALYSIS (9.93%)?

A. The example below illustrates the impact of 93 additional basis points to the Company's cost of equity if the results of my CAPM analysis, rather than my DCF

[35] CAPM result of 10.86% - DCF result of 9.93% = .93% difference.

results were applied to the Company's total filed rate base and combined capital structure:

PECO Energy Company - Gas Division	
Claimed Equity Percentage of Capital Structure	53.40%
Difference in Return on Equity between I&E's CAPM and DCF Analysis (10.86% - 9.93% = .93%)	0.93%
Claimed Rate Base*	$3,524,007,000
Impact Prior to Gross Up (0.5340 x 0.0093 x $3,524,007,000)	$17,500,924
Gross Revenue Conversion Factor**	1.383
Total Impact ($17,500,924 x 1.383)	**$24,203,778**

*PECO Exhibit MJT-1, Schedule A-1, Line 15.
**PECO Exhibit MJT-1, Schedule A-1, Line 43.

In this example, a seemingly small addition of 93 basis points to the cost of equity would burden ratepayers to fund an additional amount of $24,203,778 annually to cover the increase of the inflated rate of return along with the associated impact resulting from increases to income taxes, uncollectibles, and assessments.

CRITIQUE OF MR. MOUL'S PROPOSED COST OF EQUITY

Q. DO YOU AGREE WITH MR. MOUL'S PROPOSED COST OF EQUITY?

A. No. I disagree with Mr. Moul's proposed cost of equity analysis for several reasons. First, I disagree with the weights given to the results of Mr. Moul's CAPM, RP, and CE analyses in his recommendation. Second, I take issue with certain aspects of Mr. Moul's risk analysis of PECO. Third, I disagree with his application of the DCF including the forecasted growth rate and leverage adjustment he uses. Fourth, I do not agree with his use of the 30-year Treasury Bond in place of the 10-year Treasury Note and use of an inflated beta in his CAPM analysis. Finally, I disagree with Mr. Moul's recommendation to include an adjustment to the cost of equity for recognition of management performance.

WEIGHTS GIVEN TO THE CAPM, RP, AND CE METHODS

Q. DO YOU AGREE WITH MR. MOUL'S RELIANCE ON THE CAPM AND RP MODELS?

A. No. While I am not opposed to providing the Commission with the results of the CAPM methodology for a point of comparison to the results of the DCF calculation, I am opposed to giving the CAPM and RP considerable weight. For the reasons previously discussed in this testimony, including my reference to recent Commission orders, it is inappropriate to give the RP model similar weight to the DCF as Mr. Moul has done in creating his recommended cost of equity

range.[36] As discussed above, the CAPM measures the cost of equity indirectly and its inputs can be highly subjective. Since the RP is a simplified version of the CAPM, it suffers from these same flaws; therefore, consideration or affording equal weight to the RP result and DCF result produces an inappropriate inflated cost of equity.

Q. DO YOU AGREE WITH MR. MOUL'S USE OF THE CE METHOD?

A. No. The companies in Mr. Moul's analysis are not utilities, and, therefore, they are too dissimilar to be used in a CE analysis. The companies in Mr. Moul's CE proxy group are simply not comparable to gas utilities in terms of business risk or financial risk profile. Natural gas distribution companies are monopolies, which are subject to very little competition. Due to this minimal competition, utilities in general have very low business risk and can maintain higher financial risk profiles by employing more leverage. Conversely, since the companies in Mr. Moul's CE proxy group operate in an unregulated competitive environment with a higher level of business risk, they must maintain lower financial risk profiles by employing a smaller amount of leverage.

Further, in his CE analysis, Mr. Moul states, "I used 20% as the point where those returns could be viewed as highly profitable and should be excluded from the Comparable Earnings approach."[37] I do not believe this arbitrary use of

[36] PECO Statement No. 5, p. 8, ln. 8-20.
[37] PECO Statement No. 5, p. 53, ln. 23 through p. 54, ln. 2.

20% is justified, as I am unaware of any natural gas utility company that has been granted a Commission authorized return or regularly earns a 20% or greater return on equity.

RISK ANALYSIS

Q. PLEASE SUMMARIZE MR. MOUL'S CLAIMS REGARDING THE RISK FACTORS THE COMPANY FACES.

A. As mentioned above, Mr. Moul bases his recommend ROE by considering the DCF and RP models. He adds 20 basis points to his baseline cost of equity to recognize the higher risk of the Company's Gas Division as compared to its Electric Division.[38] He describes the Company's claimed risk factors in two different sub-sections. In the first section, labeled "Natural Gas Risk Factors," he described the *qualitative* risk factors. In this section, Mr. Moul discusses various business risks such as the potential for bypass, the Company's construction program, lack of a weather normalization adjustment (WNA) decoupling mechanism, and economic uncertainties attributed to inflation, supply-side issues, and global geopolitical situations.[39] In the second section of his risk analysis, labeled "Fundamental Risk Analysis," he described the *quantitative* risk factors. In this section, Mr. Moul discusses the Company's credit quality, as well as many different financial metrics including size, market ratios, common equity ratios,

[38] PECO Statement No. 5, p. 8, lines 8-18.
[39] PECO Statement No. 5, p. 10, ln. 1 through p. 14, ln. 5.

return on book equity, operating ratios, pre-tax interest coverage, quality of earnings, internally generated funds (IGF), and betas.[40]

Q. WHAT HAS MR. MOUL CLAIMED REGARDING THE POTENTIAL RISK OF BYPASS?

A. Mr. Moul opines that large volume users have the potential to bypass the Company's system as they may be located close enough to interstate pipelines to use those sources. Mr. Moul claims approximately 7.6 million cubic feet (MCF) of gas has the potential to bypass the Company's distribution system which would cause a significant amount of uncompensated fixed costs that the Company would not be able to recover until another base rate case would be completed.[41]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S CLAIMED RISK OF BYPASS FOR PECO?

A. Most companies in the natural gas utility sector face similar risks of competition with other suppliers. In this regard, the companies within my proxy group provide a good measurement of the risk associated with competition from alternate suppliers. Additionally, though he admits to not studying the risk of bypass of each company in his Gas Group, Mr. Moul acknowledges that most local

[40] PECO Statement No. 5, p. 14, ln. 6 through p. 20, ln. 6.
[41] PECO Statement No. 5, p. 12, lines 2-12.

distribution companies (LDCs), including the companies in his Gas Group, face risk of bypass.[42]

Q. WHAT IS MR. MOUL'S CLAIM REGARDING ADDITIONAL RISK DUE TO THE COMPANY'S CONSTRUCTION PROGRAM AND AGING INFRASTRUCTURE?

A. Mr. Moul claims that the Company must make substantial investments to maintain and upgrade existing facilities to maintain safe and reliable service to its customers. He expresses concern that these large expenditures are not paired with new customers or additional revenues.[43] The Company anticipates that gross capital expenditures will exceed $9 billion, a 71% increase in net utility plant as of December 31, 2023, during the five-year period from 2024-2028.[44]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S CLAIM REGARDING THE COMPANY'S CONSTRUCTION PROGRAM AND REPLACEMENT OF AGING INFRASTRUCTURE?

A. Every gas utility faces the same issues of upgrading or replacing its infrastructure. As costs for replacing infrastructure increase, PECO, like any other regulated gas utility, has the option to file a base rate case at any time to address revenue inadequacy due to increasing costs, infrastructure replacement, or any other

[42] I&E Exhibit No. 2, Schedule 12.
[43] PECO Statement No. 5, p. 12, lines 14-19.
[44] PECO Statement No. 5, p. 13, lines 1-7.

associated issues. Base rate cases allow a utility to recover its costs and provide it with the *opportunity* to earn a reasonable return on capital investments. Additionally, the Commission offers risk reducing mechanisms such as the DSIC and the FPFTY to help reduce any regulatory lag in recovery of infrastructure investment or other unforeseen expenditures. It should be noted that these mechanisms were not designed to eliminate the need for periodic base rate case filings, but only to mitigate regulatory lag and support increasing infrastructure replacement needs.

Q. PLEASE COMMENT ON THE COMPANY'S PROPOSAL REGARDING A WEATHER NORMALIZATION ADJUSTMENT MECHANISM AND ITS CLAIM REGARDING THE POTENTIAL IMPACT ON THE COMPANY'S COST OF EQUITY.

A. PECO witness Michael J. Trzaska, Principal Regulatory and Rates Specialist for the Company (PECO Statement No. 3) discusses the specifics of the Company's WNA proposal. Mr. Moul claims that all of the companies in his Gas Group have some form of weather normalization feature to account for variations in weather patterns and adjust (normalize) revenue collections accordingly. He argues that his market-determined return on equity analysis reflects the effects of decoupling on investor expectations. Because all of the companies in his Gas Group have

some form of a revenue decoupling mechanism, he believes the absence of the WNA results in more risk, therefore, requiring a higher return on equity.[45]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S CLAIM REGARDING THE COMPANY'S PROPOSED WNA MECHANISM?

A. The Commission allows utilities the opportunity to propose alternative ratemaking mechanisms such as the WNA requested by the Company in this proceeding. If the Commission approves the Company's WNA proposal, the benefits of revenue decoupling would certainly reduce the Company's overall risk profile. However, I&E's position on PECO's specific request regarding the WNA proposal are addressed in the testimony of I&E witness Ethan Cline (I&E Statement No. 3).

Q. ACCORDING TO MR. MOUL, WHAT ADDITIONAL BUSINESS RISKS AFFECT THE COMPANY?

A. Mr. Moul suggests that the Company faces increased risk of decreasing throughput on its distribution system due to economic uncertainty caused by inflation, supply-side issues, and global geopolitical situations.[46]

[45] PECO Statement No. 5, p. 10, ln. 9 through p. 11, ln. 15.
[46] PECO Statement No. 5, p. 11, ln. 21 through p. 12, ln. 2.

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S CLAIMS REGARDING THESE VARIOUS ADDITIONAL BUSINESS RISKS HE MENTIONS?

A. The issues referenced by Mr. Moul affect the entire gas utility industry, therefore, PECO faces the same exposure to these issues as do all the other companies in our respective proxy groups. Investors voluntarily buy and hold shares of stocks in natural gas utility companies, indicating they are aware of these risks and the returns. The cost of equity I present for PECO in this proceeding is adequately measured by my proxy group and adequately compensates investors for these risks.

Q. PLEASE DISCUSS THE CLAIMS MR. MOUL MAKES REGARDING QUANTITATIVE RISK FACTORS IN THE SECTION HE LABELS "FUNDAMENTAL RISK ANALYSIS."

A. Mr. Moul states that it is necessary to establish a company's relative risk position within its industry through an analysis of quantitative and qualitative factors. In this section, Mr. Moul uses various financial metrics to compare PECO to the S&P Public Utilities Index and his Gas Group.[47]

[47] PECO Statement No. 5, p. 14, lines 9-15.

Q. WHAT ARE YOUR COMMENTS REGARDING MR. MOUL'S "FUNDAMENTAL RISK ANALYSIS?"

A. Mr. Moul's inflated betas, are discussed and disputed below in my direct testimony. Throughout the remainder of his "fundamental risk analysis," he makes several statements to indicate that PECO has no more of a risk than any other company in his Gas Group.

First, Mr. Moul notes that PECO has a long-term issuer credit rating of "A2" ("Aa3" on First Mortgage Bonds) from Moody's Investors Service (Moody's) and "BBB+" ("A" on First Mortgage Bonds) from Standard & Poor's Corporation (S&P). Moody's offers a long-term issuer credit quality rating of "A3" for both his Gas Group and the S&P Public Utilities Index. Additionally, S&P offers corporate credit ratings of "A-" for Mr. Moul's Gas Group and "BBB+" for the S&P Public Utilities Index. Therefore, as Mr. Moul acknowledges, the ratings between the Company, his Gas Group, and the S&P Public Utilities Index are all comparable.[48] These ratings are all categorized as investment grade and imply an adequate/strong capability to meet financial commitments. From this information, we can extrapolate that Mr. Moul's Gas Group, which is used to develop his return on equity recommendation, possesses low financial risk.

[48] PECO Statement No. 5, p. 15, ln. 15 through p. 16, ln. 4.

Second, he mentions, in terms of capitalization, PECO is larger than the average size of his Gas Group and the S&P Public Utilities, recognizing that all else being equal, smaller companies are riskier than larger ones as a result of reduction to the benefits of economies of scale.[49]

Third, while discussing common equity ratios, Mr. Moul notes that the five-year average common equity ratios, based on permanent capital, were 53.8% for PECO, 49.0% for the Gas Group and 40.5% for the S&P Public Utilities. He acknowledges that the Company's higher common equity ratio indicates lower financial risk.[50]

Fourth, pertaining to operating ratios, Mr. Moul affirms that the five-year average operating ratios were 79.8% for the Company, 82.7% for the Gas Group, and 81.0% for the S&P Public Utilities.[51] As Mr. Moul explains, the operating ratio illustrates the percentage of revenue required to cover operating expenses. The lower the operating ratio is, the higher the operating margin becomes and vice versa.[52] In this case, PECO has a comparable operating ratio to the Gas Group, and the S&P Public Utilities Index indicating similar risk levels.

Fifth, regarding coverage, he explains that excluding the Allowance for Funds Used During Construction, the five-year average pre-tax interest coverage was 4.35 times for the Company, 4.33 times for the Gas Group, and 2.94 times for

[49] PECO Statement No. 5, p. 16, lines 10-13.
[50] PECO Statement No. 5, p. 17, lines 14-19.
[51] PECO Statement No. 5, p. 18, lines 12-13.
[52] PECO Statement No. 5, p. 18, Footnote 3.

the S&P Public Utilities. Notably, the interest coverage for the Company was similar to that of Mr. Moul's Gas Group, yet much higher as compared to the S&P Public Utilities. This indicates similar, if not less financial risk for PECO.[53]

Finally, related to quality of earnings, Mr. Moul concludes, "[q]uality of earnings has not been a significant concern for the Company, the Gas Group and the S&P Public Utilities."[54]

Q. PLEASE CONTINUE.

A. While some measures he discusses may imply a higher risk profile for the Company, a majority of the metrics illustrate the Company has lower risk. Mr. Moul summarizes his risk analysis by claiming, "On balance, the cost of equity for the Gas Group would fairly represent the Company's cost of equity for this case."[55] Overall, through his own analysis and testimony, I believe Mr. Moul substantiates that PECO has very similar if not lower risk as compared to that of his Gas Group, therefore, any additional consideration for the Company's risk profile is unnecessary.

[53] PECO Statement No. 5, p. 18, ln. 20, through p. 19, ln. 2.
[54] PECO Statement No. 5, p. 19, lines 7-9.
[55] PECO Statement No. 5, p. 20, lines 12-14.

COST OF EQUITY ADJUSTMENTS

INFLATED GROWTH RATES USED IN DCF ANALYSIS

Q. WHAT GROWTH RATE HAS MR. MOUL USED IN HIS DCF ANALYSIS?

A. Mr. Moul has chosen a growth rate of 6.75%.

Q. WHAT IS THE BASIS FOR MR. MOUL'S GROWTH RATE?

A. Mr. Moul indicates that Schedule 9 of his exhibit shows the prospective five-year earnings per share growth rates projected for the Gas Group to be 5.87% from IBES/First Call, 5.69% from Zacks, and 7.31% from Value Line.[56] Although the average of his sources for the growth rate is 6.29%,[57] Mr. Moul chooses to use 6.75% claiming that DCF growth rates should not be established by mathematical formulation and that the reasonableness of his chosen growth rate is justified by investor-expected growth for the Gas Group and continuation of gas utility infrastructure spending.[58]

Q. DO YOU AGREE WITH MR. MOUL'S GROWTH RATE ANALYSIS?

A. No. Contrary to Mr. Moul's belief that DCF growth rates *should not* be established by mathematical formulation, I feel that any alternative is subjective and introduces additional and unnecessary bias and should be avoided when

[56] PECO Statement No. 5, p. 35, lines 1-4 and PECO Exhibit PRM-1, Schedule 9.
[57] (5.87% + 5.69% + 7.31%) ÷ 3 = 6.29%.
[58] PECO Statement No. 5, p. 36, lines 3-9.

possible. The use of a higher growth rate than the average of his proxy group ignores the fact that analysts making earnings per share growth forecasts are already aware of the economic conditions and the state of the gas utility industry. The reasons Mr. Moul has given for choosing a growth rate above his calculated average are factors that are already included in the earnings per share growth forecasts; thus, choosing a growth rate higher than the average of his proxy group would account for the same factors twice.

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING THE RESULTS OF MR. MOUL'S PROJECTED GROWTH RATES?

A. Yes. While the five-year projected growth rates can be used in analyses, one must be aware that analysts' estimates may be biased. This bias has been observed in literature. An article authored by Professors Ciciretti, Dwyer, and Hasan in 2009 observed strong support of earnings forecasts being higher than actual earnings.[59] In spring of 2010, McKinsey on Finance presented an article reporting that after a decade of stricter regulation analysts' forecasts are still overly optimistic.[60]

Analysts' estimates are an attempt to forecast future cash flows and thus expected earnings growth. However, it should be kept in mind that prudent judgment must be exercised as to the sustainability of forecasted growth rates with

[59] Ciciretti, Rocco; Dwyer, Gerald R; and Iftekhan Hasan. "Investment Analysts' Forecasts of Earnings" Federal Reserve Bank of St. Louis *Review*, September/October 2009, 91 (5, part 2) pp. 545-67.

[60] Goedhart, Marc J; Raj, Rishi; and Abhishek Saxena. "Equity analyst: Still too bullish" McKinsey on Finance Number 35 Spring 2010, pp. 14-17.

respect to the base earnings. If the base year earnings are abnormally high, the growth rates from which they are calculated will be biased downward. Similarly, if the base year earnings are abnormally low, the growth rates from which they are calculated will be biased upward. As a result, it is typically necessary to employ a methodology to smooth out the abnormally high or low base year earnings.

In summary, since analysts' projected growth forecasts are most often overly optimistic, there is no need to arbitrarily and non-formulaically increase the estimates used in a DCF analysis.

LEVERAGE ADJUSTMENT APPLIED TO DCF ANALYSIS

Q. HAS MR. MOUL MADE ANY ADDITIONAL ADJUSTMENTS TO THE RESULT OF HIS DCF ANALYSIS?

A. Yes. Mr. Moul proposes to make a 131-basis point "leverage" adjustment[61] to the results of his DCF analysis to account for applying a market-determined cost of equity to a book value capital structure.[62]

Q. WHAT IS FINANCIAL LEVERAGE?

A. Financial leverage is the use of debt capital to supplement equity capital. A firm with significantly more debt than equity is considered highly leveraged.

[61] PECO Exhibit PRM-1, Schedule 1, p. 2.
[62] PECO Statement No. 5, p. 37, lines 10-12.

Q. WHAT IS A MARKET-TO-BOOK (M/B) RATIO?

A. A market-to-book ratio is used to evaluate a public firm's equity value by comparing the market value and book value of a company's equity. One way of doing this is to divide the current price per share of stock by the book value per share. A M/B result of above one (1) is desired.

Q. HAS MR. MOUL PROPOSED TO ADJUST THE RESULT OF HIS DCF ANALYSIS TO RECOGNIZE HOW THE COMPANY IS LEVERAGED?

A. No. Mr. Moul does not propose to change the capital structure of the utility (a leverage adjustment), nor does he propose to apply the market-to-book ratio to the DCF model (a market-to-book adjustment). Instead, Mr. Moul proposes to make an adjustment to account for applying the market value cost rate of equity to the book value of the utility's capital structure. I am not aware of any term in academic journals, textbooks, or other literature that describes this type of adjustment.

Q. WHAT IS THE BASIS FOR MR. MOUL'S PROPOSED LEVERAGE ADJUSTMENT?

A. As stated above, Mr. Moul theorizes that to make the DCF results relevant to a book value capital structure, the market-derived cost of equity needs to be adjusted to take into consideration the difference in financial risk.[63] Mr. Moul opines this

[63] PECO Statement No. 5, p. 37, lines 10-12.

is because market valuations of equity are based on market value capital structures, which in general have more equity, less debt, and therefore, less risk than book value capital structures.[64]

Q. HOW DOES MR. MOUL CALCULATE THE LEVERAGE ADJUSTMENT USED IN HIS ANAYSIS?

A. Mr. Moul simply states,

> I know of no means to mathematically solve for the 1.31% leverage adjustment by expressing it in the terms of any particular relationship of market price to book value. The 1.31% adjustment is merely a convenient way to compare the 12.05% return computed using the M&M formulas to the 10.74% return generated by the DCF model based on a market-value capital structure.[65]

Q. DO YOU AGREE WITH MR. MOUL'S "LEVERAGE ADJUSTMENT"?

A. No. Mr. Moul's adjustment is inappropriate for a couple of reasons, including the characterization of financial risk and its inconsistency with Commission precedent.

Q. EXPLAIN HOW RATING AGENCIES ASSESS FINANCIAL RISK.

A. Rating agencies assess financial risk based upon a company's booked debt obligations and the ability of its cash flow to cover the interest payments on those obligations. The agencies use a company's financial statements for their analysis,

[64] PECO Statement No. 5, p. 37, lines 2-8.
[65] PECO Statement No. 5, p. 40, ln. 20 through p. 41, ln. 2.

not market capital structure. The income statement reflects the financial risk of a company because it represents the performance of the company over a certain period. A change in the market value of the stock is not reflected in the income statement nor is a change in market value capital structure reflected in the book value capital structure unless treasury stock is purchased. It is a company's financial statements that affect the market value of the stock, and therefore, the financial statements and the book value capital structure are relied upon in an analysis such as that done by rating agencies.

Q. WHAT ARE THE MOST RECENT COMMISSION DECISIONS REGARDING A LEVERAGE ADJUSTMENT?

A. The following cases are the most recent instances where the Commission has addressed the use of a "leverage adjustment." In these cases, this adjustment has been rejected.

First, in *Pennsylvania Public Utility Commission v. Aqua Pennsylvania, Inc.*, at Docket No. R-00072711 (Order Entered July 31, 2008), pp. 38-39, the Commission rejected the ALJ's recommendation for a leverage adjustment stating, "[t]he fact that we have granted leverage adjustments in the past does not mean that such adjustments are indicated in all cases." In this proceeding, the Commission determined that there was no viable support for an upwards adjustment to compensate for any perceived risk.

Second, in *Pennsylvania Public Utility Commission, et al v. City of Lancaster – Bureau of Water*, at Docket No. R-2010-2179103 (Order Entered July 14, 2011), p. 101, the Commission agreed with the I&E position and stated, "any adjustment to the results of the market based DCF are unnecessary and will harm ratepayers. Consistent with our determination in *Aqua 2008* there is no need to add a leverage adjustment. . ."

Third, in *Pennsylvania Public Utility Commission, et al v. UGI Utilities, Inc. – Electric Division*, at Docket No. R-2017-2640058 (Order Entered October 25, 2018), pp. 93-94, the Commission agreed with the I&E position and stated, "we conclude that an artificial adjustment in this proceeding is unnecessary and contrary to the public interest. Accordingly, we decline to include a leverage adjustment in our calculation of the DCF cost of equity."

Fourth, in *Pennsylvania Public Utility Commission, et. al v. Columbia Gas of Pennsylvania, Inc*., at Docket R-2020-3018835 (Order Entered February 19, 2021), pp. 137-141, the Commission adopted the ALJ's recommendation to use I&E's DCF methodology, which excluded Columbia's application of a leverage adjustment.

Fifth, in *Pennsylvania Public Utility Commission, et. al v. PECO Energy Company – Gas Division*, at Docket R-2020-3018929 (Order Entered June 22, 2021, Public Version), pp. 172-173, the Commission adopted the ALJ's recommendation to use I&E's DCF methodology, which excluded PECO's application of a leverage adjustment.

Sixth, in *Pennsylvania Public Utility Commission, et. al v. Aqua Pennsylvania, Inc.*, at Docket R-2021-3027385 (Order Entered June 22, 2021), pp. 154-155, the Commission adopted the ALJ's recommendation to use I&E's DCF methodology, which excluded Aqua's application of a leverage adjustment.

Finally, in the most recent case, *Pennsylvania Public Utility Commission, et. al v. Columbia Water Company*, at Docket R-2023-3040258 (Order Entered January 18, 2024), p. 108, the Commission again agreed with I&E's methodologies which did not include a leverage adjustment to the cost of equity.

Q. BASED ON THE COMPANY'S FILED RATE BASE AND CLAIMED CAPITAL STRUCTURE, WHAT IS THE VALUE OF AN ADDITIONAL 131 BASIS POINTS FOR MR. MOUL'S LEVERAGE ADJUSTMENT TO THE COST OF EQUITY?

A. The example below illustrates the impact of 131 additional basis points for the leverage adjustment to the Company's cost of equity:

PECO Energy Company - Gas Division	
Claimed Equity Percentage of Capital Structure	53.40%
Additional Basis Points to the Calculated Cost of Equity for a "Leverage Adjustment"	1.31%
Claimed Rate Base*	$3,524,007,000
Impact Prior to Gross Up (0.5340 x 0.0131 x $3,524,007,000)	$24,651,839
Gross Revenue Conversion Factor**	1.383
Total Impact ($24,651,839 x 1.383)	**$34,093,493**

*PECO Exhibit MJT-1, Schedule A-1, Line 15.
**PECO Exhibit MJT-1, Schedule A-1, Line 43.

In this example, an addition of 131 basis points for the leverage adjustment to the cost of equity would force ratepayers to fund an unwarranted additional amount of $34,093,493 annually to cover the increase of the inflated rate of return along with the associated impact resulting from increases to income taxes, uncollectibles, and assessments.

Q. SUMMARIZE YOUR RECOMMENDATION REGARDING THE PROPOSED LEVERAGE ADJUSTMENT.

A. I recommend that Mr. Moul's proposed 131-basis point leverage adjustment be rejected because true financial risk is a function of the amount of interest expense,

and capital structure information provided to investors through Value Line is that of book values, not market values. This demonstrates that investors base their decisions on book value debt and equity ratios for the regulated utilities; therefore, no adjustment is needed. Mr. Moul's proposed adjustment serves only to manipulate the DCF's market-based methodology and causes undue harm to ratepayers as illustrated above.

Q. DO YOU HAVE ANY FURTHER COMMENTS REGARDING MR. MOUL'S DCF CALCULATION?

A. Yes. While I am not directly disputing Mr. Moul's adjusted dividend yield as it is essentially identical to my own, it is important to recognize that, as cited above, the Commission has recently agreed with I&E's DCF methodology which includes the appropriate calculation of dividend yields. Although it is acceptable to adjust historical dividend yields as Mr. Moul has done, it is preferable to use forecasted dividends to calculate the dividend yields when available, such as the ones offered by Value Line that I have employed.

Q. WHAT WOULD MR. MOUL'S DCF BE WITHOUT ANY ADJUSTMENTS?

A. Without Mr. Moul's use of inflated growth rates and a leverage adjustment, his DCF would consist of a dividend yield of 3.99% and an average growth rate of 6.29%, which results in a 10.28% cost of equity. Notably, this result is 35 basis

points higher than my DCF result of 9.93%, yet 177 basis points less than his originally calculated and inappropriately inflated result of 12.05%.

RISK-FREE RATE OF RETURN

Q. HOW HAS MR. MOUL CALCULATED HIS RISK-FREE RATE FOR USE IN HIS CAPM MODEL?

A. Mr. Moul's calculation of his risk-free rate is similar to mine. He considers Treasury yield estimates published by Blue Chip Financial Forecasts over the next six quarters, from the time of his analysis, as well as long-range, five-year averages. However, he uses the 30-year Treasury Bond while I employed the 10-year Treasury Note. Also, where I used a long-range, five-year average, future data point accounting for the years 2025-2029 predictions, Mr. Moul uses two future data points accounting for the year 2025-2029, and also includes an estimate for years 2030-2034. His analysis results in a 3.75% risk-free rate, which is comparable to the 3.88% I used.[66]

Q. WHAT COMMENTS DO YOU HAVE REGARDING MR. MOUL'S CALCULATION OF THE RISK-FREE RATE?

A. Although Mr. Moul and I disagree on the method and inputs to determine the risk-free rate, I will not dispute his result since it is comparable to my own. However, I

[66] PECO Statement No. 5, p. 48, ln. 14 through p. 49, ln. 21. and PECO Exhibit PRM-1, Schedule 13, p. 2.

must reiterate my earlier statements that long-term Treasury Bonds have substantial maturity risk associated with the market risk and the risk of unexpected inflation and normally offer higher yields to compensate investors for these risks. Using the 10-year Treasury Note is more appropriate to balance the short-term volatility risk and the long-term inflation risk.

The Commission has recognized the 10-year Treasury Note as the superior measure for the risk-free rate by stating the following:[67]

> We agree with I&E and the ALJs that using the yield on the 10-year Treasury Note provides a better measure of the risk-free rate of return than using the yield on the 30-year Treasury Bond, as recommended by UGI. In our view, using the 10-year Treasury Note balances the shortcomings of the short-term T-Bill and the 30-year Treasury Bond. Although long-term Treasury Bonds have less risk of being influenced by federal policies, they have substantial maturity risk associated with the market risk. In addition, long-term Treasury Bonds bear the risk of unexpected inflation.

Additionally, the Commission recognized:[68]

> I&E's CAPM model uses forecasted yields on ten-year Treasury bonds, and accordingly, its methodology captures forward looking changes in interest rates.

Moreover, the further out into the future one projects, the less reliable the information becomes. Using the projection for 2030-2034 is an unreliable measure and this should not be included in the risk-free rate. The Company's

[67] *Pa. PUC v. UGI Utilities, Inc. – Electric Division;* Docket No. R-2017-2640058 (Order entered October 25, 2018), p. 99. (Disposition of Capital Asset Pricing Model (CAPM)).

[68] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 154 (Order entered May 16, 2022).

FPFTY ends December 31, 2025, and in my opinion using an estimated risk-free rate that is up to nine years beyond the FPFTY is unreasonable and unnecessary.

INFLATED BETAS USED IN CAPM ANALYSIS

Q. HOW HAS MR. MOUL INFLATED THE BETAS EMPLOYED IN HIS CAPM ANALYSIS?

A. Mr. Moul uses the same logic for inflating his CAPM betas from 0.87 to 1.10 that he uses to enhance his DCF returns, through a financial risk or "leverage" adjustment.[69]

Q. DO YOU AGREE WITH MR. MOUL'S USE OF ADJUSTED BETAS?

A. No. Such enhancements are unwarranted for beta in a CAPM analysis for the same reasons that the "leverage" adjustment is unwarranted for DCF results.

Additionally, if the unadjusted *Value Line* betas do not reflect an accurate investment risk as Mr. Moul contends, the question naturally arises as to why *Value Line* does not publish betas that are adjusted for leverage. Until this type of adjustment is demonstrated in academic literature to be valid, such leverage adjusted betas in a CAPM model should be rejected.

Finally, as described in my CAPM analysis above, a stock with a price movement that is greater than the overall stock market will have a beta that is

[69] PECO Statement No. 5, p. 47, ln. 8 through p. 48, ln. 13.

greater than one and would be described as having more investment risk than the market. Due to being regulated and the monopolistic nature of utilities, very rarely do they have a beta equal to or greater than one. Therefore, in this case, to apply an adjusted beta of 1.10 to the entire industry or gas proxy group is irrational.

Q. WHAT WOULD MR. MOUL'S CAPM RESULT BE WITHOUT HIS INFLATED BETAS?

A. Mr. Moul's CAPM result would be 10.94%. This is 190 basis points lower than his originally calculated 12.84% result, and on par with my CAPM result of 10.86%. The calculation is repeated below without Mr. Moul's unnecessary adjustment:

Rf	+	*β*	*x*	*(Rm-Rf)*	=	*k*
3.75%	+	0.87	x	8.26%	=	**10.94%**

MANAGEMENT PERFORMANCE

Q. DISCUSS THE COMPANY'S CLAIMS SPECIFIC TO MANAGEMENT PERFORMANCE.

A. Mr. Moul proposes that 15 basis points be added to the calculated cost of equity in recognition of the Company's management performance. He primarily relies upon the direct testimony of Company witness Amy E. Hamilton, Vice President of Gas

Operations for PECO (PECO Statement No. 1) to support the consideration of additional basis points for PECO's "superior" management performance.[70]

Q. WHAT INFORMATION DOES MS. HAMILTON PROVIDE TO SUPPORT THE COMPANY'S MANAGEMENT PERFORMANCE CLAIMS?

A. Ms. Hamilton argues that PECO should be authorized additional basis points to the determined return on common equity claiming that the Company has demonstrated excellence in several areas including the quality and reliability of service, ongoing substantial capital investment, commitment to energy efficiency, use of cost-effective technologies, safety of its workers, and promotion of community and economic development. She further relies on the testimony of Marissa Humphrey, Senior Vice President, Chief Financial Officer and Treasurer for PECO Energy Company (PECO Statement No. 2) regarding the Company's claimed successful efforts to manage and control its operating expenses since its previous base rate case.[71]

Q. DO YOU AGREE WITH THE COMPANY'S CLAIMS REGARDING MANAGEMENT PERFORMANCE?

A. No. First, many of the topics presented by the Company witnesses fall within the categories of reliability, customer satisfaction, and safety that are required of every

[70] PECO Statement No. 5, p. 2, lines 4-14.
[71] PECO Statement No. 1, p. 39, lines 7-17.

public utility company under 66 Pa C.S.A. §1501. Additionally, the Company passes capital expenditures to its ratepayers via base rates, or it can utilize a DSIC for capital expenditure recovery. Further, if the Company is effective at controlling operating and maintenance costs, those savings should flow through to ratepayers and/or investors. These savings would likely be offset by the addition of basis points for management performance as ratepayers would have to fund the additional costs. This defeats the purpose of any cost cutting measures to benefit ratepayers.

Q. ARE YOU AWARE OF ANY COMPANIES THAT HAVE RECENTLY RECEIVED ADDITIONAL BASIS POINTS IN RECOGNITION OF MANAGEMENT PERFORMANCE?

A. Yes. Most recently, the Commission awarded Aqua an addition of 25 basis points for its management performance efforts.[72] However, it is important to recognize that this addition was based specifically on Aqua rescuing troubled water and wastewater systems at the Commission's request. The Commission stated: [73]

> We specifically recognize Aqua's efforts and willingness to quickly provide emergency aid to various water and wastewater systems that needed substantial improvement. Aqua has often provided this emergency aid on short notice and at the request of the Commission or other parties to protect the public from egregious health and safety threats and to

[72] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 168-173 (Order entered May 16, 2022).

[73] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, p. 169 (Order entered May 16, 2022).

protect the Commonwealth's drinking water resources from catastrophic damage.

Q. DOES THE COMMISSION'S PAST ISSUANCE OF ADDITIONAL EQUITY POINTS TO RECOGNIZE MANAGEMENT PERFORMANCE MEAN THAT PECO SHOULD ALSO RECEIVE AN ADJUSTED RETURN ON EQUITY?

A. No. The issuance of equity points to recognize management performance should be done on a case-by-case basis. The situation in the Aqua proceeding as discussed above was very specific to Aqua rescuing troubled water and wastewater systems and preventing health and safety concerns regarding drinking water. This scenario does not apply to PECO.

Q. BASED ON THE COMPANY'S FILED RATE BASE AND CLAIMED CAPITAL STRUCTURE, WHAT IS THE VALUE OF AN ADDITIONAL 15 BASIS POINTS FOR THE CONSIDERATION OF MANAGEMENT PERFORMANCE TO THE COST OF EQUITY?

A. The example below illustrates the impact of 15 additional basis points for the consideration of management performance to the Company's claimed cost of equity:

PECO Energy Company - Gas Division	
Claimed Equity Percentage of Capital Structure	53.40%
Additional Basis Points to Calculated Cost of Equity	15
Claimed Rate Base*	$3,524,007,000
Impact Prior to Gross Up (0.5340 x 0.0015 x $3,524,007,000)	$2,822,730
Gross Revenue Conversion Factor**	1.383
Total Impact ($2,822,730 x 1.383)	**$3,903,836**

*PECO Exhibit MJT-1, Schedule A-1, Line 15.
**PECO Exhibit MJT-1, Schedule A-1, Line 43.

In this example, an addition of 15 basis points to the cost of equity in consideration of management performance would force ratepayers to fund an unwarranted additional amount of $3,903,836 annually to cover the increase of the inflated rate of return along with the associated impact resulting from increases to income taxes, uncollectibles, and assessments.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE CONSIDERATION OF ADDITIONAL BASIS POINTS FOR THE COMPANY'S MANAGEMENT PERFORMANCE?

A. I am aware that under 66 Pa C.S.A. §523 the Commission has authority to

consider a utility's performance, however, it is not mandatory that the Commission grant additional basis points to the ROE. Ultimately, as alluded to above, true strong management performance is earning a higher return through efficient use of resources and cost cutting measures. The greater net income resulting from cost savings and true efficiency in management and operations is available to be passed on to both ratepayers and shareholders. I do not believe that PECO, or any utility should be gifted additional basis points for doing what they are required to do to provide adequate, efficient, safe, and reasonable service under 66 Pa C.S.A. §1501.

For these reasons, I recommend that any addition of basis points to the cost of equity for management performance be disallowed.

OVERALL RATE OF RETURN RECOMMENDATION

Q. WHAT IS THE COMPANY'S PROPOSED COST OF EQUITY AND OVERALL RATE OF RETURN?

A. The Company recommends a cost of equity of 11.15% and an overall rate of return of 8.08%.

Q. WHAT IS I&E'S RECOMMENDED COST OF EQUITY AND OVERALL RATE OF RETURN?

A. I&E Exhibit No. 2, Schedule 1, shows the calculation of an appropriate cost of equity to be 9.93% with an overall rate of return for PECO to be 7.43%.

Q. DO YOU HAVE ANY FINAL COMMENTS REGARDING THE COMPANY'S PROPOSED RETURN ON EQUITY?

A. Yes. First, a report issued by Regulatory Research Associates, a group within S&P Global Market Intelligence,[74] illustrates that PECO's 11.15% requested return on equity is a significant 68 basis points higher than the average return on equity request of 10.47% of all pending gas utility rate cases as of March 12, 2024. Further, the average return on equity authorized for gas utilities was 9.64% for cases decided in 2023, which was based on 43 rate cases across the nation. The average authorized ROE for gas utilities decided in the first quarter of 2024 increased slightly to 9.78%.[75] PECO's request is a puzzling 137 basis points above this average. It is also important to note here that Pennsylvania is a deregulated state, which would indicate less risk.

Second, when asked, Mr. Moul indicated he was unaware if any natural gas distribution utilities throughout the United States were granted a Commission authorized return of 11.15% or higher cost of common equity in the past two years.[76]

Third, the Company's requested return on common equity is 100 basis points higher than the Commission's most recently approved DSIC rate of

[74] Regulatory Research Associates, "Major energy utility cases in progress in the US, Quarterly update on pending rate cases," *S&P Global Market Intelligence*, March 20, 2024.

[75] Regulatory Research Associates, "Major energy rate case decisions in the US – January-March 2024, Quarterly update on decided rate cases," *S&P Global Market Intelligence*, April 19, 2024.

[76] I&E Exhibit No. 2, Schedule 13.

10.15%[77] for gas distribution companies. The DSIC rate is designed to encourage its use and to incentivize accelerated pipeline replacement and infrastructure upgrades to bring the existing aging infrastructure closer to meeting safety and reliability requirements in between base rate filings. Additionally, the DSIC rate establishes a benchmark above which a utility company is considered "overearning." As such, the DSIC rate does not serve as a proper measurement of a subject utility's cost of equity in a rate case proceeding. To suggest the cost of equity must be at, or in this case, drastically above the DSIC rate in this base rate proceeding is inappropriate and not in the public interest.

Finally, I believe it is important to consider the impact of what PECO's extraordinary return on equity request of 11.15%, paired with its equity heavy capital structure and expanding rate base, would have on rates. As illustrated in the various charts above, any additional basis points beyond the I&E recommended ROE of 9.93% based on a DCF (market-determined) result are unnecessary and will put an enormous burden on ratepayers. The impact to ratepayers of each of the disputed adjustments is summarized as follows:

Leverage Adjustment	$34,093,493
Management Performance	$3,903,836

[77] PA Public Utility Commission, Bureau of Technical Utility Services Report on the Quarterly Earnings of Jurisdictional Utilities for the Year Ended December 31, 2023, approved at Public Meeting on May 9, 2024, at Docket No. M-2024-3048688.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

ANTHONY D. SPADACCIO, CRRA

PROFESSIONAL EXPERIENCE AND EDUCATION

EMPLOYMENT

Fixed Utility Financial Analyst Supervisor 2023 – Present Fixed Utility Financial Analyst 2014 – 2023	PA Public Utility Commission Bureau of Investigation & Enforcement
Auditor 2012 – 2014	Public School Employee's Retirement System Bureau of Benefits Administration
Tax Technician 2010 – 2012	PA Department of Labor and Industry Unemployment Compensation Tax Services
Staff Accountant 2006 – 2009	Boyer & Ritter Certified Public Accountants

EDUCATION & TRAINING

EDUCATION/CERTIFICATIONS:

Society of Utility and Regulatory Financial Analysts (SURFA) – 2018
Certified Rate of Return Analyst (CRRA)

Indiana University of Pennsylvania, A.A. Accounting - 2006

The Pennsylvania State University, B.S. Labor and Industrial Relations – 2003

The Pennsylvania State University - The Smeal College of Business - 2003
Certificates of Completion:
Business Management - 20 credits of instruction
General Business - 20 credits of instruction

UTILITY SPECIFIC TRAINING/CONFERENCES:

- SURFA Annual Financial Forum – Richmond, VA – 2023
- NARUC Staff Subcommittee on Accounting & Finance, Fall 2021 webinar, October 5-7
- NARUC Staff Subcommittee on Accounting & Finance, Spring 2021 webinar, April 6-8
- SURFA Annual Financial Forum – New Orleans, LA – 2018
- SURFA Annual Financial Forum – Indianapolis, IN - 2016
- Western NARUC Utility Rate School – San Diego, CA - 2015
- Pennsylvania Public Utility Commission Rate School – Harrisburg, PA – 2014

ANTHONY D. SPADACCIO, CRRA

PROFESSIONAL EXPERIENCE AND EDUCATION

EXPERIENCE

I have submitted testimony or assisted in the following proceedings:

- Docket No. R-2023-3044549 – Peoples Natural Gas Company LLC*
- Docket No. R-2023-3040153 – Greater Hazleton Community Area New Development Organization T/A CAN DO, INC. – Water Division*
- Docket No. R-2023-3041575 - Conneaut Lake Park Water Corporation (Mediation)
- Docket Nos. R-2023-3039920, R-2023-3039921 & R-2023-3039919 – Pittsburgh Water & Sewer Authority*
- Docket No. A-2022-3037047 - Pennsylvania-American Water Company – Acquisition of the Wastewater Collection and Treatment System Assets of the Butler Area Sewer Authority (§1329)
- Docket No. R-2022-3035730 – National Fuel Gas Distribution Corporation*
- Docket No. R-2022-3032764 – Leatherstocking Gas Company LLC*
- Docket No. R-2022-3032369 - Citizens' Electric Company of Lewisburg, PA*
- Docket Nos. R-2022-3031672 & R-2022-3031673 - Pennsylvania-American Water Company*
- Docket No. R-2022-3031113 – PECO Energy Company – Gas Division*
- Docket No. R-2022-3030661 – Peoples Natural Gas Company, LLC 1307(f)*
- Docket No. R-2021-3030218 – UGI Utilities, Inc. – Gas Division*
- Docket Nos. R-2021-3027385 & R-2021-3027386 – Aqua Pennsylvania, Inc. & Aqua Pennsylvania Wastewater, Inc.*
- Docket No. A-2021-3027268 - Aqua PA Wastewater, Inc. – Acquisition of the Wastewater System Assets of Willistown Township (§1329)*
- Docket No. R-2021-3026682 – City of Lancaster – Water Fund*
- Docket Nos. R-2021-3024773, R-2021-3024774 & R-2021-3024779 – Pittsburgh Water & Sewer Authority*
- Docket No. R-2021-3024601 - PECO Energy Company – Electric Division*

ANTHONY D. SPADACCIO, CRRA

PROFESSIONAL EXPERIENCE AND EDUCATION

- Docket No. R-2021-3023618 – UGI Utilities, Inc. – Electric Division*
- Docket No. R-2020-3022135 – Pike County Light & Power Company (Electric)*
- Docket No. R-2020-3022134 – Pike County Light & Power Company (Gas)*
- Docket No. R-2020-3020919 – Audubon Water Company*
- Docket No. R-2020-3020256 – City of Bethlehem – Bureau of Water*
- Docket Nos. R-2020-3019369 & R-2020-3019371 - Pennsylvania-American Water Company*
- Docket Nos. R-2020-3017951, R-2020-3017970 & P-2020-3019019 – Pittsburgh Water & Sewer Authority*
- Docket No. R-2020-3017850 - Peoples Natural Gas Company, LLC 1307(f)*
- Docket No. R-2020-3017846 - Peoples Gas Company, LLC 1307(f)*
- Docket No. R-2020-3017206 – Philadelphia Gas Works*
- Docket No. R-2019-3010955 – City of Lancaster – Sewer Fund*
- Docket No. R-2019-3008948 – Community Utilities of PA, Inc. – Wastewater Division*
- Docket No. R-2019-3008947 – Community Utilities of PA, Inc. – Water Division*
- Docket No. R-2019-3008212 - Citizens' Electric Company of Lewisburg, PA*
- Docket No. R-2019-3008208 - Wellsboro Electric Company*
- Docket No. A-2019-3006880 – Pennsylvania-American Water Company – Acquisition of the Water Treatment and Distribution System Assets of Steelton Borough Authority (§1329)*
- Docket No. R-2018-3006814 – UGI Utilities, Inc. – Gas Division*
- Docket Nos. A-2018-3003517 & 3003519 - SUEZ Water Pennsylvania, Inc. – Acquisition of the Water and Wastewater Assets of Mahoning Township (§1329)*
- Docket Nos. R-2018-3002645 & 3002647 - Pittsburgh Water & Sewer Authority*
- Docket No. R-2018-3000164 - PECO Energy Company – Electric Division*
- Docket No. R-2018-3000124 - Duquesne Light Company*
- Docket No. R-2018-3000236 - Peoples Natural Gas – Equitable Division 1307(f)*
- Docket No. R-2018-2645296 - Peoples Gas Company LLC 1307(f)*
- Docket No. R-2018-2645278 - Peoples Natural Gas Company, LLC 1307(f)*

ANTHONY D. SPADACCIO, CRRA

PROFESSIONAL EXPERIENCE AND EDUCATION

- Docket Nos. M-2018-2640802 & 2640803 – Pittsburgh Water & Sewer Authority (Compliance Plan)*
- Docket No. R-2017-2640058 - UGI Utilities, Inc. – Electric Division*
- Docket No. A-2017-2606103 - Pennsylvania-American Water Company – Acquisition of Assets of the Municipal Authority of the City of McKeesport (§1329)*
- Docket No. R-2017-2595853 - Pennsylvania-American Water Company*
- Docket No. A-2016-2580061 - Aqua PA Wastewater, Inc. – Acquisition of the Wastewater System Assets of New Garden Township and the New Garden Township Sewer Authority (§1329)
- Docket No. R-2016-2542923 - PNG, LLC – Equitable Division (Rate MLX)*
- Docket No. R-2016-2542918 - Peoples Natural Gas Company, LLC (Rate MLX)*
- Docket No. R-2016-2538660 - Community Utilities of PA, Inc.
- Docket No. R-2016-2531551 - Wellsboro Electric Company*
- Docket No. R-2016-2531550 - Citizens' Electric Company of Lewisburg, PA*
- Docket No. P-2016-2543140 - Duquesne Light Company (DSP VIII)*
- Docket No. R-2016-2529660 - Columbia Gas of PA, Inc.*
- Docket No. P-2016-2521993 - Columbia Gas of PA, Inc. (DSIC)*
- Docket No. R-2015-2506337 - Twin Lakes Utilities, Inc.
- Docket No. R-2015-2479962 - Corner Water Supply & Service Corp.
- Docket No. R-2015-2479955 - Allied Utility Services, Inc.
- Docket No. R-2015-2470184 - Borough of Schuylkill Haven – Water Dept.
- Docket No. R-2014-2452705 - Delaware Sewer Company*
- Docket No. R-2014-2430945 - Plumer Water Company
- Docket No. R-2014-2427189 - B.E. Rhodes Sewer Company
- Docket No. R-2014-2427035 - Venango Water Company
- Docket No. R-2014-2428745 - Metropolitan Edison Company
- Docket No. R-2014-2428744 - Pennsylvania Power Company
- Docket No. R-2014-2428743 - Pennsylvania Electric Company

ANTHONY D. SPADACCIO, CRRA

PROFESSIONAL EXPERIENCE AND EDUCATION

- Docket No. R-2014-2428742 - West Penn Power Company

*Testimony Submitted

I&E Exhibit No. 2
Witness: Anthony Spadaccio

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany

the

Direct Testimony

of

Anthony Spadaccio, CRRA

Bureau of Investigation & Enforcement

Concerning:

Rate of Return

I&E
Summary of Cost of Capital

Type of Capital	Ratio	Cost Rate	Weighted Cost
PECO Energy Company - Gas Division			
Long-Term Debt	46.60%	4.58%	2.13%
Common Equity	53.40%	9.93%	5.30%
Total	100.00%		7.43%

Proxy Group Capital Structure

	2023		2022		2021		2020		2019		Average
Atmos Energy Corp.											
Long-term Debt	$ 6,833.663	38.08%	$ 5,944.945	38.23%	$ 5,124.950	39.33%	$ 4,732.850	41.07%	$ 3,529.452	36.22%	38.59%
Short-term Debt	241.933	1.35%	184.967	1.19%	-	0.00%	-	0.00%	464.915	4.77%	1.46%
Common Equity	10,870.064	60.57%	9,419.091	60.58%	7,906.889	60.67%	6,791.203	58.93%	5,750.223	59.01%	59.95%
	17,945.660	100.00%	15,549.003	100.00%	13,031.839	100.00%	11,524.053	100.00%	9,744.590	100.00%	100.00%
Chesapeake Utilities											
Long-term Debt	1,197.625	45.65%	590.780	36.34%	558.474	35.93%	518.371	37.26%	450.064	35.75%	38.19%
Short-term Debt	179.853	6.86%	202.157	12.43%	221.634	14.26%	175.644	12.63%	247.371	19.65%	13.16%
Common Equity	1,246.104	47.50%	832.801	51.23%	774.130	49.81%	697.085	50.11%	561.577	44.60%	48.65%
	2,623.582	100.00%	1,625.738	100.00%	1,554.238	100.00%	1,391.100	100.00%	1,259.012	100.00%	100.00%
NiSource Inc.											
Long-term Debt	11,081.300	50.57%	9,555.500	55.09%	9,211.300	60.71%	9,249.700	63.25%	7,907.800	53.48%	56.62%
Short-term Debt	3,048.600	13.91%	1,761.900	10.16%	560.000	3.69%	503.000	3.44%	1,773.200	11.99%	8.64%
Common Equity	7,783.500	35.52%	6,028.900	34.76%	5,400.800	35.60%	4,872.200	33.31%	5,106.700	34.53%	34.74%
	21,913.400	100.00%	17,346.300	100.00%	15,172.100	100.00%	14,624.900	100.00%	14,787.700	100.00%	100.00%
New Jersey Resources Corp.	-										
Long-term Debt	2,916.040	56.52%	2,623.784	53.93%	2,303.527	53.43%	2,354.496	54.45%	1,537.177	49.36%	53.54%
Short-term Debt	252.100	4.89%	423.950	8.71%	377.300	8.75%	125.350	2.90%	25.450	0.82%	5.21%
Common Equity	1,990.735	38.59%	1,817.210	37.35%	1,630.862	37.82%	1,844.692	42.66%	1,551.717	49.82%	41.25%
	5,158.875	100.00%	4,864.944	100.00%	4,311.689	100.00%	4,324.538	100.00%	3,114.344	100.00%	100.00%
Northwest Natural Gas Co.											
Long-term Debt	1,502.602	52.24%	1,325.132	48.03%	1,124.055	45.90%	940.702	44.08%	806.796	44.28%	46.91%
Short-term Debt	89.780	3.12%	258.200	9.36%	389.500	15.91%	304.525	14.27%	149.100	8.18%	10.17%
Common Equity	1,283.838	44.64%	1,175.441	42.61%	935.146	38.19%	888.730	41.65%	865.999	47.53%	42.92%
	2,876.220	100.00%	2,758.773	100.00%	2,448.701	100.00%	2,133.957	100.00%	1,821.895	100.00%	100.00%
One Gas Inc.											
Long-term Debt	2,174.701	43.24%	2,679.143	46.07%	3,707.778	56.60%	1,613.228	37.83%	1,314.064	33.18%	43.38%
Short-term Debt	88.500	1.76%	552.000	9.49%	494.000	7.54%	418.225	9.81%	516.500	13.04%	8.33%
Common Equity	2,765.877	55.00%	2,584.426	44.44%	2,349.532	35.86%	2,233.311	52.37%	2,129.390	53.77%	48.29%
	5,029.078	100.00%	5,815.569	100.00%	6,551.310	100.00%	4,264.764	100.00%	3,959.954	100.00%	100.00%
Spire Inc.											
Long-term Debt	3,624.200	49.95%	3,032.200	45.62%	2,992.800	49.22%	2,482.100	45.88%	2,082.600	40.62%	46.26%
Short-term Debt	955.500	13.17%	1,037.500	15.61%	672.000	11.05%	648.000	11.98%	743.200	14.50%	13.26%
Common Equity	2,675.300	36.88%	2,576.500	38.77%	2,416.200	39.73%	2,280.300	42.15%	2,301.000	44.88%	40.48%
	7,255.000	100.00%	6,646.200	100.00%	6,081.000	100.00%	5,410.400	100.00%	5,126.800	100.00%	100.00%

Five-Year Average Capital Structure					
Long-term Debt	46.21%	**Maximum**	56.62%	**Minimum**	38.19%
Short-term Debt	8.61%				
Common Equity	45.18%	**Minimum**	34.74%	**Maximum**	59.95%
	100.00%				

Source:
Compustat (S&P Global Market Intelligence - Data Management Solutions)
Yearly data updates typically provided late April of each year
(data in millions)

	2023		
Company	**Interest Charges**	**Long-Term Debt**	**Debt Cost**
Atmos Energy Corp.	$ 153.09	$ 6,833.66	2.24%
Chesapeake Utilities	32.85	1,197.63	2.74%
NiSource Inc.	514.90	11,081.30	4.65%
New Jersey Resources Corp.	126.56	2,916.00	4.34%
Northwest Natural Gas Co.	76.57	1,502.60	5.10%
One Gas Inc.	121.04	2,174.70	5.57%
Spire Inc.	194.30	3,624.20	5.36%
	Range:	**Low**	**2.24%**
		High	**5.57%**
		Average	**4.28%**

Source:
Compustat (S&P Global Market Intelligence - Data Management Solutions)
Yearly data updates typically provided late April of each year
(data in millions)

Mergent Bond Record **A-Rated Public Utility Bond Yields**	
Month	Yield
3/1/2023	5.39%
4/1/2023	5.13%
5/1/2023	5.36%
6/1/2023	5.38%
7/1/2023	5.41%
8/1/2023	5.71%
9/1/2023	5.86%
10/1/2023	6.34%
11/1/2023	5.96%
12/1/2023	5.42%
1/1/2024	5.48%
2/1/2024	5.56%
3/1/2024	5.55%
Average	**5.58%**

Source:
Mergent Bond Record
4/1/2024

Dividend Yields of the Proxy Group

Company	Atmos Energy Corp.	Chesapeake Utilities	NiSource Inc.	New Jersey Resources Corp.	Northwest Natural Gas Co.	One Gas Inc.	Spire Inc.
Symbol	*ATO*	*CPK*	*NI*	*NJR*	*NWN*	*OGS*	*SR*
Div	3.46	2.60	1.12	1.76	1.96	2.68	3.16
52-wk low	101.00	83.80	22.86	38.92	34.95	55.50	53.77
52-wk high	125.28	132.91	28.95	55.84	49.09	83.89	72.07
Spot Price	116.23	103.22	27.19	42.78	36.41	63.72	59.34
Spot Div Yield	2.98%	2.52%	4.12%	4.11%	5.38%	4.21%	5.33%
52-wk Div Yield	3.06%	2.40%	4.32%	3.71%	4.66%	3.85%	5.02%
Average	**3.02%**	**2.46%**	**4.22%**	**3.91%**	**5.02%**	**4.03%**	**5.17%**

	Average
Spot Div Yield	**4.09%**
52-wk Div Yield	**3.86%**
Average	**3.98%**

Source: Barrons 4/8/2024 & 2/23/2024
Value Line 02/23/24

Five-Year Growth Estimate Forecast for Proxy Group (Actual)

Company	Symbol	Source			
		Yahoo!	Zacks	Value Line	Average
Atmos Energy Corp.	ATO	7.50%	7.00%	7.00%	7.17%
Chesapeake Utilities	CPK	7.60%	NA	5.00%	6.30%
NiSource Inc.	NI	7.30%	6.00%	9.50%	7.60%
New Jersey Resources Corp.	NJR	6.00%	NA	5.00%	5.50%
Northwest Natural Gas Co.	NWN	2.80%	NA	6.50%	4.65%
One Gas Inc.	OGS	5.00%	5.00%	4.00%	4.67%
Spire Inc.	SR	6.36%	5.00%	4.50%	5.29%
Average					**5.95%**

Sources date:
4/8/2024 & 2/23/2024

Expected Market Cost Rate of Equity for the Proxy Group

5-Year Forecasted Growth Rates

	Time Period	Adjusted Dividend Yield (1)	Growth Rate (2)	Expected Return on Equity (3=1+2)
(1)	**52-Week Average** **Ending:** 4/8/2024 & 2/23/2024	3.86%	5.95%	9.81%
(2)	**Spot Price** **Ending:** 4/8/2024 & 2/23/2024	4.09%	5.95%	10.04%
(3)	**Average:**	**3.98%**	**5.95%**	**9.93%**

Sources: Value Line 02/23/24
Barrons 4/8/2024 & 2/23/2024

Company	**Beta**
Atmos Energy Corp.	0.85
Chesapeake Utilities	0.80
NiSource Inc.	0.90
New Jersey Resources Corp.	0.95
Northwest Natural Gas Co.	0.85
One Gas Inc.	0.85
Spire Inc.	0.85
Average beta for CAPM	**0.86**

Source:
Value Line
02/23/24

Risk-Free Rate

10-Year Treasury Note	Yield
3Q 2024	4.00
4Q 2024	3.90
1Q 2025	3.90
2Q 2025	3.80
3Q 2025	3.80
2025-2029	3.90
Average	**3.88**

Source:
Blue Chip
12/1/2023 & 4/1/2024

Year	% Return	Year	% Return
2023	26.29	1974	-26.47
2022	-18.11	1973	-14.66
2021	28.71	1972	18.98
2020	18.4	1971	14.31
2019	31.49	1970	4.01
2018	-4.38	1969	-8.5
2017	21.83	1968	11.06
2016	11.96	1967	23.98
2015	1.38	1966	-10.06
2014	13.69	1965	12.45
2013	32.39	1964	16.48
2012	16	1963	22.8
2011	2.11	1962	-8.73
2010	15.06	1961	26.89
2009	26.46	1960	0.47
2008	-37	1959	11.96
2007	5.49	1958	43.36
2006	15.79	1957	-10.78
2005	4.91	1956	6.56
2004	10.88	1955	31.56
2003	28.68	1954	52.62
2002	-22.1	1953	-0.99
2001	-11.89	1952	18.37
2000	-9.1	1951	24.02
1999	21.04	1950	31.71
1998	28.58	1949	18.79
1997	33.36	1948	5.5
1996	22.96	1947	5.71
1995	37.58	1946	-8.07
1994	1.32	1945	36.44
1993	10.08	1944	19.75
1992	7.62	1943	25.9
1991	30.47	1942	20.34
1990	-3.1	1941	-11.59
1989	31.69	1940	-9.78
1988	16.61	1939	-0.41
1987	5.25	1938	31.12
1986	18.67	1937	-35.03
1985	31.73	1936	33.92
1984	6.27	1935	47.67
1983	22.56	1934	-1.44
1982	21.55	1933	53.99
1981	-4.91	1932	-8.19
1980	32.42	1931	-43.34
1979	18.44	1930	-24.9
1978	6.56	1929	-8.42
1977	-7.18	1928	43.61
1976	23.84	1927	37.49
1975	37.2	1926	11.62
		Average	12.16

Source:
https://www.slickcharts.com/sp500/returns

Estimated Rate of Return on Market as a Whole

	Dividend Yield	+	Growth Rate	=	Market Return
Value Line Estimate	2.10%		9.73%	(a)	11.83%
S&P 500 Historical Return					12.16%
Average				=	**12.00%**

(a) Value Line forecast for the 3 to 5 year index appreciation is 45% ((1+45%)^.25)-1)

Sources:

Value Line Dividend Yield	4/5/2024	2.10%
Value Line Appreciation Potential	4/5/2024	45.00%

CAPM

Re		Required return on individual equity security
Rf		Risk-free rate
Rm		Required return on the market as a whole
Be		Beta on individual equity security
Re	**=**	Rf+Be(Rm-Rf)
Rf	**=**	3.88
Rm	**=**	12.00
Be	**=**	0.86
Re	**=**	**10.86**

Sources: Value Line 02/23/24
Blue Chip 12/1/2023 & 4/1/2024

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I - RR

Response Date: April 16, 2024

IE-I-RR-4

Reference PECO Statement No. 5, p. 12, lines 2-12. Identify the companies in Mr. Moul's Gas Group that are not susceptible to bypass.

RESPONSE:

Mr. Moul did not study in detail the bypass threat of each company in his proxy group (i.e., the Gas Group). However, he is aware that bypass is usually a threat to LDCs when there are a number of interstate pipelines in close proximity to large volume users served by an LDC or when customers of the LDC are in close proximity to gas producing wells. As to the issue of bypass by interstate pipelines, most LDCs, including companies in the Gas Group, are faced with this threat. Notably, PECO has five interstate pipelines traversing its service territory.

Responsible Witness: Paul R. Moul

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I - RR

Response Date: April 16, 2024

IE-I-RR-10

PECO Statement No. 5, p. 54, lines 10-19:

A. State whether Mr. Moul is aware of any natural gas distribution utilities throughout the United States that have been granted a Commission authorized 11.15% or higher cost of common equity in the past two years.

B. If the answer to I&E-RR-10-D Part A is yes, identify which company/companies have been authorized such cost of common equity and in what jurisdiction.

RESPONSE:

A. Mr. Moul has not researched this issue.
B. See the response to (A) above.

Responsible Witness: Paul R. Moul

I&E Statement No. 2-SR
Witness: Anthony Spadaccio

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Surrebuttal Testimony

of

Anthony Spadaccio, CRRA

Bureau of Investigation & Enforcement

Concerning:

Rate of Return

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INTRODUCTION OF WITNESS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Anthony Spadaccio. My business address is Pennsylvania Public Utility Commission, Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission (Commission) in the Bureau of Investigation & Enforcement (I&E) as a Fixed Utility Financial Analyst Supervisor.

Q. ARE YOU THE SAME ANTHONY SPADACCIO WHO IS RESPONSIBLE FOR THE DIRECT TESTIMONY CONTAINED IN I&E STATEMENT NO. 2 AND THE SCHEDULES IN I&E EXHIBIT NO. 2?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to address statements made in the rebuttal testimony of PECO Energy Company – Gas Division (PECO or Company) witness Paul R. Moul (PECO Statement No. 5-R) regarding rate of return topics including the cost of common equity and the overall fair rate of return that will be applied to the Company's rate base. In addition, I will address

the management performance claim discussed by Company witness Amy E. Hamilton (PECO Statement No. 1-R).

SUMMARY OF MR. MOUL'S REBUTTAL TESTIMONY

Q. SUMMARIZE MR. MOUL'S RESPONSE IN REBUTTAL TESTIMONY TO YOUR RATE OF RETURN RELATED RECOMMENDATIONS.

A. Mr. Moul disputes my recommendations regarding an appropriate proxy group, my reliance on and application of the Discounted Cash Flow (DCF) method, the DCF growth rate, and disallowance of his leverage adjustments to the DCF and beta of his Capital Asset Pricing Model (CAPM). Further, Mr. Moul disagrees with the appropriate risk-free rate to use in my CAPM analysis, my disagreement with his use of the Risk Premium (RP) and Comparable Earnings (CE) methods, and my recommended disallowance of additional basis points for management performance. Finally, Mr. Moul suggests that the Commission-determined Distribution System Improvement Charge (DSIC) rates should serve as a benchmark cost of equity in this proceeding.

PROXY GROUP

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR PROXY GROUP.

A. Mr. Moul claims that I erroneously omitted Southwest Gas Holdings, Inc. from my proxy group. He argues that I incorrectly employed the criterion that 50% or

more of a company's revenues must be generated from the regulated gas utility industry as opposed to using both income and the percentage of assets. He claims that margins on non-utility business segments within the companies in our proxy groups are dissimilar to the utility business.[1]

Q. DO YOU AGREE WITH MR. MOUL'S ASSERTION THAT THE PERCENTAGE OF GAS UTILITY ASSETS TO TOTAL ASSETS IS A MORE APPROPRIATE CRITERION?

A. No. Calculating the percentage of utility assets that make up the total assets of a company is not always a reliable way of determining if a business is primarily a regulated utility. Assets are accounted for at the original cost minus depreciation, which means that the value of an asset depends on its age. Therefore, it is possible for the regulated utility segment of a company to have assets that are predominately depreciated. Although a utility may have assets that are significantly depreciated, it does not always indicate the level of business a company does. A company, or its parent company, can have most of its utility assets depreciated but still do more business as a utility than as another business.

Another reason that the percentage of utility business is not always accurately represented by using the percentage of utility assets to total assets is that there are differences between businesses in the amount of capital needed.

[1] PECO Statement No. 5-R, p. 15, ln. 2 through p. 16, ln. 3.

Generally, a utility company requires a higher level of assets (asset value) to produce a comparatively small level of cash flow while another business may need only a small amount of assets to produce a large level of cash flow. Therefore, comparing the assets of a gas utility segment to the total assets of a company is not an appropriate criterion as it could be misleading.

Furthermore, in the 2021 PECO Energy Company - Gas Division base rate proceeding, the Commission adopted I&E's proxy group and made specific comments which support the criterion that 50% of revenues must be generated from the regulated gas utility industry.[2]

Q. PLEASE REITERATE WHY YOU ELIMINATED SOUTHWEST GAS HOLDINGS, INC. FROM YOUR PROXY GROUP.

A. As explained in my direct testimony, Southwest Gas Holdings, Inc. was excluded for not meeting my criterion that 50% or more of revenues must be generated from regulated gas utility operations. Again, this criterion is important because revenues represent the percentage of cash flow a company receives from each business line related to providing a good or service. If less than 50% of revenues come from the gas distribution sector, the companies are not comparable to the subject utility as they do not provide a similar level of regulated business.[3]

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[2] *Pa. PUC v. PECO Energy Company – Gas Division*, Docket No. R-2020-3018929, p. 138 (Order Entered June 22, 2021).

[3] I&E Statement No. 2, p. 10, lines 1-12.

Q. DO YOU HAVE ANY CHANGES TO YOUR PROXY GROUP?

A. No. For the reasons discussed above, the percentage of revenue is an appropriate criterion. As Southwest Gas Holdings, Inc. includes an insufficient percentage of regulated gas revenues of 39%,[4] it should not be included in the proxy group and compared to PECO.

DISCOUNTED CASH FLOW

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR DCF ANALYSIS.

A. Mr. Moul agrees that results of a DCF analysis should be given weight, but he asserts that use of multiple methods provides a superior foundation to determine the cost of equity. He compares the DSIC rate determined by the Commission in the Quarterly Earnings Summary Reports to the rates calculated using market data. He further disagrees with my results based on the outcomes of certain individual companies, disputes my growth rate analysis, and disagrees with my recommendation to reject his leverage adjustment. Finally, Mr. Moul states that my comparison of my DCF results to my CAPM results when determining the impact to ratepayers is not relevant. He proceeds to recalculate the impact to ratepayers by using the average of my DCF and CAPM results and comparing this to my DCF results as he asserts that would be the proper comparison.[5]

[4] PECO Statement No. 5-R, p. 16, ln. 14.
[5] PECO Statement No. 5-R, p. 16, ln. 13 through p. 27, ln. 3.

EXCLUSIVE USE OF THE DCF

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR USE OF THE DCF.

A. Mr. Moul asserts that the use of more than one method provides a superior foundation for the cost of equity determination. He claims that the use of more than one method will capture the multiplicity of factors that motivate investors to commit their capital to a particular enterprise.[6]

Q. WERE ANY METHODS OTHER THAN THE DCF EMPLOYED IN YOUR ANALYSIS?

A. Yes. Although my recommendation was based on the results of my DCF analysis, I also employed the CAPM as a comparison. For the reasons discussed in my direct testimony, the DCF method is the most reliable.[7] Although no one method can capture every factor that influences an investor, including the results of methods less reliable than the DCF does not make the end result more reliable or more accurate. In direct testimony, I cited several cases that illustrate the methodology I employed is consistent with the methodology historically used by the Commission in base rate proceedings as recently as 2017, 2018, 2020, and 2021.[8]

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6 PECO Statement No. 5-R, p. 17, lines 2-8.
7 I&E Statement No. 2, p. 18, ln. 1 through p. 19, ln. 8.
8 I&E Statement No. 2, p. 18, lines 6-8.

However, as indicated in my direct testimony,[9] the Commission recently deviated from prior Commission practice when it indicated in the 2022 Aqua Pennsylvania, Inc. (Aqua) rate case order that its method "for determining Aqua's OE shall utilize both I&E's DCF and CAPM methodologies"[10] and that "I&E's DCF and CAPM produce a range of reasonableness for the ROE … ."[11] Similarly, most recently, the Commission's 2024 Columbia Water rate case order relied on the results of I&E's DCF and CAPM analyses for determining Columbia Water's ROE.[12] In my direct testimony, I fully explain why the CAPM should not be used as a primary method and continue to express those concerns in this proceeding as to why it should only be used as a comparison to, not a check of, the DCF. Thus, I disagree with a method that provides the CAPM comparable weight to the DCF method.[13]

Q. DO YOU AGREE WITH USING THE AVERAGE OF YOUR DCF AND CAPM RESULTS TO DETERMINE THE IMPACT TO RATEPAYERS?

A. No. My calculation was to demonstrate the impact to ratepayers of using the CAPM as the top end of a range in determining a return on equity because the Commission used I&E's CAPM results as a ceiling for a "range of

[9] I&E Statement No. 2, p. 22, lines 8-18.
[10] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 154 (Order entered May 16, 2022).
[11] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 178 (Order entered May 16, 2022).
[12] *Pa. PUC v. Columbia Water Company,* Docket Nos. R-2023-3040258, p. 105 (Order entered January 18, 2024).
[13] I&E Statement No. 2, p. 20, ln. 6 through p. 21, ln. 13.

reasonableness" in determining the return on equity in the 2021 Aqua base rate case.[14] Nevertheless, Mr. Moul's average of my DCF and CAPM results of 10.40% still demonstrates the problem associated with using the CAPM in determining a utility's return on equity and would result in a significant burden to ratepayers during a time of increasing levels of inflation and economic decline. Therefore, I believe that the CAPM should not be used as a primary method, and it should only be used as a comparison to the DCF (and not as a check of the DCF) for the reasons I have stated in this testimony and in my direct testimony.

Additionally, the differences in the results of the CAPM analyses in this proceeding illustrate just how subjective the inputs of this cost of equity model can be. The results of the CAPM analyses from the Office of Consumer Advocate (OCA) witness David J. Garrett, Mr. Moul, and myself vary wildly. For example, Mr. Garrett presents CAPM results as low as 8.90%[15] which is 394 basis points (12.84% - 8.90%) lower than Mr. Moul's CAPM result of 12.84%.[16] Notably, the result of my CAPM analysis sits almost exactly in the middle at 10.86%.[17] This extreme variation in results highlights the unreliability and subjectivity of the CAPM method, further invalidating its use for establishing an appropriate ROE for ratemaking.

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[14] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 178 (Order entered May 16, 2022).
[15] OCA Statement No. 2, p. 39, lines 12-13.
[16] Exhibit PRM-1 Schedule 1.
[17] I&E Statement No. 2, p. 33, ln. 3.

Q. DO YOU HAVE ANYTHING FURTHER TO ADD REGARDING THE AVERAGING OF YOUR DCF AND CAPM RESULTS?

A. Yes. In the most recent Pennsylvania-American Water Company (PAWC) case, the Commission agreed with the ALJs' recommended ROE based on I&E's results of DCF and CAPM analyses that produces an ROE of 9.45% and denied PAWC's request for an upward adjustment to its ROE for exemplary management performance. Though the Commission determined PAWC's ROE based on the average results of DCF and CAPM analyses, the Commission most importantly notes in the order,[18]

> Before concluding this section, we stress that based upon the specific record developed in this proceeding, we have determined that taking the average of the DCF and CAPM results produces a reasonable ROE. However, we do not strictly endorse averaging the DCF and CAPM in other proceedings where it is determined that methodologies other than the DCF are necessary to determine the utility's ROE. Consistent with these determinations, we shall deny PAWC's Exception No. 1, I&E's Exception No. 1, and the OCA's Exception No. 11.

[18] *Pa. PUC v. Pennsylvania-American Water Company*, Docket Nos. R-2023-3043189 and R-203-3043190, pp. 194 195 (Order Entered July 22, 2024).

DSIC RATES

Q. SHOULD THE COMMISSION CONSIDER THE AUTHORIZED DSIC RATE ESTABLISHED IN THE QUARTERLY EARNINGS SUMMARY REPORTS AS AN APPROPRIATE MEASURE TO DETERMINE THE COST OF EQUITY IN THIS PROCEEDING?

A. No. Mr. Moul's comparison between the I&E recommended return on equity in this proceeding and the Commission's DSIC rate is misguided. My understanding is that the DSIC rate is designed to encourage its use and to incentivize accelerated pipeline replacement and infrastructure upgrades to bring aging infrastructure closer to meeting safety and reliability requirements in between base rate filings. To suggest the cost of equity must be at or above the DSIC rate in this base rate proceeding is inappropriate and not in the public interest. Additionally, the DSIC rate establishes a benchmark above which a utility company is considered "overearning" for use of the DSIC mechanism. As such, the DSIC rate should not serve as a proper measurement of a subject utility's cost of equity in a base rate proceeding since the DSIC rate is routinely higher than any return on equity approved in such base rate proceedings. In fact, 66 Pa. C.S. § 1358(b)(3) states the following:

> The distribution system improvement charge shall be reset at zero if, in any quarter, data filed with the commission in the utility's most recent annual or quarterly earnings report show that the utility will earn a rate of return that would exceed the allowable rate of return used to calculate its fixed costs under the distribution system improvement charge.

Finally, the DSIC mechanism serves to lower a utility's risk because it reduces the lag time in the recovery of a company's capital outlays. DSIC spending requires preapproval of eligible plant via a Long-Term Infrastructure Improvement Plan so there is little question as to the prudence of those expenditures.

Q. ARE THERE ANY POTENTIAL PROBLEMS WITH AWARDING A RETURN ON EQUITY THAT IS EQUAL TO OR HIGHER THAN THE DSIC RATE?

A. Yes. First, if a company achieves the awarded return that is above the DSIC rate, it eliminates the possibility for the utility to utilize the DSIC mechanism until its earnings fall below the DSIC rate. Further, if a company believes it will receive a return higher than the DSIC rate in a litigated base rate proceeding, it will remove the incentive to use the DSIC mechanism between rate filings and may encourage the more frequent filing of base rate cases. Additionally, it may encourage litigation as opposed to settlement of cases, since companies may improperly believe this is the new norm, which will increase rate case costs to customers.

Therefore, in my opinion, the DSIC rate should generally be an incentive rate that is higher than a return on equity percentage granted in a rate proceeding.

EVALUATING THE DCF BASED ON INDIVIDUAL RESULTS

Q. SUMMARIZE MR. MOUL'S RESPONSE IN REBUTTAL TESTIMONY REGARDING THE RESULTS OF YOUR DCF.

A. Mr. Moul explains that when some results are unreasonable on their face, the reliability of, or the witness' application of, that method must be questioned. He points to the results of two companies in my proxy group (Chesapeake Utilities and One Gas Inc.) and claims that they fall into the category of unreasonableness. Mr. Moul attempts to support his theory by arguing that the return on equity for these companies fails to provide a sufficient spread over the current 5.74% yield on A-rated public utility bonds.[19]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S ATTEMPT TO DISAGGREGATE YOUR RESULTS?

A. The 9.93% result of my DCF analysis offers a 5.35% margin over the undisputed 4.58% cost of debt (9.93% - 4.58% = 5.35%). My recommended cost of equity is well more than double the Company's claimed cost of debt and provides a 4.19% margin (9.93% - 5.74% = 4.19%) over Mr. Moul's claimed 5.74% yield on A-rated public utility bonds. I certainly believe these measures satisfy Mr. Moul's statement that, "It is a fundamental tenet of finance that the cost of equity must be

[19] PECO Statement No. 5-R, p. 24, ln. 11 through p. 25, ln. 3.

higher than the cost of debt by a meaningful margin to compensate for the higher risk associated with a common equity investment."[20]

GROWTH RATE

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR GROWTH RATES.

A. Mr. Moul argues that the growth rate projections I use for Northwest Natural Gas Co. and One Gas Inc are outliers as they are too far below the 6.75% growth rate he used. He suggests that had I eliminated the estimates for these two companies, the average growth rate which I employed in my DCF analysis would be more appropriate and closer to his own.[21]

Q. DO YOU AGREE WITH MR. MOUL'S RECALCULATION OF YOUR DCF RESULTS BASED ON THE REMOVAL OF COMPANIES DUE TO THEIR GROWTH RATES BEING TOO LOW?

A. No. First, although he claims Northwest Natural Gas Co. is one of the companies with too low of a growth rate, he instead eliminates the DCF result for Chesapeake Utilities along with One Gas Inc. Presumably, Mr. Moul is aware that Northwest Natural Gas Co. has a much higher than the average dividend yield, which is why he left it in his recalculation of my results. That aside, his recalculation results in a

[20] PECO Statement No. 5-R, p. 24, lines 17-19.
[21] PECO Statement No. 5-R, p. 26, lines 4-12.

DCF that is 38 basis points (10.31% - 9.93%) higher than my recommendation, yet still 84 basis points (11.15% - 10.31%) below his own cost of equity recommendation.[22]

Mr. Moul's decision to remove these estimates only serves to inflate the DCF result, as his argument lacks objective rationale and defeats the purpose of using a proxy group. Mr. Moul himself states, "[t]he principal purpose of assembling a barometer group is to avoid relying on data for a single company that may not be representative and thereby smooth out any abnormalities."[23] This acknowledgement is counterintuitive to his suggestion to remove individual companies from my analysis due to growth estimates he deems are too low. Ironically, and worth noting, Mr. Moul employs the very same growth estimates for the companies and sources he is criticizing in his own proxy group and analysis.[24]

Finally, while he takes issue with the 4.65% and 4.67% average growth rate estimates, which are 130 (5.95% - 4.65%) and 128 (5.95% - 4.67%) basis points lower than my average growth rate estimate of 5.95%, he is not concerned with the 7.17% and 7.60% growth estimates for Atmos Energy Corp. and NiSource Inc., respectively. These estimates are 122 (7.17% - 5.95%) and 165 (7.60% - 5.95%) basis points, respectively, higher than the average.

[22] PECO Statement No. 5-R, p. 26, ln. 13 through p. 27, ln. 3.
[23] PECO Statement No. 5-R, p. 24, lines 9-11.
[24] PECO Exhibit PRM-1, Schedule 9.

LEVERAGE ADJUSTMENT

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING HIS LEVERAGE ADJUSTMENT.

A. First, Mr. Moul states that credit rating agencies do not measure the market-required cost of equity for a company, nor are they concerned with how it is applied in the rate-setting context. Rather, the credit rating agencies are only concerned with the interests of lenders and the timely payment of principal and interest by companies. Then, Mr. Moul questions my references to prior Commission orders. Finally, Mr. Moul disagrees with my claim that investors base their decisions on the book value of a company's debt and equity.[25]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY CONCERNING CREDIT RATING AGENCIES?

A. Mr. Moul has actually supported my argument that his proposed leverage adjustment is not needed by stating that the credit rating agencies are only concerned with the timely payment of principal and interest by utilities. Mr. Moul's stated need for the leverage adjustment is based on his assertion that the difference between the book value capital structure and his market value capital structure poses a financial risk difference.[26]

[25] PECO Statement No. 5-R, p. 30, ln. 12 through p. 33, ln. 12.
[26] PECO Statement No. 5, p. 37, lines 2-8.

Financial risk does in fact relate to the capital structure of a company, but it is created by the financing decisions (the use of debt or equity) and the amount of leverage or debt with which a company chooses to finance its assets. Financial risk and the book value capital structure of a company are represented in the financial statements, which are part of what is evaluated by rating agencies. Mr. Moul agrees with me that credit rating agencies use a company's booked debt obligations, found in the financial statements, in their analysis to assess financial risk and determine creditworthiness.[27]

Q. SUMMARIZE MR. MOUL'S RESPONSE TO YOUR REFERENCE TO PRIOR COMMISSION ORDERS.

A. Mr. Moul refers to the discussion in my direct testimony about seven recent cases where the Commission has rejected a "leverage adjustment." He explains that even though the Commission declined to make a "leverage adjustment" in a prior Aqua Pennsylvania case, it does not invalidate its use. Further, he states, "Notably, the Commission did not repudiate the leverage adjustment in the Aqua case, but instead arrived at an 11.00% return on equity for Aqua by including a separate return increment for management performance."[28] Next, Mr. Moul claims that the adjustment proposed in the City of Lancaster case was much different than what he proposes in this case. Then, regarding UGI Electric

[27] PECO Statement No. 5-R, p. 30, lines 14-16.
[28] PECO Statement No. 5-R, p. 31, lines 6-11.

Utilities, Inc. – Electric Division, Mr. Moul acknowledges the Commission granted a "management performance increment," not a leverage adjustment when arriving at the allowed equity return. As for the Columbia Gas case, Mr. Moul concedes that the Company accepted I&E's return on equity recommendation, which did not include a leverage adjustment or addition of points for management performance. Additionally, in the 2020 PECO Gas case, he argues that the Commission arrived at an equity return on the higher side without a leverage adjustment, therefore no adjustment was warranted. Finally, in the 2021 Aqua case, Mr. Moul acknowledges that the Commission set the cost of equity without a leverage adjustment.[29]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL REGARDING THE REFERENCED PRIOR COMMISSION ORDERS IN YOUR DIRECT TESTIMONY?

A. In this proceeding, Mr. Moul is recommending a 131-basis point "leverage adjustment." To be clear, the Commission did in fact refuse to accept the leverage adjustment in the Aqua case by stating "…we reject the ALJ's recommendation to allow a 65 basis point leverage adjustment."[30] The management performance points awarded to Aqua were case-specific and in no way related to the proposed leverage adjustment. Regarding the City of Lancaster case, the Commission did

[29] PECO Statement No. 5-R, p. 31, ln. 3 through p. 32, ln. 13.
[30] *Pa. PUC v. Aqua Pennsylvania, Inc.,* Docket No. R-00072711, pp. 38-39 (Order entered July 31, 2008).

not reject the leverage adjustment based on the manner in which it was calculated, but rather, the Commission stated, "…the ALJ's recommendation is in error as any adjustment to the results of the market based DCF as we have previously adopted are unnecessary and will harm ratepayers."[31] Regarding the UGI Electric case, the Commission concluded that "…an artificial adjustment in this proceeding is unnecessary and contrary to the public interest. Accordingly, we decline to include a leverage adjustment in our calculation of the DCF cost of equity."[32]

Regarding the most recent Columbia Gas case, the Commission stated,

> … we have adopted the ALJ's recommendation to use I&E's DCF methodology utilizing I&E's dividend yield of 3.34% and growth rate of 6.52%. As noted above, the ALJ did not specify a recommended cost of equity for Columbia in their Recommended Decision. However, we note that I&E's methodology results in an ROE of 9.86%.[33]

The ALJ's Recommended Decision stated the following:

> The ALJ agrees with BIE's reasoning that Columbia Gas' calculated return on equity was flawed for five reasons: (1) the weights given to the results of the Company's CAPM, RP, and CE analyses; (2) certain aspects of Columbia's discussion of risk; (3) Columbia Gas' application of the DCF including the forecasted growth rate and leverage adjustment used; (4) Columbia's inclusion of a size adjustment, reliance on the 30-year Treasury Bond for the risk- free rate, and the use of a double-adjusted *beta* in the CAPM analysis; and (5) the Company's request for an additional 20 basis points for "strong management performance" is unjustified.[34]

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[31] *Pa. PUC v. City of Lancaster – Bureau of Water*; Docket No. R-2010-2179103, p. 101 (Order entered July 14, 2011).

[32] *Pa. PUC v. UGI Utilities, Inc. – Electric Division;* Docket No. R-2017-2640058, pp. 93-94 (Order entered October 25, 2018).

[33] *Pa. PUC v. Columbia Gas of Pennsylvania*; Inc. Docket No. R-2020-3018835, p. 141 (Order entered February 19, 2021).

[34] *Pa. PUC v. Columbia Gas of Pennsylvania*; Inc. Docket No. R-2020-3018835, Recommended Decision, pp. 184-185.

While the Company accepted I&E's DCF return without regard to the leverage adjustment or management performance in the last base rate case, in the Recommended Decision, the ALJ clearly rejected the Company's proposed leverage adjustment and the Commission agreed with the ALJ's Recommended Decision.

In the PECO Energy – Gas Division case, the Commission stated,

> … we have adopted the ALJ's recommendation to use I&E's DCF methodology and to use I&E's CAPM calculation as a check on the reasonableness of the DCF determined cost of equity. Therefore, we shall adopt the ALJ's recommended 10.24% cost of equity. In our view, this is an appropriate cost of equity for PECO given the record developed in this proceeding.[35]

In the Recommended Decision, the ALJ agreed with I&E's recommended cost of equity which did not include a leverage adjustment.[36]

Finally, regarding the 2021 Aqua base rate case, the Commission did in fact reject the Company's proposed leverage adjustment as follows,

> We find I&E's arguments in opposition to the Company's position to be persuasive. For example, as I&E observed, credit rating agencies assess financial risk based upon a company's booked debt obligations and the ability of its cash flow to cover the interest payments on those obligations. The agencies use a company's financial statements, and not the company's market capital structure, in conducting their analysis. It is a company's financial statements that affect the market value of the stock, and, therefore, the financial statements and the book value capital structure are relied upon in an analysis such as that done by rating agencies. I&E St. 2 at 40; I&E St. 2-SR at 10.

[35] *Pa. PUC v. PECO Energy Company – Gas Division*. Docket No. R-2020-3018929, p. 171 (Order entered June 22, 2021).

[36] *Pa. PUC v. PECO Energy Company – Gas Division*. Docket No. R-2020-3018929, Recommended Decision, p. 215.

> Accordingly, we find that the record in this proceeding supports rejecting the Company's requested leverage adjustment.[37]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S ASSERTION THAT INVESTORS DO NOT BASE THEIR DECISIONS ON BOOK VALUE, BUT RATHER THE RETURN THEY EXPECT TO EARN ON THE DOLLARS THEY INVEST?

A. Investors purchase securities such as stocks at market value as opposed to book value. In doing so, they accept the returns and associated risks implied by market prices. However, financial statements, which are based on book values, show the entire true financial position of a company, providing the foundation for investment and financing decisions. For example, financial institutions such as banks lend money based on actual book values and not the current price of a stock. Further, almost all financial ratios used in financial analysis utilize at least one book value variable from either the income statement or the balance sheet.

Mr. Moul's assertion that investors are unconcerned with the book value debt, or "some accounting value of little relevance to them,"[38] of a utility is unsupported. Clearly an investor takes the financial risk of the utility into consideration when determining a required return. In addition, the market capitalization information included in Value Line's reports and discussed by Mr.

[37] *Pa. PUC v. Aqua Pennsylvania, Inc*. Docket No. R-2021-3027385, pp. 166-167 (Order entered June 22, 2021).
[38] PECO Statement No. 5-R, p. 33, lines 3-5.

Moul is not the same as market value capital structure. Market capitalization refers to the number of shares outstanding multiplied by the current price. A market value capital structure refers to the ratio of market debt to market equity, which, to my knowledge, is not included in Value Line's reports. Therefore, Mr. Moul's contention that Value Line includes market capitalization data[39] does not offer any support for his leverage adjustment.

Q. HAS YOUR RECOMMENDATION CHANGED FROM DIRECT TESTIMONY REGARDING MR. MOUL'S LEVERAGE ADJUSTMENT?

A. No. For the reasons discussed above, I continue to recommend that Mr. Moul's 131-basis point leverage adjustment be rejected.

INFLATION

Q. DOES THE DCF ADEQUATELY FACTOR IN RECENT INFLATIONARY TRENDS?

A. Yes. My DCF calculation includes a spot stock price when determining the dividend yield and analysts who generate forecasted earnings growth rates should take inflation into consideration as well; therefore, it contains the most up-to-date projected information of any model. Thus, Mr. Moul's concerns of increasing

[39] PECO Statement No. 5-R, p. 32, lines 19-20.

inflation[40] are adequately covered by use of the DCF as a primary model for determining an appropriate return on equity.

CAPITAL ASSET PRICING MODEL

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR APPLICATION OF THE CAPM.

A. Mr. Moul opines that my CAPM analysis understates the cost of equity for two reasons, which include my use of the yield on 10-year Treasury Notes for my risk-free rate and failure to use leverage adjusted betas.[41] Each of these topics are discussed in more detail below.

RISK-FREE RATE

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR USE OF THE YIELD ON THE 10-YEAR U.S. TREASURY NOTE.

A. Mr. Moul claims that by using the 10-year Treasury Note, I introduced a systematic understatement of CAPM returns. He opines that his use of the yield on a 30-year U.S. Treasury Bond is more appropriate than my use of the yield on a 10-year Treasury Note because 30-year bonds are "more a reflection of investor sentiment of their required returns…" and are also less susceptible to "policy

[40] PECO Statement No. 5-R, p. 24, lines 4-6.
[41] PECO Statement No. 5-R, p. 34, lines 9-11.

initiatives of monetary officials…". Additionally, he provides a recalculation of my risk-free rate to use in the CAPM formula.[42]

Q. DO YOU AGREE WITH MR. MOUL THAT USING THE YIELD OF A 30-YEAR U.S. TREASURY BOND IS MORE APPROPRIATE DUE TO A LONGER-TERM BOND BEING LESS SUSCEPTIBLE TO FEDERAL POLICY ACTIONS?

A. No. As explained in my direct testimony,[43] I chose the 10-year Treasury Note as it balances the short-comings of the short-term T-Bill and the 30-year Treasury Bond. Although long-term Treasury Bonds have less risk of being influenced by federal policies, they have substantial maturity risk associated with the market risk. In addition, long-term treasury bonds bear the risk of unexpected inflation. As such, my choice of a 10-year Treasury Note is more appropriate. Additionally, as mentioned in my direct testimony, the Commission has recently agreed with I&E and recognized the 10-year Treasury Note as the superior measure of the risk-free rate of return.[44]

[42] PECO Statement No. 5-R, p. 34, ln. 13 through p. 36, ln. 4.
[43] I&E Statement No. 2, p. 30, ln. 1 through p. 31, ln. 2.
[44] *Pa. PUC v. UGI Utilities, Inc. – Electric Division,* Docket No. R-2017-2640058, p. 99 (Order entered October 25, 2018).

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR CALCULATION OF THE RISK-FREE RATE USED IN THE CAPM FORMULA.

A. Mr. Moul opines that I have incorrectly given the same weight to the yield on the 10-year Treasury Note for the third and fourth quarter of 2024 as I do for the entire five-year period encompassing 2025 to 2029. He then recalculates the risk-free rate by averaging the 10-year and 30-year Treasury yield forecasts by year from 2025 through 2030 in an attempt to increase my calculated risk-free rate.[45]

Q. DO YOU AGREE WITH MR. MOUL'S ANALYSIS OF YOUR RISK-FREE RATE?

A. No. Mr. Moul's new calculation proposes to give equal weight to each separate year from 2025 to 2030. The flaw with this approach is that the further out into the future one forecasts, the less reliable and more speculative the estimates become; therefore, to give the less reliable estimates equal weight would not be appropriate. It is more appropriate to weight the quarters and years as I have done in my direct testimony.[46] My calculation provides a more accurate estimation of the risk-free rate during the FPFTY, as the further out one forecasts, the less reliable the information becomes.

[45] PECO Statement No. 5-R, p. 35, ln. 7 through p. 36, ln. 1.
[46] I&E Exhibit No. 2, Schedule 8.

More importantly, what Mr. Moul fails to recognize is that my risk-free rate of 3.88% is higher than the 3.75%[47] risk-free rate he uses in his own CAPM analysis. Further, his 10.92%[48] recalculation of my CAPM using his adjusted risk-free rate as described above, yields a result only six (6) basis points higher than my originally calculated 10.86%.[49] Therefore, his criticisms of my risk-free rate are pointless and carry no weight.

LEVERAGED ADJUSTED BETAS

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING THE USE OF LEVERAGED ADJUSTED BETAS.

A. Mr. Moul simply claims that I failed to use leveraged adjusted betas.[50] He does not offer an explanation beyond what he argued in his direct testimony.

Q. IS THE USE OF "LEVERAGED ADJUSTED BETAS" IN CAPM ANALYSIS APPROPRIATE?

A. No. Mr. Moul's adjustment only serves to inflate the result of his CAPM analysis which I have discussed in greater detail in my direct testimony.[51] Value Line is a well-known and trusted source that both investors and the Commission rely upon, therefore, it is not necessary to make any type of adjustment to the Value Line

[47] PECO Statement No. 5, p. 49, lines 19-21.
[48] PECO Statement No. 5-R, p. 36, ln. 4.
[49] I&E Exhibit No. 2, Schedule 11.
[50] PECO Statement 5-R, p. 34, lines 10-11.
[51] I&E Statement No. 2, p. 59, ln. 4 through p. 60, ln. 5.

betas. Additionally, it is worth mentioning again that a stock with a price movement that is greater than the overall stock market will have a beta that is greater than one and would be described as having more investment risk than the market. Due to being regulated and the monopolistic nature of utilities, very rarely do they have a beta equal to or greater than one. Therefore, in this case, to apply an adjusted beta of 1.10 to the entire industry or gas proxy group as Mr. Moul has done is completely irrational.

RISK PREMIUM

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING THE RISK PREMIUM METHOD.

A. Mr. Moul opines that the RP approach should be given serious consideration because it is straight-forward, understandable, and uses a company's own borrowing rate. He claims it provides a direct and complete reflection of a utility's risk and return.[52] Mr. Moul also states that I make an unfounded assertion that the RP method does not measure the current cost of equity as directly as the DCF.[53]

[52] PECO Statement No. 5-R, p. 38, lines 4-15.
[53] PECO Statement No. 5-R, p. 39, ln. 16 through p. 40, ln. 2.

Q. DO YOU AGREE WITH MR. MOUL THAT THE RP METHOD PROVIDES A DIRECT AND COMPLETE REFLECTION OF A UTILITY'S RISK AND RETURN?

A. No. The RP method produces an indirect measure when compared to the DCF method.

Q. PLEASE COMMENT ON THE INDIRECT MEASURE OF THE RP METHOD VERSUS THE MORE DIRECT MEASURE OF THE DCF METHOD.

A. Mr. Moul claims my statement, that the Risk Premium method does not measure the current cost of equity as directly as the DCF, is without foundation. However, in my direct testimony, I have clearly illustrated how the two measures are different.[54] The main reason is that the RP method determines the rate of return on common equity indirectly by observing the cost of debt and adding to it an equity risk premium. The DCF measures equity more directly through the stock information (using equity information), whereas the RP method measures equity indirectly using debt information.

[54] I&E Statement No. 2, p. 16, ln. 1 through p. 25, ln. 4.

COMPARABLE EARNINGS

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING THE CE METHOD.

A. Mr. Moul claims that using the CE method satisfies the comparability standard established in the *Hope* case. Additionally, he states, "the financial community has expressed the view that the regulatory process must consider the returns that are being achieved in the non-regulated sector to ensure that regulated companies can compete effectively in the capital markets."[55]

Q. DO YOU BELIEVE THAT THE COMPANIES USED BY MR. MOUL IN HIS CE METHOD ANALYSIS ARE COMPARABLE TO PECO?

A. No. As explained in my direct testimony,[56] the companies in Mr. Moul's analysis are not utilities, and therefore, are too disparate to be used in a CE analysis. For example, the criteria Mr. Moul uses to choose the companies in his CE group results in the selection of companies such as AAON Inc. (Machinery), Corteva Inc. (Chemical), Harris Corp. (Aerospace/Defense), Ingredion Inc. (Food Processing), Motorola Solutions Inc. (Telecom. Equipment), Schneider National (Trucking), Tyler Technologies (IT Services), and Western Union Company (Financial Services) just to name few.[57] All these companies operate in industries very different from a utility company and operate under varying degrees of

[55] PECO Statement No. 5-R, p. 40, ln. 10 through p. 41, ln. 9.
[56] I&E Statement No. 2, p. 37, ln 7 through p. 38, ln. 3.
[57] PECO Exhibit PRM-1, Schedule 14.

regulation. Also, a large majority, if not all the companies Mr. Moul uses in his analysis, are not monopolies as utilities largely are. This means that they have significantly more competition and would require a higher return for the added risk. Further, the CE method should be excluded because it is entirely subjective as to which companies are comparable and it is debatable whether historical accounting returns are representative of the future.

MANAGEMENT PERFORMANCE POINTS

Q. SUMMARIZE THE COMPANY'S REBUTTAL TESTIMONY REGARDING MANAGEMENT PERFORMANCE POINTS.

A. Mr. Moul continues to advocate for 15 additional basis points to the cost of equity as he believes PECO has performed in an exemplary manner. As in his direct testimony, he points to Ms. Hamilton's testimony for support. Further, Mr. Moul claims that I simply disagree with PECO's claimed excellent performance without addressing or refuting any of the items highlighted by Ms. Hamilton.[58]

Ms. Hamilton reiterates her direct testimony, arguing that the factors she itemizes support additional basis points to the return on equity under 66 Pa. C.S. § 523 for exemplary management performance. She also notes that witnesses on behalf of the OCA and Walmart express dissent similar to my own [59]

[58] PECO Statement No. 5-R, p. 41, ln. 11 through p. 42, ln. 9.
[59] PECO Statement No. 1-R, p. 27, ln. 10 through p. 29, ln 19.

Q. WHAT IS YOUR RESPONSE TO THE COMPANY'S REBUTTAL TESTIMONY REGARDING THE CONSIDERATION OF ADDITIONAL BASIS POINTS FOR MANAGEMENT PERFORMANCE?

A. As discussed in greater detail in my direct testimony,[60] I maintain that PECO, or any utility company for that matter, should not reap additional rewards for programs funded by ratepayers or for meeting their obligations under 66 Pa C.S.A. §1501. Also, while I am aware that under 66 Pa C.S.A. §523 the Commission shall consider a utility's performance, it is not mandatory that the Commission grant additional points.

Further, the issuance of equity points to recognize management performance must always be done on a case-by-case basis. Again, as discussed in my direct testimony, the situation in the 2021 Aqua case was very specific to that company rescuing troubled water and wastewater systems and preventing health and safety concerns regarding drinking water. This scenario does not apply to PECO.

Finally, while I don't dispute the Company's specific accomplishments identified by Ms. Hamilton, I must emphasize my primary argument, that for any company, true strong management performance is earning a higher return through its efficient use of resources and cost cutting measures. The greater net income resulting from cost savings and true efficiency in management and operations is

[60] I&E Statement No. 2, p. 60, ln. 15 through p. 65, ln. 11.

available to be passed on to shareholders. Therefore, the benefits of "exemplary performance" are already realized. It is nonsensical to support the idea that since ratepayers fund the initiatives and accomplishments Ms. Hamilton mentions, ratepayers should then in turn fund a higher equity return for PECO's investors.

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS CONCERNING THE COMPANY'S CLAIM REGARDING MANAGEMENT PEFORMANCE?

A. Yes. While I am aware of the current levels of inflation and high interest rates, I believe it is important not to overburden ratepayers.

Additionally, and perhaps most importantly, I must reiterate that most of the agenda and programs the Company discusses are ultimately *funded by ratepayers* and any savings resulting from cost cutting measures would likely be offset by the addition of basis points for management performance as ratepayers would have to fund those additional costs as well. This defeats the purpose of efforts to reduce costs to benefit ratepayers.

Q. HAS YOUR RECOMMENDATION REGARDING THE COMPANY'S REQUEST FOR ADDITIONAL BASIS POINTS FOR MANAGEMENT PERFORMANCE CHANGED?

A. No. I continue to recommend that any additional basis points for management performance be rejected.

OVERALL RATE OF RETURN

Q. DO YOU HAVE ANY FINAL COMMENTS REGARDING YOUR RECOMMENDED RETURN ON EQUITY OR OVERALL RATE OF RETURN?

A. Yes. A report issued by Regulatory Research Associates, a group within S&P Global Market Intelligence,[61] announced that the average ROE authorized for gas utilities in rate cases decided in the first quarter of 2024 was 9.78%, which is within 15 basis points of my recommended ROE in this proceeding. This illustrates that accuracy and reliability of my return on equity analysis based on the DCF.

Q. HAS YOUR OVERALL RATE OF RETURN RECOMMENDATION CHANGED FROM YOUR DIRECT TESTIMONY?

A. No. My recommended cost of equity and overall rate of return remain unchanged from my direct testimony.

Q. WHAT IS YOUR OVERALL RATE OF RETURN RECOMMENDATION?

A. I recommend the following rate of return for PECO:

[61] Regulatory Research Associates, "Major energy rate case decisions in the US – January-March 2024, Quarterly update on decided rate cases," *S&P Global Market Intelligence*, April 19, 2024.

I&E Summary of Cost of Capital			
Type of Capital	**Ratio**	**Cost Rate**	**Weighted Cost**
PECO Energy Company - Gas Division			
Long-Term Debt	46.60%	4.58%	2.13%
Common Equity	53.40%	9.93%	5.30%
Total	100.00%		7.43%

1

2

3 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

4 A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2024-3046932
PECO Energy Company – Gas Division	:	

VERIFICATION OF ANTHONY SPADACCIO

I, **Anthony Spadaccio**, on behalf of the Bureau of Investigation and Enforcement, hereby verify that **I&E Statement No. 2**, **I&E Exhibit No. 2**, and **I&E Statement No. 2-SR** were prepared by me or under my direct supervision and control.

Furthermore, the facts contained therein are true and correct to the best of my knowledge, information and belief and I expect to be able to prove the same if called to the stand at any evidentiary hearing held in this matter.

This Verification is made subject to the penalties of 18 Pa. C.S. § 4904 relating to unsworn falsification to authorities.

Signed in Harrisburg, Pennsylvania, this 5th day of August 2024.

/s/ Anthony Spadaccio_____

Anthony Spadaccio

I&E Statement No. 3
Witness: Ethan H. Cline

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Direct Testimony

of

Ethan H. Cline

Bureau of Investigation and Enforcement

Concerning:

Weather Normalization Adjustment
FPFTY Reporting Requirements
Rate Base
Cost of Service Study
Customer Cost Analysis
Scale Back of Rates

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Ethan H. Cline. My business address is Pennsylvania Public Utility Commission, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission in the Bureau of Investigation and Enforcement ("I&E") as a Fixed Utility Valuation Engineer.

Q. WHAT IS YOUR EDUCATIONAL AND EMPLOYMENT EXPERIENCE?

A. An outline of my education and employment experience is attached as Appendix A.

Q. PLEASE DESCRIBE THE ROLE OF I&E IN RATE PROCEEDINGS.

A. I&E is responsible for representing the public interest in rate and other proceedings before the Commission. I&E's analysis in this proceeding is based on its responsibility to represent the public interest. This responsibility requires the balancing of the interests of ratepayers, the utility company, and the regulated community as a whole.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to evaluate PECO Energy Company – Gas

Division's ("PECO Gas" or "Company") request for an annual increase in total operating revenue of approximately $111 million. My testimony will address issues related to the weather normalization adjustment, fully projected future test year reporting requirements, rate base, cost of service, and scale back of rates.

Q. DOES YOUR TESTIMONY INCLUDE AN EXHIBIT?

A. Yes. PROPRIETARY VERSION I&E Exhibit No. 3 contains schedules relating to my testimony.

Q. PLEASE DESCRIBE THE FILING.

A. On February 27, 2024, PECO filed a base rate case using the Fully Projected Future Test Year ("FPFTY") ending December 31, 2025, for an increase of approximately $111 million. (PECO St. No. 1, p. 5).

WEATHER NORMALIZATION ADJUSTMENT

Q. WHAT IS A WEATHER NORMALIZATION ADJUSTMENT?

A. A Weather Normalization Adjustment is a mechanism that adjusts a customer's bill, either increasing or decreasing, based on a calculation of actual Heating Degree Days ("HDDs") compared to a projected, normalized HDD.

Q. IS THE COMPANY PROPOSING A WNA?

A. Yes. As stated on page 66 of PECO Gas Statement No. 3, the Company is

proposing the WNA to provide customers with more predictability in billing and to provide PECO Gas with a greater certainty in its ability to earn the distribution revenues authorized by the Commission when setting rates. The Company has proposed to include a 1% deadband (described below) to its WNA (PECO Gas St. No. 3, p. 69).

Q. HOW DOES THE COMPANY PROPOSE TO IMPLEMENT THE PROPOSED WNA?

A. The Company is proposing to apply the WNA to the residential and non-residential customers, under rate classes GR and GC. PECO Gas witness Trzaska states that the Company will adjust the heat sensitive load to account for the ratio of normal weather to actual weather and then recalculate the customer's bill. Mr. Trzaska fully describes the process for determining the weather normalization adjustment on page 73 of PECO Gas Statement No. 3. In summary, the Company's proposal is to multiply the heat sensitive load (actual Ccfs less base load Ccfs) by the ratio of the adjustment normal Heating Degree Days ("HDDs") including the 1% deadband and add that back to the base load. This amount is subtracted from the actual monthly Ccfs for each applicable customer for each billing cycle. The result of this subtraction is then multiplied by the appropriate volumetric rate for each class to determine the adjustment that is applied to the customer bill.

Q. WHAT IS A DEADBAND?

A. A deadband is a certain threshold in which the adjustment is not triggered if Actual Heating Degree Days are within the Normal Heating Degree Days.

Q. DO ANY OTHER PENNSYLVANIA NGDCS WITH A COMMISSION APPROVED WNA UTILIZE A DEADBAND?

A. Yes. Philadelphia Gas Works ("PGW") has a WNA with a 1% deadband and Columbia Gas of Pennsylvania, Inc. ("Columbia"), National Fuel Gas Corporation ("NFG"), and UGI Utilities, Inc. – Gas Division ("UGI") each have a WNA with a 3% deadband.

Q. WHY DID THE COMPANY PROPOSE A 1% DEADBAND RATHER THAN A 3% DEADBAND?

A. Mr. Trzaska stated on page 70 of PECO Gas Statement No. 3 that the Company is proposing a 1% deadband since the intent of the WNA mechanism is to adjust for differences measured against "normal weather." He further claimed that a "higher deadband would undercut the intent of the WNA mechanism by limiting its application during instances when actual weather does vary from normal weather."

Q. HAS THE COMMISSION DESCRIBED WHY A DEADBAND COMPONENT IS APPROPRIATE IN A WNA?

A. Yes. In the 2021 Columbia Order, the Commission determined that "without an

extraordinary set of circumstances, there is no need for Columbia to reconcile day-to-day temperature variations that are part of normal business." The Commission also agreed with the Administrative Law Judge's finding that "the 3% deadband is a reasonable provision, because it allows for a range of what is considered 'normal' weather in which the Company's Commission-approved rates would be applied without adjustment. (Docket No. R-2020-3018835, Order entered February 19, 2021, pp. 264-265).

Q. DO YOU AGREE WITH THE COMPANY'S CONCERNS THAT A DEADBAND LARGER THAN 1% LIMITS THE WNA'S APPLICATION DURING INSTANCES WHEN ACTUAL WEATHER DOES VARY FROM NORMAL WEATHER?

A. No. The Company's position regarding a 1% deadband stands in direct opposition to the Commission's statement that a 3% deadband allows for a range of what is considered "normal" weather. The Company did not provide any further support or evidence for why the Commission should adjust its stance regarding the need for a WNA to include a 3% deadband for PECO Gas when the deadband has been applied, as described above, to Columbia, NFG, and UGI.

Q. WHAT DO YOU RECOMMEND REGARDING PECO GAS' PROPOSED WNA?

A. I recommend that if PECO Gas' WNA is approved the approval should be

conditioned on the inclusion of a 3% deadband. My recommendation maintains consistency with the Commission's previous ruling and with existing WNAs of Columbia, NFG, and UGI.

Q. DO YOU HAVE ANY ADDITIONAL CONCERNS REGARDING PECO GAS' PROPOSED WNA?

A. Yes. Recently, customers of Philadelphia Gas Works ("PGW") experienced unusually large changes to their bills due to the WNA related to May 2022. As a result of this, PGW sought Commission approval, and was granted permission by the Commission, to immediately revise its Tariff to reverse and refund the WNA charges applied to May 2022 usage billings. This amounted to a refund to customers of approximately $12.6 million.[1] I believe that customers experiencing unusually large changes to their bills due to the WNA is cause for some concern since the service areas of PECO Gas and PGW are similar.

Q. ARE YOU RECOMMENDING ANY CHANGES TO THE COMPANY'S PROPOSED WNA?

A. Not at this time. As I stated above, PGW's customers experienced unusually large changes to their bills due to one anomalous month. While I do not believe changes to PECO Gas' proposed WNA are warranted at this time, I am

[1] Docket No. R-2023-303933 PGW Statement No. 1, pp. 11-12.

recommending the Company provide annual reporting of its WNA results. This reporting will allow the Company and parties to assess whether changes to customer bills are becoming excessive in April and May when the weather is significantly warmer and customers are accustomed to lower heating bills and changes to the WNA will need to be made in future base rate cases.

Q. PLEASE IDENTIFY WHAT REPORTING REQUIREMENTS YOU ARE RECOMMENDING FOR THE WNA.

A. I recommend the Company provide schedules to this docket each year on August 1st that displays the following information for the April and May heating months:

1) Actual HDD compared to the normalized HDD.
2) Total adjustment to revenue as a result of the April and May weather.
3) Impact to the bill of an average customer as a result of April and May weather.
4) Largest change to a customer bill.
5) Smallest change to a customer bill.

REPORTING REQUIREMENTS

Q. WHAT AMOUNT OF PLANT ADDITIONS, RETIREMENTS, AND ADJUSTMENTS IS THE COMPANY PROJECTING FOR THE FUTURE TEST YEAR ("FTY") ENDING DECEMBER 31, 2024?

A. The Company is claiming $344,997,000 of plant additions and $24,330,000 of retirements in the FTY (PECO Gas Exhibit MJT-2, Schedule C-2 pp. 16-17).

Q. WHAT AMOUNT OF PLANT ADDITIONS AND RETIREMENTS IS THE COMPANY PROJECTING FOR THE FPFTY ENDING DECEMBER 31, 2025?

A. The Company is claiming $429,186,000 of plant additions and $25,134,000 of retirements in the FPFTY (PECO Gas Ex. MJT-1, Sch. C-2, pp. 16-17).

Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING PLANT ADDITIONS THAT PECO GAS PROJECTS TO BE IN SERVICE DURING THE FTY ENDING DECEMBER 31, 2024 AND THE FPFTY ENDING DECEMBER 31, 2025?

A. Yes. I recommend that the Company provide the Bureau of Investigation and Enforcement and the Office of Consumer Advocate with an update to PECO Gas Exhibit No. MJT-1, Schedule C-2, pp. 15-17 no later than April 1, 2026, under this docket number. The update should include actual plant additions and retirements

for the twelve months ending December 31, 2024, and the twelve months ending December 31, 2025.

Q. WHY DO YOU RECOMMEND THAT PECO GAS PROVIDE THESE UPDATES?

A. I&E continues to believe that there is value in determining how closely PECO Gas' projected investments in future facilities comport with the actual investments that are made by the end of the FTY and FPFTY. Determining the correlation between the Company's projected and actual results will help inform the Commission and the parties in PECO Gas' future rate cases as to the validity of the Company's projections.

Further, using an FPFTY, PECO Gas is requesting ratepayers pre-pay a return on its projected investment in future facilities that are not in place and providing service at the time the new rates take effect, but also are not subject to any guarantee of being completed and placed into service. While the FPFTY provides for such projections, there should be verification of the projections. Therefore, requiring the Company to provide updates demonstrating that actual investments comport with projections used in setting rates using the FPFTY provides the Commission with actual data to gauge the accuracy of PECO Gas' projected investments in future proceedings.

RATE BASE

Q. WHAT IS RATE BASE?

A. Rate base is the depreciated original cost of a utility's investment in plant a utility has in place to serve customers plus other additions and deductions that the Commission determines to be necessary in order to keep the utility operating and providing safe and reliable service to its customers. Rate base includes all the utility's intangible assets (i.e., organization costs, franchise and consents costs, and land right costs) and tangible assets (i.e., facilities, equipment, and land) which have been depreciated over a period of time, or depreciated original cost plant in service, as well as the other allowed additions and deductions.

Q. HOW IS THE DEPRECIATED ORIGINAL COST PLANT IN SERVICE AT THE END OF THE TEST YEAR DETERMINED?

A. The depreciated original cost is determined by subtracting the book reserve, which is the accumulation of all prior annual depreciation expense, and other items such as salvage value from the original cost of the plant in service that is projected to be used and useful in the public service. The depreciated original cost of the plant in service is determined by taking a "snapshot" look at the depreciated original cost value of used and useful utility plant in service at the end of the fully projected future test year. I will discuss my adjustments to plant in service and depreciated original cost plant in service below.

Q. WHAT OTHER ADDITIONS AND DEDUCTIONS TO THE DEPRECIATED ORIGINAL COST OF UTILITY PLANT ARE ALLOWED?

A. Some of the additions to the depreciated original cost of a company's investment in utility include materials and supplies, gas in storage, prepayments, and cash working capital. Some of the deductions include deferred income taxes and customer deposits. Certain additions, such as gas in storage, are applicable to a specific utility or utility type. The depreciated utility plant in service claimed by PECO Gas for the year ending June 30, 2022, is $2,780,992,000, shown on PECO Exhibit MJT-1, Schedule C-1, p. 14. The claimed additions to the Company's depreciated utility plant in service are as follows:

1. Working Capital;
2. Materials and Supplies;
3. Gas Storage;

The deductions to the depreciated original cost are:

1. Accumulated Deferred Income Taxes;
2. Customer Deposits;
3. Customer Advances for Construction; and
4. Accumulated Deferred Income Taxes – Reg Liability.

Q. HOW IS THE RATE BASE USED WITHIN THE RATEMAKING FORMULA?

A. The rate base is one part of the financial equation used by the Commission, along with allowable expenses and rate of return, to determine the level of income a utility is granted an opportunity to earn, and the revenue level needed to achieve that return. The equation used to determine the proper revenue requirement level is:

$$RR = E + D + (RB \times ROR)$$

Where:

RR	=	Revenue Requirement
E	=	Operating Expense
D	=	Depreciation Expense
RB	=	Rate Base
ROR	=	Overall Rate of Return

Each item in the revenue requirement equation is synchronized to the test year period. If the date of any of the items in this equation is changed, all the other necessary data that a utility must file in a rate proceeding, such as the test year income statement, actual and projected customer levels and usage, cost of service study and other financial information used to determine the utility's rate of return, must also be changed.

Q. WHAT IS THE TOTAL RATE BASE CLAIMED BY THE COMPANY FOR THE FULLY PROJECTED FUTURE TEST YEAR ENDING DECEMBER 31, 2025?

A. The Company's claimed rate base for the FPTY ending December 31, 2025, is $3,524,007,000 (PECO Ex. MJT-1, Sch. C-1).

MATERIALS AND SUPPLIES

Q. WHAT IS THE COMPANY'S CLAIM FOR MATERIALS AND SUPPLIES IN THE FPFTY?

A. The Company's claim for materials and supplies in the FPFTY is $2,123,000 (PECO Gas Ex. MJT-1, Sch. C-1, p. 14).

Q. HOW DID THE COMPANY DETERMINE ITS $2,123,000 CLAIM FOR MATERIALS AND SUPPLIES IN THE FPFTY?

A. As described on page 27 of PECO Statement No. 3, and shown on PECO Exhibit MJT-1, Schedule C-11, the Company based its materials and supplies claim on a sum of thirteen-month averages of materials and supplies, allocated 100% to the gas distribution system, and undistributed stores expense, allocated 23.07% to the gas distribution system. The Company used data from the thirteen-month period ended December 31, 2023.

Q. DID THE COMPANY UPDATE ITS MATERIALS AND SUPPLIES DATA THROUGH THE DISCOVERY PROCESS?

A. Yes. In a confidential attachment in response to OCA-VII-16, the Company provided a schedule with the most recent materials and supplies balances available, through March 2024 (PROPRIETARY I&E Ex. No. 3, Sch. 2).

Q. ARE YOU RECOMMENDING ANY ADJUSTMENTS TO THE COMPANY'S MATERIALS AND SUPPLIES CLAIM IN THE FPFTY?

A. Yes. I recommend the Company's materials and supplies claim in the FPFTY be increased by approximately $449,000 from $2,123,000 to $2,572,000 (I&E Ex. No. 3, Sch. 1, line 9).

Q. WHY ARE YOU RECOMMENDING AN ADJUSTMENT TO THE COMPANY'S CLAIM FOR MATERIALS AND SUPPLIES?

A. I am recommending an adjustment to the Company's claim because it is appropriate for the materials and supplies claim to be based on the most up-to-date data available.

Q. IF THE COMPANY PROVIDES ADDITIONAL MATERIALS AND SUPPLIES DATA, WILL YOU UPDATE YOUR RECOMMENDATION?

A. Yes.

Q. HOW DID YOU DETERMINE YOUR RECOMMENDED ADJUSTMENT TO MATERIALS AND SUPPLIES?

A. Using the same allocation methodology used by the Company, I determined the 13-month averages based on the period March 2023 through March 2024, as shown on PROPRIETARY I&E Exhibit No. 3, Schedule 3.

GAS STORAGE

Q. WHAT IS THE COMPANY'S CLAIM FOR GAS STORAGE IN THE FPFTY?

A. The Company's claim for gas storage in the FPFTY is $56,972,000 (PECO Ex. MJT-1, Sch. C-1, p. 14, line 12).

Q. HOW DID THE COMPANY DETERMINE ITS $56,972,000 CLAIM FOR GAS STORAGE IN THE FPFTY?

A. As described on page 28 of PECO Statement No. 3, and shown on PECO Exhibit MJT-1, Schedule C-13, the Company based its gas storage claim on a sum of thirteen-month averages of gas stored underground, LNG, and propane gas. The Company used data from the thirteen-month period December 2023 through December 2024.

Q. DID THE COMPANY UPDATE ITS GAS STORAGE DATA THROUGH THE DISCOVERY PROCESS?

A. Yes. In the CONFIDENTIAL attachment to the response to OCA-VI-43, the Company provided a schedule with the most recent gas storage balances available, through March 2024 (PROPRIETARY I&E Ex. No. 3, Sch. 4).

Q. ARE YOU RECOMMENDING ANY ADJUSTMENTS TO THE COMPANY'S GAS STORAGE CLAIM IN THE FPFTY?

A. Yes. I recommend the Company's gas storage claim in the FPFTY be reduced by approximately $11,275,000 from $56,972,000 to $45,697,000 (I&E Ex. No. 3, Sch. 1, line 11).

Q. WHY ARE YOU RECOMMENDING AN ADJUSTMENT TO THE COMPANY'S CLAIM FOR GAS STORAGE?

A. I am recommending an adjustment to the Company's claim because it is appropriate for the gas storage claim to be based on the most up-to-date data available.

Q. IF THE COMPANY PROVIDES ADDITIONAL GAS STORAGE DATA, WILL YOU UPDATE YOUR RECOMMENDATION?

A. Yes.

Q. HOW DID YOU DETERMINE YOUR RECOMMENDED ADJUSTMENT TO GAS STORAGE?

A. I updated the 13-month averages based on the period March 2023 through March 2024, as shown on PROPRIETARY I&E Exhibit No. 3, Schedule 5.

CUSTOMER DEPOSITS

Q. WHAT IS THE COMPANY'S CLAIM FOR CUSTOMER DEPOSITS IN THE FPFTY?

A. The Company's claim for customer deposits in the FPFTY is $13,354,000 (PECO Gas Ex. MJT-1, Sch. C-1, p. 14, line 8).

Q. HOW DID THE COMPANY DETERMINE ITS $13,354,000 CLAIM FOR CUSTOMER DEPOSIT IN THE FPFTY?

A. As described on page 24 of PECO Statement No. 3, and shown on PECO Exhibit MJT-1, Schedule C-7, the Company based its customer deposits claim on the thirteen-month average of the customer deposits related solely to the Company's gas distribution operations. The Company used data from the thirteen-month period December 2022 through December 2023.

Q. ARE YOU RECOMMENDING ANY ADJUSTMENTS TO THE COMPANY'S CUSTOMER DEPOSITS CLAIM IN THE FPFTY?

A. Yes. I recommend the Company's customer deposits claim in the FPFTY be

decreased by approximately $476,000 from $13,354,000 to $13,830,000 (I&E Ex. No. 3, Sch. 1, line 7).

Q. DID THE COMPANY UPDATE ITS CUSTOMER DEPOSITS DATA THROUGH THE DISCOVERY PROCESS?

A. Yes. In the CONFIDENTIAL attachment to the response to OCA-VI-22, the Company provided a schedule with the most recent customer deposits balances available, through March 2024 (I&E Exhibit No. 3, Sch. 6).

Q. WHY ARE YOU RECOMMENDING AN ADJUSTMENT TO THE COMPANY'S CLAIM FOR CUSTOMER DEPOSITS?

A. I am recommending an adjustment to the Company's claim because it is appropriate for the customer deposits claim to be based on the most up-to-date data available.

Q. IF THE COMPANY PROVIDES ADDITIONAL CUSTOMER DEPOSIT DATA, WILL YOU UPDATE YOUR RECOMMENDATION?

A. Yes.

Q. HOW DID YOU DETERMINE YOUR RECOMMENDED ADJUSTMENT TO CUSTOMER DEPOSITS?

A. I updated the 13-month averages based on the period March 2023 through March 2024, as shown on PROPRIETARY I&E Exhibit No. 3, Schedule 7.

CUSTOMER ADVANCES FOR CONSTRUCTION

Q. WHAT IS THE COMPANY'S CLAIM FOR CUSTOMER ADVANCES FOR CONSTRUCTION ("CAC") IN THE FPFTY?

A. The Company's claim for CAC in the FPFTY is $1,323,000 (PECO Gas Ex. MJT-1, Sch. C-1, p. 14, line 9).

Q. HOW DID THE COMPANY DETERMINE ITS $1,323,000 CLAIM FOR CAC IN THE FPFTY?

A. As described on page 27 of PECO Statement No. 3, and shown on PECO Exhibit MJT-1, Schedule C-9, the Company based its CAC claim on the thirteen-month average of customer advances for construction that were attributable to its gas distribution operations. The Company used data from the thirteen-month period December 2023 through December 2024.

Q. DID THE COMPANY UPDATE ITS CAC DATA THROUGH THE DISCOVERY PROCESS?

A. Yes. In the CONFIDENTIAL attachment to the response to OCA-VI-23, the Company provided a schedule with the most recent CAC balances available, through March 2024 (PRORPIETARY I&E Ex. No. 3, Sch. 8).

Q. ARE YOU RECOMMENDING ANY ADJUSTMENTS TO THE COMPANY'S CAC CLAIM IN THE FPFTY?

A. Yes. I recommend the Company's CAC claim in the FPFTY be decreased by approximately $29,000 from $1,323,000 to $1,352,000 (I&E Ex. No. 3, Sch. 1, line 8).

Q. WHY ARE YOU RECOMMENDING AN ADJUSTMENT TO THE COMPANY'S CLAIM FOR CAC?

A. I am recommending an adjustment to the Company's claim because it is appropriate for the CAC to be based on the most up-to-date data available.

Q. IF THE COMPANY PROVIDES ADDITIONAL CAC DATA, WILL YOU UPDATE YOUR RECOMMENDATION?

A. Yes.

Q. HOW DID YOU DETERMINE YOUR RECOMMENDED ADJUSTMENT TO CAC?

A. I updated the 13-month averages based on the period March 2023 through March 2024, as shown on PROPRIETARY I&E Exhibit No. 3, Schedule 9.

Q. WHAT IS YOUR TOTAL RATE BASE RECOMMENDATION?

A. My total rate base recommendation, based on the adjustments I recommended above,

is to reduce rate base by $11,331,000 from $3,524,007,000 to $3,512,676,000 (I&E Ex. No. 3, Sch. 1, line 12).

COST OF SERVICE

Q. DID THE COMPANY PROVIDE A COST OF SERVICE STUDY IN THIS PROCEEDING?

A. Yes. The Company provided a cost of service study in PECO Gas Exhibit JD-1 through JD-7).

Q. DO YOU OPPOSE THE COMPANY'S COST OF SERVICE STUDY?

A. No.

CUSTOMER COST ANALYSIS – CUSTOMER CHARGES

Q. WHAT IS A CUSTOMER COST ANALYSIS AND HOW IS IT USED?

A. A customer cost analysis is a part of a COSS that is used to determine the appropriate fixed customer charges for the various classes and meter sizes. It includes customer costs only.

Q. WHY IS IT NECESSARY TO PERFORM A CUSTOMER COST ANALYSIS?

A. A fixed customer charge represents the revenue that the Company is guaranteed to receive each month, regardless of the level of usage. As acknowledged in the

seventh edition of the American Water Works Association M1 Manual, there is a tradeoff between revenue stability from a high customer charge, and affordability and conservation from a low customer charge and higher usage rates.[2]

Q. DID PECO GAS PREPARE A CUSTOMER COST ANALYSIS TO SUPPORT THE PROPOSED CUSTOMER CHARGE INCREASES IN THIS PROCEEDING?

A. Yes. The Company presented a customer cost analysis in PECO Gas Exhibit JD-5. The result of the customer cost analysis for residential customers, shown on PECO Gas Exhibit JD-5, is a cost per customer of $33.00 which supports the Company's proposed $19.38 customer charge.

Q. ARE YOU RECOMMENDING ANY CHANGES TO THE COMPANY'S PROPOSED RESIDENTIAL CUSTOMER CHARGE?

A. Not at this time. It should be noted, though, that while the Company's proposed $19.38 customer charge is supported by the customer cost analysis, the $5.13 increase from $14.25 to $19.38, or 36%, is a significant increase. Therefore, I recommend that the customer charge be included in the scale back of rates if the Commission grants less than the full requested increase.

[2] AWWA Manual of Water Supply Practices M1 Principles of Water Rates, Fees, Charges, Seventh Edition. pp. 154-155.

SCALE BACK OF RATES

Q. DID THE COMPANY PROPOSE A SCALE BACK METHODOLOGY IF THE COMMISSION GRANTS LESS THAN THE COMPANY'S FULL REQUESTED INCREASE?

A. Yes. On page 19 of PECO Statement No. 7, Mr. Bisti proposed that rates be "reduced in proportion to the proposed increase for each class" and that customer charges for all rate classes remain as proposed.

Q. DO YOU AGREE WITH THE COMPANY'S SCALE BACK PROPOSAL?

A. Partially. I agree that the proposed rate be reduced in proportion to the proposed increase for each class, but I do not agree that the customer charges for all rate classes remain as proposed.

Q. WHY DO YOU RECOMMEND THAT THE CUSTOMER CHARGES BE INCLUDED IN ANY SCALE BACK OF RATES?

A. As part of the Commission's decision to approve a revenue requirement that is less than what was requested by the Company, it is possible that some of the expenses that are included in the customer cost analysis would be reduced which would justify a reduction in the customer charge. Therefore, it is reasonable to include the customer charge in a scale back of rates.

Q. HAS THE COMMISSION ADJUSTED A COMPANY'S PROPOSED CUSTOMER CHARGE DESPITE APPROVING THE CUSTOMER COST ANALYSIS SUBMITTED BY THE COMPANY?

A. Yes. In the disposition of UGI Utilities, Inc. – Electric Division's base rate case the Commission agreed with the Company's proposed customer cost analysis, yet still included the customer cost in its scale back of rates (Docket No. R-2017-2640058, pp. 173-174 (Order entered October 25, 2018)). Therefore, my recommendation to include the customer charges in the scale back is consistent with Commission precedent.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

ETHAN H. CLINE

PROFESSIONAL EXPERIENCE AND EDUCATION

EXPERIENCE:

03/2009 - Present
Bureau of Investigation and Enforcement, Pennsylvania Public Utility Commission - Harrisburg, Pennsylvania

Fixed Utility Valuation Engineer – Assists in the performance of studies and analyses of the engineering-related areas including valuation, depreciation, cost of service, quality and reliability of service as they apply to fixed utilities. Assists in reviewing, comparing and performing analyses in specific areas of valuation engineering and rate structure including valuation concepts, original cost, rate base, fixed capital costs, inventory processing, excess capacity, cost of service, and rate design.

06/2008 – 09/2008
Akens Engineering, Inc. - Shiremanstown, Pennsylvania

Civil Engineer – Responsible, primarily, for assisting engineers and surveyors in the planning and design of residential development projects.

10/2007 – 05/2008
J. Michael Brill and Associates - Mechanicsburg, Pennsylvania

Design Technician – Responsible, primarily, for assisting engineers in the permit application process for commercial development projects.

01/2006 – 10/2007
CABE Associates, Inc. - Dover, Delaware

Civil Engineer – Responsible, primarily, for assisting engineers in performing technical reviews of the sewer and sanitary sewer systems of Sussex County, Delaware residential development projects.

EDUCATION:

Pennsylvania State University, State College, Pennsylvania
Bachelor of Science; Major in Civil Engineering, 2005

- Attended NARUC Rate School, Clearwater, FL
- Attended Society of Depreciation Professionals Annual Conference and Training

TESTIMONY SUBMITTED:

I have testified and/or submitted testimony in the following proceedings:

1. Clean Treatment Sewage Company, Docket No. R-2009-2121928
2. Pennsylvania Utility Company – Water Division, Docket No. R-2009-2103937
3. Pennsylvania Utility Company – Sewer Division, Docket No. R-2009-2103980
4. UGI Central Penn Gas, Inc., 1307(f) proceeding, Docket No. R-2010-2172922
5. PAWC Clarion Wastewater Operations, Docket No. R-2010-2166208
6. PAWC Claysville Wastewater Operations, Docket No. R-2010-2166210
7. Citizens' Electric Company of Lewisburg, Pa, Docket No. R-2010-2172665
8. City of Lancaster – Bureau of Water, Docket No. R-2010-2179103
9. Peoples Natural Gas Company LLC, Docket No. R-2010-2201702
10. UGI Central Penn Gas, Inc., Docket No. R-2010-2214415
11. Pennsylvania-American Water Company, Docket No. R-2011-2232243
12. Pentex Pipeline Company, Docket No. A-2011-2230314
13. Peregrine Keystone Gas Pipeline, LLC, Docket No. A-2010-2200201
14. Philadelphia Gas Works 1307(f), Docket No. R-2012-2286447
15. Peoples Natural Gas Company LLC, Docket No. R-2012-2285985
16. Equitable Gas Company, Docket Nos. R-2012-2312577, G-2012-2312597
17. City of Lancaster – Sewer Fund, Docket No. R-2012-2310366
18. Peoples TWP, LLC 1307(f), Docket No. R-2013-2341604
19. UGI Penn Natural Gas, Inc. 1307(f), Docket No. R-2013-2361763
20. UGI Central Penn Gas, Inc. 1307(f), Docket No. R-2013-2361764
21. Joint Application, Docket Nos. A-2013-2353647, A-2013-2353649, A-2013-2353651
22. City of Dubois – Bureau of Water, Docket No. R-2013-2350509
23. The Columbia Water Company, Docket No. R-2013-2360798
24. Pennsylvania American Water Company, Docket No. R-2013-2355276
25. Generic Investigation Regarding Gas-on-Gas Competition, Docket Nos. P-2011-227868, I-2012-2320323
26. Philadelphia Gas Works 1307(f), Docket No. R-2014-2404355
27. Pike County Light and Power Company (Gas), Docket No. R-2013-2397353
28. Pike County Light and Power Company (Electric), Docket No. R-2013-2397237
29. Peoples Natural Gas Company LLC 1307(f), Docket No. R-2014-2403939
30. UGI Penn Natural Gas, Inc. 1307(f), Docket No. R-2014-2420273
31. UGI Utilities, Inc. – Gas Division 1307(f), Docket No. R-2014-2420276
32. UGI Central Penn Gas, Inc. 1307(f), Docket No. R-2014-2420279
33. Emporium Water Company, Docket No. R-2014-2402324
34. Borough of Hanover – Hanover Municipal Water, Docket No. R-2014-2428304
35. Philadelphia Gas Works 1307(f), Docket No. R-2015-2465656
36. Peoples Natural Gas Company LLC 1307(f), Docket No. R-2015-2465172
37. Peoples Natural Gas Company – Equitable Division 1307(f), Docket No. R-2015-2465181
38. PPL Electric Utilities Corporation, Docket No. R-2015-2469275

39. UGI Penn Natural Gas, Inc. 1307(f), Docket No. R-2015-2480934
40. UGI Central Penn Gas, Inc. 1307(f), Docket No. R-2015-2480937
41. UGI Utilities, Inc. – Gas Division 1307(f), Docket No. R-2015-2480950
42. UGI Utilities, Inc. – Gas Division, Docket No. R-2015-2518438
43. Joint Application of Pennsylvania American Water, et al., Docket No. A-2016-2537209
44. UGI Utilities, Inc. – Gas Division 1307(f), Docket No. R-2016-2543309
45. UGI Central Penn Gas, Inc. 1307(f), Docket No. R-2016-2543311
46. City of Dubois – Company, Docket No. R-2016-2554150
47. UGI Penn Natural Gas, Inc., Docket No. R-2016-2580030
48. UGI Central Penn Gas, Inc. 1307(f), Docket No. R-2017-2602627
49. UGI Penn Natural Gas, Inc. 1307(f), Docket No. R-2017-2602633
50. UGI Utilities, Inc. – Gas Division 1307(f), Docket No. R-2017-2602638
51. Application of Pennsylvania American Water Company Acquisition of the Municipal Authority of the City of McKeesport, Docket No. A-2017-2606103
52. Pennsylvania American Water Company, Docket No. R-2017-2595853
53. Pennsylvania American Water Company Lead Line Petition, Docket No. P-2017-2606100
54. UGI Utilities, Inc. – Electric Division, Docket No. R-2017-2640058
55. Peoples Natural Gas Company, LLC – Peoples and Equitable Division 1307(f), Docket Nos. R-2018-2645278 & R-2018-3000236
56. Peoples Gas Company, LLC 1307(f), Docket No. R-2018-2645296
57. Columbia Gas of Pennsylvania, Inc., Docket No. R-2018-2647577
58. Duquesne Light Company, Docket No. R-2018-3000124
59. Suez Water Pennsylvania, Inc., Docket No. R-2018-3000834
60. Application of Pennsylvania American Water Company Acquisition of the Municipal Authority of the Township of Sadsbury, Docket No. A-2018-3002437
61. The York Water Company, Docket No. R-2018-3000006
62. Application of SUEZ Water Pennsylvania, Inc. Acquisition of the Water and Wastewater Assets of Mahoning Township, Docket Nos. A-2018-3003517 and A-2018-3003519
63. Pittsburgh Water and Sewer Authority, Docket Nos. R-2018-3002645 and R-2018-3002647
64. Joint Application of Aqua America, Inc. et al., Acquisition of Peoples Natural Gas Company LLC, et al., Docket Nos. A-2018-3006061, A-2018-3006062, and A-2018-3006063
65. Implementation of Chapter 32 of the Public Utility Code Regarding Pittsburgh Water and Sewer Authority, Docket Nos. M-2018-2640802 and M-2018-2640803
66. Philadelphia Gas Works 1307(f), Docket No. R-2019-3007636
67. People Natural Gas Company, LLC, Docket No. R-2018-3006818
68. Application of Pennsylvania American Water Company Acquisition of the Steelton Borough Authority, Docket No. A-2019-3006880
69. Application of Aqua America, Inc. et al., Acquisition of the Wastewater System Assets of the Township of Cheltenham, Docket No. A-2019-3006880
70. Philadelphia Gas Works, Docket No. R-2019-3009016

71. Wellsboro Electric Company, Docket No. R-2019-3008208
72. Valley Energy, Inc., Docket No. R-2019-3008209
73. Citizens' Electric Company of Lewisburg, Pa, Docket Non. R-2019-3008212
74. Application of Aqua America, Inc. et al., Acquisition of the Wastewater System Assets of the East Norriton Township, Docket No. A-2019-3009052
75. Peoples Natural Gas Company, LLC 1307(f), Docket No. R-2020-3017850
76. Peoples Gas Company, LLC 1307(f), Docket No. R-2020-3017846
77. Philadelphia Gas Works, Docket No. R-2020-3017206
78. Pittsburgh Water and Sewer Authority, Docket Nos. R-2020-3017951 et al.
79. Columbia Gas of Pennsylvania, Docket No. R-2020-3018835
80. Pennsylvania America Water Company, Docket Nos. R-2020-3019369 and R-2020-3019371
81. PECO Energy Company – Gas Division, Docket No. R-2020-3019829
82. PGW 1307(f), Docket No. R-2021-3023970
83. Peoples Natural Gas Company, LLC 1307(f), Docket No. R-2021-3023965
84. Peoples Gas Company, LLC 1307(f), Docket No. R-2021-3023967
85. UGI Utilities, Inc. – Electric Division, Docket No. R-2021-3023618
86. Columbia Gas of Pennsylvania, Inc., Docket No. R-2021-3024926
87. Duquesne Light Company, Docket No. R-2021-3024750
88. UGI Utilities, Inc. – Gas Division 1307(f), Docket No. R-2021-3025652
89. Pittsburgh Water and Sewer Authority, Docket Nos. R-2021-3024773 et al.
90. Application of Aqua America Wastewater, Inc. et al., Acquisition of the Wastewater System Assets of Lower Makefield Township, Docket No. A-2021-3024267
91. Aqua Pennsylvania Water, Inc. and Aqua Pennsylvania Wastewater, Inc., Docket Nos. R-2021-3027385 and R-2021-3027386
92. Application of Pennsylvania-American Water Company for Acquisition of the Wastewater Collection and Treatment System Assets of the York City Sewer Authority, Docket No. A-2021-3024681
93. City of Lancaster – Bureau of Water, Docket No. R-2021-3026682
94. Application of Aqua America Wastewater, Inc. et al., Acquisition of the Wastewater System Assets of East Whiteland Township, Docket No. A-2021-30246132
95. UGI Utilities, Inc. – Gas Division, Docket No. R-2021-3030218
96. Peoples Natural Gas Company, LLC 1307(f), Docket No. R-2022-3030661
97. Columbia Gas of Pennsylvania, Inc., Docket No. R-2022-3031211
98. UGI Utilities, Inc. – Gas Division 1307(f), Docket No. R-2022-3032242
99. Pennsylvania American Water Company, Docket Nos. R-2022-3031672 and R-2022-3031673
100. The York Water Company, Docket Nos. R-2022-3031340 and R-2022-3032806
101. Columbia Gas of Pennsylvania, Inc., Docket No. R-2022-3032167
102. National Fuel Gas Distribution Corporation, Docket No. R-2022-3035730
103. UGI Utilities, Inc. – Electric Division, Docket No. R-2022-3037368

104. Application of Pennsylvania-American Water Company for Acquisition of the Wastewater Collection and Treatment System Assets of the Butler Area Sewer Authority, Docket No. A-2022-3037047
105. Philadelphia Gas Works, Docket No. R-2023-3037933
106. Pittsburgh Water and Sewer Authority, Docket Nos. R-2023-3039920 et al.
107. Pennsylvania-American Water Company, Docket Nos. R-2023-3043189 and R-2023-3043190
108. Peoples Natural Gas Company, LLC, Docket No. R-2023-3044549
109. Duquesne Light Company, Docket No. R-2024-3046523

NON-PROPRIETARY VERSION
I&E Exhibit No. 3
Witness: Ethan H. Cline

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany

the

Direct Testimony

of

Ethan H. Cline

Bureau of Investigation and Enforcement

Concerning:

Weather Normalization Adjustment
FPFTY Reporting Requirements
Rate Base
Cost of Service Study
Customer Cost Analysis
Scale Back of Rates

PECO ENERGY COMPANY - GAS DIVISION
I&E Adjusted Measure of Value
Fully Projected Test Year Ending December 31, 2025
Docket No. R-2024-3046832
($ in thousands)

		Company	Adjustment	I&E
		(A)	(B)	(C)
1	Utility Plant	$ 4,630,050	$ -	$ 4,630,050
2	Accumulated Depreciation	$ 1,022,690	$ -	$ 1,022,690
3	Common Plant	$ 190,266	$ -	$ 190,266
4	Net Plant in Service	$ 3,797,627	$ -	$ 3,797,627
5	Working Capital	$ 13,737	$ -	$ 13,737
6	ADIT	$ (220,306)	$ -	$ (220,306)
7	Customer Deposits	$ (13,354)	$ (476)	$ (13,830)
8	CAC	$ (1,323)	$ (29)	$ (1,352)
9	Materials and Supplies	$ 2,123	$ 449	$ 2,572
10	ADIT- Reg Liability	$ (111,469)	$ -	$ (111,469)
11	Gas Storage	$ 56,972	$ (11,275)	$ 45,697
12	Total Measures of Value	$ 3,524,007	$ (11,331)	$ 3,512,676

I&E Statement No. 3-SR
Witness: Ethan H. Cline

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Surrebuttal Testimony

of

Ethan H. Cline

Bureau of Investigation and Enforcement

Concerning:

Weather Normalization Adjustment
FPFTY Reporting Requirements
Rate Base
Cost of Service Study
Customer Cost Analysis
Scale Back of Rates

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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Ethan H. Cline. My business address is Pennsylvania Public Utility Commission, 400 North Street, Harrisburg, PA 17120.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Pennsylvania Public Utility Commission in the Bureau of Investigation and Enforcement ("I&E") as a Fixed Utility Valuation Engineer.

Q. ARE YOU THE SAME ETHAN H. CLINE THAT SUBMITTED I&E STATEMENT NO. 3 AND PROPRIETARY I&E EXHIBIT NO. 3 ON MAY 14, 2024?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony submitted by witnesses on behalf of PECO Energy Company – Gas Division ("PECO Gas" or "Company"): Michael J. Trzaska (PECO Gas St. No. 3-R) and Joseph A. Bisti (PECO Gas St. No. 7-R). I will also address the rebuttal testimony submitted on behalf of the Office of Consumer Advocate ("OCA") by Ron Nelson (OCA St. No. 6R).

Q. DOES YOUR TESTIMONY INCLUDE AN EXHIBIT?

A. No. However, I will refer to my direct testimony and exhibit in this surrebuttal testimony.

WEATHER NORMALIZATION ADJUSTMENT

Q. IS THE COMPANY PROPOSING A WNA?

A. Yes. The Company is proposing a weather normalization adjustment ("WNA") to provide customers with more predictability in billing and to provide PECO Gas with a greater certainty in its ability to earn the distribution revenues authorized by the Commission when setting rates. The Company has proposed to include a 1% deadband to its WNA (PECO Gas St. No. 3, pp. 66, 69).

Q. WHAT DID YOU RECOMMEND REGARDING PECO GAS' PROPOSED WNA?

A. On pages 5-7 of I&E Statement No. 3, I recommended that if PECO Gas' proposed WNA is approved, the approval should be conditioned on the inclusion of a 3% deadband. My recommendation maintains consistency with the Commission's previous ruling and with existing WNAs of Columbia, NFG, and UGI. I also recommended the Company provide schedules to this docket each year on August 1st that display the following information for the April and May heating months:

1) Actual HDD compared to the normalized HDD.

2) Total adjustment to revenue as a result of the April and May weather.

3) Impact to the bill of an average customer as a result of April and May weather.

4) Largest change to a customer bill.

5) Smallest change to a customer bill.

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATIONS?

A. Yes. PECO Gas witness Trzaska disagreed with my recommendation of a 3% deadband. His reasoning is that "[t]he deadband is an arbitrary figure because the purpose of alternative rate recovery tools like the WNA is to allow the utility to recover an amount that the Commission has approved." (PECO Gas St. No. 3-R, pp. 19-20).

Q. PLEASE RESPOND.

A. Mr. Trzaksa's claim that a deadband is an arbitrary figure is further reason to rely on the Commission's conclusion of 3% representing "normal weather" and the well-established Commission precedent of applying a 3% deadband to natural gas distribution company ("NGDC") WNAs as I described on pages 4-6 of I&E Statement No. 3. This standard established by the Commission removes the perceived arbitrary nature out of the deadband by imposing a universal condition to the functioning of the WNA as utilized by other investor-owned NGDCs.

Q. DID ANY OTHER PARTIES RESPOND TO YOUR RECOMMENDATIONS REGARDING THE WNA?

A. Yes. OCA witness Nelson disagreed with my recommended reporting requirements for the WNA as well as recommendation for a three percent deadband. (OCA St. No. 6R, pp. 4-5).

Q. WHY DID THE OCA DISAGREE WITH YOUR RECOMMENDED REPORTING REQUIREMENTS?

A. The OCA disagreed with my recommended reporting requirements because Mr. Nelson claims it is "too little, too late." He further posed the question "if bills are found to be excessive, will customers be issued refunds?" Mr. Nelson also offered his general disagreement with the use of tracking metrics as a consumer protection for a rate adjustment. However, regarding my recommendation for the 3% deadband, Mr. Johnson did claim that I provided no calculation or analysis regarding why I selected 3% for the deadband. (OCA St. No. 6R, pp. 4-5).

Q. DO YOU AGREE THAT REPORTING REQUIREMENTS ARE TOO LITTLE, TOO LATE?

A. No. The reporting requirements themselves are not intended as a consumer protection. Instead, they provide actual data so that the WNA can be adjusted to better protect customers in the future. Too little, too late would be to wait until an event happens to attempt to gather data to address any potential issues. My

recommendation allows for the active gathering of that information so that all parties are fully informed on the impact of the WNA going forward. In response to Mr. Nelson's question regarding whether customers will be issued refunds due to excessive bills, the answer to that is they could. As I have said, my reporting recommendations are not intended as a refund trigger. I explained on page 6 of I&E Statement No. 3, customers were provided refunds by Philadelphia Gas Works when they experienced unusually large changes to their bills, but this was at PGW's request via petition at P-2022-3033477. However, there is nothing in my recommendation or in the proposed WNA to require the Company to issue refunds of WNA charges at any specific trigger point.

Q. WHY DID YOU SELECT 3% FOR YOUR DEADBAND RECOMMENDATION?

A. My 3% deadband is based on the Commission's prior 2021 Columbia Gas Order which established that 3% represents "normal" weather. I have no evidence that would support a change to the Commission's ruling on what represents normal weather, therefore my recommendation remains consistent with what the Commission previously established.

Q. DID THE OCA MAKE ANY OTHER STATEMENTS THAT YOU WISH TO RESPOND TO?

A. Yes. Mr. Nelson stated on page 5 of OCA Statement No. 6R that I did not include

an analysis of the Commission's distribution rate considerations identified in 52 Pa. Code § 69.3302.

Q. PLEASE RESPOND.

A. I made no recommendation as to whether the WNA should be approved or not. The purpose of my testimony was to provide a condition for the approval of the WNA rather than either proposing or supporting the proposal; therefore, there was no reason for me to provide such an analysis.

Q. DO YOU WISH TO CHANGE YOUR RECOMMENDATION?

A. No. I continue to recommend that any WNA approved by the Commission be on the condition that a 3% deadband be included and require the Company provide schedules to this docket each year on August 1st that display the information for the April and May heating months, as explained above and in my direct testimony.

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION REGARDING THE WNA REPORTING REQUIREMENTS?

A. Mr. Trzaska stated on page 22 of PECO Gas Statement No. 3-R that the Company does not oppose my recommendation.

REPORTING REQUIREMENTS

Q. DID YOU HAVE ANY RECOMMENDATIONS REGARDING PLANT ADDITIONS THAT PECO GAS PROJECTS TO BE IN SERVICE DURING THE FTY ENDING DECEMBER 31, 2024, AND THE FPFTY ENDING DECEMBER 31, 2025?

A. Yes. I recommended that the Company provide the Bureau of Investigation and Enforcement and the Office of Consumer Advocate with an update to PECO Gas Exhibit No. MJT-1, Schedule C-2, pp. 15-17 no later than April 1, 2026, under this docket number. The update should include actual plant additions and retirements for the twelve months ending December 31, 2024, and the twelve months ending December 31, 2025. (I&E St. No. 3, p. 9).

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION?

A. Yes. On pages 5-6 of PECO Gas Statement No. 3-R, the Company stated that it agrees with this request and will provide the requested information in a timely manner.

RATE BASE

Q. WHAT IS YOUR TOTAL RATE BASE RECOMMENDATION?

A. My total rate base recommendation, based on the adjustments to materials and supplies, gas storage, customer deposits, and customer advances for construction

described on pages 13-21 of I&E Statement No. 3, is to reduce rate base by $11,331,000 from $3,524,007,000 to $3,512,676,000.

Q. DID THE COMPANY RESPOND TO YOUR RATE BASE RECOMMENDATIONS?

A. Yes. Mr. Trzaska indicated that the Company updated its rate base claim based on my recommended adjustments on pages 4-5 of PECO Gas Statement No. 3-R.

CUSTOMER CHARGES

Q. DID YOU RECOMMEND ANY CHANGES TO THE COMPANY'S PROPOSED RESIDENTIAL CUSTOMER CHARGE?

A. Not at this time. However, I did recommend that the customer charge be included in the scale back of rates if the Commission grants less than the full requested increase. (I&E St. No. 3, p. 22).

SCALE BACK OF RATES

Q. DID THE COMPANY PROPOSE A SCALE BACK METHODOLOGY IF THE COMMISSION GRANTS LESS THAN THE COMPANY'S FULL REQUESTED INCREASE?

A. Yes. On page 19 of PECO Statement No. 7, Mr. Bisti proposed that rates be "reduced in proportion to the proposed increase for each class" and that customer charges for all rate classes remain as proposed.

Q. DID YOU AGREE WITH THE COMPANY'S SCALE BACK PROPOSAL?

A. Partially. I agreed that the proposed rate be reduced in proportion to the proposed increase for each class, but I did not agree that the customer charges for all rate classes remain as proposed. (I&E St. No. 3, p. 23).

Q. DID THE COMPANY RESPOND TO YOUR RECOMMENDATION?

A. Yes. PECO Gas witness Bisti disagreed with my recommendation because he claimed that a comparison to the Commission's 2018 order in a UGI Utilities, Inc. ("UGI") electric distribution rate case does not represent a reasonable apples-to-apples comparison for use as Commission precedent. The proposed increase to the customer charge in the UGI case was 250%, and the customer charge increase proposed by the Company in this proceeding is 36%. (PECO Gas St. No. 7-R, p. 9).

Q. DO YOU AGREE WITH THE COMPANY'S POSITION THAT IT IS NOT APPROPRIATE TO USE THE 2018 UGI ELECTRIC CASE AS COMMISSION PRECEDENT IN THIS CASE?

A. No. While I agree that the scale of the increases between the two cases is significant, I do not agree that difference precludes the use of that case as precedent. The Commission did not provide a scale of what should be considered a large enough increase to include the customer charge in a scale back. I continue

to believe that a 36% increase is significant; and, therefore, I continue to recommend the customer charges be included in any scale back of rates.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2024-3046932
PECO Energy Company – Gas Division	:	

VERIFICATION OF ETHAN CLINE

I, **Ethan Cline**, on behalf of the Bureau of Investigation and Enforcement, hereby verify that **I&E Statement No. 3**, **I&E Exhibit No. 3** (in both Proprietary and Non-Proprietary format), and **I&E Statement No. 3-SR** were prepared by me or under my direct supervision and control.

Furthermore, the facts contained therein are true and correct to the best of my knowledge, information and belief and I expect to be able to prove the same if called to the stand at any evidentiary hearing held in this matter.

This Verification is made subject to the penalties of 18 Pa. C.S. § 4904 relating to unsworn falsification to authorities.

Signed in Harrisburg, Pennsylvania, this 5th day of August 2024.

*/s/ Ethan H. Cline*_____

Ethan Cline

I&E Statement No. 4
Witness: Martin Salamonski
NON-PROPRIETARY VERSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Direct Testimony

of

Martin Salamonski

Bureau of Investigation & Enforcement

Concerning:

DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM
SETTLEMENT AGREEMENT APPROVED IN 2022 RATE CASE
LEAK MANAGEMENT
FACILITY EXCAVATION DAMAGE
UTILIZATION OF NEW TECHNOLOGY
SYSTEM PERFORMANCE PROJECTS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Martin Salamonski. I am a Fixed Utility Valuation Engineer in the Safety Division of the Pennsylvania Public Utility Commission's ("Commission") Bureau of Investigation and Enforcement ("I&E"). My business address is Pennsylvania Public Utility Commission, 400 North Street, Harrisburg PA 17120.

Q. PLEASE DESCRIBE THE ROLE OF I&E IN RATE PROCEEDINGS.

A. I&E is responsible for protecting the public interest in proceedings before the Commission. The I&E analysis in the proceeding is based on its responsibility to represent the public interest. This responsibility requires the balancing of the interests of ratepayers, the regulated utility, and the regulated community as a whole.

Q. WHAT IS YOUR EDUCATIONAL AND EMPLOYMENT EXPERIENCE?

A. I attended Penn State University Harrisburg where I earned a Bachelor of Science degree in Mechanical Engineering. I joined the Pennsylvania Public Utility Commission's Safety Division in February of 2021.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to address the federal and state regulations that PECO Energy Company – Gas Division ("PECO Gas" or "Company") is required

to follow and to evaluate the effectiveness of PECO Gas' mitigation of known risks within its system. My direct testimony addresses the following issues:

A. PECO's Distribution Integrity Management Program ("DIMP").

B. PECO Gas' completion of terms outlined in the Joint Petition for Settlement of Rate Investigation ("Settlement Agreement") that the Commission approved in the 2022 Gas Rate Case.

C. Leak management, particularly hazardous leak management.

D. Analysis of PECO Gas' facility excavation damages.

E. PECO Gas' utilization of new technology in the field.

F. PECO Gas' system performance projects

Q. DOES YOUR TESTIMONY INCLUDE EXHIBITS?

A. Yes. I&E Exhibit No. 4 contains schedules that support my direct testimony.

Q. WHAT ARE YOU RECOMMENDING FOR PECO GAS?

A. The following is a list summarizing my recommendations. PECO Gas should:

- Implement a data review process for its service line leak repair reports to make the data accurate and to eliminate misclassification of materials.
- Add DIMP threat categories to provide more granularity for its risk rankings.
- Continue identifying and locating inaccurate facilities.
- Include more information in its brochures for homeowners and excavators.

- Begin keeping track of post construction quality audits containing a failed observation.
- Hire more Senior Contractor Coordinators
- Continue investing in technologies that facilitate mapping improvements and removal of potentially hazardous pipeline components.
- Conduct a study and find additional methods to mitigate unaccounted for gas.

Q. DESCRIBE THE FEDERAL REGULATIONS GOVERNING GAS PIPELINES WITHIN THE UNITED STATES.

A. Gas pipelines in the United States are regulated under Title 49 of the Code of Federal Regulations, Part 192 ("49 CFR Part 192" or "Federal Code"). This part prescribes minimum safety standards for pipeline facilities and the transportation of gas. A Gas distribution system's operator's adherence to 49 CFR Part 192 is mandatory.

Q. IS PECO GAS REQUIRED TO COMPLY WITH FEDERAL REGULATIONS THAT AFFECT PIPELINE REPLACEMENTS?

A. Yes. PECO Gas is mandated to adhere to the regulations outlining the requirements of a Distribution Integrity Management Program. The regulations for DIMP are found under Subpart P of 49 CFR Part 192.1001-192.1015.

Q. WHAT IS DIMP?

A. DIMP is a performance based regulatory program applicable to gas distribution operators driven by risk management. The federal Pipeline and Hazardous Materials Safety Administration ("PHMSA") created the DIMP regulations to reduce the number of Department of Transportation ("DOT") reportable incidents ("Incidents").

Q. WHAT DOES DIMP REQUIRE?

A. DIMP requires a natural gas distribution utility to:

1. Demonstrate knowledge of the gas distribution system;
2. Identify the threats to its facilities;
3. Evaluate and rank the risks of threats to the facilities;
4. Identify and implement measures to reduce risk;
5. Measure performance, monitor the results, and evaluate effectiveness;
6. Periodically evaluate and make improvements to the program; and
7. Report the results.

DIMP regulations mandate PECO Gas to identify the risks to its pipeline facilities and create a plan or plans to mitigate and reduce these risks. PECO Gas determines pipeline replacements by risk ranking the various pipeline types and then replacing the pipe based on the highest risk. DIMP compliance is not optional.

Q. WHAT DID THE COMMISSION'S FINAL ORDER IN PECO'S 2020 GAS BASE RATE PROCEEDING STATE (DOCKET NO. R-2020-3018929)?

A. In the Commission's Final Order (the "2020 PECO Gas Order") the Company was required to **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

Q. WHAT DID THE COMPANY AGREE TO IN ITS 2022 GAS BASE RATE PROCEEDING AT DOCKET NO. R-2022-3031113?

A. In the settlement agreement PECO Gas agreed to (a) accelerate its gas mapping program from its original 20-year commitment to a 15-year commitment, to be completed by December 31, 2032, and (b) to continue its comprehensive analysis of its DIMP threat rankings by committing to creating additional threat categories. PECO was to communicate its findings and resulting changes to the Commission's

Gas Safety Division. In addition, PECO was to host a collaborative to update I&E Safety on or before March 1, 2023 regarding the creation of new threat categories in PECO's DIMP prior to the anticipated 2023 Commission's DIMP audit in the spring of 2023.[1]

Q. PLEASE DESCRIBE WHAT PECO HAS DONE THUS FAR RELATED TO THE REQUIREMENTS OF THE SETTLEMENT.

A. As part of the settlement, PECO Gas was to create additional threat categories for their DIMP. PECO Gas held a collaborative meeting with I&E Safety staff on February 23, 2023 and shared that its pipe diameters were categorized by small (8-inch and smaller) and large (greater than 8-inches).[2] **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

Q. DO YOU AGREE WITH MS. HAMILTON'S REMARKS IN PECO GAS STATEMENT NO. 1[3] THAT THE NEW PIPE DIAMETER CATEGORIES SHE IDENTIFIES ADDS MORE GRANULARITY REGARDING RISK RANKING?

A. No. I believe PECO continues to struggle with implementing granularity into its

[1] 2022 PECO Settlement, p. 8-9 (Docket No. R-2022-3031113).
[2] PECO St. No. 1, p. 33.
[3] PECO St. No. 1, p. 33.

threat categories in order to more accurately identify risks.

Q. PLEASE EXPLAIN THE NUMBER OF THREAT CATEGORIES MAY ADVERSELY AFFECTS THE RESULTS OF THE DIMP.

A. Having fewer threat categories may potentially have a direct impact on pipeline replacement and public safety. As mentioned previously, PECO Gas determines pipeline replacements by risk ranking the various pipeline types and then replacing the pipe based on the highest risk. A more granular approach means a particular asset, for example a pipe of certain diameter made of certain material installed during a certain time period around certain environmental conditions, may be identified as the riskiest asset and may be prioritized for replacement. Fewer threat categories mean assets get grouped together and the failures of one risky asset may be diluted by the group of other non-failing assets, which may potentially result in inefficiencies with regard to pipeline replacement, omissions of pipeline replacement, or failure to prioritize the riskiest assets for replacement appropriately. Consequently, the safety of the public may potentially be adversely affected by a reduction in threat categories, as riskiest assets may not be correctly prioritized.

Q. COULD THREAT CATEGORIES THAT INCLUDE SIZE, AGE, PRESSURE OF A FACILITY, CATHODIC PROTECTION STATUS, AND COATING TYPE HELP PECO GAS MAKE A MORE INFORMED DECISION ABOUT PIPELINE REPLACEMENT?

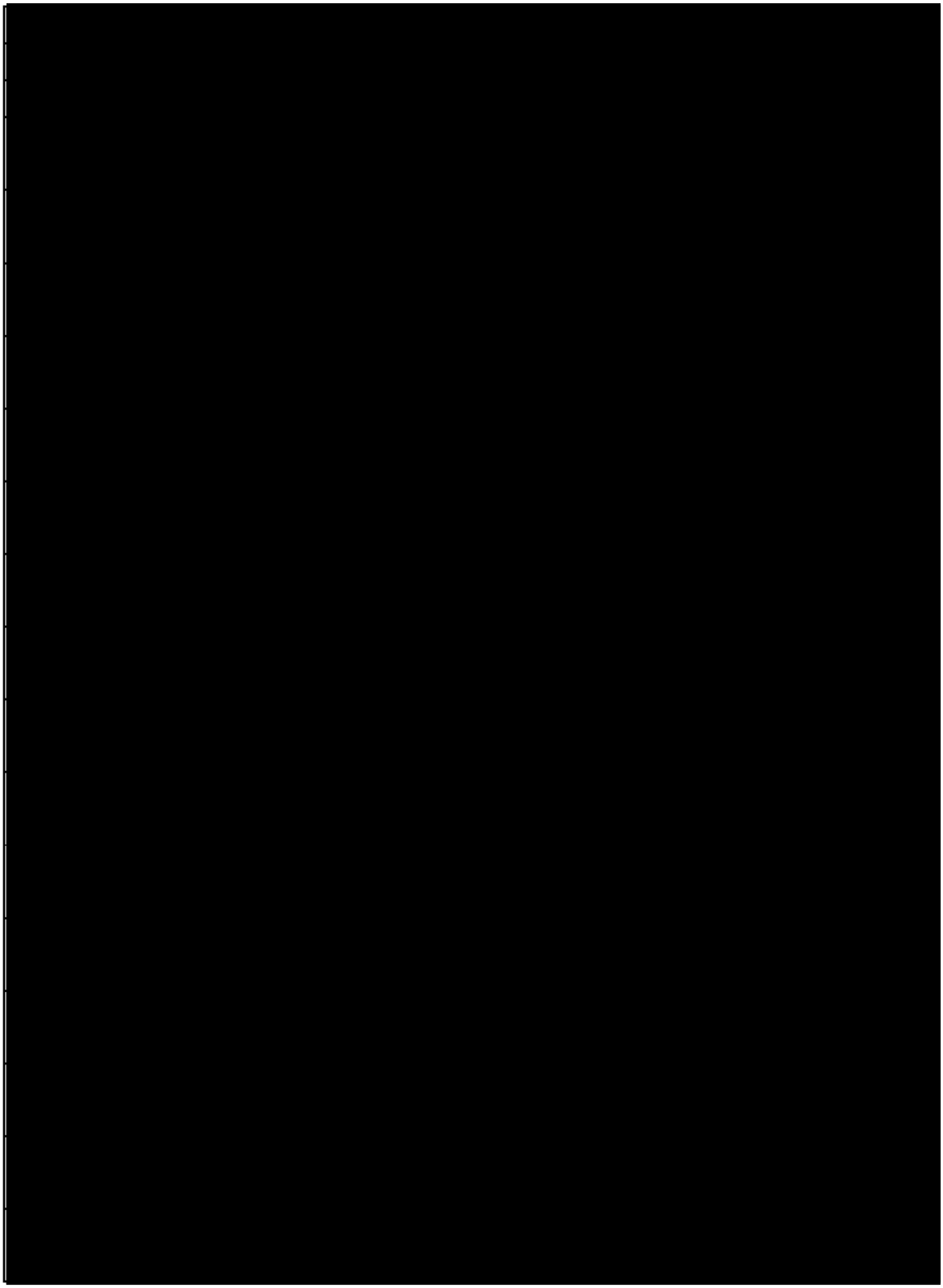
A. Yes. It is very important to consider size, age, pressure of a facility, cathodic protection status, and coating type in order to mitigate risks through pipeline replacement. The granular asset categories will allow the Company to more representatively measure performance, monitor results, and evaluate effectiveness as required by 49 CFR 192.1007(e).

Q. WHAT ARE PECO GAS' CURRENT THREAT CATEGORIES?

A. PECO Gas was asked to provide its primary threat table from 2019 to date. The response included data for 2019 and for "to date" (2022), which is shown in Table 1[4] below:

[4] I&E Exhibit 4, Sch. 21– Confidential.

[BEGIN CONFIDENTIAL]



[redacted]

[END CONFIDENTIAL]

Q. DO YOU HAVE ANY CONCERNS ABOUT THESE THREAT CATEGORIES?

A. Yes. **[BEGIN CONFIDENTIAL]** [redacted]

[redacted]

[redacted] **[END CONFIDENTIAL]**

Q. HOW DOES PECO GAS' DIMP PLAN RANK DIFFERENT APPURTENANCES SUCH AS FITTINGS AND COUPLINGS?

A. PECO Gas explained that its risk model calculates risk for Gas Mains and Gas services. All failures regarding specific appurtenances related to those assets are part of the risk calculations for each failure mode for that asset type. For example, if a specific coupling is determined to corrode quickly, the risk scores related to main corrosion associated with that type of main would be elevated.[5]

Q. HOW MIGHT THIS APPROACH TO RANKING APPURTENANCES BE PROBLEMATIC?

A. PECO Gas' DIMP may not be appropriately ranking risks associated with certain fittings by not breaking these risks out separately. For example, if a specific fitting tends to corrode and it is located on a coated steel main, it may be

[5] I&E Exhibit No. 4, Sch. 1.

categorized as coated steel main corrosion. This would raise the risk score for coated steel main corrosion, though the underlying problem in this example is the fitting, not the main. Likewise, some repaired leaks on plastic pipes may actually be a result of metal components within fittings corroding, which PECO inappropriately categorizes as plastic pipe corrosion in its reported leak repairs.

Q. HOW WOULD YOU DESCRIBE PECO GAS' DIMP PROGRAM INSPECTION HISTORY?

A. The Pipeline Safety division has conducted inspections for PECO's DIMP program yearly for the past five years. **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

Q. WITHOUT CHANGES, WOULD PECO GAS' DIMP RISK RANKING SUFFICIENTLY EVALUATE RISKS IN THE SYSTEM?

A. In my opinion, it will not. I will assess the Company's current threat ranking for known system risks using its Incident history and will use hazardous leaks to evaluate the system's potential risks below.

Q. WHAT ARE THE TOP TEN THREATS TO PECO GAS' DISTRIBUTION SYSTEM AS IDENTIFIED BY THE CURRENT DIMP?

A. The top ten threats identified by the Company are as follows[6]: **[BEGIN CONFIDENTIAL]**



[END CONFIDENTIAL]

Q. WHAT IS THE MEANING OF THE RISK SCORES AND HOW DO THEY COMPARE TO EACH OTHER?

A. PECO explains that risk scores are unitless values that consider the likelihood of a failure and the consequence associated with that failure. The difference in risk scores is primarily driven by the likelihood that a specific type of failure will occur on a type of asset relative to other types of assets. In other words, the risk scores

[6] I&E Exhibit No. 4, Sch. 2 – Confidential.
[7] I&E Exhibit No. 4, Sch. 3, – Confidential.

are proportional to each other. For example, if a threat has a risk score of 8, it would be twice as risky as a threat with a risk score of 4.[8]

Q. WHAT IS THE LEADING CAUSE OF INCIDENTS IN PECO GAS' DISTRIBUTION SYSTEM?

A. Based on data reviewed,[9] the two leading causes of Incidents in the company's distribution system are cast iron breaks and 3rd party excavation damages on gas facilities. Together, these causes are responsible for over 56% of all Incidents in PECO Gas' territory from 1984 to present.

Table 3. PECO Gas Incidents Caused by 3rd Party Excavation Damage and Cast Iron Main breaks

Number of Incidents in PECO Gas' Distribution System, By Cause	1984 to Present	Percent of Total Incidents on PECO Gas' Assets
Incidents Due to 3rd Party Excavation Damage	15*	34.09%
Incidents Due to Cast Iron Breaks	10	22.72%

*The Pottstown explosion was found to have not involved PECO facilities and was removed from this total.

[8] I&E Exhibit No. 4, Sch. 4.

[9] PECO provided data only back to 2010, so PHMSA incident history was used https://www.phmsa.dot.gov/data-and-statistics/pipeline/distribution-transmission-gathering-lng-and-liquid-accident-and-incident-data.

Q. WHY DO YOU THINK THE INCIDENT HISTORY SHEDS LIGHT ON KNOWN RISKS IN THE COMPANY'S DISTRIBUTION SYSTEM?

A. Incident causes are indicators of existing risks associated with the distribution system assets. The goal of DIMP is to help the operator reduce system risks. For example, cast iron main breaks can be completely eliminated as a risk to the system by replacing all cast iron mains. In contrast, excavation damage will remain a risk for most distribution systems and cannot be completely eliminated. In other words, an Incident caused by a cast iron main break in 1984 will remain as an indicator of a system's threats as long as cast iron assets are part of that distribution system.

Q. [BEGIN CONFIDENTIAL] [redacted]

[END CONFIDENTIAL]

Q. IN YOUR OPINION, ARE ALL LEAKS REPORTED ON A DISTRIBUTION SYSTEM EQUALLY DANGEROUS?

A. No. The pipeline safety regulations specifically identify and define hazardous

leaks and require each pipeline operator to repair hazardous leaks promptly.

Q. PLEASE DESCRIBE HOW PECO GAS CLASSIFIES LEAKS ON ITS SYSTEM.

A. **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[10]

Q. WHAT IS THE PRIMARY CAUSE OF HAZARDOUS LEAKS ON THE COMPANY'S DISTRIBUTION SYSTEM?

A. Over the past five years, primary cause of hazardous leaks on mains and services in the Company's distribution system was excavation damage.

[10] I&E Exhibit No. 4, Sch. 5 – Confidential.

Q. [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**[11]

Q. [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**

Q. ARE PECO GAS' CONCERNS ABOUT THE POTENTIAL HAZARDS OF BOLT-ON SERVICE TEES APPROPRIATE?

A. Yes. In Pennsylvania, there have been several Incidents linked to leaking bolt-on tees, including an Incident resulting in a fatality. One Incident caused by a leaking

[11] I&E Exhibit No. 4, Sch. 2– Confidential.
[12] PECO St. No. 1, p. 7.

bolt-on tee was a 2017 explosion in Millersville, PA resulting in the death of one person and injury to three others. Additionally, in 2004 a leaking bolt-on tee caused an Incident on PECO Gas' facilities in Huntingdon Valley.[13]

Q. DOES THE FEDERAL GOVERNMENT HAVE CONCERNS ABOUT ISSUES RELATED TO APPURTENANCES USED IN NATURAL GAS DISTRIBUTION SYSTEMS?

A. Yes. PHMSA issued an Advisory Bulletin, ADB-86-02[14] that advises owners and operators of gas pipelines to consider the potential failure modes for mechanical couplings used for joining and pressure sealing two pipes together.

Q. [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**

[13] https://www.phmsa.dot.gov/data-and-statistics/pipeline/distribution-transmission-gathering-lng-and-liquid-accident-and-incident-data.

[14] https://www.federalregister.gov/documents/2008/03/04/E8-4155/pipeline-safety-issues-related-to-mechanical-couplings-used-in-natural-gas-distribution-systems.

[15] I&E Exhibit No. 4, Sch.1.

Q. HAVE ANY OF THESE SHORTCOMINGS RELATED TO DIMP BEEN NOTED IN THE PAST?

A. Yes. These issues were raised in the 2020 base rate case, the 2022 base rate case, and two non-compliance letters.

Q. [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**

Q. DO YOU HAVE ANY CONCERNS ABOUT PECO GAS' REPAIRED LEAK DATA AS IT RELATES TO REPAIRED LEAKS ON SERVICE LINES?

A. Yes. Ms. Hamilton stated that in 2024, PECO Gas will be deploying improvements to its Pipe Inspection Leak Repair Report ("PILRR") in order to

[16] I&E Exhibit No. 4, Sch. 1.

increase efficiency and the accuracy of data being collected.[17] When asked for further details, it was clarified that the improvements relate to enhancing workflow, separating work orders, the ability to map leak locations, and removal of duplicate fields.[18] There was no mention of any mechanism that would prevent the selection of service line materials which PECO reports do not exist in their U.S. DOT Annual Reports.

Between 2019 and 2023, there were 332 leaks reported to be repaired on cast iron, ductile iron, and wrought iron services. PECO Gas' distribution U.S. DOT Annual Reports[19] show that PECO has not had any cast iron, ductile iron, and wrought iron services in the entire system for 2019-2023. From 2019 through 2023, there were 2,315 leaks found and repaired on service lines. This scale of data inaccuracies (14.34%) can have a dramatic effect on resulting recommendations for replacements or asset risk rankings. There were 18 leaks of this nature reported as repaired in 2023, demonstrating that data inaccuracies continue to be a problem.[20]

Q. HAVE THESE CONCERNS BEEN MENTIONED IN THE PAST?

A. Yes. This was brought up during the 2022 base rate case.

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[17] PECO St. No. 1, p. 18.
[18] I&E Exhibit No. 4, Sch. 6.
[19] I&E Exhibit No. 4, Sch. 7 refers to I&E-GS-4 where PECO was asked to provide the reports. The reports which are voluminous are available on the DOT website at Gas Distribution, Gas Gathering, Gas Transmission, Hazardous Liquids, Liquefied Natural Gas (LNG), and Underground Natural Gas Storage (UNGS) Annual Report Data | PHMSA (dot.gov).
[20] I&E Exhibit No. 4, Sch. 22.

Q. DO YOU HAVE ANY RECOMMENDATIONS FOR PECO GAS AS IT RELATES TO DATA COLLECTION?

A. Yes. I recommend that PECO Gas review service line leak repair reports to make the resulting data more accurate and to eliminate errors, such as misclassification of material type. This data should be obvious to PECO Gas upon review and should be promptly corrected.

PECO Gas should implement a data review process to eliminate existing inaccuracies and future inaccuracies should be caught and eliminated through this process.

Q. DO YOU HAVE ANY RECOMMENDATIONS FOR PECO GAS AS IT RELATES TO DIMP?

A. Yes. PECO Gas needs more granularity within its DIMP threat categories. I recommend that PECO Gas study and evaluate DIMP asset groups based on a combination of size, age, pressure of a facility, or any combination of these based on PECO Gas' experience and operating history. Additionally, this information should be used to evaluate and rank other risks to its distribution system. PECO Gas should include cathodic protection status of a facility for applicable threats when assets are divided into DIMP threat categories. Similarly, a facility's coating type should be used to evaluate risks of failure as it relates to corrosion. PECO Gas should also include more materials for plastic pipe. In addition, I recommend the company include appurtenances in its DIMP risk ranking.

Q. WHAT IS THE MAIN CAUSE OF EXCAVATION DAMAGES?

A. For 2019 through 2023, one of the main causes of PECO Gas' excavation damages were mapping and record errors.[21] **[BEGIN CONFIDENTIAL]**

[redacted]

[redacted]

[redacted]

[redacted]

[21] I&E Exhibit 4, Sch. 8 and I&E Exhibit 4, Sch. 9.
[22] I&E Exhibit 4, Sch. 8, and I&E Exhibit 4, Sch. 9.



[END CONFIDENTIAL]

Q. IN PECO GAS ST. NO. 1, PECO WITNESS HAMILTON STATED THAT PECO HAS EXPERIENCED A GENERAL DECLINE IN DAMAGE OCCURRENCES WITH RESPECT TO THE NUMBER OF ONE CALL TICKETS RECEIVED.[23] WOULD YOU AGREE?

A. No. The data[24] I reviewed demonstrates the opposite is happening. **[BEGIN CONFIDENTIAL]**

[23] PECO St. No. 1, p. 23.
[24] I&E Exhibit No. 1, Sch. 8 and I&E Exhibit No. 1, Sch. 9.

[redacted]

[END CONFIDENTIAL]

There is no clear trend – the numbers fluctuate, with 2023 being the worst year during the last five years.

Q. WHAT IS PECO GAS DOING TO ADDRESS MAPPING AND RECORD ERRORS?

A. Ms. Hamilton stated that PECO Gas has accelerated its gas mapping program.[25] This program identifies mains and services for locating with the goal of making corrections to the GIS and gas service GFR systems.[26]

PECO Gas' process for identification of inaccurate gas mains and services for locating appears to be doing well by identifying facilities based on sound reasoning, setting a target number of locates, exceeding the targeted number of

[25] PECO St. No. 1, p. 32.
[26] I&E Exhibit 4, Sch. 10.

locates each year overall, and by identifying new facilities for locating on a continuing basis.[27]

Gas facilities are captured in Locusview software with GPS locations. PECO Gas' process for mapping gas facilities with GPS locations appears to be stagnating, however. When asked, PECO Gas provided the following data[28]:

Table 8. Percent of Total PECO Gas System Captured with Locusview By Year					
Year	2019	2020	2021	2022	2023
Percent of Total System Captured with Locusview	2.9%	2.5%	2.5%	1.9%	1.7%

As of 2023, PECO Gas had 11.2% of its total system captured in Locusview software.

Q. WHAT IS PECO GAS DOING TO ADDRESS EXCAVATOR ERROR?

A. PECO Gas is enhancing the outreach of its Public Awareness Program to help educate the public with the intention of reducing 3rd party damages on its facilities. One of the measures taken includes the creation of a new brochure[29] that will be available to the public at licensing and inspection offices.

[27] I&E Exhibit 4, Sch. 11.
[28] I&E Exhibit 4, Sch. 12.
[29] I&E Exhibit No. 4, Sch. 13.

Q. HOW DOES THE NEW BROCHURE DIFFER FROM THE PREVIOUS BROCHURE?

A. They are essentially the same. In I&E Exhibit No. 4, Schedule 13, I have highlighted the similarities with color coded boxes. The old brochure is on the left, and the new brochure is on the right.

PECO Gas has noted that the content of the brochure will be tailored to each audience. However, this was the only brochure that was provided.

Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING PECO GAS' FACILITY DAMAGES?

A. Yes. PECO Gas should continue identifying and locating inaccurate facilities under its gas mapping program, as this appears to be working well. PECO Gas should increase overall capture of GPS locations with Locusview software, as this appears to have stagnated. Together these will continue to decrease facility damages caused by inaccurate maps and records.

PECO Gas should also include more information about facility damages in its brochures for homeowners and excavators. Potential helpful information to include may be a chart showing the color coding of line locates, explanation of tolerance zones, informing the public to call 811 when doing any digging – that is, not just around underground utility facilities as stated in the brochure, as people may not know if there even are facilities – and by providing a case study where not calling 811 resulted in a facility damage. Third party damages are a difficult

item to completely eliminate, but a more well-informed public could help decrease this type of facility damage.

Q. HOW WOULD YOU ASSESS PECO GAS' POST CONSTRUCTION QUALITY AUDITS FOR ALL CONTRACTORS?

A. This program yields mixed results. PECO Gas provided data shows a decrease in visits from 2019 through 2022, but then increases from 2022 through 2023.[30] PECO Gas tracks the total number of audits and observations made during these audits, and the number of total observations that "failed," meaning what was observed did not meet standards. However, PECO does not track how many audits had a failed observation.[31] Data shows that audits performed have increased since 2022 and that the number of failed observations as a percentage of total observations has decreased since 2019.[32]

This data is problematic as it cannot be correlated to whether or not the number of job sites not meeting standards has increased or decreased. For example, multiple job sites may have few failed observations while others may have many.

[30] I&E Exhibit No. 4, Sch. 14.
[31] I&E Exhibit No. 4, Sch. 15.
[32] I&E Exhibit No. 4, Sch. 16.

Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING PECO GAS' POST CONSTRUCTION QUALITY AUDITS?

A. Yes. PECO Gas should begin keeping track of audits containing a failed observation. By keeping track of the audits containing a failed observation, it would help PECO Gas keep track of the effectiveness of the post construction quality audit program.

PECO Gas utilizes Senior Contractor Coordinators ("SCCs") who visit multiple job sites per day in order to perform inspections. These SCCs visit an estimated 70-80% of their region's job sites per day.[33] This may be problematic as these SCCs do not visit all of the jobs in their area daily, nor do they stay on any given job site for the full day. Since only portions of the work are being inspected, there may be opportunity to miss several aspects that would result in failed observations. PECO Gas should hire additional SCCs to provide adequate oversight of PECO Gas' job sites.

Q. PLEASE COMMENT ON PECO'S USAGE OF NEW AND EXISTING TECHNOLOGIES?

A. Ms. Hamilton stated PECO utilizes new and existing technologies to drive efficiencies, such as bolt-on tee removal tools, horizontal directional drilling equipment, camera equipment, and vacuum excavation.[34] Ms. Hamilton also

[33] I&E Exhibit No. 4, Sch. 15.
[34] PECO St. No. 1, p. 7.

stated the Company's investments in gas technologies to reduce system distribution leaks are critical in achieving the goal of being a low-carbon company and reducing greenhouse gas emissions, with one example being the company's investment in a Zero Emissions Vacuum and Compression ("ZEVAC") machine.[35]

PECO Gas was asked to provide a list of Horizontal Directional Drilling machines, pipe inspection camera equipment, bolt-on tee removal tools, and vacuum trucks acquired since 2022. PECO provided the following data[36]:

Table 9. PECO Gas Equipment Acquired Since 2022	
Equipment	Number Acquired Since 2022
Horizontal Direction Drilling Machines	0
Pipe Inspection Camera Trucks	2
Bolt-On Tee Removal Tools	7
Vacuum Trucks	0

This data shows that PECO Gas did not make additional investments in Horizontal Directional Drilling machines or Vacuum trucks since 2022. PECO did invest in additional camera trucks and bolt-on tee removal tools.

PECO Gas utilizes camera equipment daily for trouble locates, mapping improvements, locating water intrusions, verifying branch services, and for locating and verifying tap locations. PECO utilizes bolt-on tee removal tools for removing bolt-on tees, which they have identified as potentially hazardous. This equipment is necessary for PECO's day-to-day operations.

[35] PECO St. No. 1, p. 30.
[36] I&E Exhibit 4, Sch. 17.

PECO Gas has not invested in additional vacuum trucks, which may help with its gas mapping program or construction audit process. PECO Gas has instead contracted vacuum excavation technicians to perform this work.[37] Investing in additional vacuum trucks and teams would help PECO have equipment available to perform or assist with pinpointing PECO Gas assets for acceleration of the gas mapping and construction audit program.

PECO Gas has also not invested in additional Horizontal Directional Drilling equipment, but that is because PECO Gas is using it less and less,[38] which is in contrast to Ms. Hamilton's claim of leveraging this technology to drive efficiencies.[39]

Table 10. PECO Gas' Number of Horizontal Directional Drilling Projects By Year

Year	2019	2020	2021	2022	2023
Number of HDD Projects	No Data	No Data	22	10	9

Q. WOULD YOU AGREE THAT PECO GAS' INVESTMENT IN AND USAGE OF THE ZEVAC MACHINE IS INSTRUMENTAL IN PECO GAS' GOAL OF GREENHOUSE GAS EMISSIONS REDUCTION?

A. Yes, but it alone is not achieving the desired effect. PECO Gas' percentage of

[37] I&E Exhibit 4, Sch. 10 and I&E Exhibit No. 4, Sch. 18.
[38] I&E Exhibit 4, Sch. 17.
[39] PECO St. No. 1, p. 7.

unaccounted for gas, obtained from its U.S. DOT Annual Reports[40], is shown in Table 11:

Table 11. PECO Gas' Reported Percent of Gas Unaccounted For By Year	
Year	% Gas Unaccounted For
2019	1.04%
2020	1.51%
2021	0.55%
2022	2.72%
2023	2.60%

PECO Gas acquired its ZEVAC system in 2022. PECO Gas' reported usage of the ZEVAC system[41] is shown in Table 12:

Table 12. PECO Gas' Usage of ZEVAC System By Year	
Year	Number of Instances Equipment Was Used
2022	Not reported to have been used
2023	5 days at 5 locations
2024	8 days at 10 locations

Despite PECO Gas' usage of its ZEVAC system and a small decrease in unaccounted for gas, the system has not been in use long enough to determine its overall effectiveness on mitigation of unaccounted for gas.

[40] Available at Gas Distribution, Gas Gathering, Gas Transmission, Hazardous Liquids, Liquefied Natural Gas (LNG), and Underground Natural Gas Storage (UNGS) Annual Report Data | PHMSA (dot.gov).

[41] I&E Exhibit No. 4, Sch. 19.

Q. WOULD YOU AGREE WITH MS. HAMILTON'S STATEMENT THAT PECO HAS SEEN A 40% REDUCTION IN INCOMING 1, 2A, AND 2B LEAKS SINCE 2019[42]?

A. No. Ms. Hamilton did not take into consideration leaks in all types of materials. Grade 1 leaks are hazardous leaks that must be repaired when they are found. Table 13 shows PECO Gas' reported incoming hazardous leaks from the U.S. DOT Annual Reports[43]:

Table 13. PECO Gas' Reported Hazardous Leaks By Year	
Year	Hazardous Leaks
2019	668
2020	389
2021	619
2022	424
2023	1258

This data shows an 88.32% increase in incoming hazardous leaks since 2019, with a 196.69% increase between 2022 and 2023.

[42] PECO St. No. 1, p. 22.

[43] Available at Gas Distribution, Gas Gathering, Gas Transmission, Hazardous Liquids, Liquefied Natural Gas (LNG), and Underground Natural Gas Storage (UNGS) Annual Report Data | PHMSA (dot.gov).

Q. DO YOU HAVE ANY RECOMMENDATIONS FOR PECO GAS REGARDING ITS USE OF AND INVESTMENTS IN NEW AND EXISTING TECHNOLOGIES TO DRIVE EFFICIENCIES AND REDUCE GREENHOUSE GAS EMISSIONS?

A. Yes. PECO Gas should continue to invest in technologies that facilitate mapping improvements and removal of potentially hazardous pipeline components such as bolt-on tees. PECO Gas should also increase investment in other technologies such as vacuum trucks and crews to help facilitate mapping improvements and reduction in excavation damages.

There is currently a notice of proposed rulemaking by PHMSA regarding gas pipeline leak detection and repair. Under this proposed rule, regulations would require gas pipeline operators to reduce both unintentional and vented methane gas emissions. In addition to PECO Gas' investment in the ZEVAC system, PECO Gas should conduct a study to see if it would be beneficial to:

- Invest in repairing existing leaks – some of which have been open since 1982.
- Investing in new leak detection technologies, such as Picarro advanced leak survey technology, which claims to be three times more efficient than standard mobile leak surveys.
- Making the previously mentioned recommendations to improve its DIMP program to help prevent leaks before they occur.

- Making the previously mentioned recommendations to improve its Public Awareness Program, Construction Audit Program, and Gas Mapping Programs to help eliminate leaks from facility damages.

This would allow PECO Gas to combat its unaccounted for gas and greenhouse gas emissions while simultaneously addressing hazardous leaks and system risks, therefore improving its environmental footprint while also, and more importantly, improving its system's safety by reducing risk.

Q. WHAT IS YOUR ASSESSMENT OF PECO GAS' SYSTEM PERFORMANCE PROJECTS?

A. Ms. Hamilton stated that system performance projects are evaluated based upon factors specific to the appropriate replacement program and then prioritized for replacement in any given year.[44]

PECO Gas has a DIMP program in place, as well as a Long Term Infrastructure Improvement Plan ("LTIIP") program. PECO Gas has stated that performance projects are part of its LTIIP, and that the LTIIP projects address issues consistent with the ones identified in its DIMP plan.[45]

Although the performance projects happen to align with reducing the risks identified in PECO's DIMP plan, they are performance projects meant to retire

[44] PECO St. No. 1, p. 11.
[45] I&E Exhibit No. 4, Sch. 20.

aging mains, services, and district regulator stations.[46] By contrast, the DIMP program is meant to prioritize and reduce system risks and improve safety.

Q. DO THESE SYSTEM IMPROVEMENT PROJECTS TAKE PRIORITY OVER DIMP PROJECTS?

A. PECO Gas maintains that the system improvement projects are not separate from DIMP projects because they are consistent with targeting the risks identified in the DIMP program.[47]

I have asked PECO Gas for further clarification, but at the time of writing this testimony I have not yet received a response. To my understanding, as a hypothetical, PECO Gas may replace a segment of ductile iron main and treat this as both an LTIIP and DIMP project since it is a system improvement project that happens to reduce a risk identified in the DIMP program. The problem here is that the DIMP plan may, for example, specify that wrought iron mains are the ones that are riskiest and should be prioritized for replacement. The DIMP program is mandated by Federal Code, and the LTIIP program is not.

Q. PLEASE REITERATE YOUR RECOMMENDATIONS TO PECO.

A. Certainly. PECO Gas should:

- Implement a data review process for its service line leak repair reports to

[46] PECO St. No. 1, p. 13.
[47] I&E Exhibit No. 4, Sch. 20.

make the data accurate and to eliminate misclassification of materials.

- Add DIMP threat categories to provide more granularity for its risk rankings.
- Continue identifying and locating inaccurate facilities.
- Include more information in its brochures for homeowners and excavators.
- Begin keeping track of post construction quality audits containing a failed observation.
- Hire more Senior Contractor Coordinators
- Continue investing in technologies that facilitate mapping improvements and removal of potentially hazardous pipeline components.
- Conduct a study and find additional methods to mitigate unaccounted for gas.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

I&E Exhibit No. 4
Witness: Martin Salamonski
NON-PROPRIETARY VERSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany

the

Direct Testimony

of

Martin Salamonski

Bureau of Investigation & Enforcement

Concerning:

DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM
SETTLEMENT AGREEMENT APPROVED IN 2022 RATE CASE
LEAK MANAGEMENT
FACILITY EXCAVATION DAMAGE
UTILIZATION OF NEW TECHNOLOGY
SYSTEM PERFORMANCE PROJECTS

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-13

Reference Distribution Integrity Management Program (DIMP) on page 14 lines 8-14 of PECO Statement No. 1. How does PECO's DIMP rank different appurtenances, e.g. fittings and couplings?

RESPONSE:

Both PECO's legacy risk model and new risk model calculate risk for major asset classifications: Gas Mains and Gas services. Any and all failures regarding specific appurtenances related to those assets are part of the risk calculations for each failure mode for that asset type. For example, if a specific coupling is determined to add to the risk of failure of a specific type of main because it tends to corrode quickly, the risk scores related to main corrosion associated with that type of main would be elevated based on the previous failures observed that are rooted in the coupling failure.

Responsible Witness: Amy E. Hamilton

I&E Exhibit 4
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I&E Exhibit 4
Schedule 3
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Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-12

Reference Distribution Integrity Management Program (DIMP) scoring on page 17 line 7 of PECO Statement No. 1. Provide detailed explanation on the DIMP's relative risk score meaning. Can its value be used for comparison between the groups of assets? For example, if two group of assets have scores 4 and 8, does that mean that the second asset group is twice as risky as the first?

RESPONSE:

PECO's Risk scores are unitless values that are relative in nature. Each risk score considers both the likelihood that a specific mode of failure will occur on a given asset type and the consequence associated with that failure type. Generally speaking, the consequence related to failures is consistent across asset classifications and therefore the difference in risk scores is primarily driven by the likelihood that a specific failure will occur on that type of asset relative to other types of assets. Because of this, the risk scores are proportional to each other as in the example question. If a threat were to have a risk score of 8, it would be twice as risky as a threat with a risk score of 4.

Responsible Witness: Amy E. Hamilton

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Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-43

Reference improvements to the digitized Pipe Inspection Leak Repair Report (PILRR) on page 18 lines 6-9. Describe the improvements referenced and how they will increase efficiency and accuracy.

RESPONSE:

The PILRR improvements were designed to improve the usability of the system with respect to leak repair form data capture. Included in the improvement was a redesigned workflow for leak repair data capture, a segregation of leak repair work orders from main construction work orders so that orders may be managed individually, and the ability to map the specific leak location. Additionally, the form, which was generated based on two historic paper forms, contained several duplicated fields which were simplified into single fields of data entry. Each of these improvements was made with the goal that leak repair forms are filled out efficiently and accurately and can be easily identified when compared to other work order types during the data review and approval process.

Responsible Witness: Amy E. Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-4

Provide the company's annual DOT reports, from 2019 through 2023.

RESPONSE:

See Attachments:

- Attachment IE-I-GS-4(a)
- Attachment IE-I-GS-4(b)
- Attachment IE-I-GS-4(c)
- Attachment IE-I-GS-4(d)
- Attachment IE-I-GS-4(e)
- Attachment IE-I-GS-4(f)
- Attachment IE-I-GS-4(g)
- Attachment IE-I-GS-4(h)
- Attachment IE-I-GS-4(i)
- Attachment IE-I-GS-4(j)

Responsible Witness: Amy E. Hamilton

2019	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED	INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR
2" PLASTIC MAIN	13		3		4		11
2" STEEL MAIN	1			1	1		1
4" PLASTIC MAIN	2		1		2		3
4" CAST IRON MAIN							1
4" STEEL MAIN							3
6" PLASTIC MAIN	4		1	1	3		6
6" STEEL MAIN							1
8" STEEL MAIN							1
12" STEEL MAIN			1				
Totals	20	0	6	2	10	0	27

2020	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED	INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR
1" steel main		1					1
1" plastic main					1		1
1.25" plastic main	1						
1.25" steel main		1					
2" plastic main	2	2		2	2	1	7
2" steel main			1		1	1	
4" plastic main	4		1	2			1
4" steel main							2
6" plastic main	1		1		1		3
6" steel main						1	
8" steel main							1

12" steel main							1
Totals	8	4	3	4	5	3	17

2021	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED	INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR
1.25" plastic main	1				1		1
2" plastic main	13	1	2	1	4	3	11
2" steel main		1					3
4" plastic main	2		2	1	4	2	3
4" steel main				1			4
6" plastic main	1		1	1			1
12" steel main							2
Totals	17	2	5	4	9	5	25

2022	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED	INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR
1.25" plastic main							
2" plastic main	6		1		2		9
2" steel main							1
4" plastic main	7			1	1		4
4" steel main							1
6" plastic main	1		1	1	2		3
6" steel main	1						2
8" steel main	2						
12" steel main							1
16" steel main							1
Totals	17	0	2	2	5	0	22

2023	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED	INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR
2" plastic main	5			2			18
2" steel main							
4" plastic main							1
4" steel main							
6" Steel main			1				1
6" plastic main			1				4
8" steel main							3
Totals	5	0	2	2	0	0	27

I&E Exhibit 4
Schedule 8
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NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE	DELIBERATE
0	0	0	0

NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE	DELIBERATE

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0	0	0	0

NATURAL FORCES	OTHER
0	0

NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE	DELIBERATE
0	0	0	0

I&E Exhibit 4
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NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE	DELIBERATE
0	0	0	0

2019	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED
1/2" PLASTIC SERVICE	98	2	12	12	33
1" PLASTIC SERVICE	40	2	7	5	39
1" STEEL SERVICE					
1.25" PLASTIC SERVICE	15		4		6
1.25" STEEL SERVICE	15		1		2
3/4" STEEL SERVICE	5				
2" PLASTIC SERVICE	5		1	1	4
2" STEEL SERVICE	3				
TOTAL	181	4	25	18	84

2020	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED
1/2" PLASTIC SERVICE	61	21	9	9	36
1/2" STEEL SERVICE		1			
1" PLASTIC SERVICE	34	5	7	4	29
1" STEEL SERVICE		1		1	
3/4" STEEL SERVICE		10			1
3/4" PLASTIC SERVICE					1
1.25" PLASTIC SERVICE	10	2	1	1	
1.25" STEEL SERVICE	1	17	1		
2" PLASTIC SERVICE	4	2		2	5
2" STEEL SERVICE		1	1		1
4" PLASTIC SERVICE			1	1	
TOTAL	110	60	20	18	73

2021	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED
1/2" PL SERVICE	81	26	8	9	39
3/4" STEEL SERVICE	2	3		2	1
1" PLASTIC SERVICE	30	13	10	4	33
1" STEEL SERVICE					
1.25" PLASTIC SERVICE	8		1	2	7
1.25" STEEL SERVICE		10			
2" PLASTIC SERVICE	14	2	2	1	4

2" STEEL SERVICE		2			
TOTAL	135	56	21	18	84

2022	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED
1/2" PL SERVICE	76		12	4	
3/4" STEEL SERVICE	4				
1" PLASTIC SERVICE	8				
1" STEEL SERVICE	2				
1.25" PLASTIC SERVICE	3				
1.25" STEEL SERVICE	5				
2" PLASTIC SERVICE	4				
2" STEEL SERVICE	2				
TOTAL	104	0	12	4	0

2023	MAPPING ERRORS	POOR RECORDS	NOT MARKED	MARKED INCORRECTLY	NO LOCATE REQUESTED
1/2" PL SERVICE	61		3	8	
3/4" STEEL SERVICE	4		1		
1" PLASTIC SERVICE	21		7	6	
1.25" PLASTIC SERVICE	11		3		
1.25" STEEL SERVICE	3				
2" PLASTIC SERVICE	3				
2" STEEL SERVICE			1		
TOTAL	103	0	15	14	0

INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR	NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE
3	71			
1	39			
	1			
1	11			
	3			
1	3			
6	128	0	0	0

INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR	NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE
9	51			
4	21			
	4			
1	7			
	1			
1	9			
1	1			
1				
17	94	0	0	0

INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR	NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE
7	66			
	3			
6	50			
	1			
1	13			
4	13			

	3			
18	149	0	0	0

INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR	NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE
	93		11	
	1			
0	94	0	11	0

INSUFFICIENT NOTIFICATION	EXCAVATOR ERROR	NATURAL FORCES	OTHER	EXCAVATOR FAILED TO EXPOSE
	320			
	48			
	13			
	6			
	1			
0	388	0	0	0

Attachment IE-I-GS-19

DELIBERATE

0

DELIBERATE

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DELIBERATE

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DELIBERATE

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DELIBERATE

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Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-34

Reference PECO Gas Statement No. 1, page 32 line 23. Provide a description of the gas mapping program.

RESPONSE:

PECO's Gas Mapping Program is a targeted asset records quality improvement plan which focuses on gas main GIS alignment and service record accuracy corrections. PECO's Gas Mapping program team is tasked with assessing records identified as having poor quality, performing field investigations as necessary to locate the main or service, and using data captured in the field to make corrections to the GIS and Gas Service GFR systems. To perform this work, PECO has contracted a team of field locators and vacuum excavation technicians trained in industry standard utility mark out and soft dig techniques to locate the main and service assets in the field. Once located, the field personnel capture high accuracy GPS coordinates corresponding to the location of the assets and the surrounding landbase features (road edges, house edges/corners, other stationary landbase reference points, etc.) This data is then utilized by a team of contracted GIS technicians to correct the gas main alignments and referential dimensions in the GIS and update gas service GFR record sketches with dimensions that allow them to be more easily located in the field.

Responsible Witness: Amy E. Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 07, 2024

IE-I-GS-35

Reference PECO Gas Statement No. 1, page 33 lines 1-4.

A. Provide when and explain how the number of initial services and mains have been identified for locating under the gas mapping program;

B. Are there provisions within the gas mapping program to actively identify additional services and mains for locating? If so, explain the provisions;

C. Provide the targeted number of annual locates under the gas mapping program and explain how this number was obtained;

D. For services, provide in Excel format the target number of locates, actual number of locates, total number identified by the program for locating, and the number of new identifications for each year from 2019 through 2023;

E. For mains, provide in Excel format the target number of locates, actual number of locates, total number identified by the program for locating, and the number of new identifications for each year from 2019 through 2023.

RESPONSE:

A. When PECO's paper gas main alignment maps were converted to a digital format in 2016, the data conversion vendor noted approximately 8,000 sections of gas main where the historical referential dimensions were identified as requiring review. The need for review stemmed from the comparison of the historically mapped roadway widths and alignment to new electronic land base information which contained updated road profiles.

PECO performed a similar assessment on service gas facility records (GFRs) since services were not maintained on the historical paper maps. PECO hired a conversion vendor to digitize gas service GFR record sketches and in the process perform a quality assessment of the records. This assessment began in 2017 and was completed in 2019 and identified approximately 178,000 service GFRs where the service sketch was either missing or contained dimensions that were not adequate to accurately locate the service asset in the field.

B. Yes, there are provisions within the gas mapping program to actively identify additional services and mains which will require locating to resolve records inconsistencies. For gas mains, after the initial 2016 digital data conversion, the data was reviewed and validated again as part of the implementation of new maps for field use. Through the implementation process, additional sections of main were identified that required field review to confirm that the location was converted successfully. Furthermore, through the process of work package creation to direct field locators on what to target during their inspections, the program GIS technicians are reviewing the GIS gas main infrastructure for further data inconsistencies that would need to be included within the scope of the work packages.

For services, PECO has contracted with the same digital conversion vendor that performed the initial assessment to provide monthly reviews of all newly created or modified service GFR records. The results of this review are provided to the project team on a monthly basis and any records that did not meet the project established quality control metrics are added to the list of GFRs to address.

C. The targeted number of locates for mains and services each year was identified assuming a several-year ramp up period required to locate and onboard resources needed to complete both the field locating and back-office GIS system corrections. The total program targets (inclusive of main and service locates) are listed below.

Year	2022	2023
Target # Locates	1,920	3,043
Actual # Locates	2,605	3,109

D. For the following table, the "Target # Locates" represents the number of services that the project team planned to locate for the associated calendar year. The "Actual # Locates" represents the total number of services that were located by the project team for the associated year. The "Program Locate Identifications" represents the total number of outstanding locates that needed to be addressed at the end of the associated calendar year. This number is impacted not only by the number of services that are investigated annually, but also by the number of services which are updated or retired through PECO's other asset replacement programs. Lastly, the "New Identifications" represents the number of services that were newly identified in the associated calendar year which require investigation. Note that the number of new identifications in 2019 includes the services that were identified through the initial review by the assessment vendor during their review of the entire system which spanned from 2017 to 2019.

Year	2019	2020	2021	2022	2023
Target # Locates	6,900	6,900	6,900	1,500	2,530
Actual # Locates	6,907	6,907	6,702	2,150	2,580
Program Locate Identifications	178,610	147,869	135,957	115,844	102,711
New Identifications	88,772	914	295	179	866

E. For the following table, "Target # Locates" represents the number of main segments that are targeted for field investigation annually. "Actual # Locates" represents the number of main segments that were located during the applicable year. "Program Locate Identifications" represents the number of main segments that were identified to be investigated as part of the program at the end of the applicable year. Note that this number is impacted by the various other system replacement programs that PECO is currently undertaking. Lastly, "New Identifications" represents the number of newly identified main segments that were added to the inspection list during the applicable year.

Year	2019	2020	2021	2022	2023
Target # Locates	540	540	540	420	513
Actual # Locates	558	632	548	455	529
Program Locate Identifications	8,177	7,844	7,686	7,443	7,003
New Identifications	192	298	388	212	86

Responsible Witness: Amy E. Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-42

Reference GPS locations of assets on page 18 lines 1-4 of PECO's Gas Statement No. 1. Describe when this technology is utilized. Provide the percentage of locations of PECO's gas facilities captured by GPS for each year from 2019 through 2023.

RESPONSE:

PECO utilizes high accuracy GPS data capture during new or replacement gas main and service installation, Gas Mapping Program investigations related to the correction of gas main alignment and service GFR sketches, during exposed pipe inspections, and during leak repairs. The following tables represent the percentage of the total mileage of pipe, inclusive of mains and services, that was field captured utilizing high accuracy GPS technology.

Year	**2019**	**2020**	**2021**	**2022**	**2023**
Percent of Total System Captured with Locusview per year	2.9%	2.5%	2.5%	1.9%	1.7%

Year	**2019**	**2020**	**2021**	**2022**	**2023**
Percent of Total System Captured with Locusview based on current year total pipe	2.8%	5.2%	7.6%	9.5%	11.2%

Responsible Witness: Amy E. Hamilton

One of Pennsylvania's safest utilities

Natural gas remains the fuel of choice for residential, commercial and industrial customers. The amount of natural gas delivered to customers has increased by 20 percent during the past 10 years, safety incidents have decreased by 40 percent.

Safety is our top priority. Nothing is more important than the safety of our customers and employees. The *American Gas Association*, the *Southeastern Electric Exchange*, the *Energy Association of PA*, and the *PA Department of Labor & Industry* have recognized PECO for its commitment to safety.

PECO inspects and maintains pipelines and local service lines for about 508,000 natural gas customers in Bucks, Chester, Delaware, Montgomery and a portion of Lancaster counties. We use sophisticated gas-detection devices to regularly patrol all of our lines to identify any issues. And, we respond promptly to emergencies 24/7, 365 days-a-year.

It takes commitment and continual vigilance to maintain a safe and reliable system. We make public safety presentations throughout the year to promote natural gas safety, working with school children, businesses, first responders and construction workers to help keep our communities safe.

Important information

- Recognize potential hazards
- Prevent pipeline damage
- Report natural gas issues immediately

To report an odor, a leak or other gas emergency:
Call PECO's emergency number: **1-800-841-4141**

For non-emergency questions and concerns:
Call PECO Customer Care: **1-800-494-4000**

Before you dig:
Call *PA One Call*: **811**

For more on natural gas safety:
- PECO: *www.peco.com/safety*
- U.S. Department of Transportation: *phmsa.dot.gov/pipeline*
- National Pipeline Mapping System: *www.npms.phmsa.dot.gov*
- American Gas Association: *www.aga.org*

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10/15

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Page 1 of 2

Natural Gas Safety & Reliability

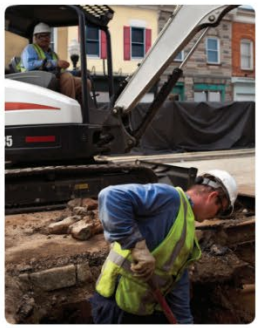
- Recognize potential hazards
- Prevent pipeline damage

PECO
An Exelon Company

Safe and reliable

Almost two-thirds of natural gas incidents are caused by construction activities. Through the Dig Safe program, PECO works with contractors, builders and excavators to prevent damage to natural gas equipment.

PECO is a leader in the utility industry for rapid response to natural gas odor reports. In a year, PECO can receive more than 25,000 calls about possible natural gas leaks. 99.9 percent of the time, PECO responds to the scene in less than an hour—that's the best response time in Pennsylvania. Your safety is our priority—we will respond 24 hours-a-day / 7 days-a-week.



Help us ensure safety and reliability by recognizing potential hazards, preventing pipeline damage and reporting natural gas odors and leaks promptly.

Call before you dig

Call 811. It's the law: Anyone digging around underground utility facilities must notify *PA One Call* at 811.* Homeowners, contractors, or anyone planning to dig anywhere is required to call before they dig—including backyards, along streets or in vacant fields or lots.

Here's how it works: Call 811 three-business days before you dig. *PA One Call* notifies PECO and other utilities so underground facilities can be marked before construction or digging activity. The service is free for residential customers.

Understanding natural gas markers:
To locate interstate natural gas pipelines and PECO's transmission pipelines, look for markers that are above-ground, either on white and yellow posts or yellow markers on the roadway. To locate natural gas mains and service lines on or near a property, you must call *PA One Call* at 811.

811
Know what's below.
Call before you dig.

* The Federal Communications Commission approved the use of 811 as the national abbreviated telephone number for commercial and residential consumer to provide advanced notice of excavation activities.

Attachment IE-I-GS-45(a)
Page 2 of 2

If you smell natural gas

If you smell natural gas, suspect a leak, or other issues, call PECO immediately: **1-800-841-4141.** You can use this number 24 hours-a-day, every day.

Call PECO: 1-800-841-4141

Know what to do about:

A FAINT odor of natural gas: Check to see if a pilot light is out or if a burner is partially on. If you cannot find the source, call PECO.

A VERY STRONG natural gas odor: Evacuate immediately and call 911 and PECO from OUTSIDE.
- DO NOT turn on or off any electrical switches
- DO NOT use devices such as phones, radios, doorbells, or flashlights
- DO NOT smoke, strike a match or use a lighter
- DO NOT start a motor vehicle near the building

A suspected leak OUTSIDE: If you notice a natural gas odor outside especially near a natural gas meter or around the sidewalk or street, call PECO.

Act quickly: Natural gas has no natural odor, so an odorant is added to help detect when a leak occurs. Leaks can occur after nearby construction or ground movement during winter's deep freeze. Reporting a natural gas odor promptly plays a critical role in ensuring safety.

Safe and reliable service

PECO is a leader in the utility industry for rapid response to natural gas odor reports. We have consistently ranked as one of the best companies for natural gas odor response reliability, with the goal of responding in less than one hour. In a year, PECO receives more than 20,000 odor calls, and historically, we have had the best response times in Pennsylvania. Your safety is our priority. We will respond 24 hours a day, 7 days a week.

Committed to safety

We work hard to keep you safe. Nothing is more important than the safety of the people who live and work near our facilities.

We inspect and maintain pipelines and local service lines for more than 548,000 natural gas customers in Bucks, Chester, Delaware, Montgomery, and a portion of Lancaster counties. We use vehicle-mounted and handheld detectors to regularly patrol all of our lines to identify any issues.



It takes commitment and vigilance to maintain a safe and reliable system. We promote natural gas safety throughout the year, working with schools, businesses, first responders, and construction workers to help keep our communities safe.

Help us ensure safety and reliability by recognizing potential hazards, preventing pipeline damage, and reporting natural gas odors and leaks promptly.

Important information

- Report odors
- Recognize potential hazards
- Call 811 before you dig

To report an odor, potential natural gas leak, or other gas emergency:
- Call PECO's emergency number: **1-800-841-4141**

Before you dig:
- Call PA One Call: **811**

811

For non-emergency questions and concerns:
- Visit our website: **www.peco.com**
- Call PECO Customer Care: **1-800-494-4000**

For more on natural gas safety:
- PECO: **www.peco.com/GasSafety**
- U.S. Department of Transportation: **www.phmsa.dot.gov/pipeline**
- National Pipeline Mapping System: **www.npms.phmsa.dot.gov**
- American Gas Association: **www.aga.org**

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Attachment IE-I-GS-45(b)
Page 1 of 2



Natural Gas Safety for Everyone

Whether or not you have natural gas service, this important information is for you.

- Report odors
- Recognize potential hazards
- Call 811 before you dig



Call 811 before you dig

Through the PA One Call program, PECO works with contractors, builders, and excavators to prevent damage to underground facilities and promote safety.

Call 811. It's the law: Anyone digging around underground utility facilities must notify PA One Call at 811.* Homeowners, contractors, or anyone planning to dig anywhere must call before they dig—including yards, along streets, or in vacant fields or lots.

811
Know what's below.
Call before you dig.

Here's how it works: Call 811 three business days before you dig. PA One Call notifies PECO and other utilities so underground facilities can be marked before construction or digging activity. The service is free for residential customers.

Understanding natural gas markers: Look for brightly colored pipeline markers on above-ground posts or in the roadway. To locate natural gas mains and service lines on or near a property, you must call PA One Call at 811.



What to do if you smell natural gas

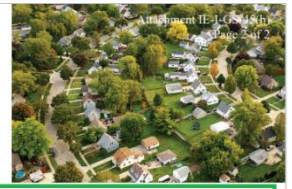
It smells like rotten eggs. Natural gas has no natural odor, so an odorant is added to help detect when a leak occurs.

If you smell natural gas or suspect a leak, go outside to where you do not smell gas and call PECO from a safe distance: **1-800-841-4141.**

Call PECO: 1-800-841-4141



* The Federal Communications Commission approved the use of 811 as the national abbreviated telephone number for commercial and residential consumers to provide advanced notice of excavation activities.



Know what to do about:

A natural gas odor INSIDE: Evacuate immediately and call PECO from OUTSIDE.

- **DO NOT** open or close any windows
- **DO NOT** operate any electrical devices, including lights and appliances
- **DO NOT** use devices such as telephones, cell phones, radios, doorbells, or flashlights
- **DO NOT** smoke, strike a match, or use a lighter
- **DO NOT** start a motor vehicle near the building
- **DO NOT** try to shut off the natural gas service

A natural gas odor OUTSIDE: If you notice a natural gas odor outside, especially near a natural gas meter or around the sidewalk or street, call PECO.

Act quickly: Leaks can occur after nearby construction or ground movement during winter's deep freeze. Reporting a natural gas odor promptly plays a critical role in ensuring safety.

Pennsylvania Public Utility Commission
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PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-28

Reference PECO Gas Statement No. 1, page 17 lines 16-22. Provide number of post construction quality audits, post-construction dig-ups and observations, for each year from 2019 through 2023.

RESPONSE:

VISITS/AUDITS:

Audit Type	2019	2020	2021	2022	2023	Total
DIG_UP_PLAS_SERV_PECO	1,447	1,310	1,137	1,148	1,176	6,218
DIG_UP_PLAS_MAIN_PECO	1	64	69	90	269	493
DIG_UP_STEEL_SERV_PECO	-	11	35	3	3	52
DIG_UP_STEEL_MAIN_PECO	-	3	5	1	-	9
BACKFILL	624	354	357	245	263	1,843
Total	2,072	1,742	1,603	1,487	1,711	8,615

Observations (Number of Questions answered as part of the visit/audit):

Audit Type	2019	2020	2021	2022	2023	Total
DIG_UP_PLAS_SERV_PECO	19,654	17,350	14,629	13,984	14,291	79,908
DIG_UP_PLAS_MAIN_PECO	16	371	392	529	1,691	2,999
DIG_UP_STEEL_SERV_PECO	-	112	284	14	10	420
DIG_UP_STEEL_MAIN_PECO	-	20	28	5	-	53
BACKFILL	3,527	1,900	1,963	1,660	1,637	10,687
Total	23,197	19,753	17,296	16,192	17,629	94,067

Responsible Witness: Amy E. Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 07, 2024

IE-I-GS-29

Reference PECO Gas Statement No. 1, page 17 lines 16-22. Provide the percentage of construction jobs audited for each year from 2019 through 2023.

RESPONSE:

The Company is unable to calculate a percentage of construction jobs audited each year from 2019 to 2023 but can confirm that it performed one or more quality audits on all ongoing construction project programs during this period.

PECO's gas territory is divided into 9 regions with a Contractor of Choice (COC) assigned to each region. The construction project programs in each of the regions involve completing gas main, service, and/or gas meter installation activities. Each region is assigned 1-3 Senior Contract Coordinators (SCC) that are responsible for performing quality control audits of construction project programs in the region. During each audit, the SCC completes a checklist form that correlates to the type of installation activity being performed by the COC. Each day, the SCC will visit 70-80% of the job sites in his/her region, prioritizing field visits based upon the criticality of the work, the type of activity being performed, and knowledge of the crew's quality of work. Additionally, within 30 days of construction completion, PECO deploys vacuum excavation trucks to determine whether the COC work was done in accordance with PECO's standards and procedures. A checklist form is used to record the truck's findings. While checklist forms are utilized for all audits, the Company's current data entry system does not facilitate grouping of audit data collected that is associated with a single job. Consequently,

distinguishing which audits were performed for a particular job and in which year is challenging, and the Company is not able to calculate a percentage of construction jobs audited during the period.

Responsible Witness: Amy E. Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-30

Reference PECO Gas Statement No. 1, page 17 lines 16-22. Provide numbers of post construction quality audits, post-construction dig-ups and of observations that identified a defect or condition that may impact the reliability of the gas distribution system or cause damage to the system, by facility type and material (e.g. cast iron, wrought iron, steel, bare steel, HDPE, MDPE, Aldyl-A, etc.), for each year from 2019 through 2023. Provide explanation on the type of defects or conditions identified by each inspection type.

RESPONSE:

Failed Observations (Total Number of Questions that did not meet applicable standards)

Audit Type	2019	2020	2021	2022	2023	Total
DIG_UP_PLAS_SERV_PECO	330	170	130	100	121	851
DIG_UP_PLAS_MAIN_PECO	-	10	6	8	18	42
DIG_UP_STEEL_SERV_PECO	-	1	1	1	-	3
DIG_UP_STEEL_MAIN_PECO	-	-	-	-	-	-
BACKFILLING EXCAVATIONS	45	64	43	29	7	188

Total	375	245	180	138	146	1,084

Failed Observations as a percentage of total observations

Audit Type	2019	2020	2021	2022	2023	Total
DIG_UP_PLAS_SERV_PECO	1.7%	1.0%	0.9%	0.7%	0.8%	1.1%
DIG_UP_PLAS_MAIN_PECO	0.0%	2.7%	1.5%	1.5%	1.1%	1.4%
DIG_UP_STEEL_SERV_PECO		0.9%	0.4%	7.1%	0.0%	0.7%
DIG_UP_STEEL_MAIN_PECO		0.0%	0.0%	0.0%		0.0%
BACKFILLING EXCAVATIONS	1.3%	3.4%	2.2%	1.7%	0.4%	1.8%
Total	1.6%	1.2%	1.0%	0.9%	0.8%	1.2%

Detail

Audit Type	Question	2019	2020	2021	2022	2023	Total
BACKFILLING EXCAVATIONS	Appropriate backfill	4	10	5	4	2	25
	Appropriate bedding/screening used	0			2	0	2
	Appropriate sub-base used in paving	3	2	1	3	1	10
	Backfill achieved proper compaction	12	12	14	10	0	48
	Installed facilities identified	7	29	13	4	2	55
	Select unsat backfill items	0	0	0	0	0	0
	Select unsat compaction items	0	0	0	0		0
	Select unsat top coat items	0	0	0	0	0	0
	Select unsat warning tape items	0	0	0	0		0
	Top coat appropriate	19	9	7	4	2	41
	Type unsat backfill item not in list	0		0		0	0
	Type unsat compaction item not in list	0	0	0	0		0
	Type unsat top coat item not in list	0	0			0	0
	Type unsat warning tape item not in list	0			0		0
	Warning tape installed appropriately	0	2	3	2	0	7
	Total	45	64	43	29	7	188
DIG_UP_PLAS_MAIN_PECO	1 foot piping was used	0	0	0	0		0
	1 inch piping was used	0			0	0	0
	Anode in place	0			0	0	0

	Appropriate backfill	0	2	0	0	7	9
	Clamps applied	0	0	0	0	0	0
	Curb cock in place	0	0	0	0	0	0
	Depth of pipe adequate	0	0	0	0	0	0
	Documentation/tagging correct	0	0	0	0	0	0
	Husky in place	0	0	0	0		0
	Inside pipework is adequate	0	0	0	0	0	0
	Locating wire properly installed	0	7	3	8	9	27
	Marker balls were properly installed	0	0	0	0	0	0
	Marking tape appropriately placed	0	1	2	0	1	4
	Proper facility separation	0	0	1	0	0	1
	Select unsat backfill items	0	0			0	0
	Select unsat locating wire items	0	0	0	0	0	0
	Select unsat marking tape items	0	0	0		0	0
	Select unsat WO package item	0		0	0	0	0
	Stub marker in place	0	0	0	0	1	1
	Type unsat backfill item not in list	0	0				0
	Type unsat locating wire item not in list	0	0				0
	Type unsat marking item not listed	0				0	0
	Valve properly installed	0	0	0	0	0	0
Total		0	10	6	8	18	42
DIG_UP_PLAS_SERV_PECO	1 foot piping was used	2	1	3	0		6
	1 inch piping was used	0			0	0	0
	Anode in place	0			2	0	2
	Appropriate backfill	52	37	20	12	34	155
	Appropriate wall seal	55	23	12	7	1	98
	Clamps applied	1	1	0	0	0	2
	Contractor representative signature	0		0	0		0
	Curb cock in place	1	0	2	2	0	5
	Depth of pipe adequate	0	0	2	4	5	11
	Documentation/tagging correct	6	3	2	3	4	18
	Husky in place	8	3	2	1		14
	Insertion performed properly	11	4	13	5	1	34
	Inside pipework is adequate	1	1	0	0	0	2
	Locating wire properly installed	9	9	4	7	35	64
	Marker balls were properly installed	22	2	7	14	8	53
	Marking tape appropriately placed	22	2	5	4	15	48
	Meter properly installed	43	49	10	7	5	114
	Meter set painted properly	47	11	20	23	4	105

	Proper facility separation	3	1	0	0	0	4
	Recorded pressure	0	0	0	0	0	0
	Riser installed properly	25	13	7	3	7	55
	Select unsat backfill items	0	0	0	0	0	0
	Select unsat document items	0	0	0	0	0	0
	Select unsat insertion items	0	0	0	0	0	0
	Select unsat locating wire items	0	0	0	0	0	0
	Select unsat marking tape items	0	0	0	0	0	0
	Select unsat meter install item	0	0	0	0	0	0
	Select unsat riser install item	0	0	0	0	0	0
	Select unsat valve install item	0	0	0		0	0
	Select unsat WO package item	0	0	0	0	0	0
	Stub marker in place	1	1	0	4	0	6
	Type unsat backfill item not in list	0	0	0	0	0	0
	Type unsat document item not in list	0	0		0	0	0
	Type unsat insertion item not listed	0	0	0	0		0
	Type unsat locating wire item not in list	0	0	0			0
	Type unsat marking item not listed	0	0	0	0	0	0
	Type unsat meter install item not in list	0	0	0			0
	Type unsat riser item not in list	0	0				0
	Type unsat valve install item not in list	0		0			0
	Type unsat WO package item not in list	0	0	0			0
	UMAC present	1	2	4	0	0	7
	UMAC tag present	20	6	12	2	1	41
	Valve properly installed	0	1	5	0	1	7
	Total	330	170	130	100	121	851
DIG_UP_STEEL_MAIN_PECO	1 foot piping was used	0	0	0			0
	1 inch piping was used	0			0	0	0
	Anode in place	0			0	0	0
	Appropriate backfill	0	0	0	0	0	0
	Clamps applied	0	0	0	0	0	0
	Curb cock in place	0	0	0	0	0	0
	Depth of pipe adequate	0	0	0	0	0	0
	Documentation/tagging correct	0	0	0	0	0	0
	Husky in place	0	0	0			0
	Inside pipework is adequate	0	0	0	0	0	0
	Marker balls were properly installed	0	0	0	0	0	0
	Marking tape appropriately placed	0	0	0	0	0	0
	Proper facility separation	0	0	0	0	0	0

	Stub marker in place	0	0	0	0	0	0
	Valve properly installed	0	0	0	0	0	0
	Total	0	0	0	0	0	0
DIG_UP_STEEL _SERV_PECO	1 foot piping was used	0	0	0	0		0
	Appropriate backfill	0	0	1	0		1
	Appropriate wall seal	0	0	0	0		0
	Clamps applied	0	0	0	0		0
	Curb cock in place	0	0	0	0		0
	Depth of pipe adequate	0	0	0	0		0
	Documentation/tagging correct	0	0	0	0		0
	Husky in place	0	0	0	0		0
	Insertion performed properly	0	0	0	0		0
	Inside pipework is adequate	0	0	0	0		0
	Marker balls were properly installed	0	1	0	0		1
	Marking tape appropriately placed	0	0	0	1		1
	Meter properly installed	0	0	0	0		0
	Meter set painted properly	0	0	0	0		0
	Proper facility separation	0	0	0	0		0
	Recorded pressure	0		0			0
	Riser installed properly	0	0	0	0		0
	Select unsat backfill items	0		0			0
	Stub marker in place	0	0	0	0		0
	UMAC present	0	0	0	0		0
	UMAC tag present	0	0	0	0		0
	Valve properly installed	0	0	0	0		0
	Total	0	1	1	1	0	3
	Grand Total	375	245	180	138	146	1,084

Responsible Witness: Amy E. Hamilton

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Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-38

Reference new and existing gas technologies on page 7 lines 5-15 of PECO Gas Statement No. 1. Provide:

A. A list of new technologies acquired since 2022;

B. The number of projects utilizing horizontal directional drilling equipment for each calendar year from 2019 through 2023;

C. The number of instances and a description of the purpose for which pipe inspection camera equipment was deployed for each calendar year from 2019 through 2023;

D. A list showing the quantity of horizontal directional drilling machines, pipe inspection camera equipment, bolt-on tee removal tools, and vacuum trucks acquired since 2022.

RESPONSE:

a. See below for list of new technologies adopted on PECO system since 2022
   - Supraflow Tee – new plastic tapping tee to make plastic tie-ins more efficient.
   - Sensus Sonix IQ Gas Meter – started pilot program installing new Sonix IQ gas meter allowing for improved system monitoring and improved customer aesthetics.
   - Pietro Fiorentini slam shut regulators - regulators with slam shut capability when over-pressure is sensed downstream

- Hawthorne Camera System – allowing capability to inspect 2" mains and HP systems (up to 60 psig)
- Zevac system - reducing emissions during purging activities for main replacement jobs.

b.

	2019	2020	2021	2022	2023
No. of HDD projects	Not available	Not available	22	10	9

c. The camera is utilized daily for instances like trouble locate, mapping improvements for our gas distribution system, locating water intrusion, verifying branch services, and locating/verifying tap locations and ends of mains for retirement purposes.

d. Horizontal directional drilling machines – 0 drills have been acquired since 2022.
Pipe inspection camera equipment – 2 camera equipment trucks have been acquired since 2022.
Bolt-on tee removal tools – 7 bolt-on tee removals tools have been acquired since 2022.
Vacuum trucks – 0 vac trucks have been acquired since 2022.

Responsible Witness: Amy E. Hamilton

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To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-31

Reference PECO Gas Statement No. 1, page 17 lines 16-22. Provide explanation for how post construction quality audits, post-construction dig-ups and of observations are scheduled. Explain how targeting of the facilities is performed, if it is based on installation method, installer history or if any other methodology is used.

RESPONSE:

PECO utilizes two PECO Senior Distribution Mechanics (SDM) whoare responsible for oversight of daily post-construction quality dig-ups and observations. The SDM schedules the post-construction dig-ups on a weekly basis. The dig-ups are performed with the assistance of a contractor that performs trenchless technology (vac excavation) in order for the SDM to conduct the quality inspection. Post construction quality dig-ups are conducted randomly based on work that was completed recently. PECO targets random inspections for each of the programs. Each week, the Senior Contract Coordinator (SCC) audits a different job location and program: Accelerated Gas Infrastructure Modernization Program (AGIMP), New Business, Bare Steel Service Replacement (BSSR), and New Residential Construction Group (NRCG). In addition to the random audit selection, if there are jobs where deficiencies have been identified, the post-construction crew is leveraged to conduct additional audits to ensure the extent of condition is identified and resolved.

Responsible Witness: Amy E. Hamilton

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To Interrogatories of the
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IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-39

Reference the ZEVAC technology on page 30 lines 13-19 of PECO Gas Statement No. 1. Clarify whether this technology has been implemented for active use in field or if PECO is in the process of evaluating this technology. Provide the quantity of outdated main replacements, the quantity of times this technology was utilized, and the number of days this technology was utilized and not utilized for each calendar year from 2022 through 2023.

RESPONSE:

PECO purchased the ZEVAC units in 2022 and utilized the units on five days at five locations in 2023. PECO continues to utilize the ZEVAC and has utilized the units on eight days at ten locations to date in 2024.

MILES OF OUTMODED MAIN RETIRED BY TYPE (MILES)	2022	2023
BARE STEEL	18.9	20.5
CAST IRON	32.4	19.8
WROUGHT IRON	1.6	0.9
DUCTILE IRON	0.6	1.6
TOTAL MILES RETIRED	53.5	42.8

Responsible Witness: Amy E. Hamilton

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To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set I-GS

Response Date: June 03, 2024

IE-I-GS-40

Reference system performance projects on page 11 lines 11-17 of PECO Gas Statement No. 1. Are these performance projects separate from projects started as a result of PECO's DIMP plan? Are they part of PECO's LTIIP? Provide a list of projects started as a result of PECO's DIMP plan and a list of performance projects for each calendar year from 2019 through 2023. Describe the level of importance assigned to performance or LTIIP projects in comparison to DIMP projects.

RESPONSE:

The performance projects are not separate from the projects started as a result of PECO's DIMP plan. The projects are consistent with the risks identified in the DIMP plan.

The performance projects are part of PECO's LTIIP.

The list of performance projects and the projects started as a result of PECO's DIMP Plan are the same. See Attachment IE-I-GS-40(a) for full list of projects from 2019 to 2023.

Responsible Witness: Amy E. Hamilton

I&E Exhibit 4
Schedule 21
Page 1 of 5
CONFIDENTIAL

Leaks Repaired by Cause	2019 Mains	Services	2020 Mains	Services	2021 Mains	Services	2022 Mains	Services	2023 Mains	Services	Total	% of total	Total for Mains	Total for Services		
3rd Party	82	267	39	109	50	185	40	130	7	48	957	13.57447	218	739		
CI Break	51	0	52	0	65	1	50	0	25	0	244	3.460993	243	1		
Contruction Defect	16	29	13	28	13	21	8	19	14	20	181	2.567376	64	117		
Corrosion	433	253	590	243	495	180	495	112	236	66	3103	44.01418	2249	854		
Leaking Joints	246	15	365	8	334	15	317	3	148	5	1456	20.65248	1410	46		
Material Defect	33	71	43	53	58	75	25	46	24	27	455	6.453901	183	272		
Other	64	56	63	50	92	73	96	65	53	42	654	9.276596	368	286		
Total	925	691	1165	491	1107	550	1031	375	507	208	7050	100	4735	2315		
Hazardous Leaks Repaired By Cause	2019 Mains	Services	2020 Mains	Services	2021 Mains	Services	2022 Mains	Services	2023 Mains	Services	Total	% of total	Total for Mains	Total for Services	% of total for mains	% of total for services
3rd Party	75	238	33	96	46	180	36	117	7	43	871	34.72887	197	674	18.83365201	46.10123119
CI Break	28	0	23	0	29	0	34	0	17	0	131	5.223285	131	0	12.52390057	0
Contruction Defect	8	19	2	15	1	8	3	7	2	8	73	2.910686	16	57	1.529636711	3.89876881
Corrosion	108	154	86	97	84	100	81	65	32	37	844	33.65231	391	453	37.38049713	30.98495212
Leaking Joints	34	6	31	2	55	8	36	2	18	1	193	7.695375	174	19	16.63479924	1.299589603
Material Defect	10	37	8	23	17	33	5	25	5	12	175	6.977671	45	130	4.30210325	8.891928865
Other	24	27	8	17	31	39	16	23	13	23	221	8.811802	92	129	8.79541109	8.823529412
Total	287	481	191	250	263	368	211	239	94	124	2508	100	1046	1462	100	100
Hazardous - Total Mains	1046															
Hazardous - Total Services	1462															

I&E Statement No. 4-SR
Witness: Martin Salamonski
NON-CONFIDENTIAL

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Surrebuttal Testimony

of

Martin Salamonski

Bureau of Investigation & Enforcement

Concerning:

DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM SETTLEMENT AGREEMENT APPROVED IN 2022 RATE CASE LEAK MANAGEMENT AND FACILITY EXCAVATION DAMAGE UTILIZATION OF NEW TECHNOLOGY

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Martin Salamonski. I am a Fixed Utility Valuation Engineer in the Safety Division of the Pennsylvania Public Utility Commission's Bureau of Investigation and Enforcement. My business address is Pennsylvania Public Utility Commission, 400 North Street, Harrisburg PA 17120.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes. I submitted direct testimony marked as I&E Statement No. 4 and the accompanying exhibit I&E Exhibit No. 4.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. My surrebuttal testimony will address PECO Energy Company – Gas Division ("PECO" or "Company") witness Amy Hamilton's rebuttal testimony concerning the following topics:

- PECO's compliance with system integrity management requirements set forth in the Commission's final order in PECO's 2020 gas base rate case proceeding, and the settlement agreement in PECO's 2022 gas base rate case proceeding.
- The effectiveness of the Company's mapping program and continued analysis of the Distribution Integrity Management Program ("DIMP") plan.

- The Company's progress with respect to leak management and reducing facility excavation damage on its gas distribution system.

Q. DOES YOUR TESTIMONY INCLUDE EXHIBITS?

A. Yes. I&E Exhibit No. 4-SR contains schedules that support my surrebuttal testimony.

Q. MS. HAMILTON RESPONDED TO YOUR STATEMENT THAT THE COMPANY'S [BEGIN CONFIDENTIAL] [redacted] [END CONFIDENTIAL] DO YOU AGREE WITH HER REBUTTAL?

A. No. Ms. Hamilton explained that the Company's **[BEGIN CONFIDENTIAL]** [redacted]

[redacted]

[redacted] **[END CONFIDENTIAL]**

Q. MS. HAMILTON STATES THAT [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL] WHAT IS YOUR ASSESSMENT OF THIS STATEMENT?**

A. Ms. Hamilton noted that **[BEGIN CONFIDENTIAL]** [redacted]

[redacted] **[END CONFIDENTIAL]**

I don't believe the first portion of this statement is relevant. PHMSA created the DIMP regulations to mitigate the number of DOT reportable incidents.

From 49 CFR 191.3, Incident means any of the following events:

(1) An event that involves a release of gas from a pipeline, gas from an underground natural gas storage facility (UNGSF), liquefied natural gas, liquefied petroleum gas, refrigerant gas, or gas from an LNG facility, and that results in one or more of the following consequences:

(i) A death, or personal injury necessitating in-patient hospitalization;

(ii) Estimated property damage of $122,000 or more, including loss to the operator and others, or both, but excluding the cost of gas lost. For adjustments for inflation observed in calendar year 2021 onwards, changes to the reporting threshold will be posted on PHMSA's website. These changes will be determined in accordance with the procedures in appendix A to part 191; and

(iii) Unintentional estimated gas loss of three million cubic feet or more.

(2) An event that results in an emergency shutdown of an LNG facility or a UNGSF. Activation of an emergency shutdown system for reasons other than an actual emergency within the facility does not constitute an incident.

(3) An event that is significant in the judgment of the operator, even though it did not meet the criteria of paragraph (1) or (2) of this definition.

Once one of the above criteria is met, a reportable incident occurs and should be factored into the DIMP program. Additionally, simply because an incident has not resulted in injury or death does not mean it did not have the potential to cause injuries or deaths.

Regarding the latter portion of Ms. Hamilton's statement, I do not dispute that **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

Q. MS. HAMILTON MENTIONS A [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL] WOULD YOU AGREE WITH HER STATEMENT?**

A. No. **[BEGIN CONFIDENTIAL]** [redacted]

[redacted] **[END CONFIDENTIAL]**

Q. YOU PREVIOUSLY RECOMMENDED THAT PECO SHOULD ADD DIMP THREAT CATEGORIES TO PROVIDE MORE GRANULARITY FOR ITS RISK RANKINGS. DOES YOUR RECOMMENDATION STILL STAND?

A. As I understand it, PECO plans to add granularity to its DIMP threat categories by utilizing Synergi Pipeline software (PECO Gas Statement 1-R, p. 4). This method of adding granularity, along with an added mechanism to track and rank individual appurtenances, would be acceptable. I also recommend that PECO consider adding "appurtenances" in addition to their "mains" and "services" threat categories.

Q. MS. HAMILTON STATED SHE DOES NOT BELIEVE THAT IT IS NECESSARY TO ADD A SEPARATE FAILURE CATEGORY FOR EACH TYPE OF APPURTENANCE WITHIN THE DIMP RISK MODEL (PECO GAS STATEMENT 1-R, p. 8). WOULD YOU AGREE?

A. No. DIMP requires a natural gas distribution utility to:

1. Demonstrate knowledge of the gas distribution system;

2. Identify the threats to its facilities;

3. Evaluate and rank the risks of threats to the facilities;

4. Identify and implement measures to reduce risk;

5. Measure performance, monitor the results, and evaluate effectiveness;

6. Periodically evaluate and make improvements to the program; and

7. Report the results.

Ms. Hamilton stated that the current DIMP model **[BEGIN CONFIDENTIAL]** [redacted]

[redacted] **[END CONFIDENTIAL]**

Q. MS. HAMILTON RESPONDED TO YOUR RECOMMENDATION FOR A DATA REVIEW PROCESS TO ELIMINATE DATA ERRORS REGARDING SERVICE LINE LEAK REPAIR REPORTS. WOULD YOU HAVE ANYTHING TO ADD?

A. At the time of writing my direct testimony, data provided by PECO showed that between 2019 and 2023 there were 332 leaks reported to be repaired on cast iron, wrought iron, and ductile iron services. Since then, PECO has provided a correction stating incorrect data fields were used for some attribute information.

Although the data was corrected, the point remains that a review process is necessary to prevent these errors from happening.

Q. MS. HAMILTON HAS DISAGREED THAT [BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL] HOW WOULD YOU RESPOND?**

A. Ms. Hamilton cites to the response to IE-GS-17 which she has attached as PECO Exhibit AEH-3 to her rebuttal testimony as data supporting a **[BEGIN CONFIDENTIAL]** [redacted]

[redacted]

[redacted]

[END CONFIDENTIAL]

Q. MS. HAMILTON STATED THAT WHILE SOME OF THE INFORMATION INCLUDED IN THE NEW PUBLIC AWARENESS BROCHURE IS THE SAME AS THE PREVIOUS BROCHURE, THE NEW PUBLIC AWARENESS BROCHURE HAS IMPROVED. (PECO STATEMENT NO. 1-R, PP. 13-14) HOW WOULD YOU RESPOND?

A. As shown in I&E Exhibit No. 4, Schedule 13, the brochures are essentially the same in content albeit with a few cosmetic differences.

The Company did recently update its "Call 811 Before You Dig" webpage to provide more detailed information on how to understand the location marks for each type of buried utility by showing a chart with color and utility type, as well as by providing a link to PA Act 50 of 2021.

My concern is that the typical homeowner may not visit Call 811 Before You Dig webpage. For this reason, I continue to recommend improvements to the brochure itself as outlined in my direct testimony.

Q. MS. HAMILTON AGREES WITH YOUR ASSERTION THAT THE GAS MAPPING PROGRAM HAS BEEN SUCCESSFUL. DID YOU MAKE THAT ASSERTION?

A. Not exactly. What I did state was that PECO's process for identification of

inaccurate gas mains and services for locating appears to be working well by identifying facilities based on sound reasoning, setting a target number of locates, exceeding the targeted number of locates each year overall, and by identifying new facilities for locating on a continuing basis (I&E Statement No. 4, pp. 24-26).

However, I noted that PECO's process for mapping gas facilities with GPS locations appears to be stagnating. I have provided Table 8 in my direct testimony (I&E Statement No. 4, p. 25) that shows a decrease in the percent of total PECO gas system captured with Locusview by year.

My recommendation to continue identifying and locating inaccurate facilities, as well as to continue investing in technologies that facilitate mapping improvements remains unchanged.

Q. MS. HAMILTON STATED PECO CAN TRACK WHETHER THE NUMBER OF JOB SITES NOT MEETING STANDARDS IS INCREASING OR DECREASING. HOW WOULD YOU RESPOND?

A. When asked for a percentage of construction jobs audited for each year from 2019 through 2023, PECO responded by stating the Company is unable to calculate a percentage of construction jobs audited each year from 2019 through 2023 but can confirm that it performed one or more quality audits on all outgoing construction project programs during this period (I&E Exhibit No. 4, Schedule 15). While checklist forms are utilized for all audits, the Company's current data entry system does not facilitate grouping of audit data collected that is associated with a single job. Consequently, distinguishing which audits were performed for a particular

job and in which year is challenging, and the Company is not able to calculate a percentage of construction jobs audited during the period.

When asked for a percentage of failed audits from total audits from 2019 through 2023, PECO Gas provided a table in IE-II-GS-58 and noted that the failure percentage is calculated as the number of failed observations over total number of observations.

It is important to note that one audit contains several observations. Some observations may be not applicable, some audits may contain several failed observations, and some audits may contain few failed observations. Ms. Hamilton states that the Company utilizes a Locusview data dashboard to analyze the post construction audit observations by different categories, which allows the Company to see if there is a trend in failure type or an increase in deficiencies. (PECO Gas Statement No. 1-R, p. 15)

The objective of my recommendation regarding tracking the number of audits containing a failed observation was to assist PECO with determining and tracking the effectiveness of its post construction quality audits as a whole. If PECO knows the number of audits performed and would know the number of audits containing a failed observation, PECO could leverage that additional data to its advantage. For example, if the number of total audits increases but the number of "failed audits" decreases over time, the post construction quality audits are having a positive effect. If the number of total audits increases and the number of failed audits also increases, it would mean more problems are being found and additional communication and corrective action between PECO and its contractors

is required. The objective would be to decrease failed audits, which would decrease all failed observations, resulting in an increase in safety and the quality of contractor work. For this reason, my recommendation still stands.

Q. MS. HAMILTON EXPLAINED THAT PECO BELIEVES THE CURRENT SENIOR CONTRACTOR COORDINATOR ("SCC") COVERAGE IS ADEQUATE (PECO GAS STATEMENT NO. 1-R, PP. 15-16). HOW WOULD YOU RESPOND?

A. I disagree. SCCs visit an estimated 70-80% of their region's job sites per day (I&E Exhibit No. 4, Schedule 15). This may be problematic as these SCCs do not visit all job sites in their area daily, nor do they stay on any given job site for the full day.

Since 70-80% of PECO construction sites are being visited in a day, with the SCC's time being split among each of the sites, several portions of construction work are performed unobserved.

PECO Gas' reply to IE-I-GS-28 (I&E Exhibit No. 4, Schedule 14) shows that between 2022 and 2023, the total number of construction audits has increased from 1,487 visits to 1,711 visits. The Company's reply to IE-I-GS-30 (I&E Exhibit No. 4, Schedule 16) also shows that the number of failed observations has increased from 138 to 146 between 2022 and 2023. As more post-construction audits are being performed, more failed observations are being found. More company oversight during the construction process would potentially help increase

the safety and quality of contractor work and contribute to a decrease in failed observations during post construction audits.

My recommendation to hire more SCCs still stands. More SCCs would allow for more inspection time at more sites, granting PECO Gas more oversight and would allow PECO to potentially catch more deficiencies in the earlier stages of construction.

Q. MS. HAMILTON DISAGREED WITH YOUR ASSESSMENT AND RECOMMENDATIONS REGARDING THE EFFICACY OF PECO'S USE OF NEW AND EXISTING TECHNOLOGIES TO DRIVE EFFICIENCIES (PECO GAS STATEMENT NO. 1-R, PP. 16-18). HOW WOULD YOU RESPOND?

A. Ms. Hamilton points out that PECO initiated a three-year program to install remote rectifier equipment, and that PECO is currently studying additional investment in leak detection and repair technologies such as the Timberline Expert Tool for plastic repairs, Kobus Pipe Puller, and other advanced leak detection systems. This information was not previously available from Ms. Hamilton's direct testimony nor from her response to IE-GS-38 (I&E Exhibit No. 4, Schedule 17).

In light of this new information, I would agree with Ms. Hamilton's belief that there is no need to expend additional resources to conduct a study as previously recommended. The Company should continue to maintain its current course of leveraging technology to mitigate unaccounted for gas.

Ms. Hamilton also pointed out that contractor crews are utilized to provide flexibility to scale operations up or down as needed since vacuum trucks can be less efficient during winter months; and, therefore, it is the Company's belief that it can be more efficient to contract with vendors for the use of vacuum trucks rather than purchasing the equipment outright (PECO Gas Statement No. 1-R, p. 17). I agree with this point, but my recommendation to continue identifying and locating inaccurate facilities, as well as to continue investing in technologies that facilitate mapping improvements remains unchanged – though I would like to add that utilizing contractors (and their technologies) that facilitates mapping improvements is perfectly valid in satisfying this condition.

Q. PLEASE REITERATE YOUR RECOMMENDATIONS AT THIS TIME.

A. PECO should:

- Continue its transition from its current risk model software to Synergi Pipeline software and should consider adding "appurtenances" in addition to its "mains" and "services" threat categories in its DIMP program.
- Implement a data review process (or improve the existing one) for its service line leak repair reports to make the data accurate and to avoid misclassification of materials.
- Continue identifying and locating inaccurate facilities.
- Continue investing in technologies (whether the Company's or a contractor's) that facilitate mapping improvements and removal of potentially hazardous pipeline components.

- Begin keeping track of the number of post construction quality audits containing a failed observation.
- Hire more Senior Contractor Coordinators to provide more company safety and compliance oversight over construction sites.
- Continue to leverage technology and equipment (whether the Company's or a contractor's) to mitigate unaccounted for gas.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

I&E Exhibit No. 4-SR
Witness: Martin Salamonski

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PECO ENERGY COMPANY – GAS DIVISION

Docket No. R-2024-3046932

Exhibit to Accompany the

Surrebuttal Testimony

of

Martin Salamonski

Bureau of Investigation & Enforcement

Concerning:

DISTRIBUTION INTEGRITY MANAGEMENT PROGRAM SETTLEMENT AGREEMENT APPROVED IN 2022 RATE CASE LEAK MANAGEMENT AND FACILITY EXCAVATION DAMAGE UTILIZATION OF NEW TECHNOLOGY

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Bureau of Investigation and Enforcement
IE Set II - GS

Response Date: June 20, 2024

IE-II-GS-58

Reference PECO Gas' response to IE-I-GS-30. A percentage of failed observations from total observations was provided. Please also provide the percentage of failed audits from total audits from 2019 through 2023.

RESPONSE:

Year	Visit	Total Observations	Failed Observation	Failure %
2019	14,546	127,747	1,500	1.17%
2020	10,072	89,000	1,708	1.92%
2021	8,891	94,412	1,450	1.54%
2022	6,904	86,347	1,311	1.52%
2023	7,933	97,907	1,272	1.30%

*Please note that the Failure Percentage is calculated as the total number of failed observations divided by the total number of observations.

Responsible Witness: Amy E. Hamilton

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2024-3046932
PECO Energy Company – Gas Division	:	

VERIFICATION OF MARTIN SALAMONSKI

I, **Martin Salamonski**, on behalf of the Bureau of Investigation and Enforcement, hereby verify that **I&E Statement No. 4** (in both Proprietary and Non-Proprietary format), **I&E Exhibit No. 4** (in both Proprietary and Non-Proprietary format), **I&E Statement No. 4-SR** (in both Proprietary and Non-Proprietary format), and **I&E Exhibit No. 4-SR** were prepared by me or under my direct supervision and control.

Furthermore, the facts contained therein are true and correct to the best of my knowledge, information and belief and I expect to be able to prove the same if called to the stand at any evidentiary hearing held in this matter.

This Verification is made subject to the penalties of 18 Pa. C.S. § 4904 relating to unsworn falsification to authorities.

Signed in Reading, Pennsylvania, this 5th day of August 2024.

Martin Salamonski

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission v. PECO Energy Company - Gas	Docket No. R-2024-3046932

LIST OF CAUSE-PA EXHIBITS

Hearing Exhibit 1: CAUSE-PA Pre-Served Testimony

- CAUSE-PA Statement No. 1: Direct Testimony of Elizabeth R Marx
  - CAUSE-PA Exhibit A: Languages Spoken at Home by Zip Code
  - CAUSE-PA Exhibit B: Security Deposits by Zip Code
  - CAUSE-PA Exhibit C: MEAF Awards and Disbursement by Zip Code
  - Appendix A: Resume of Elizabeth R. Marx
  - Appendix B: MEAF Flow Chart
- CAUSE-PA Statement No. 1-SR: Surrebuttal Testimony of Elizabeth R. Marx
  - Appendix A: PECO Security Deposit Letter

Hearing Exhibit 2: Selected Redacted Communications from PECO Related to MEAF Grant Processing

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission **v.** **PECO Energy Company – Gas Division**	**Docket No. R-2024-3046932**

DIRECT TESTIMONY OF ELIZABETH R. MARX

On Behalf of

Tenant Union Representative Network

and

Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

June 17, 2024

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PREPARED DIRECT TESTIMONY OF ELIZABETH R. MARX

I. INTRODUCTION AND BACKGROUND

Q. Please state your name, occupation, and business address.

A. Elizabeth R. Marx. I am an attorney, and currently serve as Executive Director of the Pennsylvania Utility Law Project, with offices at 118 Locust Street, Harrisburg, PA 17101.

Q. Briefly outline your education and professional background.

A. I received a BA in Political Science from Temple University, with a minor in Economics, and a JD from Widener University Commonwealth School of Law. I also hold a Certificate in the Fundamentals of Regulatory Studies from Michigan State University's Institute of Public Utilities.

Upon graduation from law school, I worked as a Staff Attorney at the Pennsylvania Coalition Against Domestic Violence (PCADV). There, I provided education, consultation, and legal support services to attorneys, advocates, and judges on legal matters impacting the health, safety, and stability of survivors of domestic violence. While at PCADV, I helped to launch PCADV's economic justice initiative, which works to address intersectional economic issues that impact the ability of survivors to establish a safe, healthy home. Through that work, I served as legal counsel for PCADV on matters before the Public Utility Commission impacting survivors' right to privacy and their ability to establish and maintain safe, affordable utility services.

In 2014, I was hired as a Staff Attorney at the Pennsylvania Utility Law Project (PULP), a statewide specialty legal services program dedicated to advancing the rights of low-income utility customers. I was promoted to PULP's Supervising Attorney in 2017. In 2020, I was appointed to serve as PULP's Executive Director. Since joining PULP in 2014, I have provided direct legal

representation, education, and support services to thousands of low-income Pennsylvanians and organizations across the state on utility and energy matters. In my current role as PULP's Executive Director, I am responsible for overseeing PULP's policy, litigation, advocacy, support services, and special projects in furtherance of its mission to ensure Pennsylvanians of limited economic means can access and maintain safe and affordable utility services.

I also currently serve on a number of advisory councils and committees to Pennsylvania state agencies on matters impacting the rights of low-income Pennsylvanians and their ability to access safe and affordable water and energy services. Since 2020, I have served as Chairperson of the LIHEAP Advisory Committee to the Department of Human Services. In 2023, I assumed the role of Chairperson of the Weatherization Assistance Program Policy Advisory Council to the Department of Community and Economic Development. I am also an appointed member of the Consumer Advisory Council to the Public Utility Commission and the Climate Change Advisory Committee to the Department of Environmental Protection.

As illustrated more thoroughly in my resume, I have well over a decade of experience providing direct legal services, education, and support services to resolve utility and energy issues affecting low-income consumers. My resume is attached as Appendix A.

Q. Please describe the focus of your work, including relevant work experience on issues of low-income families' ability to afford essential goods and services such as utilities?

A: Over the last 14 years, I have represented low-income individuals and organizations serving low-income populations in a wide variety of legal matters, including family law, public benefits, utility shut-offs, debtor/creditor, and housing related disputes. In all of these legal matters, I have worked almost exclusively on behalf of very low-income individuals and other uniquely

vulnerable groups. Through this work, I have become intimately familiar with the daily lives of Pennsylvania families who are experiencing poverty and utility insecurity, and the ways in which applicable laws, policies, and programs serve to help or hinder their ability to connect and maintain safe and affordable services to their home.

In addition to extensive experience representing individuals facing utility insecurity, I have an extensive knowledge of the array of state, federal, and utility-run programs designed to ensure low-income families can afford essential utility services. I have been involved in countless proceedings evaluating the effectiveness of required Universal Service Programs to assist low-income families, and I have spent thousands of hours identifying program issues in Universal Services and making recommendations for changes to Universal Service programming to better serve low-income consumers. As indicated in my resume, I have provided testimony before state agencies and the legislature on these matters.

Q: Have you previously served as an expert witness in proceedings before the Public Utility Commission?

A: In 2018, I provided formal testimony on behalf of PULP in an *en banc* hearing before the PUC regarding Supplier Consolidated Billing, at Docket No. M-2018-2645254. I also recently sponsored testimony in PECO Energy Company's Petition for Approval of Its Default Service Program for the Period from June 1, 2025 through May 31, 2029 at Docket No. P-2024-3046008. I have also served as legal counsel for groups and individuals in numerous other PUC proceedings.

Q: For whom are you testifying in this proceeding?

A: I am testifying on behalf of the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA").

Q: What information did you rely on in preparing your testimony for this proceeding?

A: In addition to publicly available information compiled by the PUC and other sources I relied on information contained in PECO's rate case filing,[1] other PUC proceedings involving PECO, and discovery responses provided by PECO in response to discovery requests by CAUSE-PA and the other parties in this proceeding.

Q: Please provide an overview of your testimony.

A: Based on my extensive review of PECO's rates and terms and conditions of programming, I conclude that PECO's current rates and services are not just and reasonable for low-income households in PECO service territory. Any further increase in rates will further exacerbate deep disparities in access to service for economically vulnerable Pennsylvanians. Unless and until PECO corrects fundamental inequities engrained in its terms, conditions, and programming, its proposed rate increase should be denied.

My testimony is divided into five sections. Section I outlines my background and provides a summary of my testimony as a whole. Section II describes the impact that the requested rate increase would have on low-income households. In this section, I provide information on the low-income population that PECO serves, and outline how the proposed rate increase would uniquely harm vulnerable households across its service territory. I describe how low-income customers already struggle to afford and maintain PECO gas service, and demonstrate that existing programs are woefully inadequate to mitigate the financial impact and harm of the proposed rate increase on low-income households.

[1] For the purposes of this testimony, unless otherwise noted, all references to PECO are intended to refer specifically to PECO Gas.

Section III of my testimony discusses PECO's Universal Service programs, and the critical need to address fundamental program design and accessibility issues to ensure low-income households can maintain service in the face of rising rates. In this section, I discuss PECO's Customer Assistance Program (CAP), Low Income Usage Reduction Program (LIURP), and Matching Energy Assistance Fund (MEAF). First, I discuss CAP enrollment, and recommend how PECO could increase enrollment through routinized income screening and automatic enrollment and recertification of LIHEAP recipients – helping to address acute rate unaffordability at existing rates, reduce collections costs, and mute the severity of any approved rate increase on low-income families across PECO's service territory. Second, to help offset the disproportional impact of any approved rate increase on low-income high-usage customers, I propose an increase to PECO's LIURP budget and urge improved service delivery and coordination with home repair and weatherization programs. Third, I discuss PECO's proposed changes to its MEAF program and recommend an alternative to this change, as well as additional reforms to PECO's administration and oversight of MEAF and MEAF eligibility to ensure grant assistance is reaching households in need of crisis assistance to prevent termination.

Section IV of my testimony discusses residential customer service issues related to PECO's provision of service to non-English speaking (NES) customers and PECO's policies and practices related to security deposits. First, I describe the failure of PECO to properly serve its NES customers and provide recommendations as to how PECO can improve its service to NES households. Second, I discuss PECO's security deposit practices and raise concerns about the unlawful imposition of security deposits on low-income households. I also raise concerns about racially disparate impacts of PECO's security deposit practices. I recommend reforms to PECO's

security deposit policies and procedures to more closely adhere to the statutory, regulatory, and policy guidance regarding application of the low-income security deposit prohibition.

Section V of my testimony describes PECO's proposed rate design, and the impact that PECO's high fixed charge proposal would have on the ability of low-income households to achieve meaningful bill savings through adoption of comprehensive efficiency and conservation. I also explain my opposition to PECO's proposed Weather Normalization Adjustment, which disproportionately impacts low usage and low-income customers and unjustly shifts the risk of our warming climate onto consumers.

Finally, Section VI provides a summary of the recommendations proposed throughout my testimony.

Q: Please summarize the Company's requested rate increase as it applies to residential customers.

A: As proposed, PECO has requested to increase overall rates by approximately $111 million, including a request to implement a Weather Normalization Adjustment (WNA) charge.[2] If PECO's requested rate increase is approved, PECO projects that the bill of a residential customer using 80 Ccf of gas will go from $97.98 to $114.13 ($16.15 per month) in 2025, a 16.15% increase.[3] Of course, this projected impact will be much higher for households with higher usage. In terms of rate design, PECO is proposing to increase its fixed monthly residential customer charge from $14.25 to $19.38 per month, a staggering 36% increase.[4] Notably, given many of PECO's residential gas customers outside of Philadelphia County are also PECO electric customers, this

[2] PECO St. 1 at 5.
[3] PECO Customer Notice.
[4] PECO St. 7 at 8.

substantial proposed increase in rates for gas service must also be viewed in the context of PECO's substantial proposed increase in rates for electric service. In tandem with this proceeding, PECO has proposed a substantial increase in its residential gas rates – estimating that an average residential consumer using 700 kWh will go from $135.85 to $152.52 in 2025, a 12.3% increase.[5] In total, PECO's average combined residential gas and electric customers would experience an overall energy rate impact of $35.52 per month. The compounding nature of PECO's stacked rate increases for both gas and electric service is likely to cause rate shock many residential households, and will have a severe impact on the ability of low-income consumers across PECO's service territory to access life-essential energy services to their home.

Q: As a preliminary matter, do you support the Company's requested rate increase?

A: No, I do not support PECO's requested rate increase. The requested increase is neither just nor reasonable and is not in the public interest. PECO's current rates are already unaffordable, making service inaccessible to tens of thousands of low-income households across PECO's service territory. Further increasing rates will only exacerbate this problem. Moreover, as noted above, given PECO's tandem request for a substantial electric rate increase, PECO's rate proposals are likely to cause rate shock for an even broader swath of residential consumers at higher income levels – though the stacked increase in rates for both electric and gas will undoubtedly fall hardest on low-income families across PECO's service territory.

Rates are not just and reasonable if they are not affordable for those seeking service. All Pennsylvanians, regardless of income, must be able to access and maintain safe and affordable

[5] PECO Customer Notice (Initial Filing, Volume I).

energy services to their homes. That is the promise of universal service, which is deeply embedded in the regulatory compact. As I will discuss, increasing numbers of low-income families in all corners of PECO's service territory are unable to afford service to their homes at current rates, and a further rate increase will serve to exacerbate this unaffordability. It would be both unjust and unreasonable to approve any rate increase at this time, absent substantial additional measures to address existing rate unaffordability and to fully remediate additional unaffordability created by increased rates.

II. RATE IMPACT ON LOW-INCOME HOUSEHOLDS

a. PECO Gas Serves a Substantial Low-income Population

Q: How many customers in PECO's service territory are considered low-income?

A: PECO's service territory encompasses a significant number of low-income customers. PECO, along with all other large public utilities in Pennsylvania, tracks and assesses its low-income customer population via two metrics: 1) estimated low-income customers and 2) confirmed low-income customers.[6] To be considered low-income in this context, a household must have income at or below 150% of the federal poverty level (FPL).[7] For context, in 2024, a family of four with an income at or below 150% FPL has a maximum gross income of $46,800 per year, or $3,900 per month.[8]

[6] *See* Pa. PUC, BCS 2022 Report on Universal Service Programs & Collections Performance, at 7-9 (Sept. 2023), https://www.puc.pa.gov/media/2573/2022-universal-service-report-final.pdf [hereinafter 2022 Universal Service Report].

[7] This is consistent with the eligibility guidelines for utility Customer Assistance Programs in Pennsylvania, including PECO's. 52 Pa. Code § 69.265(4)(ii); PECO Energy Company Universal Service and Energy Conservation Plan 2019 to 2028 (Third Amended Plan, Oct. 30, 2023);https://www.puc.pa.gov/media/2690/peco_2019_usecp_10-2023.pdf (hereinafter PECO USECP).

[8] Poverty Guidelines, U.S. Department of Health and Human Services, https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines.

PECO's "estimated low-income customer" count is based on annually compiled census data, proportionate to PECO's overall residential customer count.[9] PECO also tracks "confirmed low-income customers," which it defines as "customers who in the last two years have provided verified financial information at or below 150% FPL, and/or enrolled in CAP, and/or received a LIHEAP grant."[10] In 2023, PECO Gas had 79,853 estimated low-income customers, 15.8% of its residential customers.[11] By contrast, in 2023, PECO Gas confirmed as low-income less than half that number –31,018 customers, or 6.14% of its residential customers.[12]

Throughout this testimony, I will refer to PECO's confirmed low-income customer numbers and estimated low-income customer numbers, as well as publicly available census data from the U.S. Census Bureau's 2022 American Community Survey, ACS 5-Year Estimates Subject Tables and ACS 5-Year Estimates Detailed Tables. Specifically, I reference the "Poverty Status in the Past 12 Months", "Race", and "Limited English Speaking Households" tables.[13] Each measure provides important context to understand the impact of PECO's rate increase on the households served.

To be clear, while I will refer to both estimated and confirmed low-income customer data, PECO's estimated low-income customer count provides a more realistic assessment of the number

[9] 2022 Universal Service Report at 9.
[10] CAUSE-PA-I-1
[11] Attachment OCA-II-1(a).
[12] Attachment OCA-II-1(a).
[13] U.S. Census Bureau. (2022). Poverty Status in the Past 12 Months. American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1701. Retrieved June 3, 2024, from https://data.census.gov/table/ACSST5Y2022.S1701?t=Income%20and%20Poverty&g=040XX00US42$8600000&y=2022; U.S. Census Bureau. (2022). Race. American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B02001. Retrieved June 3, 2024, from https://data.census.gov/table/ACSDT5Y2022.B02001?t=Race%20and%20Ethnicity&g=040XX00US42$8600000&y=2022; and U.S. Census Bureau. (2022). Limited English Speaking Households. American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1602. Retrieved June 3, 2024, from https://data.census.gov/table/ACSST5Y2022.S1602?t=Language%20Spoken%20at%20Home&g=040XX00US42$8600000&y=2022.

of low-income households served by PECO. Unlike the census-based estimated low-income customer number, PECO's confirmed low-income customer number counts only customers who have recently verified their income. As a result, the "confirmed low-income customers" number provides an inaccurately narrow assessment of PECO's low-income customer population.

PECO's definition is in fact, narrower than the Commission's regulatory definition for confirmed low-income customers. The Commission defines "confirmed low-income residential account" as "accounts where the NGDC has obtained information that would reasonably place the customer in a low-income designation. This information may include receipt of LIHEAP funds (Low-Income Home Energy Assistance Program), self-certification by the customer, income source or information obtained in § 56.97(b) (relating to procedures upon rate-payer or occupant contact prior to termination)."[14] To ensure accuracy and consistency in reporting of confirmed low-income customer data across the state, and to improve the ability of the Commission, PECO, and stakeholders to more accurately assess and serve the needs of low-income consumers across PECO's service territory, the Commission should require PECO to amend its definition to conform to this broader regulatory definition. Indeed, there are a number of statutory and regulatory protections that apply to low-income customers, but PECO's inappropriately narrow definition for confirmed low-income customers truncates the application of those protections.

Q: How much income must a household earn each month to be considered low-income?

A: For the purposes of Commission reporting, a "low-income customer" is defined as a household at or below 150% of the Federal Poverty Level (FPL).[15] This is consistent with the eligibility requirements of PECO's CAP. Two of PECO's other Universal Service programs, the

[14] 52 Pa. Code 62.2.
[15] 2022 Universal Service Report at 2.

Matching Energy Grant Assistance Program ("MEAF") and Low Income Usage Reduction Program ("LIURP") are available for customers with household income up to 200% FPL.[16]

The FPL is a measure of poverty based exclusively on the size of the household, without accounting for variations in the composition of the household or the cost of living in a given geographic region. A family of four at 50% FPL has a gross annual income of $15,600.[17]

TABLE 1: Gross Annual Income by Percent FPL for 2024

	50%	**100%**	**150%**	**200%**
Household of 1	$7,530.00	$15,060.00	$22,590.00	$30,120.00
Household of 4	$15,600.00	$31,200.00	$46,800.00	$62,400.00

To contextualize the FPL, a full-time (40 hour/week; 52 weeks/year) worker making minimum wage ($7.25/hour) has a gross annual income of $15,080, assuming no time off. This would be 58.4% FPL for a single parent with two children, or 96.67% FPL for a family of four with two adults working minimum wage jobs.

Another tool used to assess income levels is the Self Sufficiency Standard, which looks at how much income a household needs to live without assistance in Pennsylvania. This tool measures the income that a household must earn to meet their basic needs (housing, child care, food, health care, transportation, and taxes) without the help of public subsidies.[18] Unlike the FPL, the Self Sufficiency Standard takes into account family composition, ages of children, and

[16] PECO USECP at 19, 54.
[17] US Dep't Health & Human Services, 2024 Poverty Guidelines: 48 Contiguous States, https://aspe.hhs.gov/sites/default/files/documents/7240229f28375f54435c5b83a3764cd1/detailed-guidelines-2024.pdf
[18] Diana Pierce, Overlooked & Undercounted: Struggling to Make Ends Meet in Pennsylvania, Univ. Washington School of Social Work (Oct. 2019), https://selfsufficiencystandard.org/wp-content/uploads/2021/10/PA2019_Demographic.pdf.

geographic differences in costs.[19] In 2024, the Average Self Sufficiency Standard across PECO Gas service territory for 2 adults and 2 school aged children is $100,084.04.[20] This income puts that household at 320.78% FPL. When I refer to moderate income households, I am referring to those households that subsist below the Self Sufficiency Standard, but above FPL.

TABLE 2: Self Sufficiency Standard by County[21]

County	2 Adults, 2 School Aged Children	2 Adults, 2 Preschoolers
Bucks	$104,761.80	$116,304.58
Chester	$104,491.14	$118,024.92
Montgomery	$103,484.40	$115,767.00
Delaware	$98,599.87	$108,864.21
Lancaster	$89,083	$96,010
Average	$100,084.04	$110,994.14

Furthermore, the average annual income for PECO's 31,018 confirmed low-income gas customers is just $14,507.[22] These customers have far less than the amount needed to be self-sufficient and live without financial assistance. Any increase in the cost of necessities, including gas for heating, hot water, and cooking, will – by any measure - result in increased unaffordability for well over 30,000 low and moderate income households.

[19] Univ. of Washington School of Social Work, Self-Sufficiency Standard: Pennsylvania, https://selfsufficiencystandard.org/Pennsylvania/
[20] Univ. of Washington School of Social Work, Self-Sufficiency Standard: Pennsylvania, 2024 Dataset, *available at* https://selfsufficiencystandard.org/Pennsylvania/ (last accessed June 16, 2024).
[21] *Id.*
[22] CAUSE-PA-I-4.

b. Impact of Rate Increase on Low-Income Households

Q: How would PECO's proposed rate increase impact low income households?

A: In my experience representing thousands of Pennsylvanians facing energy insecurity, low-income families are regularly forced to choose which life necessities they can forego in order to make ends meet. Any increase in cost for essential life-sustaining services like heating will have a severe impact on the lowest income households in PECO's service territory, forcing them to make trade-offs among basic needs like shelter, food, and utilities. According to a recent national study, in February 2024, 51.9% of households with income under $50,000 reported at least one month where they reduced or went without food, medicine, and other basic needs in order to pay an energy bill.[23] In addition, 34% kept their home at a temperature that felt unsafe or unhealthy in order to save money on energy bills.[24] The data reviewed in the study found that, far and away, the greatest increase in energy insecurity last year was among households with children.

The proposed average monthly gas bill increase of $16.15,[25] or approximately $194 annually, is a substantial increase in basic living expenses - especially for low-income households. As noted, the average annual income for PECO's confirmed low-income customers is $14,507.[26] If a confirmed low-income customer uses 80 Ccf of gas, as PECO's calculation of the average monthly increase assumes, the proposed increase represents an additional 1.34% of their total annual household income. The new average residential bill of $1,369.56 would account for 9.4% of household income for the average residential confirmed low-income customer. Many low-income customers exceed the average residential usage rates, especially those who live in poor

[23] National Energy Assistance Directors Association and the Center for Energy Poverty and Climate, Energy Hardship Report at 10 (April 2024), https://neada.org/wp-content/uploads/2024/04/neadahardshipreportAPR24.pdf.
[24] *Id.* at 9.
[25] PECO Notice of Proposed Natural Gas Rate Changes Customer Letter.
[26] CAUSE-PA-I-4

quality, energy inefficient housing and have correspondingly higher average usage than other residential customers.

The average impact of PECO's proposed gas rate increase on the energy burden of a low-income household represents only a portion of the increased energy burden that low-income households actually face. It does not include the additional cost of electricity, water, wastewater, and telecommunications services. As noted, in tandem with this gas rate increase, PECO is proposing to increase rates for electricity by 12.3% in 2025, and an additional 1.8% in 2026. If approved, this will add approximately $19.37 to the average residential monthly electric bill.[27] Together with its proposed increase in gas rates, PECO's average residential consumers will face an average increase in combined energy rates of roughly $35.52 each month. At the same time that PECO is proposing increases for both its electric and gas customers, Aqua Pennsylvania, which provides water and wastewater service to a substantial number of PECO's customers, has proposed a 18.7% increase to its water rates and a 20.1% increase to wastewater rates as well.[28] PECO's request to substantially increase gas rates cannot be reviewed in a vacuum, and must be contextualized with the real-world financial pressures on Pennsylvanians who reside in PECO's service territory. It bears repeating: Rates for basic services are not just and reasonable if they are not also affordable for a broad swath of the population served.

One way to contextualize how rising gas costs factor into this larger picture is to look at energy burdens. A household's energy burden is the percentage of annual household income spent on annual energy bills. High energy burdens in low-income households have been linked to adverse

[27] Pa P.U.C. v. PECO Energy Company – Electric Division, Docket No. R-2024-3046931, PECO Electric Customer Notice (Initial Filing, Volume I).
[28] *See* Pa. P.U.C. v. Aqua Pennsylvania Inc, Docket No. R-2024-3047822 (proposing a 18.7% increase in water rates); Pa. P.U.C. v. Aqua Pennsylvania Wastewater Inc, Docket No. R-2024-3047824 (proposing a 20.1% increase in wastewater rates).

outcomes in mental health, respiratory health, and child health, as well as higher rates of food insecurity.[29] High energy burdens can also limit a household's ability to benefit from economic development in their communities.[30] One study of household energy burdens, categorizing energy burdens as "high" (>6%) and "severe" (>10%), found that in the Philadelphia metro area, households with an FPL at or under 200% had a median energy burden of 9.5%, and 25% of low-income households had an energy burden greater than 19.1%.[31] PECO's proposed rate increase will raise energy burdens and compound existing unaffordability.

Q: Is there other evidence that PECO's low-income customers already struggle to afford and maintain service to their homes?

A: Yes. Even at current rates, low-income customers struggle to afford to maintain PECO gas service in their homes, leading to increasingly high levels of involuntary terminations. In 2023, PECO terminated gas to 20,767[32] households for nonpayment. This is an involuntary termination rate of 4.1% for all PECO Gas residential customers.[33] In comparison, the involuntary termination rate for PECO Gas's confirmed low-income residents was 20.9%.[34] This means that, in 2023, one in every five low-income households in PECO's service territory has been forced to go without gas service for home heating, cooking, and hot water necessary for families to keep warm, feed their family, and practice basic hygiene. Involuntary terminations have a deep and lasting impact on the health, safety, and welfare of Pennsylvania families and their surrounding communities.

[29] Diana Hernandez, Energy Insecurity and Health: America's Hidden Hardship (June 29, 2023); https://www.healthaffairs.org/do/10.1377/hpb20230518.472953/.
[30] Drehobl, Ariel et al., How High Are Household Energy Burdens? An Assessment of National and Metropolitan Energy Burden across the United States at 6 (Sept. 2020), https://www.aceee.org/sites/default/files/pdfs/u2006.pdf.
[31] *Id.* at 16-17.
[32] OCA-II-1(a).
[33] Based on average number of residential customers of 504,918 in 2023. OCA-II-1(a).
[34] OCA-II-1(a) (average of 31,018 confirmed low income customers in 2023; 6,487 confirmed low income termination in 2023).

Finally, as I will address in further detail below with regard to PECO's Matching Energy Assistance Fund (MEAF), PECO's low-income customers carry substantially higher levels of arrears compared to average residential consumers.[35]

Q: How does the involuntary termination of gas service impact a household?

A: Involuntary loss of gas can and does have a deep and lasting impact on the health and well-being of an entire household – as well as the community as a whole.

The overwhelming energy burden on low income households makes it difficult to pay for other basic necessities, has substantial and long-term impacts on mental and physical health, and creates serious risks to the household and the larger community.[36] According to the Energy Information Administration (EIA) Residential Energy Consumption Survey (RECS) released in 2022, 27.2% of United States residents reported experiencing energy insecurity; 19.9% reported reducing or forgoing food or medicine to pay for energy costs; and 10% reported keeping their homes at unhealthy temperatures because they could not afford to pay for energy.[37] Importantly, energy insecurity is more pronounced for low income Black families. EIA's RECS data revealed that 52% of Black and African American households experience energy insecurity, compared to 23.2% of white households – and nearly 40.2% of Black and African American households report foregoing food or medicine to pay energy costs, compared to 16.8% of white households.[38] These disparities are driven in large part by inequities in housing quality and, in turn, home efficiency.

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[35] See 2022 Universal Service Report at 30.
[36] See United States Energy Information Administration, 2020 Residential Energy Consumptions Survey, Table HC11.1 Household energy insecurity, 2020 available at: https://www.eia.gov/consumption/residential/data/2020/hc/pdf/HC%2011.1.pdf; see also NEADA, 2018 National Energy Assistance Survey, at 17, 20 (Dec. 2018), http://neada.org/wp-content/uploads/2015/03/liheapsurvey2018.pdf (hereinafter NEADA Survey).
[37] United States Energy Information Administration, 2020 Residential Energy Consumptions Survey, Table HC11.1 Household energy insecurity, 2020 available at: https://www.eia.gov/consumption/residential/data/2020/hc/pdf/HC%2011.1.pdf .
[38] Id.

The loss of gas service can often mean that a household is unable to use their primary heating source in the winter. When a household is unable to use a primary or secondary heating system, they often resort to dangerous and/or high-cost heating, cooking, and lighting alternatives – such as use the of alternate fuels or portable generators – which increases the risk of carbon monoxide poisoning and home fires.

The loss of gas service can also have a significant impact on the ability of vulnerable populations to manage medical conditions, and is particularly dangerous for certain groups – including seniors, families with young children, and individuals with a disability – each of whom are more likely than other residential households to experience poverty and income insecurity.[39]

The loss of essential utility service is also a common catalyst for eviction, housing instability, and – ultimately – homelessness.[40] As a result, communities must often expend an even greater level of resources to address housing issues which quickly escalate following involuntary termination. Indeed, a 2016 report of Pennsylvania's Joint State Government Commission on Homelessness found that utility assistance ranked in the top three types of assistance noted by survey respondents (24.1 percent) that would have prevented homelessness.[41] Utility insecurity and resulting payment trouble is increasingly recognized as a predictor of first-time

[39] Charlie Harak, Olivia Wein, NCLC, Protecting Seriously Ill Consumers from Utility Disconnections: What States Can Do to Save Lives Now (Sept. 29 2022), at 5-6, available at: https://www.nclc.org/resources/report-protecting-seriously-ill-consumers-from-utility-disconnections-what-states-can-do-to-save-lives-now/.

[40] See Joint State Gov't Comm'n, Gen. Assembly of the Commw. of Pa., Homelessness in Pennsylvania: Causes, Impacts, and Solutions: A Task Force and Advisory Committee Report (2016), http://jsg.legis.state.pa.us/resources/documents/ftp/documents/HR550%201%20page%20summary%204-6-2016.pdf.

[41] Joint State Government Commission, Homelessness in Pennsylvania: Causes, Impacts, and Solutions, at 112, 157, 160 (April 2016), available at: http://jsg.legis.state.pa.us/publications.cfm?JSPU_PUBLN_ID=447 ("When asked if there were any services that may have prevented them from becoming homeless, the women responded overwhelmingly that assistance with past-due rent and utilities, security deposit, and first and last months' rent would have been most beneficial.").

homelessness,[42] confirming the need to improve timely access to rate assistance programs to prevent the more costly consequences of homelessness to individuals, families, and communities.

Ultimately, an increase in rates for gas service such as the increase proposed in the present case will compound existing unaffordability for vulnerable households and is likely to result in a corresponding increase in uncollectible expenses and involuntary payment-related terminations. These impacts can and do have deep and lasting impacts on the health, stability, and well-being of impacted households, and the welfare of communities as a whole.[43] As such, no rate increase should be permitted without first addressing the current affordability gap for PECO's low-income customers.

Q: Are customers who enroll in PECO's Customer Assistance Program (CAP) insulated from the financial impact of the proposed rate increase?

A: While CAP provides critically important rate assistance to low-income customers, the program does not fully insulate participants from the financial impact of the proposed rate increase. At the current rates, CAP customers in 2023 experienced 3,986 involuntary terminations for nonpayment.[44] In section III, below, I will discuss the impact of the proposed rate increase on CAP customers and the programmatic features driving persistent unaffordability within PECO's CAP design.

Q: Will the federal Low Income Home Energy Assistance Program (LIHEAP) mitigate the financial impact of the proposed rate increase on low-income households?

[42] Colin Middleton, Kim Boynton, David Lewis & Andrew M. Oster, The Value of Utility Payment History in Predicting Homelessness, PLOS (Oct. 9, 2023), available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0292305.
[43] Id.
[44] CAUSE-PA-I-6(d)

A: No. Funding for LIHEAP is limited. In 2023, only 5,541 PECO Gas customers received LIHEAP cash grants, and 1,445 received LIHEAP crisis grants.[45] This means that only 17.86% of PECO's confirmed low-income customers were able to access assistance through LIHEAP to help pay their PECO bill.[46]

LIHEAP is not designed nor is it sufficient to mitigate the financial impact of the proposed rate increase on low-income households. Unlike food and medical assistance, which is available to all eligible households who apply, there is a finite amount of funding available for LIHEAP each year.

As noted, PECO's rate proposal would increase residential bills by an average of $16.15, or approximately $194 annually.[47] During the most recent LIHEAP season, the average cash grant amount for PECO gas customers was $559. [48] If this trend of the average cash grant continues into future LIHEAP seasons, the proposed rate increase alone will consume at least 34.7% of the average cash grant.

However, going forward, LIHEAP grants are anticipated to decrease. Pennsylvania's Department of Human Services, which administers LIHEAP, recently published its draft state plan for the 2024-2025 LIHEAP season and proposed a minimum cash grant of $200 - $100 less than the current $300 minimum grant level.[49] As a result, average LIHEAP awards in the upcoming program year will decline significantly across all regions of the state. This proposed decrease is in

[45] OCA-II-1(a).
[46] OCA-II-1(a) (31,018 confirmed low income customers; 5,541 LIHEAP Cash grants).
[47] PECO Customer Notice (Initial Filing, Volume I).
[48] Attachment OCA-II-1(a).
[49] The proposed State Plan for 2024-2025 was published in the PA Bulletin on June 8, 2024. *See* **54 Pa.B. 3301.** The proposed plan can be accessed at https://www.pa.gov/content/dam/copapwp-pagov/en/dhs/documents/services/assistance/documents/heating-assistance_liheap/LIHEAP-Proposed-2025-State-Plan-Clean.pdf

response to declining levels of federal funding, following expiration of pandemic-related assistance. In section III below, I recommend that PECO automatically enroll LIHEAP recipients into CAP. If PECO does so, this would help to protect LIHEAP recipients from the impact of the rate increase.

III. PECO'S UNIVERSAL SERVICE PROGRAMS

a. Customer Assistance Program (CAP)

Q: How is PECO's current Customer Assistance Program designed to provide bill assistance to low-income customers?

A: PECO's current CAP is known as a Percentage of Income Payment Program (PIPP). Under PECO's CAP PIPP design, CAP customers receive a monthly bill based on the lesser of their actual bill or their applicable CAP PIPP rate (below).

TABLE 3: PECO Energy Burdens for CAP PIPP[50]

	Gas
0-50% FPL	4%
51-100% FPL	6%
101-150% FPL	6%

Q: Does PECO's CAP PIPP design insulate CAP customers from the proposed rate increase?

A: In part, yes. PECO's PIPP design would limit the financial impact of any approved rate increase to the maximum applicable percentage of income – to the extent low-income households are able to access and enroll in the program. But even for enrolled CAP customers, the PIPP design

[50] PECO USECP at 4.

does not *eliminate* the financial impact on CAP customers. The impact of any approved rate increase will only be mitigated to the extent that a CAP PIPP customer was already paying a percentage of income based rate. Otherwise, any CAP customer receiving an *actual* bill rate – as opposed to a PIPP rate – will experience the full impact of any approved rate increase in that month. As rates increase, and more CAP participants shift from the actual to the PIPP rate, the cost of CAP will also increase.

Q: Please describe the current landscape of PECO's CAP enrollment.

A: As of January 2024, there were 23,534 PECO Gas customers enrolled in CAP – just 29% of PECO's estimated eligible low-income customer base.[51] In other words, PECO's CAP reaches less than 1 in 3 estimated eligible households.

Q: Please explain why some customers who may be eligible for CAP would not be enrolled in CAP.

A: In my experience, there are a few reasons why potentially CAP eligible customers may not be enrolled in CAP. Some households are not aware of the program, do not know how to apply, or face certain barriers to completing the application process. There is also a subset of potentially CAP-eligible customers who are aware of and have applied for or previously participated in CAP, but are not currently enrolled.

First, PECO requires all CAP participants to periodically submit income statements and household information to recertify eligibility for the program. If a participant fails to submit income documentation within their recertification period, they are removed from the program.

[51] Attachment CAUSE-PA-I-16 (a7). In 2023, PECO Gas had 79,853 estimated low-income customers. Attachment OCA-II-1(a).

PECO paused removals from CAP for failure to recertify from May 2020 to August 2023, due to the COVID-19 pandemic.[52] For the months of September through December 2023, 1,578 customers were removed from CAP for failure to recertify.[53] While some of these customers may not have recertified because they are no longer eligible for CAP, it is likely many others had no change in income but did not notice their recertification letter or were unable to overcome the logistical hurdle of re-sending income documentation. On November 8, 2023, PECO held a collaborative to address concerns with CAP recertification. In that collaborative, PECO noted that 72% of failures to recertify were due to income verification documents not being returned.[54] This is consistent with my experience. I have served hundreds of low-income clients over the years who missed their CAP recertification window and are subsequently removed from CAP – despite their ongoing eligibility for the program, causing a cascade of avoidable consequences to the household. In my experience working directly with low-income clients, some of the most vulnerable low-income households – including seniors, parents with young children, and individuals with a disability or medical condition – are more likely to miss their recertification window as a result of the burdens associated with the recertification process.

Q: Does PECO propose to increase CAP enrollment in this case?

A: No, PECO does not propose or otherwise discuss increasing its CAP enrollment in this proceeding. Increasing CAP enrollment is critical to better address energy insecurity at existing rates and, in turn, to insulate income eligible customers from the full brunt of any approved increase in rates as a result of this proceeding. I note that improved CAP enrollment is not only

[52] CAUSE-PA I-18(a).
[53] Attachment CAUSE-PA-1-18(a). At this rate of removal, 4,734 CAP customers would have been removed for failure to recertify their income for a full 12 month period.
[54] Attachment CAUSE-PA-I-38(a) at 3.

sound public policy to ensure low-income households have equitable access to services, it is also necessary for full compliance with various regulatory and statutory obligations – including PECO's obligation to provide customers with the most advantageous rate.[55] For low-income customers, the most advantageous rate is most often the applicable CAP rate. In note that PECO's adherence to various legal standards will be addressed by counsel for TURN and CAUSE-PA through briefing.

Q: Do you have any recommendations regarding how PECO can increase CAP enrollment?

A: Yes. I recommend PECO make two critical changes to its policies and procedures to improve enrollment in CAP, ensuring low-income households are better matched with the right rate – before they accrue unmanageable arrears.

First, PECO should initiate routine universal service screening for new and moving customers, and during non-emergency calls or contacts. Routine income screening would not only improve referrals to and enrollment in CAP, it would also help to improve application of other critical income-based protections – including adherence to the statutory prohibition on security deposits for low-income customers and protection from involuntary termination in the winter months.

PECO should also increase CAP participation by automatically enrolling and/or recertifying customers for CAP following receipt of a LIHEAP grant. Customers who receive a LIHEAP grant have already had their income vetted through the Department of Human Services income screening process, and should not be required to complete a duplicative and

[55] *See, e.g.,* 66 Pa. C.S. §§ 1301, 1303, 1410.1.

administratively burdensome enrollment process to participate in CAP. I note that utilizing LIHEAP data in this manner to automate enrollment will also help to address the concerns Ms. Golden noted that increased outreach is driving an increase in referrals.

Q: With regard to your recommendation to initiate routine screening process to facilitate universal service program enrollment, could you please explain how that would work?

A: If an applicant or customer contacts PECO, the customer service representative should ask whether the household would like to share their income information to determine if they are eligible for a reduced rate or other assistance. If the applicant or customer opts to share their income, the customer service representative should ask whether the household's estimated gross household income is within the eligibility range for its universal service programs. If the customer or applicant indicates verbally that their income is within the eligibility range, they should be provided with information about CAP and other available universal service programs and should be transferred to someone who can assist with enrollment. If necessary, PECO should establish a warm transfer process that allows potentially eligible households to be transferred directly to the appropriate universal service program administrator.

Note that, consistent with my recommendations below regarding PECO's security deposit policies and practices, this routinized screening process will help to identify households for which PECO is statutorily prohibited from assessing and collecting a security deposit.[56] If a household indicates that they have income at or below 150% FPL, the customer service representative should not assess a security deposit and/or should release any currently held deposits on their account.

[56] See 66 Pa. C.S. § 1404(a.1); 56 Pa. Code §§ 56.32(e), 55.53(f).

Q: With regard to your recommendation to institute auto-enrollment and recertification of LIHEAP recipients into CAP, can you explain recent developments that will allow PECO to institute such a process?

A: Yes. After an extended stakeholder process with its LIHEAP Advisory Committee, which I chair, the Department of Human Services will begin sharing LIHEAP recipient income and household composition data with utilities at the start of the 2024-2025 LIHEAP program. Notably, the stakeholder process to develop this policy included several representatives from PECO, as well as the Public Utility Commission. If PECO uses DHS' pre-verified income information to enroll customer accounts in CAP and recertify accounts that are already enrolled in CAP, fewer customers will be removed from CAP for failure to recertify, and CAP participation will increase. Reliance on verified income data from DHS will, in turn, simplify burdensome paperwork requirements for both the applicant and PECO's CAP administrator, helping to reduce duplicative administrative costs. PECO already acknowledges that LIHEAP eligibility is an effective proxy for CAP eligibility in their practice of requiring recertification only every 4 years, rather than every 2 years, for customers who receive LIHEAP.[57]

Q: How many households would benefit from auto enrollment?

A: In LIHEAP season 2022-2023, 5,541 PECO gas customers received cash grants, and 1,445 received Crisis grants.[58] While there is some overlap between LIHEAP recipients and CAP customers, it is still likely that many households could benefit from either auto-enrollment or auto-recertification. Auto-enrollment and auto-recertification would maximize the impact of any

[57] PECO USCEP at 7.
[58] Attachment OCA-II-1(a).

increased LIHEAP enrollment as a result of PECO's outreach efforts. At the same time, automated enrollment would help reduce administrative costs to process increased program referrals.

Q: Has PECO considered auto-enrollment of LIHEAP recipients into CAP?

A: Yes. However, when asked if PECO plans to implement automatic enrollment, PECO stated:

> "As stated previously, the Company [PECO] supports exploring opportunities to streamline universal service processes for eligible customers. However, any changes to the enrollment process should preserve the ability of customers to affirmatively choose whether or not to enroll in CAP or another universal service program. While enrollment may offer benefits to a customer in the form of bill discounts, it may also restrict other types of customer activities. For example, if a PECO customer is enrolled in CAP they cannot shop for an electric supplier or utilize budget billing. Customers should have the opportunity to understand the specific program benefits and requirements before they are enrolled in a universal service program." [59]

Q: Can you address PECO's concerns about the ability of a customer to "affirmatively choose" whether to enroll in CAP?

A: Yes. First, pursuant to its new data sharing policy, DHS may only share data if a LIHEAP recipient affirmatively indicates on the LIHEAP application that they would like their information to be shared with their utility for the purpose of facilitating their participation in a utility-run universal service program. Second, as an added confirmation, PECO could implement a simple notice procedure that informs customers of the auto-enrollment procedure and allows customers to opt-out if they so choose. In my experience, it is exceedingly rare for a low-income customer to turn down comprehensive rate assistance through CAP once they are fully informed about the benefits of the program. I believe these two processes address PECO's concerns.

[59] CAUSE-PA I-39.

Q: Has PECO addressed the possibility of auto-recertification?

A: No. PECO only addresses auto-enrollment. However, auto-recertification is also critical. In the last four months of 2023, 1,578 customers were removed from CAP for failure to recertify.[60]

Q: What do you recommend regarding the use of LIHEAP data for auto-enrollment into PECO's CAP?

A: Because auto-enrollment includes complications that would warrant further examination by PECO, the Commission, and stakeholders, such as the treatment of pre-program arrears for customers that previously participated in CAP, I recommend that PECO be required to file a Petition to amend its USECP to permit auto-enrollment.[61] In doing so, PECO should work with its Universal Services Advisory Council (USAC) to develop the details of the program, including customer communications. Within 90 days of the final order in this case, PECO should file a petition seeking approval to implement an auto-enrollment process for CAP that includes amended budget projections and, in turn, proposes any amendments to its USECP which are necessary to facilitate auto-enrollment.

All households automatically enrolled in CAP through this process should be marked as confirmed low-income customers and eligible for reconnection waiver, security deposit exemption, and winter shutoff protections. Taking this approach will help implement LIHEAP auto-enrollment in a useful and meaningful way to improve rate affordability.

Q: What do you recommend regarding the use of LIHEAP data for auto-recertification into PECO's CAP?

[60] CAUSE-PA-1-18(a)

[61] These complications include whether to provide preprogram arrearage forgiveness to auto-enrolled customers and how to manage arrears for customers returning to CAP through auto-enrollment.

A: Auto-recertification for customers already on CAP is much simpler than auto-enrollment. I note that on June 13, 2024, the Commission issued an Order encouraging all utilities to participate in DHS' LIHEAP data sharing, and setting up a process by which utilities could file a letter with the Commission outlining how the utility will use the shared data to streamline program outreach and enrollment and/or to implement auto-recertification.[62] While the Commission did not require utilities to automatically enroll customers into CAP as I suggest above, it was explicit in noting that its Order encouraging adoption of streamlined outreach and enrollment and auto-recertification did not foreclose consideration of other beneficial uses for the data to improve access to a utility's universal service programs – such as auto-enrollment.[63] As a condition to granting any approved increase in rates through this proceeding, and to the extent PECO has not already done so by the conclusion of this proceeding, I recommend the Commission require PECO to participate in the DHS data-sharing program and, in turn, to implement CAP auto-recertification. PECO should, in turn, file a letter with the Commission that includes the necessary information, as outlined in the June 13, 2024 Order on LIHEAP Data Sharing.

[62] 2023 Review of All Jurisdictional Fixed Utilities' Universal Service Programs, Docket No. M-2023-3038944, Order (June 13, 2024); https://www.puc.pa.gov/pcdocs/1833698.pdf
[63] *Id.* at 3 n.1.

b. Low Income Usage Reduction Program

Q: What is LIURP?

A: LIURP is a critical universal service program intended to improve bill affordability, reduce arrearages and termination rates over the long term, and work in tandem with CAP to help reduce uncontrollably high usage attributed to home energy inefficiencies that low-income households cannot afford to address on their own.[64] Throughout Pennsylvania, gas heating customers who receive LIURP services achieve annual bill savings that average approximately $220 (14.5%) per year, or roughly $18.33 per month.[65] As these savings show, bill reduction through comprehensive energy efficiency and conservation efforts improve affordability and help to ensure that low-income customers remain connected to service in the face of rising rates.

Despite the value of LIURP at reducing usage and resulting energy burden, PECO's LIURP program is not operating at a rate sufficient to fulfill the identified need in its service territory for comprehensive usage reduction services. According to PECO's most recent third-party universal service needs assessment, conducted in 2021, PECO Gas had an estimated 40,468 LIURP income-eligible households in its service territory.[66] According to that needs assessment, historically, 52% of households that are income eligible also meet the LIURP usage requirements.[67] For PECO Gas, this would be 21,043 households. Comparatively, PECO completed very few LIURP jobs as shown in the following table. Since PECO's last needs assessment, PECO has served just 944 households – roughly 4.5% of the estimated eligible homes in 2021. This issue is further exacerbated for

[64] 52 Pa. Code § 58.1.
[65] 2022 Universal Service Report at 57.
[66] PECO Universal Service and Energy Conservation Plan (2019–2028) at Addendum E, 53.
[67] PECO USECP at 60.

tenants who are significantly underserved by the program. Since 2018, PECO has served 3,634 homeowners but only 1,148 tenants, only about 1/3 of homeowners served.[68]

TABLE 4: LIURP Jobs Completed by Year[69]

Year	2018	2019	2020	2021	2022	2023
Completed LIURP (Gas) Jobs	1699	1288	146	376	312	256

In 2020, there was a precipitous drop in LIURP production rates, which was not unexpected due to COVID-era restrictions. However, PECO's LIURP job completion rate has been very slow to recover: there were less than a quarter the number of LIURP jobs completed in 2023 compared to 2019. To meaningfully remediate the unaffordability of rates at both current and proposed levels, and address well documented disparities in energy burden for low-income customers driven by inefficiencies in the home,[70] PECO must expand usage reduction services to more households by adopting critical changes to its LIURP policies, procedures, and budget.

Q: Is PECO's Low Income Usage Reduction Program adequately funded to remediate the impact of the proposed rate increase on low-income households?

A: No. PECO's LIURP program could play an important role in mitigating unaffordability for low-income consumers, and I am a strong supporter of robust energy efficiency and weatherization to reduce low-income bills over the long term. PECO is required to operate universal service programs, which must be appropriately funded and available.[71] But PECO's LIURP is not adequately funded nor appropriately available to help reduce unnecessarily high usage and

[68] CAUSE-PA-I-25.
[69] CAUSE-PA-I-21.
[70] Diana Hernández, Energy Insecurity And Health: America's Hidden Hardship, Health Affairs Health Policy Brief, (June 2023) ("The physical manifestations of energy insecurity include dated, malfunctioning, or nonexistent heating and cooling equipment; poor insulation; drafts; and reliance on older, less efficient lighting systems and domestic appliances such as refrigerators, stoves, and hot water heaters.").
[71] 66 Pa. C.S. § 2204(8).That statute specifically defines universal service to include Low Income Usage Reduction Programs. 66 Pa. C.S. § 2202.

correspondingly unaffordable energy burdens, which will be further exacerbated by any approved rate increase. To help reduce increasing costs associated with universal service programs as a result of higher rates, it is critical for PECO to improve investments in comprehensive, long-term energy reduction programs for its low-income customers.

Currently, LIURP only serves a small portion of those in need of comprehensive energy efficiency and usage reduction services. As discussed above, PECO completed 256 LIURP jobs in 2023, just over 1% of the 21,043 potentially eligible households.[72] For LIURP to make a meaningful impact to remediate PECO's existing rate unaffordability *and* offset any impact of the proposed rate increase, PECO must make critical changes to its LIURP budget to expand usage reduction services to more households.

Q: How does the PECO Gas LIURP budget compare to other Gas Distribution Companies?

As it stands, PECO has a disproportionately low LIURP budget compared to other gas distribution companies (NGDCs). PECO Gas's LIURP budget provides the lowest LIURP funding among all NGDCs.

[72] PECO USECP at 53; CAUSE-PA-I-26.

TABLE 5: NGDC 2023 Projected LIURP Budget[73]

NGDC	LIURP Budget (2023)	Residential Customers (2022)
Columbia	$5,893,673	409,611
NFG	$3,388,596	196,741
PECO-Gas	**$3,150,000**	**500,154**
Peoples	$3,466,437	594,250
PGW	$8,105,134	487,336
UGI Utilities – Gas	$3,964,350	618,589
Total/ Industry Average	$27,968,190	2,806,681

If PECO continues to serve the same number of customers at current spending levels, it would take PECO more than 80 years to serve all LIURP eligible households. PECO's current investment is woefully inadequate to meet the need for comprehensive usage reduction services in PECO's service territory.

Q: Would PECO's proposed increase to the fixed charge affect the Company's LIURP program?

A: Yes. PECO's proposal to substantially increase the fixed portion of the residential customer bill will undermine the explicit goals of the Low-income Usage Reduction Program ("LIURP"), which is intended to help low-income customers to reduce their *bills* and to "decrease the incidence and risk of customer payment delinquencies and the attendant utility costs associated with uncollectible accounts expense, collection costs and arrearage carrying costs."[74] By reducing the

[73] 2022 Universal Service Report at 7, 54.

[74] 52 Pa. Code § 58.1 ("The programs are intended to assist low-income customers conserve energy and reduce residential energy bills. The reduction in energy bills should decrease the incidence and risk of customer payment delinquencies and the attendant utility costs associated with uncollectible accounts expense, collection costs and arrearage carrying costs.").

amount of bill savings that can be obtained through LIURP participation, the proposed increase to the fixed charge threatens the continued effectiveness of ratepayer investments intended to reduce energy consumption, delinquencies, collections, and uncollectible costs. The explicit goals of the LIURP program will be more difficult to achieve if the fixed portion of the bill is increased.

This is even more critical for households with income above 150% FPL but less than 200% FPL who are ineligible for CAP or LIHEAP but are eligible for energy efficiency and conservation services through LIURP or the federal Weatherization Assistance Program ("WAP") – both of which have income guidelines of up to 200% FPL. It is critical that all low-income households retain the ability to reduce their monthly energy costs through adoption of comprehensive energy efficiency and conservation programming.

Q: Do you have recommendations that would help PECO's LIURP program reach a greater number of homes in need of service?

A: Yes. I recommend that PECO increase its LIURP budget by $1,850,000, bringing its annual LIURP budget for gas customers to $5,000,000. This will bring greater parity to PECO's LIURP budget (consistent with similarly sized NGDCs), will help reduce the financial impact of any rate increase approved in this case on low-income high usage customers, will help to reduce the cost of providing rate assistance through CAP, and will better meet the identified need for LIURP services within a more reasonable period of time. At this spending level, PECO's total per customer LIURP spend would still be well below LIURP spending levels for similarly sized NGDCs in Pennsylvania.[75]

In addition to increasing the budget and, in turn, the availability of comprehensive usage reduction services, PECO must also ensure that high usage CAP customers are actively recruited

[75] See 2022 Universal Service Report at 7, 54.

for participation in CAP, as doing so would help reduce the cost of the CAP program for all residential customers. PECO should improve its direct solicitation and recruitment of high usage CAP participants to participate in LIURP.

Finally, I recommend that PECO take steps to improve services and accessibility under its LIURP for tenants, increase efforts to leverage and coordinate LIURP services with other local, state, and federal home repair, efficiency, and weatherization programs.

Q: How can PECO improve delivery of LIURP services to tenants?

A: As discussed above, tenants are not served at rates consistent with LIURP services to homeowners and residents of single-family properties. PECO should be required to ensure that tenants can receive LIURP services.

With regard to improving LIURP services to tenants, I recommend that PECO be required to provide a report to its USAC within 180 days of effective date of rates in this proceeding about the barriers to tenant participation and what measures the company can feasibly provide to tenants without landlord approval. After reviewing the data, PECO should make changes to its process for outreach to tenants and its landlord approval process in consultation with its Advisory Committee.

Q: How can PECO better coordinate with complementary home repair, efficiency and weatherization programs administered at the local, state, and federal level?

A: PECO's service area has a significant amount of old housing stock that requires large amounts of energy to heat. Recent state and federal legislation has increased the resources available for home repairs, efficiency, and weatherization.[76] Since the passage of the Whole Home Repair Act there has been an increase in the home repair programs offered by local agencies that could

[76] Notably, the Whole Home Repairs Act passed at the state level, and the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) were passed at the federal level.

reduce the number of home deferrals and/or facilitate coordinated installation of efficiency and usage reduction improvements.[77] Moreover, since passage of the Infrastructure Inflation and Jobs Act in 2021, there has been increased funding available through the Weatherization Assistance Program (WAP) for both home repair and weatherization projects, which can be leveraged with LIURP to help improve the comprehensiveness of services delivered to low-income customers. By making critical repairs to residents' homes, and leveraging other weatherization dollars, these programs can help lower overall energy burdens and mitigate issues that would otherwise prevent LIURP measures from being installed. PECO has stated that it does not coordinate with external weatherization or home repair programs, and in fact appears to have very little contact with any of the home repair or weatherization agencies in its service territory.[78] Coordinating with these programs would allow PECO to extend by the reach and effectiveness of their LIURP program.

However, it seems like PECO has done very little to attempt to adjust its processes and procedures to effectively leverage and coordinate with any external entity – deferring these activities to the discretion of its program vendors. In response to discovery, PECO indicated that it has not had a single discussion with any of the local WAP providers across its service territory regarding possible coordination of LIURP with WAP or LIHEAP Crisis Interface (emergency furnace repair).[79]

I recommend that PECO actively coordinate delivery of services with other local, state, and federal efficiency, weatherization, and home repair programs that can help remediate health, safety, and other home repair issues that prevent the installation of comprehensive efficiency

[77] These programs include: Montgomery County's Owner-Occupied Housing Rehabilitation Program, Montgomery County's Whole Home Repair Program, Bucks County Home Repair Program and Delaware County's Whole Home Repair Program.
[78] CAUSE-PA-I-29.
[79] CAUSE-PA-TURN II-1, 5.

measures and cannot be resolved through PECO's health and safety budget alone. More specifically, to achieve these outcomes, PECO should host a series of collaborative meetings with members of its Universal Service Advisory Committee (USAC), as well as local weatherization and home repair program administrators across its service territory, to identify concrete ways to leverage and coordinate LIURP with home repair and weatherization programs across its service territory. Within six months of a final order in this rate case, PECO should provide to the Commission and its USAC with a report that addresses:

1) How PECO intends to coordinate its delivery of LIURP services with home repair and weatherization providers
2) Identified barriers to coordination, and the efforts it has made or intends to make to address those barriers
3) Next steps PECO will be taking to eliminate identified barriers, including but not limited to hosting additional collaboratives, amendments to PECO's USECP, amendments to the enrollment and/or service delivery process, improved training and/or communication channels across contractor networks and/or program administrators, and/or requests to waive regulations.

Coordination is critical – PECO must leverage its LIURP investments with other programs to bring costs down both for low-income customers and all customers through reduced CAP costs, uncollectible expenses, and other collections-related costs.

c. Matching Energy Assistance Fund

Q: Can you describe PECO's Hardship Funds?

A: Yes. As part of its Commission-approved Universal Service and Energy Conservation Program portfolio, PECO is required to operate a hardship fund program, which is subject to the oversight of the Public Utility Commission. PECO's hardship fund program is known as the Matching Energy Assistance Fund (MEAF). Currently, customers can apply for MEAF grants of up to $500 per commodity, subject to the following eligibility criteria:

- Household income is at or below 200% FPL;
- Service is in threat of termination or has been terminated for non-payment;[80]
- The customer has not received a MEAF grant in the past 12 months; and
- The grant amount must bring the account balance to zero, either on its own or in combination with other third-party funding, like a LIHEAP grant or a customer payment.[81]

Q: Why is MEAF important?

A: As a hardship fund, MEAF is an emergency fund to help resolve an acute financial hardship, and as a result, provides an alternative to traditional collections methods. It is intended to help customers maintain service, in turn reducing uncollectible expenses for the company. Because LIHEAP assistance in Pennsylvania is seasonal, and is typically available from November through April, MEAF grants are often the only source of assistance for PECO customers facing involuntary termination in the summer months.

[80] PECO USECP at 19-20. Note that customers remain eligible for MEAF assistance if they use a medical certificate or enter into a payment arrangement after applying for MEAF. *Id.* at 20.
[81] PECO USECP at 19.

Q: How is MEAF funded?

A: MEAF is funded by a combination of customer and employee contributions and a golf fundraiser. These donations are then matched by shareholder funds as grants are awarded.[82]

Since 2020, PECO has raised the following amounts of voluntary contributions for its Matching Energy Assistance Fund (exclusive of PECO's matching funds):

TABLE 6: MEAF Contributions Collected by PECO[83]

County	**2020**	**2021**	**2022**	**2023**
Employee/Customer Donation	$106,721	$104,021	$96,757	$90,608
Shareholder Donation (not including matching funds)	$0	$0	$0	$100,000
Golf Fundraiser	$26,100	$33,300	$47,345	$56,345
Total	**$132,821**	**$137,321**	**$144,102**	**$246,953**

These funds were then distributed to the counties as follows:

TABLE 7: Contributions Distributed to MEAF Agencies[84]

County	**2020**	**2021**	**2022**	**2023**
Bucks	$22,224	$23,124	$24,480	$45,051
Chester	$22,224	$23,124	$24,480	$45,051
Delaware	$22,224	$23,124	$24,480	$45,051
Montgomery	$22,224	$23,124	$24,480	$45,051
Philadelphia	$42,224	$43,124	$44,480	$65,051
York	$1,700	$1,700	$1,700	$1,700
Total	**$132,821**	**$137,321**	**$144,102**	**$246,953**

[82] Attachment CAUSE-PA-II-15(a).
[83] Attachment CAUSE-PA-II-16(a).
[84] Attachment CAUSE-PA-II-14(a) at 4.

It is my understanding that the agencies use these disbursements to issue partial grants to eligible customers, and that agency-issued grants are then matched by PECO with shareholder funds, dollar for dollar, to make up the full awarded grant amount.[85] For example, if a customer is eligible for a $500 MEAF grant, the MEAF agency would issue a check to PECO for $250 from the pot of funds identified in Table 7, above. Once that check is received, PECO would apply a matching award (in this example, $250) to the customer's account once the agency's grant is received. In response to discovery, PECO produced a MEAF flow chart, attached as Appendix B to my testimony, which helps to illustrate the manual, multi-step process PECO currently uses to issue matching funds to individual accounts following receipt of funds from a MEAF agency. I will discuss this process further below.

In addition to the funds identified above, and in accordance with the Settlement in PECO's 2022 gas base rate case, PECO guaranteed to provide shareholder funding for MEAF grants of up to $300,000 annually, regardless of the amount of customer donations in a given year.[86] Based on PECO's testimony, my understanding is that for 2023 (the first year this settlement obligation took effect, PECO matched approximately $90,000 in grants –leaving a remaining shareholder match balance of $210,000. As I understand it, this $210,000 was distributed among the MEAF agencies in early 2024 and, presumably, is now available for those agencies to make grants.[87]

[85] *See* Attachment CAUSE-PA-II-14(a) at 4 ("[t]he funding is collected and disbursed monthly to an agency providing service in the six counties making up PECO's service territory. All contributions made to MEAF are provided to the agencies as no contribution dollars are used for administration of the program. Additionally, PECO matches each contribution dollar for dollar.").
[86] PECO St. 10 at 9:18-22.
[87] PECO St. 10 at 9:22-10:3.

Q: How does PECO's MEAF spending – in terms of actual grant dollars awarded – compare to other energy utilities across Pennsylvania?

A: PECO distributes substantially fewer hardship fund dollars compared to its peer utilities, as reflected in the below table. PECO Gas' half a million residential customers makes it similar in size to most of the other natural gas utilities in Pennsylvania. Yet, excluding 2022, when the Commission approved PECO to automatically apply $3.7 million of unspent LIURP funds to customer accounts in the form of hardship fund grants,[88] the amount of hardship grant benefits provided to PECO customers was the lowest in Pennsylvania and far below all of its peer NGDCs.

TABLE 8: Hardship Fund Grant Benefits Distributed[89]

Utility	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	Total Residential Customers (2022)
Columbia	$487,716	$426,042	$487,716	$1,239,146	$489,884	409,611
NFG	$144,638	$62,060	$15,001	$16,402	$68,553	196,741
PECO-Gas	$44,967	$55,795	$2,055	$14,658	$581,255*	500,154
Peoples	$1,100,000	$1,099,720	$1,113,090	$1,317,840	$1,221,974	594,250
PGW	$1,058,407	$1,701,062	$253,992	$413,586	$972,777	487,336
UGI - Gas			$474,951	$1,802,592	$1,003,837	618,589

In 2023, PECO-Gas distributed just $27,005 in hardship fund dollars. [90]

PECO distributes substantially fewer hardship fund dollars compared to its peer utilities, as reflected in the below table. PECO Gas' half a million residential customers makes it similar in size to most of the other natural gas utilities in Pennsylvania. Yet, excluding 2022, when the Commission approved PECO to automatically apply $3.7 million of unspent LIURP funds to

[88] PECO Energy Company Petition for Expedited Approval to Establish an Emergency Grant Program for Low-Income Customers, Order, Docket No. P-2022-3032265 (order entered June 16, 2022).
[89] 2022 Universal Service Report at 80. *In 2022, PECO issued approximately $3.7 million in additional one-time grants to eligible electric and natural gas customers in debt using unspent LIURP funds from 2020. See Docket No. P-2022-3032265. 2020 Universal Service Report at 80; 2018 Universal Service Report at 71.
[90] Attachment OCA-II-1(a).

customer accounts in the form of hardship fund grants,[91] the amount of grant benefits provided to PECO customers was the lowest in Pennsylvania and far below all of its peer NGDCs.

I am deeply concerned about PECO's poor performance in distributing hardship fund assistance to families in need across its service territory. Year after year, it appears as though PECO is dramatically underspending available funds, despite clear and well-documented need, and it is not clear what is happening to funds that remain at the end of each program year.

Q: Can you further elaborate on your concerns with PECO's distribution of MEAF funds to eligible households, mentioned above?

A: Yes. As shown in the table below, the data provided by PECO shows significant underspending of PECO's MEAF funding in several of the counties in PECO's service territory.[92] In discovery, PECO provided information about the dollar amounts received by PECO customers as well as the amount of grant assistance dollars distributed to each county. Table 9, below, compares the total grant dollars awarded to PECO customers (disaggregated by the agency dollars and shareholder match) and the total funding PECO distributed to the agencies to support agency awards, from 2020-2023. The final column shows the difference between the agency dollars used to support grant awards and the total funding allocated to the agency.

[91] PECO Energy Company Petition for Expedited Approval to Establish an Emergency Grant Program for Low-Income Customers, Order, Docket No. P-2022-3032265 (order entered June 16, 2022).
[92] See Exhibit C.

TABLE 9: MEAF Grants Awarded vs. MEAF Funding Available by County - 2020-2023[93]

County	Total Grant Dollars Awarded to PECO Customers[94]	Agency Dollars Applied to Grant Awards	Shareholder Match Applied to Grant Awards	Funds Allocated to MEAF Agencies[95]	Difference, Agency Funds Available vs. Funds Awarded
Bucks	$80,971	$40,486	$40,486	$114,879	$74,394
Chester	$28,920	$14,460	$14,460	$114,879	$100,419
Delaware	$223,966	$111,983	$111,983	$114,879	$2,896
Montgomery	$147,864	$73,932	$73,932	$114,879	$40,947
Philadelphia	$55,716	$27,858	$27,858	$194,879	$167,021
York	$5,822	$2,911	$2,911	$6,800	$3,889
Total	**$543,260**	**$271,630**	**$271,630**	**$661,197**	**$389,567**

Across PECO's service territory, PECO's MEAF agencies underspent their MEAF allocations by $389,567 from 2020 through 2023. Only one county, Delaware, got close to spending the dollars it was allocated for grant assistance.

It is wholly unacceptable that nearly $400,000 in agency-administered MEAF contributions have gone unspent since 2020 – leaving behind hundreds of thousands of dollars in lost opportunities for leveraging PECO's dollar-for-dollar shareholder match. In all, between agency underspending and the loss of shareholder match, it appears as though PECO's MEAF has underspent by well over $750,000 since 2020. Note that time in this proceeding has not allowed

[93] See TURN/CAUSE-PA Exhibit C. This table assumes that only half of the total grant dollars awarded were provided by the agency, and the other half came from shareholder matching. This is based on my understanding, as described above, that PECO applies its shareholder match as grants are awarded. See Appendix B for a MEAF flow chart, which provide a more detailed illustration of PECO's process for issuing MEAF grants.
[94] Attachment CAUSE-PA I-9 (a). This is the total MEAF grants received by PECO customers, disaggregated by county. As with the number of grants, these are total dollar amounts for both gas and electric, as PECO was unable to provide information by commodity type.
[95] Attachment CAUSE-PA II-15(a).

for an inquiry into MEAF spending levels before 2020, though I am concerned this may be a deeper, longer-term issue.

PECO's consistent and pervasive underspending is not for lack of need for emergency grant assistance to prevent a termination. In the same time frame of 2020 through 2023, PECO terminated service to 47,958 gas customers, including 15,350 confirmed low-income gas customers.[96]

It is unclear at this time whether the unspent funds identified above are still available for grants, or whether PECO has any accounting controls or reporting in place to ensure agencies are tracking all remaining unspent funds year over year. Indeed, the opacity of PECO's reporting and the complexity of its matching process has made it incredibly challenging to investigate in the context of this proceeding. Suffice to say, I am alarmed at PECO's consistent underspending of MEAF dollars, resulting in loss of hundreds of thousands of dollars in lost grant assistance, and I am deeply concerned that dollars intended for emergency grant assistance are not reaching PECO's low-income customers. MEAF donations are solicited from PECO's customers, employees, and the communities it serves for the explicit purpose of directly supporting grant assistance to PECO's low-income gas and electric customers, and with the promise of a shareholder match. It is imperative that the Commission ensure that every single dollar donated to MEAF is properly matched, as promised, and used for the exclusive purpose of providing direct assistance to PECO customers.

[96] 2022 Universal Service Report at 16; OCA-II-1(a).

Q: In addition to persistent underspending, is there other evidence that MEAF is not reaching eligible households across PECO's service territory?

A: Yes. As shown in the table below, PECO's total grant numbers have fallen considerably since 2019, especially in certain counties, and its distribution of funds across its service territory are not proportional to the relative poverty rates or populations served.

TABLE 10: MEAF Grant Numbers by County[97]

	2018	2019	2020	2021	2022	2023	2024
Bucks	132	78	1	33	57	59	2
Chester	103	96	3	11	4	30	5
Delaware	95	135	0	20	198	81	0
Montgomery	93	100	2	61	93	53	3
Philadelphia	95	237	7	50	7	51	0
York	7	7	0	2	5	6	0
Total	525	653	13	177	364	280	10

In 2023, 280 MEAF grants were awarded – less than half of the 653 grants awarded in 2019. Even excluding 2020 and 2021 as outlying years due to the COVID pandemic, PECO's MEAF grant numbers are alarmingly low, and point to more systemic issues with PECO's hardship fund program administration.

Q: Does PECO track MEAF applications and denials?

A: PECO reports that, as of 2023, it is now tracking the number of applications submitted to MEAF agencies, including applications received and applications denied.

[97] CAUSE-PA I-8(a). Note that according to PECO, these are the total grant amounts for both gas and electric, and PECO is unable to provide information by commodity type.

TABLE 11: MEAF Applications Received and Approved by County[98]

	2023 Received	2023 Approved	2024 Received	2024 Approved
Bucks	60	59	3	2
Chester	171	30	15	5
Delaware	82	81	2	0
Montgomery	62	53	3	3
Philadelphia	242	51	215	0
York	6	6	0	0
Total	623	280	238	10

This table shows significant disparities among the agencies in the percentage of applications approved in 2023. The low MEAF approval rate in Chester County (17.5%) in 2023 is particularly troubling – with fewer than 1 in 5 applications approved.

As I discuss further below, in addition to critical reforms to PECO's administration and oversight of the program, I believe critical changes must be made to improve MEAF awareness, eligibility, and grant amounts. These needed reforms go much further than PECO's proposed change in grant amounts.

Q: Before turning to your recommended program reforms, do you have any further concerns about the distribution of MEAF grant dollars?

A: Yes, in addition to more general concerns that MEAF is not reaching those in need, I am also concerned that the distribution of MEAF grant dollars does not reflect the relative poverty levels in PECO's service territory. In the table below, I compare the percentage of MEAF grant dollars by county to the weighted distribution of the households who would be income-eligible for a MEAF grant.

[98] Applications received, Attachment CAUSE-PA-II-14(a).

TABLE 12: MEAF Grant Dollars Awarded by County, Compared to Percent of Confirmed Low-income Customers [99]

	2022 MEAF Grant Awards	2022 Distribution of Grant Awards	2023 MEAF Grant Awards	2023 Distribution of Grant Awards	Weighted Distribution of 200% FPL Households
Bucks	$32,015	13%	$31,798	18%	19.75%
Chester	$2,000	1%	$18,938	11%	12.82%
Delaware	$145,874	58%	$65,948	37%	21.61%
Montgomery	$67,705	27%	$35,992	20%	22.67%
Philadelphia	$2,344	1%	$20,404	12%	49.56%
York	$2,096	1%	$2,891	2%	-
Total	**$252,035**		**$175,972**		

Q: Do you have a recommendation regarding the distribution of MEAF grants across PECO's service territory?

A: In addition to recommendations discussed below regarding critical changes to program benefits, eligibility, and operations, I believe PECO should distribute all of its MEAF contributions proportional to the low-income populations in its service territory.[100]

Q: Can you explain the impact that the unavailability of MEAF funds has on PECO's low-income customers?

[99] MEAF dollar amounts come from CAUSE-PA-I-9; Weighted distribution of 200% FPL Households weights the number of 200% FPL households by County based on the accounts eligible for MEAF funding. PECO USECP at Addendum E, 54. This is consistent with PECO's MEAF grant data, as it is my understanding that customers outside of Philadelphia may be eligible for two MEAF grants, $500 per commodity.
[100] *See* Attachment CAUSE-PA II-15(a).

A: As I referenced at the outset of my testimony, PECO's low-income customers – those who would be eligible for MEAF – face extremely high rates of termination and carry substantial levels of arrears, far surpassing debt and termination rates of general residential consumers. Confirmed low-income customers in debt carry as much as three times the amount of debt compared to the overall average for residential customers.

TABLE 13: Average Arrears for Customers in Debt – Gas

	2020[101]	**2021**[102]	**2022**[103]	**2023**[104]
Residential	$680.41	$962.02	$759.34	$798.03
Confirmed Low Income	$1,417.52	$2,099.11	$2,158.61	$2,035.07

As discussed in Section II, above, high energy burdens are linked to adverse health outcomes, and higher rates of food insecurity. Higher energy bills will drive households to forego basic necessities or keep their home at unsafe or unhealthy temperatures to save money on energy bills. The limited availability of MEAF funds to address acute financial distress only compounds these outcomes.

Q: What do you suggest?

A: PECO must improve its oversight and administration of MEAF, top to bottom. Even following extensive analysis above, highlighting deep concerns about the allocation and distribution of MEAF dollars across its service territory, I have barely scratched the surface in addressing a host of other serious concerns about PECO's delivery of MEAF assistance, including the tracking and treatment of unspent funds year over year, the potential loss of matched or leveraged funds, how applications are accepted and processed, how customers are made aware of

[101] 2020 Universal Service Report at 34-35.
[102] 2021 Universal Service Report at 29-30.
[103] 2022 Universal Service Report at 29-30.
[104] OCA-II-1

available grant assistance, and whether a MEAF agency is abiding by MEAF guidelines. PECO cannot wait until a MEAF agency is struggling to monitor that agency's programs.

At the end of the day, MEAF is a PECO program, one it is required to operate by state law. The Commission, in turn, is obligated to ensure that a utility's universal service programs are appropriately funded and available to those in need.[105] While PECO can contract with third parties, and is encouraged to do so, it cannot pass the buck to the administrator, which is not subject to PUC jurisdiction. The Commission must ensure that PECO provide strong, consistent and ongoing oversight to its MEAF agencies and implement processes to monitor performance on a consistent and ongoing basis.

Given the substantial issues with PECO's MEAF identified above, I recommend that the Commission refer the matter to the Bureau of Audits and the Bureau of Investigation and Enforcement to closely examine PECO's MEAF operations. Specifically, I recommend that the Commission's Bureaus examine whether and how PECO accounts for unspent MEAF funds at the end of each year, whether those dollars are appropriately matched, and the adequacy of controls it has in place to ensure that donations to the hardship fund and shareholder matching are appropriately spent to support hardship fund grants.

In addition, and separate from these recommended investigations, the Commission should require PECO to take a more active role in the administration and oversight of MEAF to ensure that its hardship funds are available to PECO customers. Specifically, the Commission should require PECO to monitor performance of each of its MEAF agencies and create backup plans to

[105] 66 Pa. C.S. §§ 2202 (definition, Universal Service and Energy Conservation); 2203 (9)("The commission shall ensure that universal service and energy conservation policies, activities and services are appropriately funded and available in each natural gas distribution service territory.").

step in if an agency is unable to make grants available to households in its service area. I fully support the use of community based organizations to distribute grant assistance, and I do not recommend at this time that PECO cease its reliance on any of its MEAF agencies to administer the program. However, as noted, PECO has an obligation to ensure that its hardship fund program is appropriately funded and available – and the Commission has a corresponding obligation to oversee PECO's operations.

Going forward, I recommend that PECO require agencies to report the following on a monthly basis, and remitted to the Commission to allow for appropriate oversight:

1. Number of requests and/or inquiries for grant assistance;
2. Number of new applicants;
3. Number of new approvals;
4. Number of denied applications, disaggregated by reason for denial;
5. Total number of accounts flagged for a hold pending payment (newly approved and previously approved, but not yet paid by the agency);
6. Number of grants paid by the agency in that month; and
7. Number of accounts receiving funds from the agency in that month.

PECO should include information about its application of matching funds in these reports.

Discovery responses show that PECO has recently – and belatedly – started asking for some of this information from MEAF agencies. A PowerPoint presentation provided to MEAF agencies on March 15, 2024, sets forth the following expectations of MEAF agencies:

- Retain proof of income to verify income eligibility for 4 years and furnish to PECO at request;
- Report monthly tracking status of MEAF applications and funding by the 5th of the month for the previous month;
- Report monthly tracking on all applications to and denials (as well as reasons for denials);
- Report annually on the USP reporting process (MEAF Hardship Report);
- Remit invoice for successful/approved applications in a timely fashion to PECO by the 5th of the month for the previous month;
- Provide assistance or public access to the agency and MEAF grants throughout the entire county;

- Access outreach opportunities within your county to promote both MEAF as well as other PECO low-income assistance programs; and
- Keep PECO informed of changes to the organization (staff changes, mission re-direction, et al.).[106]

While clear communication regarding these program "expectations" are a good start, I don't believe these changes are sufficient to address the significant concerns with MEAF operations raised above. The Commission should require PECO to file monthly status reports on the status and availability of its MEAF, which should be filed at this docket and PECO's most recent Universal Service and Energy Conservation Plan Docket and served on parties to both proceedings. In addition, PECO should amend its policies such that if a MEAF agency has stopped accepting or approving applications, or isn't on track to spend its full grant allocation, PECO would step in to ensure the availability of grant assistance to customers in that area of its service territory. It is PECO's responsibility to administer its hardship funds. If an agency is unable to process or approve applications, PECO should temporarily take over administration internally, and, if necessary, find a different agency to administer its hardship funds.

Q: Has PECO made any proposals regarding MEAF in this proceeding?

A: Yes. PECO proposes to increase the maximum allowable MEAF grant from $500 per commodity to $1000 per account.[107]

Q: What are your thoughts on this proposal?

A: I believe this proposal is well intended. While it addresses some concerns with the MEAF program, it raises other concerns. Specifically, it does not account for commodity or rate type. Electric heating customers and combined electric and gas customers use PECO for two purposes

[106] Attachment CAUSE-PA-II-14(a) at 6.
[107] PECO St. 10 at 10:6-11.

– electric and heating, while non-heating customers only use PECO for electric, and may have access to grant assistance for other kinds of heating.

Q: What changes do you suggest to PECO's proposal?

A: With regard to grant amounts, PECO should set grant amounts separately for each rate type. I support PECO increasing the grant amount, and to that end, I would suggest the following:

Rate R: $1000
Rate RH: $2000
Gas: $1000

In this scenario, customers would be eligible for $1000 grants for both baseload electric and heating. So, combined gas and electric customers would be able to receive grant assistance of up to $2000 – maximum $1,000 for electric, and $1,000 for gas.

Q: Do you have any additional suggestions regarding MEAF to improve the availability of grant assistance?

A: Yes. MEAF's requirement that grants must bring past due balances to zero acts as an insurmountable barrier to MEAF access for many low-income customers, which consistently carry significantly higher average arrearage levels than can be resolved with PECO's MEAF assistance. This design issue is undoubtedly contributing to PECO's low relative MEAF spending levels. As discussed above, the average arrearage of a confirmed low-income PECO gas customer was $2,158.61 in 2022. Even increasing the grant amount as PECO suggests would limit the availability of MEAF to many low-income customers, whose arrears surpass the proposed grant amount. To improve the availability of MEAF assistance to those in need, PECO should eliminate the requirement that a MEAF grant bring the balance to zero. Instead, consistent with the rules of every other utility operating a hardship fund in Pennsylvania, PECO should allow customers to

receive assistance through MEAF if the grant amount is sufficient to resolve the crisis (in other words, prevent an imminent termination or allow the household to be reconnected). This would mean that a MEAF grant could be used to pay a catch-up amount on a payment arrangement, a CAP cure amount, or cover a reduced amount to prevent termination or allow for restoration with any remaining balance placed in a payment arrangement.

Q: Can you summarize your recommendations and suggestions regarding MEAF?

A: Yes. I am deeply concerned about the availability of MEAF in PECO's service territory. Grants have not been accessible or available to PECO customers, and PECO has not been properly monitoring the distribution of its hardship fund assistance, leading to unnecessarily high balances, termination notices, and termination of service. My recommendations are as follows:

1) The Commission should refer the issues identified above to the Bureau of Audits and the Bureau of Investigation and Enforcement to closely examine PECO's MEAF operations, including whether and how PECO accounts for unspent MEAF funds at the end of each year, and the controls it has in place to ensure that donations to the hardship fund, and whether shareholder matching is appropriately spent to support hardship fund grants.

2) The Commission should require PECO to take a more active role in the administration and oversight of MEAF to ensure that its hardship funds are available to PECO customers. Specifically, the Commission should require PECO to monitor performance of each of its MEAF agencies, and create backup plans to step in if an agency is unable to make grants available to households in its service area.

3) PECO should require agencies to report the following on a monthly basis:

    a. Number of requests and/or inquiries for grant assistance;
    b. Number of new applicants;

c. Number of new approvals;
d. Number of denied applications, disaggregated by reason for denial;
e. Total number of accounts flagged for a hold pending payment (newly approved and previously approved, but not yet paid by the agency);
f. Number of grants paid by the agency in that month; and
g. Number of accounts receiving funds from the agency in that month.

4) The Commission should require PECO to file monthly status reports on the status and availability of its MEAF, which should be filed at this docket and PECO's most recent Universal Service and Energy Conservation Plan Docket and served on parties to both proceedings.

5) The Commission should approve increased grant amounts for MEAF of $1000 for baseload electric, and an additional $1000 for heating customers (whether electric or gas).

6) The Commission should require PECO to eliminate its requirement that a MEAF grant pay a customer's grant to zero, and replace it with a requirement that the MEAF grant be sufficient to resolve the crisis, with any remaining balance placed on a payment arrangement.

IV. RESIDENTIAL CUSTOMER SERVICE ISSUES

Q: Please describe this section of your testimony.

A: In this section of my testimony, I examine the quality of customer service that PECO provides to residential customers. As discussed further in this section, I am specifically concerned about the level of customer service PECO is providing to non-English speaking (NES) households. It is also imperative that PECO improve its security deposit practices to fully comply with statutory and regulatory requirements.

a. Language Access for NES Customers

Q: Why is language access relevant as an issue in this proceeding?

A: How PECO serves its non-English speaking (NES)[108] customers is a core customer service issue. In her testimony describing recent customer service changes, Nicole L. LeVine, Senior Vice President and Chief Operating Officer at PECO, touts that "Customers now also have the option to view webpages in English, Spanish, or Simplified Chinese." [109] In evaluating PECO's rate increase request, including management performance, it is important to consider the quality of customer service PECO provides quality to all of its customers, including customers who do not speak English.

Q: What information is available related to the number of NES households in PECO's Service Territory?

A: Census data shows that in the four major counties in PECO's service territory, 15.3% of households do not speak English as their primary language at home. While Spanish is the most common language for NES households, a significant number of NES households also speak languages other than Spanish. As shown in the table below, there is a substantial NES population in each of the four major counties served by PECO Gas.[110]

[108] Note that I am using the term "non-English speaking" as opposed to "limited English proficiency" so as not to create confusion with the "limited English speaking" definition from the U.S. Census Bureau's American Community Survey.
[109] PECO St. 1 at 25:8.
[110] TURN/CAUSE-PA Exhibit A

TABLE 14: Non-English Households by County

	Bucks County	Chester County	Delaware County	Montgomery County
% Non-English Households	15.4%	14.0%	15.3%	15.9%
Spanish	4.26%	4.70%	3.60%	3.92%
Other Indo-European languages	7.84%	5.15%	5.96%	6.09%
Asian and Pacific Island languages	2.51%	3.75%	3.61%	4.77%
Other languages	0.77%	0.41%	2.17%	1.14%

Q: What information is available to PECO customers in languages other than English?

A: PECO provided all customer-facing documents that have been translated into languages other than English, including a CAP application in Spanish.[111] However, all of these documents are general materials, not vital notices directed toward individual customers. For example, shutoff notices, CAP enrollment letters, and CAP maximum credit letters have not been translated into Spanish – or any other language commonly spoken in areas across PECO's service territory. These vital notices directed toward individual customers are critical because they impact whether a specific household is able to stay connected to utility service.

Information is also available to PECO customers by calling PECO customer service. PECO tracks the number of customer service calls that use language line. PECO reports that in 2023,

[111] Attachment CAUSE-PA-I-29(a.1).

70,487 customer service calls used language line interpretation.[112] In 2023, PECO used 63 different languages via Language Line, a telephone-based interpreter service.[113] These figures suggest that a large proportion of PECO's customers are reliant on the accessibility of both interpretation and translation services.

Q: Is any translation or interpretation mandated by law?

A: Yes. The PUC's regulations require that "termination notice must include, in conspicuous print: Information in Spanish directing Spanish-speaking customers to the numbers to call for information and translation assistance."[114] The regulations also require that a "public utility which serves a substantial number of Spanish-speaking customers shall provide billing information in English and in Spanish."[115]

I note that Counsel for TURN and CAUSE-PA will address PECO's legal obligations with regard to language access more thoroughly in briefing, including application of the above noted regulations as well as PECO's obligations as a federal funding recipient pursuant to Title VI of the federal Civil Rights Act of 1964.

Q: Do you have any concerns about PECO's approach to serving its NES customers?

A: Yes. I am concerned that NES customers do not receive meaningful access to PECO's programs and services. I am also concerned that NES customers may not be able to understand critical communications from PECO regarding their bill, collections efforts, service termination, and/or details and requirements related to CAP enrollment.

[112] Attachment CAUSE-PA-TURN-II-10(a)
[113] Attachment CAUSE-PA-TURN-II-10(a)
[114] 52 Pa. Code § 56.91(b)(17).
[115] 52 Pa. Code § 56.201(b)

Q: Does PECO track the primary language of its NES customers?

A: No, PECO does not track the primary language of its customers.[116] I recommend that PECO track the primary language of its customers as part of its CIS. Tracking a customer's language preferences would allow PECO to communicate orally and in written form with the customer about specific customer issues in a language they can understand. Although a customer calling PECO can request a Language Line interpreter, tracking the customer's preferred language would mean that a customer service representative would immediately know to connect and interpreter, and would allow PECO to conduct more successful outreach to NES customers – improving call times and service quality, and helping to more expediently resolve issues that arise. Tracking customer language would also allow PECO to communicate in written form in a customer's preferred language, either by providing translated documents or by including a notice in the written document explaining how a customer can access the written information in their own language.

Q: What recommendations do you have as to how PECO can improve its service to NES households?

A: Given the prominence of LEP households whose primary language is Spanish, I recommend that key portions of PECO's residential customer bills (including, at minimum, itemized charges and details related to customer shopping and CAP enrollment) and the entirety of residential termination notices should be sent to all households in both English and Spanish. Even if PECO does not begin tracking customer language, sending billing information and

[116] PECO stated in response to discovery that it has not performed an assessment of the cost of using PECO's CIS to track PECO Electric customers' preferred language. CAUSE-PA-I-30.

termination notices in both English and Spanish to all households would ensure that at least some LEP households receive termination notices in a language that they can understand.

Given the variety of languages spoken in NES households in PECO's service territory, I recommend that PECO include a tagline on its residential customer bills that notifies customers of the availability of interpretation services to address questions related to their bill. This tagline should be provided in the top 5 languages spoken in PECO's service territory, determined in consultation with stakeholders and PECO's most recent language needs assessment.

Finally, PECO's shutoff notices should be similarly revised to include language which identifies the document as a termination notice, and includes a tagline in the top 5 languages spoken in PECO's service territory that explains how the customer can contact PECO and the availability of interpretation services. Specifically, the tagline should state: "This is a notice that your gas may be shut if you do not make arrangements to pay your bill. Please contact PECO at [phone number] to discuss your options. When you call, you can request an interpreter." I recommend this tagline be provided in 5 languages, to be determined in consultation with stakeholders and PECO's most recent needs assessment.

b. Low-Income Security Deposit Issues

Q: Could you summarize the statutory and regulatory rules that pertain to assessing security deposits for low-income customers, and PECO's policies and procedures implementing those rules?

A: Section 1404(a.1) of the Public Utility Code and section 56.32(e) of the Commission's regulations prohibit utilities from collecting security deposits from customers who are confirmed to be income eligible for its customer assistance programs.[117]

In its Ch. 56 Rulemaking Order, the Commission clarified that the prohibition on collecting security deposits from low-income customers is "referring to eligibility based upon the customer's household income – not on other miscellaneous eligibility criteria that can vary by utility."[118] Thus, the regulation provides:

> [A] public utility may not require a cash deposit from an applicant who is, based upon household income, confirmed to be eligible for a customer assistance program. An applicant is confirmed to be eligible for a customer assistance program by the public utility if the applicant provides income documents or other information attesting to his or her eligibility for state benefits based on household income eligibility requirements that are consistent with those of the public utility's customer assistance programs.

The Commission also requires both verbal notice of the exemption to be provided to applicants and customers at the time the security deposit is assessed, as well as instructions for how the applicant or customer can verify income.[119]

If a low-income customer is initially assessed and pays a security deposit, and a utility later learns that the household is protected from the imposition of a security deposit, the regulations provide that the utility "shall refund a deposit, along with applicable interest, within 60 days of determining the customer or applicant from whom a deposit was collected is not subject to a deposit under § 56.32(e) (relating to security and cash deposits) or § 56.41(4) (relating to general rule)."[120]

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[117] 66 Pa. C.S. § 1404(a.1); 56 Pa. Code §§ 56.32(e), 55.53(f).
[118] Rulemaking to Amend the Provisions of 52 Pa. Code, Chapter 56 to Comply with the Amended Provisions of 66 Pa. C.S. Ch. 14, L-2015-2508421, Final Rulemaking Order, Attach. One at 48 (Feb. 28, 2019).
[119] *Id.*; see also 52 Pa. Code §§ 56.36, 56.286.
[120] 52 Pa. Code § 56.32(f).

As a general matter, PECO's policies state that a "deposit will be equal to one-sixth of the applicant's or customer's estimated annual bill" [121] and that a customer will not have their deposit released until that customer "has paid in full and on time for twelve consecutive months."[122] That is about 2 months' worth of bills that a customer will not have access to for a year. With respect to its specific policies governing the assessment, collection, and release of security deposits from low-income customers, pursuant to the Joint Petition for Partial Settlement in PECO's 2018 distribution rate case, PECO does a monthly review of accounts to determine whether it is holding deposits that were paid by confirmed low-income customers. However, it appears that PECO does not provide refunds to those customers, they only return those deposits in the form of a "deposit credited back to the customer's account."[123] .

Q: How does PECO's security deposit policy impact its low-income customers?

A: The imposition of a security deposit can pose a huge barrier to safe, stable service for low-income customers who already struggle to connect to and maintain service. This is why the legislature prohibited utilities from imposing security deposits on low-income households.

In 2023, PECO Gas had 79,853 estimated low-income customers, 15.8% of its residential customers, but only 31,018 confirmed low-income customers – meaning PECO had recently verified their income directly with PECO or through enrollment in LIHEAP.[124] That means that only about a third of the customers who may be statutorily exempt from utility security deposit requirements – or other income-based protections – are afforded those protections.

[121] PECO Exhibit 2: PECO Gas Tariff No. 6 – Proposed at 12.
[122] 66 Pa. C.S. 1404(c).
[123] PECO USECP at 27, 36.
[124] Attachment OCA-II-1(a).

Furthermore, PECO's security deposit practices appear to have a strong racially disparate impact in that PECO collects significantly different amounts of security deposits in similarly sized majority White and majority Minority[125] ZIP codes. For ZIP codes that are 50% White or greater, the total amount of security deposits collected divided by the total number of customers in those ZIP codes is $7.02.[126] However, in ZIP codes that are 50% Minority or greater, the total amount of security deposits collected divided by the total number of customers in those ZIP codes is $13.73, nearly double the amount collected per customer.[127]

A few zip codes that exemplify the larger trend follow. For example, 19083 has a racial composition that is 87% White, and in 2023, PECO collected about $69,241 in security deposits from 11,788 customers – a per customer amount of $5.87.[128] However, in 19401, which has about the same number of customers (11,707) but is 59% Minority, PECO collected about $170,700 in security deposits – a per customer amount of $14.58.[129] And in 19013, which has slightly fewer customers (9,764) than 19083 and is 85% Minority, PECO collected about $158,100 in security deposits – a per customer amount of $16.19.[130] With such a strong racially disparate impact, PECO's policies related to security deposits need to change.

[125] Here, I use the term "Minority" as an aggregation of non-White racial categories from the US Census Bureau's American Community Survey.
[126] TURN/CAUSE-PA Exhibit B.
[127] *Id.*
[128] CAUSE-PA-I-12, OCA-II-4, and U.S. Census Bureau. (2022). Race. American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B02001. Retrieved June 3, 2024, from https://data.census.gov/table/ACSDT5Y2022.B02001?t=Race%20and%20Ethnicity&g=040XX00US42$8600000&y=2022.
[129] *Id.*
[130] *Id.*

TABLE 15: Deposits Collected and Racial Composition

Zip Code	% White	% Minority	Customers	2023 Deposits Collected	Deposit/Customer
19083	87%	13%	11,788	$69,241	$5.87
19401	41%	59%	11,707	$170,704	$14.58
19013	15%	85%	9,764	$158,100	$16.19

Q: Do you have specific recommendations for how PECO can reduce this disparate impact in the application of security deposits?

A: Yes. Consistent with my above recommendation regarding improvements to universal service program enrollment, I recommend that the Commission order PECO implement routine screening to determine whether an applicant or customer qualifies for the statutory security deposit prohibition before a deposit is assessed. If they are not already doing so, PECO should be ordered to inform all consumers of the prohibition at the time a security deposit is assessed, provide information about how PECO gathers income information to prevent imposition of a deposit, and explain what customers can do to access the exemption if it is not automatically applied. PECO should be required to explain the low-income security deposit prohibition and request income information through the course of any communication (written or verbal) regarding a security deposit. This proactive approach would help ensure that PECO is not assessing and collecting security deposits from economically vulnerable households that should be exempt by law.

In addition to improved screening and information about the security deposit prohibition, PECO should be required to review its current records within 30 days of a final order in this proceeding, and should immediately refund any security deposits held on accounts classified as "confirmed low-income." Going forward, PECO should conduct a similar review on a monthly

basis – consistent with its 2018 settlement obligation – to ensure it is timely *refunding* deposits that were collected from customers later determined to be low-income. Notably, pursuant to the Commission's regulations, PECO should provide consumers with a direct refund of any previously collected deposits, and should only apply the deposit to a customer's account if they provide explicit and informed consent to do so. I note that in reviewing PECO's responses to discovery, it is unclear whether PECO is currently providing consumers with the option for a refund of erroneously collected deposits.

V. PECO'S PROPOSED RATE DESIGN

a. Fixed Charge

Q: Please describe PECO's residential rate design proposal.

A: PECO is proposing to increase its fixed monthly residential customer charge from $14.25 per month[131] to $19.38[132] (a $5.13 or approximately 36% increase). The remaining rate increase will be recovered through an increase in the volumetric charge.

Q: How would PECO's proposed rate design impact low-income households?

A: Increases to fixed charges undermine the ability for consumers to control costs through energy efficiency, conservation, and consumption reduction. Low-income customers already struggle to pay for gas. When fixed costs increase, it erodes their ability to mitigate this increase through conservation and usage reduction.

Q: Would PECO's proposed increase to the fixed charge affect the Company's LIURP program?

[131] PECO Exhibit 1.
[132] PECO Exhibit 2.

A: Yes. As I explained above in discussing PECO's LIURP, PECO's proposal to increase the fixed charge undermines LIURP's ability to reduce costs for low-income customers. LIURP is intended to "decrease the incidence and risk of customer payment delinquencies and the attendant utility costs associated with uncollectible accounts expense, collection costs and arrearage carrying costs."[133] If the fixed portion of the bill is increased, raising the cost of gas bills in a way that cannot be mitigated with LIURP measures, these goals become more difficult to achieve.

Q: Do you have recommendations to help mitigate the effect of the proposed rate design on low-income households?

A: Yes. PECO's proposal to increase the fixed monthly customer charge should be rejected. To the extent any increase in the Company's residential distribution rate is approved, it should be applied to the volumetric charge. This would promote conservation and energy efficiency, protect the ability of low-income households to lower their utility costs by reducing consumption, and would preserve the effectiveness of LIURP at reducing customer bills and improving payment behavior.

b. Weather Normalization Adjustment Charge (WNA)

Q: Please briefly describe PECO Gas's proposed Weather Normalization Adjustment.

A: PECO's proposed WNA is a bill adjustment applied to PECO's Residential and Non-Residential customers from October through May.[134] PECO claims that the WNA would both provide PECO with greater certainty in earning distribution revenues and provide customers with

[133] 52 Pa. Code § 58.1
[134] PECO St. 3 at 69:2-7.

more predictability in billing and protection from the impacts of high bills during cold winter months.[135]

However, other WNAs implemented in Pennsylvania service territories have almost always resulted in higher charges for residential consumers and shifted all risk of changing weather from the utility onto consumers.[136] When temperatures are warmer than normal, a WNA results in a higher bill for residential customers. PECO states that it has not taken into account the impacts of climate change in developing the proposed WNA, suggesting that they have not taken into account the higher bill impact that increasingly warmer winters will have on PECO Gas customers if a WNA is implemented.[137]

Q: Do you support PECO's proposed adoption of a WNA in this proceeding?

A: No. PECO's proposed WNA would prevent PECO residential customers from savings that they would otherwise have during increasingly warmer winters. Low-income customers already struggle to afford service. The WNA would deprive these customers of the ability to decrease bills by reducing usage.

A significant number of PECO Gas's estimated low-income customers are not enrolled in CAP[138] and would therefore feel the full effects of the WNA. Because the WNA is not charged in relation to income, low-income customers are disproportionately impacted by higher bills that could come with a WNA because a larger percentage of their income will need to be devoted to

[135] PECO St. 3at 66:15-20.
[136] See Pa. PUC v. Columbia Gas of Pa., Inc., R-2020-3018835, Columbia St. 3 at 17-18 (Submitted Apr. 24, 2020); see also Pa. PUC v. Philadelphia Gas Works, R-2017-2586783, PGW Annual WNA Reporting (filed Dec. 31, 2019; June 9, 2021; Jan. 6, 2022).
[137] CAUSE-PA-I-42.
[138] PECO Gas had 79,853 estimated low-income customers in 2023. Attachment OCA-II-1(a). In December 2023, 23,715 PECO Gas customers were enrolled in CAP. CAUSE-PA-I-16. That leaves an estimated 56,138 low-income PECO Gas customers who are not enrolled in CAP.

paying the increase. Moreover, since PECO is not proposing to exempt CAP participants from the charge, the WNA will unnecessarily inflate the cost of CAP for other ratepayers.

VI. SUMMARY OF RECOMMENDATIONS

Q: Please provide a summary of your recommendations.

A: I am making the following recommendations:

1. Require PECO to amend its definition of "confirmed low-income customers" to fully comply with the Commission's regulatory definition of the term, including receipt of an income-based payment arrangement, verbal disclosure by the customer, or other factors which make it reasonably likely the household is low-income.
2. Rate Design:
    a. Reject PECO's proposal to increase the fixed monthly customer charge. To the extent any increase in the Company's residential distribution rate is approved, it should be applied to the volumetric charge.
    b. Reject PECO's proposal for a Weatherization Normalization Adjustment charge.
3. CAP
    a. Require PECO to implement a screening process to identify households that are potentially eligible for CAP or other universal service programs, and assist with enrollment or provide a warm transfer to PECO's universal service program administrator.
    b. Require PECO to file a Petition to amend its USECP to permit auto-enrollment of CAP customers, and to work with its Universal Services Advisory Council (USAC) to develop the details of the program, including customer communications.

c. Require PECO to participate in the DHS data sharing program, and to use LIHEAP data to perform auto-recertification of CAP customers.

4. LIURP

a. Require PECO to increase its LIURP budget to $5,000,000.

b. Require PECO to revise its high usage eligibility threshold to account for usage on a per-square foot basis – as opposed to a flat high usage threshold.

c. Require PECO to provide a report to its USAC within 180 days of effective date of rates in this proceeding about the barriers to tenant participation and what measures the company can feasibly provide to tenants without landlord approval.

d. Require PECO to advance efforts to coordinate LIURP services with local, state, and federal home repair, efficiency, and weatherization programs, consistent with the more detailed recommendations outlined above.

5. MEAF

a. Refer MEAF issues to the Bureau of Audits and the Bureau of Investigation and Enforcement to examine issues with PECO's MEAF program identified throughout my testimony.

b. With regards to grant amounts, require PECO to set grant amounts separately for each rate type, as follows:

i. Rate R: $1000

ii. Rate RH: $2000

iii. Gas: $1000

c. Require PECO to distribute its MEAF dollars proportional to the number of low-income customers in each county.

d. Require PECO to amend its policies such that if a MEAF agency is not performing or doesn't spend its full grant allocation, PECO would step in. PECO has an obligation to ensure that its universal service programs, including its hardship funds, are appropriately funded and available.

e. Require PECO to eliminate its requirement for MEAF grants (alone or in combination with other resources) pay down the total balance to zero and allow grants to issue if the grant will resolve a pending crisis.

6. Language Access

a. Require PECO to track the primary language of its customers as part of its CIS.

b. Require PECO to send residential customer bills and termination notices to all households in both English and Spanish.

c. Require PECO to include a tagline in its residential customer bills and termination notices, consistent with the more detailed recommendations outlined above.

7. Security Deposits

a. Require PECO to implement an income screening process prior to assessing a security deposit to determine if they qualify for the statutory security deposit prohibition.

b. Require PECO to inform all consumers of the prohibition on low-income security deposits at the time a security deposit is assessed and provide information about how PECO gathers income information to prevent imposition of a deposit and what customers can do to access the exemption if it is not automatically applied.

c. Within 30 days of a final order issued in this proceeding, require PECO to review all accounts where a security deposit was previously collected from a low-income

customer, and issue immediate refunds for any deposits held for confirmed low-income customers. Going forward, require PECO to conduct this review on a monthly basis.

d. Require PECO to refund all improperly held deposits directly to the low-income customer, and instruct PECO to only apply a deposit to the customer's account with their explicit and informed consent.

Q: Does this conclude your direct testimony?

A: Yes.

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission **v.** **PECO Energy Company – Gas Division**	**Docket No. R-2024-3046932**

EXHIBITS

TO THE
DIRECT TESTIMONY OF ELIZABETH R. MARX

On Behalf of

Tenant Union Representative Network

and

Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

June 17, 2024

Exhibit A

U.S. Census Bureau. (2022). Limited English Speaking Households. American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1602. Retrieved June 3, 2024, from https://data.census.gov/table/ACSST5Y2022.S1602?t=Language%20Spoken%20at%20Home&g=040XX00US42$8600000&y=2022.

Source: OCA-II-4

Source: OCA-II-16(a)

Zip	County	Total	Non English Households	Households speaking Spanish	Households speaking Other Indo-European languages	Households speaking Asian and Pacific Island languages	Households speaking Other languages	% Non English Households	% Households speaking Spanish	% Households speaking Other Indo-European languages	% Households speaking Asian and Pacific Island languages	% Households speaking Other languages	Customers	Shutoffs	2023 Shutoffs / Customer
18054	Montgomery	1716	196	120	43	0	33	11.4	7	2.5	0	1.9	137	0	0
18073	Montgomery	4030	314	164	88	31	31	7.8	4.1	2.2	0.8	0.8	347	0	0
18074	Montgomery	2166	177	6	104	42	25	8.2	0.3	4.8	1.9	1.2	55	0	0
18076	Montgomery	1281	105	56	18	4	27	8.2	4.4	1.4	0.3	2.1	179	0	0
18915	Montgomery	547	175	24	82	69	0	32.0	4.4	15	12.6	0	378	0	0
18936	Montgomery	74	0	0	0	0	0	0.0	0	0	0	0	3	0	0
18964	Montgomery	5319	694	358	199	132	5	13.0	6.7	3.7	2.5	0.1	1773	2	0.001128032
18969	Montgomery	6190	691	282	243	145	21	11.2	4.6	3.9	2.3	0.3	819	0	0
19001	Montgomery	6396	1073	451	354	229	39	16.8	7.1	5.5	3.6	0.6	5558	236	0.042461317
19002	Montgomery	11863	1946	288	760	768	130	16.4	2.4	6.4	6.5	1.1	8561	177	0.020675155
19003	Montgomery	5884	916	199	412	296	9	15.6	3.4	7	5	0.2	4492	108	0.024042743
19004	Montgomery	4098	765	73	325	234	133	18.7	1.8	7.9	5.7	3.2	2814	87	0.030916844
19006	Montgomery	8576	2132	210	1215	560	147	24.9	2.4	14.2	6.5	1.7	4904	80	0.016313214
19009	Montgomery	346	10	0	0	0	10	2.9	0	0	0	2.9	189	0	0
19012	Montgomery	2208	513	108	198	149	58	23.2	4.9	9	6.7	2.6	2290	136	0.059388646
19025	Montgomery	2557	454	102	159	157	36	17.8	4	6.2	6.1	1.4	2064	6	0.002906977
19027	Montgomery	8026	1413	291	501	460	161	17.6	3.6	6.2	5.7	2	4988	236	0.047313553
19031	Montgomery	2094	256	36	60	140	20	12.2	1.7	2.9	6.7	1	1770	3	0.001694915
19034	Montgomery	2449	351	54	105	185	7	14.3	2.2	4.3	7.6	0.3	1582	7	0.004424779
19035	Montgomery	1450	159	32	56	40	31	11.0	2.2	3.9	2.8	2.1	1102	10	0.00907441
19038	Montgomery	11575	1051	414	326	199	112	9.1	3.6	2.8	1.7	1	10061	262	0.026041149
19040	Montgomery	7973	753	314	237	154	48	9.4	3.9	3	1.9	0.6	5112	162	0.031690141
19044	Montgomery	6633	1448	513	385	550	0	21.8	7.7	5.8	8.3	0	3016	35	0.011604775
19046	Montgomery	7718	1063	176	631	191	65	13.8	2.3	8.2	2.5	0.8	5816	142	0.024415406
19066	Montgomery	1705	264	36	128	63	37	15.5	2.1	7.5	3.7	2.2	1627	11	0.00676091
19072	Montgomery	4317	756	169	341	180	66	17.5	3.9	7.9	4.2	1.5	2997	44	0.014681348
19075	Montgomery	2921	283	59	169	47	8	9.7	2	5.8	1.6	0.3	2564	22	0.008580343
19090	Montgomery	7563	913	183	433	289	8	12.1	2.4	5.7	3.8	0.1	5380	247	0.045910781
19095	Montgomery	3282	667	81	234	247	105	20.3	2.5	7.1	7.5	3.2	1600	37	0.023125
19096	Montgomery	5923	1433	251	591	470	121	24.2	4.2	10	7.9	2	3740	37	0.009893048
19401	Montgomery	16495	4146	2273	882	622	369	25.1	13.8	5.3	3.8	2.2	11707	1408	0.120269924
19403	Montgomery	19119	3075	709	1120	978	268	16.1	3.7	5.9	5.1	1.4	10479	243	0.023189236
19405	Montgomery	2064	378	235	119	24	0	18.3	11.4	5.8	1.2	0	1686	113	0.067022539
19406	Montgomery	12786	3233	376	1377	1202	278	25.3	2.9	10.8	9.4	2.2	6753	99	0.014660151
19422	Montgomery	7682	1332	230	406	681	15	17.3	3	5.3	8.9	0.2	5028	55	0.010938743
19426	Montgomery	13257	2144	480	869	738	57	16.2	3.6	6.6	5.6	0.4	7651	122	0.015945628
19428	Montgomery	9287	931	229	372	306	24	10.0	2.5	4	3.3	0.3	7214	128	0.017743277
19435	Montgomery	38	0	0	0	0	0	0.0	0	0	0	0	0	0	0
19436	Montgomery	320	0	0	0	0	0	0.0	0	0	0	0	31	0	0
19437	Montgomery	271	24	0	24	0	0	8.9	0	8.9	0	0	314	0	0
19438	Montgomery	9290	864	257	315	284	8	9.3	2.8	3.4	3.1	0.1	3729	54	0.014481094
19440	Montgomery	7411	1571	334	685	366	186	21.2	4.5	9.2	4.9	2.5	2094	0	0
19444	Montgomery	4726	458	107	260	77	14	9.7	2.3	5.5	1.6	0.3	3241	22	0.006788028
19446	Montgomery	23656	4352	495	1884	1708	265	18.4	2.1	8	7.2	1.1	11389	87	0.00763895
19453	Montgomery	756	101	2	99	0	0	13.4	0.3	13.1	0	0	191	4	0.020942408
19454	Montgomery	11255	2439	264	802	1263	110	21.7	2.3	7.1	11.2	1	6386	121	0.018947698
19456	Montgomery	115	6	0	6	0	0	5.2	0	5.2	0	0	225	0	0
19462	Montgomery	6305	1091	423	293	309	66	17.3	6.7	4.6	4.9	1	3072	44	0.014322917
19464	Montgomery	18734	1843	880	508	208	247	9.8	4.7	2.7	1.1	1.3	7238	495	0.068389058
19468	Montgomery	10649	1081	73	651	253	104	10.2	0.7	6.1	2.4	1	7080	178	0.025141243
19472	Montgomery	31	0	0	0	0	0	0.0	0	0	0	0	1	0	0
19473	Montgomery	6500	632	69	313	137	113	9.7	1.1	4.8	2.1	1.7	1702	17	0.009988249
19474	Montgomery	221	0	0	0	0	0	0.0	0	0	0	0	323	2	0.00619195
19477	Montgomery	27	0	0	0	0	0	0.0	0	0	0	0	31	0	0
19490	Montgomery	111	0	0	0	0	0	0.0	0	0	0	0	113	0	0
19492	Montgomery	430	0	0	0	0	0	0.0	0	0	0	0	43	3	0.069767442
17527	Lancaster	2068	545	79	446	0	20	26.4	3.8	21.6	0	1	0	0	0
17563	Lancaster	1163	281	82	199	0	0	24.2	7.1	17.1	0	0	0	0	0
19008	Delaware	6916	1290	80	672	480	58	18.7	1.2	9.7	6.9	0.8	5800	117	0.020172414

19010	Delaware	7788	1451	532	495	403	21	18.6	6.8	6.4	5.2	0.3	5122	75	0.014642718
19013	Delaware	13102	966	771	18	52	125	7.4	5.9	0.1	0.4	1	9764	2007	0.205551004
19014	Delaware	7672	538	89	345	88	16	7.0	1.2	4.5	1.1	0.2	4645	213	0.045855759
19015	Delaware	6794	619	135	314	67	103	9.1	2	4.6	1	1.5	4874	500	0.102585146
19017	Delaware	92	12	0	12	0	0	13.0	0	13	0	0	119	1	0.008403361
19018	Delaware	9669	1821	532	603	374	312	18.8	5.5	6.2	3.9	3.2	7181	727	0.101239382
19022	Delaware	1615	199	131	24	0	44	12.3	8.1	1.5	0	2.7	1270	144	0.113385827
19023	Delaware	7819	1757	363	608	56	730	22.5	4.6	7.8	0.7	9.3	7003	1237	0.176638583
19026	Delaware	12847	2058	532	756	404	366	16.0	4.1	5.9	3.1	2.8	9795	757	0.077284329
19029	Delaware	1760	47	9	8	16	14	2.7	0.5	0.5	0.9	0.8	1493	68	0.045545881
19032	Delaware	2446	522	158	189	24	151	21.3	6.5	7.7	1	6.2	2285	194	0.084901532
19033	Delaware	2838	356	68	89	99	100	12.5	2.4	3.1	3.5	3.5	2456	65	0.026465798
19036	Delaware	4995	439	116	157	67	99	8.8	2.3	3.1	1.3	2	4419	332	0.07513012
19041	Delaware	2486	335	85	155	75	20	13.5	3.4	6.2	3	0.8	1708	7	0.004098361
19043	Delaware	1185	200	2	198	0	0	16.9	0.2	16.7	0	0	906	37	0.040838852
19050	Delaware	12149	1855	336	643	172	704	15.3	2.8	5.3	1.4	5.8	8746	1100	0.125771781
19052	Delaware	243	0	0	0	0	0	0.0	0	0	0	0	34	0	0
19060	Delaware	3643	539	49	162	328	0	14.8	1.3	4.4	9	0	2806	20	0.007127584
19061	Delaware	7999	1121	261	484	344	32	14.0	3.3	6.1	4.3	0.4	5015	487	0.097108674
19063	Delaware	15180	1780	353	696	574	157	11.7	2.3	4.6	3.8	1	7575	167	0.022046205
19064	Delaware	8696	913	114	452	324	23	10.5	1.3	5.2	3.7	0.3	7486	167	0.022308309
19070	Delaware	2795	223	19	82	58	64	8.0	0.7	2.9	2.1	2.3	1963	83	0.042282221
19073	Delaware	8411	1108	99	761	173	75	13.2	1.2	9	2.1	0.9	3930	29	0.007379135
19074	Delaware	2341	237	36	102	69	30	10.1	1.5	4.4	2.9	1.3	1960	83	0.042346939
19076	Delaware	2586	193	40	38	103	12	7.5	1.5	1.5	4	0.5	1951	94	0.04818042
19078	Delaware	4822	332	42	179	59	52	6.9	0.9	3.7	1.2	1.1	3680	140	0.038043478
19079	Delaware	3314	370	71	33	25	241	11.2	2.1	1	0.8	7.3	3079	376	0.122117571
19081	Delaware	3712	567	43	256	190	78	15.3	1.2	6.9	5.1	2.1	2723	29	0.010650018
19082	Delaware	15854	6365	1608	2421	1392	944	40.1	10.1	15.3	8.8	6	12311	1794	0.145723337
19083	Delaware	13362	1628	288	728	514	98	12.2	2.2	5.4	3.8	0.7	11788	248	0.021038344
19085	Delaware	1805	447	96	178	164	9	24.8	5.3	9.9	9.1	0.5	1797	9	0.005008347
19086	Delaware	4575	621	53	227	326	15	13.6	1.2	5	7.1	0.3	2633	42	0.015951386
19094	Delaware	1778	214	133	81	0	0	12.0	7.5	4.6	0	0	1364	95	0.069648094
19317	Delaware	3932	639	138	170	331	0	16.3	3.5	4.3	8.4	0	1360	6	0.004411765
19319	Delaware	138	13	0	13	0	0	9.4	0	9.4	0	0	10	0	0
19342	Delaware	7826	1297	393	485	419	0	16.6	5	6.2	5.4	0	3421	38	0.011107863
19373	Delaware	665	36	0	23	13	0	5.4	0	3.5	2	0	361	0	0
19087	Chester	12117	2371	321	1252	705	93	19.6	2.6	10.3	5.8	0.8	7834	72	0.009190707
19301	Chester	2948	615	112	205	290	8	20.9	3.8	7	9.8	0.3	1562	9	0.005761844
19310	Chester	906	163	21	110	0	32	18.0	2.3	12.1	0	3.5	277	0	0
19311	Chester	3506	740	471	142	113	14	21.1	13.4	4.1	3.2	0.4	1709	12	0.00702165
19312	Chester	4490	875	20	388	467	0	19.5	0.4	8.6	10.4	0	2857	9	0.003150158
19316	Chester	36	0	0	0	0	0	0.0	0	0	0	0	0	0	0
19320	Chester	19933	2400	1680	491	143	86	12.0	8.4	2.5	0.7	0.4	7881	638	0.080954194
19330	Chester	2096	315	221	89	5	0	15.0	10.5	4.2	0.2	0	7	0	0
19333	Chester	3066	638	78	208	352	0	20.8	2.5	6.8	11.5	0	1070	7	0.006542056
19335	Chester	19493	2143	321	972	773	77	11.0	1.6	5	4	0.4	8383	240	0.028629369
19341	Chester	8620	1668	274	578	794	22	19.4	3.2	6.7	9.2	0.3	5564	99	0.017792955
19343	Chester	3019	205	33	140	32	0	6.8	1.1	4.6	1.1	0	3	0	0
19344	Chester	4384	600	69	517	14	0	13.7	1.6	11.8	0.3	0	296	1	0.003378378
19345	Chester	0	0	0	0	0	0	0.0	-	-	-	-	0	0	0
19348	Chester	8938	1571	1135	241	163	32	17.6	12.7	2.7	1.8	0.4	3669	79	0.021531753
19350	Chester	3828	388	74	174	131	9	10.1	1.9	4.5	3.4	0.2	945	2	0.002116402
19352	Chester	3089	173	83	76	10	4	5.6	2.7	2.5	0.3	0.1	217	1	0.004608295
19355	Chester	11020	2780	392	1051	1161	176	25.2	3.6	9.5	10.5	1.6	5529	37	0.006691988
19358	Chester	133	8	2	6	0	0	6.0	1.5	4.5	0	0	0	0	0
19362	Chester	2195	278	236	27	15	0	12.7	10.8	1.2	0.7	0	0	0	0
19363	Chester	5939	1236	940	293	3	0	20.8	15.8	4.9	0.1	0	35	0	0
19365	Chester	2670	519	245	165	95	14	19.4	9.2	6.2	3.6	0.5	705	10	0.014184397
19367	Chester	33	19	10	9	0	0	57.6	30.3	27.3	0	0	34	1	0.029411765
19369	Chester	91	9	0	9	0	0	9.9	0	9.9	0	0	26	0	0
19372	Chester	745	107	40	53	14	0	14.4	5.4	7.1	1.9	0	848	4	0.004716981
19374	Chester	267	150	150	0	0	0	56.2	56.2	0	0	0	110	3	0.027272727
19375	Chester	81	0	0	0	0	0	0.0	0	0	0	0	17	0	0

19380	Chester	21007	2376	949	835	544	48	11.3	4.5	4	2.6	0.2	8504	151	0.01775635
19382	Chester	20843	1951	649	805	421	76	9.4	3.1	3.9	2	0.4	8661	154	0.017780857
19383	Chester	131	0	0	0	0	0	0.0	0	0	0	0	0	0	0
19390	Chester	4543	622	409	49	116	48	13.7	9	1.1	2.6	1.1	2432	33	0.013569079
19425	Chester	5711	1441	105	537	742	57	25.2	1.8	9.4	13	1	3097	12	0.003874717
19442	Chester	0	0	0	0	0	0	0.0	-	-	-	-	154	0	0
19457	Chester	73	0	0	0	0	0	0.0	0	0	0	0	40	0	0
19460	Chester	17663	1984	425	970	553	36	11.2	2.4	5.5	3.1	0.2	9970	206	0.020661986
19465	Chester	7258	392	140	175	77	0	5.4	1.9	2.4	1.1	0	1530	3	0.001960784
19475	Chester	4803	371	134	142	73	22	7.7	2.8	3	1.5	0.5	1576	74	0.046954315
19520	Chester	2486	67	41	16	10	0	2.7	1.6	0.6	0.4	0	0	0	0
18901	Bucks	10891	1058	230	613	178	37	9.7	2.1	5.6	1.6	0.3	3918	41	0.010464523
18902	Bucks	7957	871	307	326	222	16	10.9	3.9	4.1	2.8	0.2	3526	39	0.011060692
18912	Bucks	104	0	0	0	0	0	0.0	0	0	0	0	106	2	0.018867925
18913	Bucks	62	16	0	16	0	0	25.8	0	25.8	0	0	0	0	0
18914	Bucks	7578	952	204	512	228	8	12.6	2.7	6.8	3	0.1	2958	29	0.009803922
18917	Bucks	984	83	41	21	21	0	8.4	4.2	2.1	2.1	0	0	0	0
18923	Bucks	496	55	0	27	28	0	11.1	0	5.4	5.6	0	0	0	0
18925	Bucks	2171	206	12	106	88	0	9.5	0.6	4.9	4.1	0	1223	19	0.015535568
18929	Bucks	3241	827	81	633	36	77	25.5	2.5	19.5	1.1	2.4	1837	13	0.007076756
18932	Bucks	148	0	0	0	0	0	0.0	0	0	0	0	68	1	0.014705882
18933	Bucks	75	0	0	0	0	0	0.0	0	0	0	0	0	0	0
18935	Bucks	111	0	0	0	0	0	0.0	0	0	0	0	0	0	0
18938	Bucks	6180	666	102	348	153	63	10.8	1.7	5.6	2.5	1	1734	18	0.010380623
18940	Bucks	11626	1862	191	846	726	99	16.0	1.6	7.3	6.2	0.9	6760	93	0.013757396
18942	Bucks	1082	86	13	64	7	2	7.9	1.2	5.9	0.6	0.2	0	0	0
18944	Bucks	9913	574	210	309	21	34	5.8	2.1	3.1	0.2	0.3	0	0	0
18946	Bucks	164	11	0	4	7	0	6.7	0	2.4	4.3	0	28	0	0
18947	Bucks	2354	83	30	42	11	0	3.5	1.3	1.8	0.5	0	461	2	0.004338395
18950	Bucks	48	0	0	0	0	0	0.0	0	0	0	0	0	0	0
18954	Bucks	3716	648	99	479	48	22	17.4	2.7	12.9	1.3	0.6	1113	7	0.006289308
18955	Bucks	496	58	19	5	0	34	11.7	3.8	1	0	6.9	0	0	0
18960	Bucks	4827	236	69	128	29	10	4.9	1.4	2.7	0.6	0.2	0	0	0
18966	Bucks	13946	2169	255	1576	198	140	15.6	1.8	11.3	1.4	1	6523	119	0.01824314
18974	Bucks	17423	2739	588	1537	444	170	15.7	3.4	8.8	2.5	1	10718	298	0.027803695
18976	Bucks	8298	1470	356	835	259	20	17.7	4.3	10.1	3.1	0.2	5271	73	0.013849364
18977	Bucks	1789	227	19	161	25	22	12.7	1.1	9	1.4	1.2	314	0	0
18980	Bucks	40	0	0	0	0	0	0.0	0	0	0	0	54	0	0
19007	Bucks	9187	1746	1044	380	97	225	19.0	11.4	4.1	1.1	2.4	3790	309	0.081530343
19020	Bucks	22300	6591	2204	3243	937	207	29.6	9.9	14.5	4.2	0.9	6735	237	0.03518931
19021	Bucks	3869	532	374	85	63	10	13.8	9.7	2.2	1.6	0.3	998	44	0.044088176
19030	Bucks	4744	404	80	267	48	9	8.5	1.7	5.6	1	0.2	2861	87	0.030408948
19047	Bucks	12625	1331	320	699	282	30	10.5	2.5	5.5	2.2	0.2	6380	170	0.026645768
19053	Bucks	10582	2591	283	1631	410	267	24.5	2.7	15.4	3.9	2.5	3177	109	0.034309097
19054	Bucks	6446	685	178	457	24	26	10.6	2.8	7.1	0.4	0.4	314	7	0.022292994
19055	Bucks	4897	861	600	139	89	33	17.6	12.3	2.8	1.8	0.7	27	8	0.296296296
19056	Bucks	5794	769	324	239	206	0	13.3	5.6	4.1	3.6	0	554	30	0.054151625
19057	Bucks	6160	972	573	155	184	60	15.8	9.3	2.5	3	1	750	82	0.109333333
19067	Bucks	20921	2956	709	1625	531	91	14.1	3.4	7.8	2.5	0.4	10740	393	0.036592179
19504	Berks	2029	117	28	61	23	5	5.8	1.4	3	1.1	0.2	0	0	0
17302	York	983	26	0	26	0	0	2.6	0	2.6	0	0	0	0	0
17309	York	717	117	0	92	25	0	16.3	0	12.8	3.5	0	0	0	0
17314	York	2263	75	5	67	3	0	3.3	0.2	3	0.1	0	0	0	0
17321	York	926	29	13	15	1	0	3.1	1.4	1.6	0.1	0	0	0	0

Exhibit B		Source: CAUSE-PA-I-10	Source: CAUSE-PA-I-12		Source: OCA-II-4					Source: U.S. Census Bureau. (2022). Race. American Community Survey, ACS 5-Year Estimates Detailed Tables, Table B02001. Retrieved June 3, 2024, from https://data.census.gov/table/ACSDT5Y2022.B02001?t=Race%20and%20Ethnicity&g=040XX00US42$8600000&y=2022.			Source: U.S. Census Bureau. (2022). Poverty Status in the Past 12 Months. American Community Survey, ACS 5-Year Estimates Subject Tables, Table S1701. Retrieved June 3, 2024, from https://data.census.gov/table/ACSST5Y2022.S1701?t=Income%20and%20Poverty&g=040XX00US42$8600000&y=2022.		
Zip	**County**	**New Deposits**	**Deposits Collected**	**Deposits/ Customer**	**Customers**	**Confirmed Low-Income**	**CAP**	**% CLI**	**% CAP**	**Residents**	**% White**	**% Minority**	**150% FPL**	**FPL Determined**	**% 150% FPL**
19067	Bucks	64	$ 75,739.47	$ 7.05	10740	340	240	3.17%	2.23%	53320	84%	16%	4277	52899	8.09%
19380	Chester	51	$ 44,829.21	$ 5.27	8504	108	79	1.27%	0.93%	50494	86%	14%	4254	50301	8.46%
19320	Chester	136	$ 98,789.78	$ 12.54	7881	987	744	12.52%	9.44%	55321	67%	33%	9421	54848	17.18%
19335	Chester	60	$ 57,189.58	$ 6.82	8383	158	104	1.88%	1.24%	51126	83%	17%	3564	50805	7.02%
19382	Chester	59	$ 57,574.98	$ 6.65	8661	127	97	1.47%	1.12%	53117	84%	16%	5833	51327	11.36%
19020	Bucks	32	$ 44,801.17	$ 6.65	6735	563	446	8.36%	6.62%	56746	64%	36%	9780	56375	17.35%
19460	Chester	56	$ 55,336.16	$ 5.55	9970	236	157	2.37%	1.57%	43246	84%	16%	4144	42453	9.76%
19403	Montgomery	76	$ 66,934.84	$ 6.39	10479	341	239	3.25%	2.28%	44111	79%	21%	4239	43735	9.69%
19401	Montgomery	287	$170,704.02	$ 14.58	11707	1950	1471	16.66%	12.57%	42908	41%	59%	12092	42150	28.69%
19464	Montgomery	148	$ 76,487.57	$ 10.57	7238	824	615	11.38%	8.50%	47913	74%	26%	9208	47501	19.38%
18974	Bucks	33	$ 62,975.10	$ 5.88	10718	427	303	3.98%	2.83%	42811	87%	13%	3564	42321	8.42%
19082	Delaware	299	$153,216.20	$ 12.45	12311	2890	2145	23.47%	17.42%	42847	23%	77%	11599	42761	27.13%
19063	Delaware	35	$ 42,427.56	$ 5.60	7575	141	96	1.86%	1.27%	37716	85%	15%	2459	36293	6.78%
19446	Montgomery	78	$ 58,695.67	$ 5.15	11389	322	213	2.83%	1.87%	60659	74%	26%	5605	59438	9.43%
18966	Bucks	14	$ 32,066.77	$ 4.92	6523	123	82	1.89%	1.26%	36167	93%	7%	2841	35927	7.91%
19426	Montgomery	24	$ 34,703.88	$ 4.54	7651	119	81	1.56%	1.06%	42656	78%	22%	1914	36225	5.28%
19083	Delaware	37	$ 69,240.95	$ 5.87	11788	252	191	2.14%	1.62%	37143	87%	13%	2432	36918	6.59%
19087	Chester	28	$ 53,962.81	$ 6.89	7834	115	89	1.47%	1.14%	33683	76%	24%	1502	31306	4.80%
19047	Bucks	25	$ 32,861.82	$ 5.15	6380	133	97	2.08%	1.52%	33874	85%	15%	3046	32370	9.41%
19026	Delaware	114	$131,157.03	$ 13.39	9795	919	704	9.38%	7.19%	31917	68%	32%	4046	31841	12.71%
19013	Delaware	447	$158,092.57	$ 16.19	9764	3572	2734	36.58%	28.00%	34456	15%	85%	13852	31623	43.80%
19002	Montgomery	28	$ 52,609.11	$ 6.15	8561	202	140	2.36%	1.64%	31608	78%	22%	2077	31135	6.67%
19038	Montgomery	39	$ 78,922.46	$ 7.84	10061	374	258	3.72%	2.56%	32672	77%	23%	2813	30813	9.13%
19050	Delaware	131	$126,724.23	$ 14.49	8746	1578	1185	18.04%	13.55%	28905	22%	78%	6505	28526	22.80%
19468	Montgomery	55	$ 48,309.59	$ 6.82	7080	184	129	2.60%	1.82%	28083	85%	15%	2625	27546	9.53%
18901	Bucks	14	$ 17,485.80	$ 4.46	3918	49	35	1.25%	0.89%	28311	89%	11%	1892	25811	7.33%
18940	Bucks	26	$ 37,800.76	$ 5.59	6760	85	58	1.26%	0.86%	29834	83%	17%	1450	29603	4.90%
19355	Chester	37	$ 31,417.15	$ 5.68	5529	50	33	0.90%	0.60%	28178	71%	29%	2203	28160	7.82%
19454	Montgomery	27	$ 45,202.82	$ 7.08	6386	132	99	2.07%	1.55%	28036	70%	30%	2029	27664	7.33%
19053	Bucks	9	$ 24,405.39	$ 7.68	3177	151	115	4.75%	3.62%	28245	80%	20%	2525	28054	9.00%
19018	Delaware	93	$ 95,046.85	$ 13.24	7181	890	665	12.39%	9.26%	23302	60%	40%	4523	23263	19.44%
19341	Chester	64	$ 34,732.44	$ 6.24	5564	78	62	1.40%	1.11%	20545	77%	23%	769	20538	3.74%
19428	Montgomery	56	$ 47,846.99	$ 6.63	7214	222	161	3.08%	2.23%	20321	82%	18%	1848	20304	9.10%
19064	Delaware	23	$ 42,436.80	$ 5.67	7486	159	108	2.12%	1.44%	25218	89%	11%	1518	25131	6.04%
19348	Chester	19	$ 20,328.12	$ 5.54	3669	76	53	2.07%	1.44%	23707	80%	20%	2006	23272	8.62%
19406	Montgomery	68	$ 52,693.35	$ 7.80	6753	189	140	2.80%	2.07%	28826	66%	34%	1928	28594	6.74%
19438	Montgomery	15	$ 17,477.85	$ 4.69	3729	151	109	4.05%	2.92%	24962	87%	13%	1701	24743	6.87%
19061	Delaware	89	$ 66,358.58	$ 13.23	5015	825	624	16.45%	12.44%	20282	77%	23%	3663	20063	18.26%
19007	Bucks	97	$ 47,126.81	$ 12.43	3790	549	409	14.49%	10.79%	22337	65%	35%	4887	22110	22.10%
19073	Delaware	15	$ 21,522.87	$ 5.48	3930	38	30	0.97%	0.76%	21297	93%	7%	1258	21177	5.94%
19040	Montgomery	31	$ 39,712.85	$ 7.77	5112	160	105	3.13%	2.05%	22137	86%	14%	2275	21899	10.39%
19090	Montgomery	36	$ 45,309.37	$ 8.42	5380	328	229	6.10%	4.26%	19814	70%	30%	1900	19587	9.70%

19014	Delaware	18	$ 26,691.68	$ 5.75	4645	176	120	3.79%	2.58%	20925	86%	14%	2401	20106	11.94%
19023	Delaware	234	$102,989.43	$ 14.71	7003	2228	1689	31.81%	24.12%	22493	17%	83%	8774	22124	39.66%
18976	Bucks	14	$ 19,051.22	$ 3.61	5271	79	50	1.50%	0.95%	22352	84%	16%	1448	21894	6.61%
19422	Montgomery	18	$ 28,194.49	$ 5.61	5028	66	47	1.31%	0.93%	20050	75%	25%	973	19847	4.90%
19008	Delaware	16	$ 37,811.30	$ 6.52	5800	175	130	3.02%	2.24%	20492	85%	15%	955	19945	4.79%
18914	Bucks	7	$ 13,530.92	$ 4.57	2958	50	35	1.69%	1.18%	21067	86%	14%	1004	21061	4.77%
19006	Montgomery	20	$ 33,927.26	$ 6.92	4904	107	83	2.18%	1.69%	23244	81%	19%	1737	22806	7.62%
19010	Delaware	20	$ 36,260.66	$ 7.08	5122	97	76	1.89%	1.48%	21406	80%	20%	1710	19130	8.94%
18902	Bucks	7	$ 20,938.47	$ 5.94	3526	36	24	1.02%	0.68%	22621	88%	12%	1203	22536	5.34%
19015	Delaware	51	$ 45,518.72	$ 9.34	4874	769	567	15.78%	11.63%	16484	68%	32%	2444	16460	14.85%
19465	Chester	14	$ 10,249.99	$ 6.70	1530	65	42	4.25%	2.75%	18710	94%	6%	1399	18534	7.55%
19046	Montgomery	19	$ 41,899.80	$ 7.20	5816	187	132	3.22%	2.27%	18994	85%	15%	1603	18628	8.61%
19342	Delaware	7	$ 13,057.39	$ 3.82	3421	32	24	0.94%	0.70%	20948	79%	21%	896	18935	4.73%
19054	Bucks	0	$ 954.06	$ 3.04	314	5	5	1.59%	1.59%	17440	91%	9%	1076	17413	6.18%
19001	Montgomery	25	$ 39,430.45	$ 7.09	5558	262	178	4.71%	3.20%	17830	70%	30%	2017	17599	11.46%
18938	Bucks	7	$ 10,371.12	$ 5.98	1734	7	4	0.40%	0.23%	13380	89%	11%	589	13314	4.42%
19044	Montgomery	27	$ 16,436.70	$ 5.45	3016	72	47	2.39%	1.56%	17027	79%	21%	1780	17011	10.46%
19363	Chester	0	$ -	$ -	35	0	0	0.00%	0.00%	17670	78%	22%	2918	17567	16.61%
19057	Bucks	16	$ 7,341.18	$ 9.79	750	97	66	12.93%	8.80%	18439	78%	22%	2263	18267	12.39%
19027	Montgomery	39	$ 47,028.43	$ 9.43	4988	300	227	6.01%	4.55%	19863	42%	58%	3129	19849	15.76%
19425	Chester	8	$ 13,292.50	$ 4.29	3097	19	11	0.61%	0.36%	17385	70%	30%	367	17255	2.13%
19003	Montgomery	33	$ 31,787.45	$ 7.08	4492	154	111	3.43%	2.47%	13953	77%	23%	1088	13348	8.15%
19056	Bucks	9	$ 2,891.13	$ 5.22	554	155	117	27.98%	21.12%	15765	81%	19%	1896	15597	12.16%
19473	Montgomery	13	$ 11,114.74	$ 6.53	1702	34	23	2.00%	1.35%	17522	89%	11%	2095	17431	12.02%
19390	Chester	6	$ 17,753.03	$ 7.30	2432	74	56	3.04%	2.30%	12677	83%	17%	1346	12516	10.75%
19036	Delaware	65	$ 50,756.02	$ 11.49	4419	530	406	11.99%	9.19%	13181	79%	21%	1998	13154	15.19%
19055	Bucks	4	$ 840.28	$ 31.12	27	7	6	25.93%	22.22%	13667	77%	23%	2313	13518	17.11%
19475	Chester	17	$ 12,962.34	$ 8.22	1576	72	52	4.57%	3.30%	11840	83%	17%	2128	11616	18.32%
19030	Bucks	12	$ 15,552.43	$ 5.44	2861	136	91	4.75%	3.18%	12490	86%	14%	1499	12462	12.03%
19078	Delaware	32	$ 37,843.49	$ 10.28	3680	216	144	5.87%	3.91%	11671	91%	9%	1144	11592	9.87%
19312	Chester	11	$ 20,302.75	$ 7.11	2857	22	15	0.77%	0.53%	12021	81%	19%	1246	11999	10.38%
19462	Montgomery	17	$ 16,614.51	$ 5.41	3072	80	59	2.60%	1.92%	15868	79%	21%	1340	15624	8.58%
19086	Delaware	13	$ 16,066.72	$ 6.10	2633	79	57	3.00%	2.16%	12649	78%	22%	961	12309	7.81%
19317	Delaware	2	$ 8,966.25	$ 6.59	1360	11	7	0.81%	0.51%	10594	83%	17%	550	10594	5.19%
19060	Delaware	4	$ 9,193.45	$ 3.28	2806	29	23	1.03%	0.82%	11239	83%	17%	895	11218	7.98%
19004	Montgomery	19	$ 20,861.41	$ 7.41	2814	60	44	2.13%	1.56%	9971	78%	22%	1139	9944	11.45%
19096	Montgomery	4	$ 21,011.72	$ 5.62	3740	55	37	1.47%	0.99%	15384	77%	23%	997	15038	6.63%
19350	Chester	3	$ 6,145.00	$ 6.50	945	5	4	0.53%	0.42%	10636	86%	14%	964	10569	9.12%
19021	Bucks	8	$ 11,192.86	$ 11.22	998	100	73	10.02%	7.31%	9744	79%	21%	2217	9673	22.92%
19444	Montgomery	6	$ 21,241.62	$ 6.55	3241	41	31	1.27%	0.96%	11194	89%	11%	393	11048	3.56%
19072	Montgomery	11	$ 22,000.30	$ 7.34	2997	42	32	1.40%	1.07%	10557	81%	19%	557	10538	5.29%
19079	Delaware	63	$ 34,821.91	$ 11.31	3079	976	741	31.70%	24.07%	9183	13%	87%	3195	9112	35.06%
19081	Delaware	17	$ 15,551.23	$ 5.71	2723	57	41	2.09%	1.51%	10577	84%	16%	523	9078	5.76%
19333	Chester	4	$ 6,664.08	$ 6.23	1070	17	10	1.59%	0.93%	7886	75%	25%	505	7863	6.42%
19033	Delaware	21	$ 21,184.83	$ 8.63	2456	113	80	4.60%	3.26%	7804	88%	12%	1012	7740	13.07%
18954	Bucks	3	$ 8,397.96	$ 7.55	1113	11	9	0.99%	0.81%	10635	86%	14%	212	10518	2.02%
19311	Chester	4	$ 13,089.57	$ 7.66	1709	41	28	2.40%	1.64%	11342	79%	21%	1042	11311	9.21%
19301	Chester	12	$ 8,098.31	$ 5.18	1562	37	25	2.37%	1.60%	7960	71%	29%	555	7726	7.18%
19070	Delaware	12	$ 15,147.42	$ 7.72	1963	104	73	5.30%	3.72%	6409	80%	20%	765	6397	11.96%
19343	Chester	0	$ -	$ -	3	0	0	0.00%	0.00%	8316	89%	11%	466	8135	5.73%
18929	Bucks	6	$ 8,300.67	$ 4.52	1837	24	19	1.31%	1.03%	9700	89%	11%	284	9700	2.93%

19075	Montgomery	10	$ 12,484.22	$ 4.87	2564	56	41	2.18%	1.60%	7868	87%	13%	330	7850	4.20%
19076	Delaware	21	$ 16,189.71	$ 8.30	1951	162	106	8.30%	5.43%	6449	75%	25%	1343	6292	21.34%
19352	Chester	0	$ 555.00	$ 2.56	217	0	0	0.00%	0.00%	11279	83%	17%	471	9276	5.08%
19032	Delaware	45	$ 33,756.70	$ 14.77	2285	513	386	22.45%	16.89%	6758	45%	55%	1624	6758	24.03%
17314	York	0	$ -	$ -	0	0	0	0.00%	0.00%	6386	96%	4%	819	6286	13.03%
19365	Chester	11	$ 12,606.15	$ 17.88	705	74	53	10.50%	7.52%	7402	77%	23%	803	7400	10.85%
19012	Montgomery	18	$ 26,206.02	$ 11.44	2290	158	119	6.90%	5.20%	6664	44%	56%	553	6635	8.33%
19405	Montgomery	35	$ 18,434.90	$ 10.93	1686	158	118	9.37%	7.00%	5110	78%	22%	1013	5108	19.83%
19074	Delaware	19	$ 22,683.31	$ 11.57	1960	171	123	8.72%	6.28%	5926	92%	8%	632	5926	10.66%
19025	Montgomery	3	$ 8,741.47	$ 4.24	2064	26	20	1.26%	0.97%	7044	85%	15%	149	7044	2.12%
19034	Montgomery	4	$ 6,556.25	$ 4.14	1582	12	7	0.76%	0.44%	7138	81%	19%	604	6819	8.86%
19041	Delaware	10	$ 9,631.25	$ 5.64	1708	15	10	0.88%	0.59%	6404	85%	15%	416	5498	7.57%
19330	Chester	0	$ -	$ -	7	1	1	14.29%	14.29%	5761	90%	10%	536	5749	9.32%
18925	Bucks	0	$ 4,933.23	$ 4.03	1223	6	5	0.49%	0.41%	6510	86%	14%	255	6510	3.92%
19085	Delaware	2	$ 20,304.49	$ 11.30	1797	14	10	0.78%	0.56%	10779	80%	20%	162	5359	3.02%
19031	Montgomery	2	$ 8,155.00	$ 4.61	1770	31	18	1.75%	1.02%	5159	85%	15%	350	4797	7.30%
18944	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	27635	92%	8%	1426	27561	5.17%
19094	Delaware	12	$ 14,139.06	$ 10.37	1364	261	184	19.13%	13.49%	4589	77%	23%	861	4589	18.76%
19029	Delaware	15	$ 15,532.42	$ 10.40	1493	177	124	11.86%	8.31%	3988	90%	10%	785	3984	19.70%
18977	Bucks	0	$ 980.00	$ 3.12	314	0	0	0.00%	0.00%	4565	89%	11%	154	4565	3.37%
19066	Montgomery	5	$ 8,291.07	$ 5.10	1627	18	15	1.11%	0.92%	5594	82%	18%	262	4890	5.36%
19095	Montgomery	8	$ 20,523.00	$ 12.83	1600	86	65	5.38%	4.06%	7437	55%	45%	1320	7066	18.68%
18947	Bucks	0	$ 1,700.00	$ 3.69	461	4	3	0.87%	0.65%	6423	92%	8%	256	6379	4.01%
19022	Delaware	49	$ 19,099.91	$ 15.04	1270	323	245	25.43%	19.29%	3671	77%	23%	937	3667	25.55%
19035	Montgomery	1	$ 19,660.76	$ 17.84	1102	8	8	0.73%	0.73%	4149	88%	12%	73	4092	1.78%
19362	Chester	0	$ -	$ -	0	0	0	0.00%	0.00%	5981	89%	11%	845	5967	14.16%
18054	Montgomery	2	$ 1,609.91	$ 11.75	137	6	5	4.38%	3.65%	4960	94%	6%	722	4952	14.58%
18074	Montgomery	0	$ 440.00	$ 8.00	55	1	1	1.82%	1.82%	5423	97%	3%	519	5380	9.65%
18917	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	2252	85%	15%	287	2252	12.74%
19043	Delaware	7	$ 6,300.04	$ 6.95	906	74	54	8.17%	5.96%	3051	99%	1%	380	3005	12.65%
17302	York	0	$ -	$ -	0	0	0	0.00%	0.00%	2386	96%	4%	221	2386	9.26%
19440	Montgomery	4	$ 5,850.20	$ 2.79	2094	34	18	1.62%	0.86%	19897	71%	29%	2078	19622	10.59%
18969	Montgomery	5	$ 736.92	$ 0.90	819	24	17	2.93%	2.08%	15533	86%	14%	1533	15418	9.94%
19344	Chester	4	$ 1,615.00	$ 5.46	296	18	13	6.08%	4.39%	12784	94%	6%	1699	12467	13.63%
19373	Delaware	0	$ 1,185.00	$ 3.28	361	2	2	0.55%	0.55%	1919	94%	6%	45	1919	2.34%
19474	Montgomery	1	$ 2,292.28	$ 7.10	323	7	5	2.17%	1.55%	386	93%	7%	0	386	0.00%
19453	Montgomery	4	$ 1,568.96	$ 8.21	191	1	0	0.52%	0.00%	1543	97%	3%	157	1543	10.17%
18915	Montgomery	3	$ 3,059.26	$ 8.09	378	10	6	2.65%	1.59%	1458	61%	39%	78	1458	5.35%
19372	Chester	10	$ 4,579.74	$ 5.40	848	30	19	3.54%	2.24%	2021	77%	23%	23	2021	1.14%
19374	Chester	0	$ 1,274.65	$ 11.59	110	6	6	5.45%	5.45%	812	81%	19%	76	812	9.36%
19437	Montgomery	0	$ 1,515.00	$ 4.82	314	0	0	0.00%	0.00%	968	78%	22%	4	726	0.55%
19456	Montgomery	3	$ 1,250.75	$ 5.56	225	1	1	0.44%	0.44%	270	93%	7%	0	270	0.00%
18073	Montgomery	1	$ 1,725.97	$ 4.97	347	5	4	1.44%	1.15%	11271	93%	7%	1099	11071	9.93%
18912	Bucks	0	$ 1,393.75	$ 13.15	106	2	2	1.89%	1.89%	181	100%	0%	94	181	51.93%
18942	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	2607	90%	10%	205	2595	7.90%
19009	Montgomery	0	$ 990.00	$ 5.24	189	0	0	0.00%	0.00%	1091	95%	5%	69	919	7.51%
18923	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	1384	95%	5%	84	1384	6.07%
19310	Chester	2	$ 1,291.25	$ 4.66	277	25	18	9.03%	6.50%	3013	91%	9%	750	3009	24.93%
19375	Chester	0	$ -	$ -	17	1	1	5.88%	5.88%	176	100%	0%	0	176	0.00%
19492	Montgomery	2	$ 2,292.50	$ 53.31	43	3	3	6.98%	6.98%	674	98%	2%	65	618	10.52%
19490	Montgomery	0	$ 165.00	$ 1.46	113	2	1	1.77%	0.88%	274	94%	6%	0	274	0.00%

18980	Bucks	0	$ -	$ -	54	3	2	5.56%	3.70%	104	99%	1%	4	104	3.85%
19017	Delaware	0	$ 755.00	$ 6.34	119	0	0	0.00%	0.00%	289	99%	1%	0	282	0.00%
19369	Chester	3	$ 900.00	$ 34.62	26	1	1	3.85%	3.85%	159	50%	50%	62	159	38.99%
18913	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	180	100%	0%	5	180	2.78%
19520	Chester	0	$ -	$ -	0	0	0	0.00%	0.00%	6261	94%	6%	618	6254	9.88%
18932	Bucks	0	$ 40.00	$ 0.59	68	4	3	5.88%	4.41%	314	95%	5%	31	314	9.87%
19457	Chester	1	$ 53.75	$ 1.34	40	3	3	7.50%	7.50%	148	86%	14%	25	148	16.89%
18933	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	126	100%	0%	16	126	12.70%
18950	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	117	100%	0%	0	117	0.00%
19367	Chester	0	$ 220.00	$ 6.47	34	0	0	0.00%	0.00%	142	100%	0%	31	133	23.31%
19383	Chester	0	$ -	$ -	0	0	0	0.00%	0.00%	5271	76%	24%	307	354	86.72%
19319	Delaware	0	$ -	$ -	10	0	0	0.00%	0.00%	735	92%	8%	62	583	10.63%
18946	Bucks	0	$ -	$ -	28	1	0	3.57%	0.00%	568	97%	3%	32	441	7.26%
17527	Lancaster	0	$ -	$ -	0	0	0	0.00%	0.00%	6525	94%	6%	907	6496	13.96%
19477	Montgomery	0	$ 905.00	$ 29.19	31	0	0	0.00%	0.00%	44	100%	0%	0	44	0.00%
19435	Montgomery	0	$ -	$ -	0	0	0	0.00%	0.00%	120	100%	0%	0	120	0.00%
18936	Montgomery	0	$ -	$ -	3	0	0	0.00%	0.00%	265	96%	4%	0	265	0.00%
19052	Delaware	0	$ -	$ -	34	1	1	2.94%	2.94%	625	100%	0%	20	625	3.20%
19316	Chester	0	$ -	$ -	0	0	0	0.00%	0.00%	81	100%	0%	0	81	0.00%
18964	Montgomery	16	$ 6,441.35	$ 3.63	1773	38	28	2.14%	1.58%	14129	85%	15%	1491	14023	10.63%
17309	York	0	$ -	$ -	0	0	0	0.00%	0.00%	1968	96%	4%	267	1968	13.57%
19436	Montgomery	0	$ -	$ -	31	0	0	0.00%	0.00%	486	97%	3%	100	426	23.47%
17321	York	0	$ -	$ -	0	0	0	0.00%	0.00%	2368	95%	5%	159	2368	6.71%
19358	Chester	0	$ -	$ -	0	0	0	0.00%	0.00%	384	76%	24%	199	384	51.82%
18076	Montgomery	1	$ 237.50	$ 1.33	179	3	2	1.68%	1.12%	3152	86%	14%	283	3148	8.99%
19345	Chester	0	$ -	$ -	0	0	0	0.00%	0.00%	718	74%	26%	14	32	43.75%
17563	Lancaster	0	$ -	$ -	0	0	0	0.00%	0.00%	4073	87%	13%	925	4073	22.71%
18955	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	1406	90%	10%	80	1266	6.32%
18960	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	11850	92%	8%	1020	11733	8.69%
19504	Berks	0	$ -	$ -	0	0	0	0.00%	0.00%	5213	94%	6%	337	5174	6.51%
18935	Bucks	0	$ -	$ -	0	0	0	0.00%	0.00%	316	95%	5%	0	316	0.00%
19472	Montgomery	0	$ -	$ -	1	0	0	0.00%	0.00%	60	100%	0%	0	60	0.00%

Exhibit C

County	2020 Awarded MEAF Grant Dollars	2020 Contributions distributed to agencies	2021 Awarded MEAF Grant Dollars	2021 Distribution	2022 Awarded MEAF Grant Dollars	2022 Distribution	2023 Awarded MEAF Grant Dollars	2023 Distribution	Total Grant Dollars Awarded to Customers (2020-2023)	Dollar amounts from agencies (amount awarded divided by 2)	dollar amount matched (amount awarded divided by 2)	Dollar Amounts Distributed (2020-2023)	Available Match (1:1 match)	Difference (assuming agency provides full grant amount)	Difference (assuming shareholder match applied)	Difference (if all match available to org)
BUCKS	$989	$22,224	$16,169	$23,124	$32,015	$24,480	$31,798	$45,051	$80,971	$40,486	$40,486	$114,879	$114,879	$33,908	$74,394	$148,787
CHESTER	$1,776	$22,224	$6,206	$23,124	$2,000	$24,480	$18,938	$45,051	$28,920	$14,460	$14,460	$114,879	$114,879	$85,959	$100,419	$200,838
DELAWARE	$0	$22,224	$12,144	$23,124	$145,874	$24,480	$65,948	$45,051	$223,966	$111,983	$111,983	$114,879	$114,879	($109,087)	$2,896	$5,792
MONTGOMERY	$1,091	$22,224	$43,076	$23,124	$67,705	$24,480	$35,992	$45,051	$147,864	$73,932	$73,932	$114,879	$114,879	($32,985)	$40,947	$81,894
PHILADELPHIA	$3,168	$42,224	$29,800	$43,124	$2,344	$44,480	$20,404	$65,051	$55,716	$27,858	$27,858	$194,879	$194,879	$139,163	$167,021	$334,042
YORK	$0	$1,700	$835	$1,700	$2,096	$1,700	$2,891	$1,700	$5,822	$2,911	$2,911	$6,800	$6,800	$978	$3,889	$7,778
Total	**7,023.00**	**132,821.00**	**108,230.00**	**137,321.00**	**252,035.00**	**144,102.00**	**175,972.00**	**246,953.00**	$543,260	$271,630	$271,630	$661,197	$661,197	$117,937	$389,567	$779,134

MEAF Grant Dollars from CAUSE-PA I-9

Distribution from CAUSE-PA III-31(a) (these numbers equal the contributions minus the shareholder match)

Assumption is that agency uses money to provide 50% of grant, PECO matches that 50% via shareholder dollars as match on account - see REVISED Attachment CAUSE-PA-TURN-III-30(a) at 4

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission **v.** **PECO Energy Company – Gas Division**	**Docket No. R-2024-3046932**

APPENDIX B

TO THE
DIRECT TESTIMONY OF ELIZABETH R. MARX

On Behalf of

Tenant Union Representative Network

and

Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

June 17, 2024

ELIZABETH R. MARX, ESQ.

267.240.3089
e.rowanmarx@gmail.com
3627 Brisban Street
Harrisburg, PA 17111

PROFESSIONAL EXPERIENCE

Pennsylvania Utility Law Project 2014-current
Executive Director, 2020-current
Supervising Attorney, 2017-2020
Staff Attorney, 2014-2017

Pennsylvania Coalition Against Domestic Violence 2008-2014
Staff Attorney, 2010-2014
Legal Intern, 2008-2010

Widener University Commonwealth School of Law 2009-2010
Research Assistant, Professor John Capowski

YWCA Domestic Violence Legal Center 2007
Certified Legal Intern

EDUCATION

JD **Widener University Commonwealth School of Law** **May 2010**
Magna Cum Laude
Executive Managing Editor, Widener Law Journal

BA **Temple University** **May 2005**
Cum Laude
Major - Political Science; Minor - Economics and Women's Studies

PROFESSIONAL BOARDS AND ADVISORY COMMITTEES

- **Chairperson, LIHEAP Advisory Committee**
  Pennsylvania Department of Human Services
  Chair, 2020-current
- **Chairperson, Weatherization Assistance Program Policy Advisory Council**
  Pennsylvania Department of Community and Economic Development
  Chair, January 2023-current
  Member, 2020-2022
- **Member, Consumer Advisory Council**
  Pennsylvania Public Utility Commission
  2021-current
- **Member, Climate Change Advisory Committee**
  Pennsylvania Department of Environmental Protection
  2022-current
- **Member, Steering Committee**
  National Leadership Forum, Adults Exposed to Domestic Violence in Childhood
  2014-2016

SELECT PRESENTATIONS

Public Testimony

- **En Banc Hearing, Supplier Consolidated Billing, June 2018**
  Pa. Public Utility Commission, Docket No. M-2018-2645254

- **Public Hearing, Property Assessed Clean Energy Program, April 2018**
  Pa. House of Representatives, Commerce Committee
  http://www.legis.state.pa.us/WU01/LI/TR/Transcripts/2018_0058_0005_TSTMNY.pdf.

- **Public Hearing, Impact of COVID-19 on Utility Debt Crisis, September 2020**
  Pa. House of Representatives, Commerce Committee
  https://www.legis.state.pa.us/WU01/LI/TR/Transcripts/2020_0092_0002_TSTMNY.pdf

- **Public Hearing, Pennsylvania's Housing Crisis, March 2021**
  Pa. Senate, Democratic Policy Committee
  https://www.senatormuth.com/wp-content/uploads/2021/03/Elizabeth-Marx.pdf

- **Public Hearing, Pennsylvania's Retail Energy Markets, June 2022**
  Pa. House of Representatives, Consumer Affairs Committee
  https://www.legis.state.pa.us/WU01/LI/TR/Transcripts/2022_0073_0002_TSTMNY.pdf

- **Public Hearing, Title 66, Ch. 14 of the Public Utility Code, October 2023**
  Pa. Senate, Consumer Affairs and Professional Licensure
  https://www.pasenategop.com/news/consumer-100323/

- **Public Hearing, Title 66, Ch. 14 of the Public Utility Code, January 2024**
  Pa. House of Representatives, Consumer Protection, Technology, Utilities Committee
  https://www.legis.state.pa.us/cfdocs/Legis/CMS/ArchiveDetails.cfm?SessYear=2023&MeetingId=3479&Code=63&Chamber=H

National Conference Workshops

- **In Pursuit of Safe and Affordable Water in Pittsburgh**
  National Energy and Utility Affordability Conference (June 2022)

- **State and Local Gov't Role in Helping Consumers Fill the Gap**
  Consumer Federation, High Cost Lending Summit (Feb. 2022)

- **The Impact of Water Policies on Communities of Color and Low Income**
  Partners for Justice Virtual Conference (May 2021)

- **Addressing the Unique Utility Needs of Domestic Violence Victims**
  National Energy and Utility Affordability Conference (2016, 2017, 2018, 2020)

- **Protecting Utility Consumers in the Fast-Changing Markets**
  Community Action Partnership Annual Convention (Aug. 2017)

- **State Level Advocacy: Interaction with PUCs and Beyond**
  National Energy and Utility Affordability Conference (June 2017)

- **Critical Utility Protections for Domestic Violence Survivors**
  NASUCA Consumer Protection Committee (Dec. 2019, Sept. 2023)

SELECT APPELLATE CASE WORK

- Coalition for Affordable Util. Servs. & Energy Efficiency in Pa. v. Pa. PUC, 120 A.3d 1087 (Pa. Commw. Ct. 2014) (*counsel for CAUSE-PA*).
- Retail Energy Supply Ass'n v. Pa. PUC, 185 A.3d 1206 (Pa. Commw. Ct. 2017) (*counsel for CAUSE-PA*).

PROFESSIONAL CERTIFICATIONS

- **Institute of Public Utilities, Michigan State University**
  Fundamentals of Regulatory Studies, 2014

HONORS AND AWARDS

Outstanding Social Service Award **2017**
Awarded by The Women's Center of Columbia / Montour County to individuals who have demonstrated an outstanding level of commitment to serving victims of domestic violence.

Dean's Award **2010**
The Dean's Award is given annually to the graduating student who, in the dean's opinion, has demonstrated outstanding legal aptitude, exemplary service, significant leadership skills and the potential to become an outstanding member of the legal community.

Distinguished Legal Scholarship **2010**
Awarded to a graduating member of the Widener Law Journal for distinguished service and distinguished legal writing abilities.

PUBLICATIONS

- Jim Grevatt, Elizabeth Marx, Sarah Ralich, & Levana Layendecker, Small Steps in Coordination Equal Leaps and Bounds for Pennsylvania's Underserved Families: Driving Policy Improvements through Collaborative Advocacy, ACEEE 2018 Summer Study on Energy Efficiency in Buildings (Aug. 2018).
- Elizabeth Marx, Protecting Victims, Saving Lives: 36 Years of Effective Domestic Violence Prevention, AT ISSUE, Pa. Bar Ass'n (Summer, 2013).
- Elizabeth R. Marx, When is a Billboard Just a Billboard?: Twp. of Exeter v. Zoning Hearing Board and the Implications of Business-Infused Police Power, 19 WIDENER L.J. 711 (2010).

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission **v.** **PECO Energy Company – Gas Division**	**Docket No. R-2024-3046932**

APPENDIX A

TO THE
DIRECT TESTIMONY OF ELIZABETH R. MARX

On Behalf of

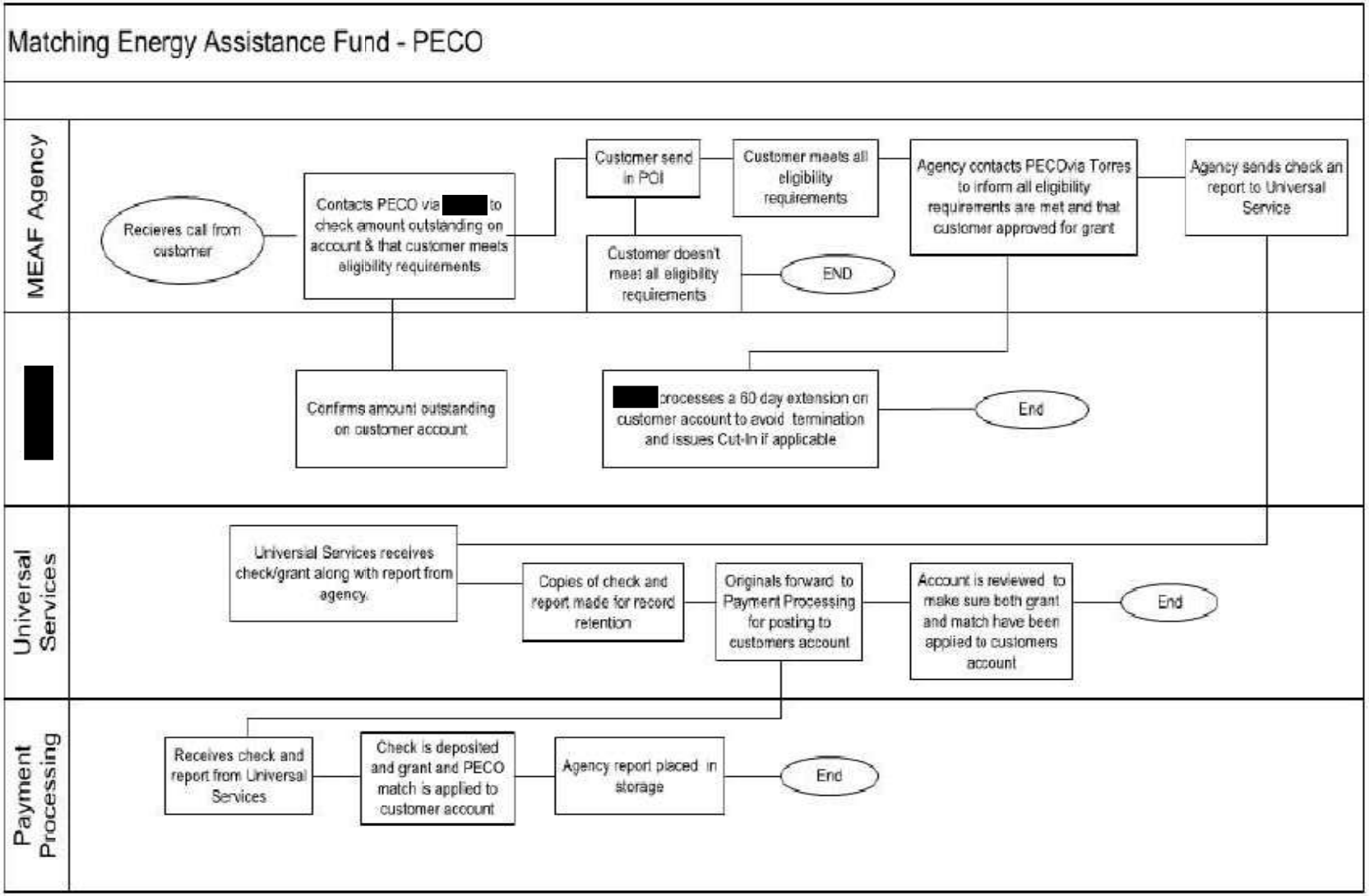
Tenant Union Representative Network

and

Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

June 17, 2024

MEAF Flow Chart



BEFORE THE

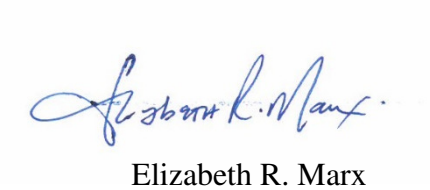
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2024-3046932
PECO Energy Company - Gas Division	:	

VERIFICATION

I, Elizabeth R. Marx, hereby state that the facts set forth in my Direct Testimony labeled CAUSE-PA Statement No. 1 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: June 17, 2024



Elizabeth R. Marx

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission v. PECO Energy Company - Gas	Docket No. R-2024-3046932

SURREBUTTAL TESTIMONY OF ELIZABETH R. MARX

On Behalf of

Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

August 2, 2024

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Appendix A: PECO Security Deposit Letter

PREPARED SURREBUTTAL TESTIMONY OF ELIZABETH R. MARX

Q: Please state your name, occupation, and business address.

A. Elizabeth R. Marx. I am an attorney, and currently serve as Executive Director of the Pennsylvania Utility Law Project, with offices at 118 Locust Street, Harrisburg, PA 17101.

Q: Have you previously provided testimony in this proceeding?

A: Yes. I provided direct testimony in this proceeding on June 17, 2024, on behalf of the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (CAUSE-PA).

Q: What is the purpose of your surrebuttal testimony?

A: The purpose of my surrebuttal testimony is to address the rebuttal testimony of witnesses for PECO and for the Commission's Bureau of Investigation and Enforcement (I&E). First, I will address the statements of PECO witness Michael J. Trzaska regarding PECO's proposed Weather Normalization Adjustment charge, and will further clarify the negative impacts of PECO's proposed decoupling mechanism on consumers – especially low income consumers. Next, I will respond to PECO witness Joseph Bisti (PECO Statement 7-R) flawed analysis that increasing the residential fixed charge will benefit low-income customers. Third, I will respond to PECO witness Jaqueline F. Golden (PECO Statement 10-R). I will discuss Ms. Golden's assertions related to the affordability of a rate increase, including the insufficiency of PECO's outreach efforts related to Universal Service Programs and CAP enrollment. I will respond to Ms. Golden's inaccurate statements about PECO's adherence to the statutory prohibition on assessing low income security deposits and its regulatory obligation to provide low-income customers with security deposit refunds. In my response to Ms. Golden's testimony on the Low-Income Usage Reduction Program (LIURP), I will outline why *prior* increases to PECO's LIURP budget to mitigate the impact of *prior* approved rate increases do not eliminate the need for a current increase to mitigate the impact

of the current rate increase, and why PECO's multi-family collaboratives do not sufficiently address my concerns about the availability of LIURP for tenants. I will respond to Ms. Golden's discussion of the Matching Energy Assistance Fund (MEAF), describing PECO's failure to ensure that hardship funds are reaching customers. I will also respond to Ms. Golden in relation to language access, reiterating my stance that PECO is providing inadequate service to non-English speaking customers. I will also explain why the examples provided in Ms. Golden's testimony do not support PECO's contention of exemplary management. Lastly, I will respond to the rebuttal statement of I&E's witness Christopher Keller in relation to his discussion of my LIURP recommendations.

I. RESPONSE TO PECO WITNESS MICHAEL J. TRZASKA (PECO ST. 3-R)

Q: Could you summarize Mr. Trzaska's rebuttal testimony in response to analysis and recommendations regarding PECO's proposed Weather Normalization Charge (WNA) contained in your direct testimony?

A: In direct testimony, I stated that "other WNAs implemented in Pennsylvania service territories have almost always resulted in higher charges for residential consumers and shifted all risk of changing weather from the utility onto consumers."[1] Rather than providing any actual information or argument to rebut my conclusions, Mr. Trzaska simply reiterates arguments from his direct testimony in his rebuttal. Mr. Trzaska claims that the WNA doesn't shift risk to customers – rather, in his opinion, the WNA reduces risk to consumers because it stabilizes the amounts customers are billed by lowering customer bills during unseasonably cold months and raising customer bills during unseasonably warm months.[2] As I will discuss further below, predictable

[1] CAUSE-PA St. 1 at 67.
[2] PECO St. 3-R at 11-12.

bills are not the same as removing risk if the predictable bills will be higher. Further, Mr. Trzaska's arguments that customers might sometimes have lower bills and CAP customers won't be affected are inaccurate, and do not address my documented concerns – based on experience with similar mechanisms – that the WNA will result in consistently higher bills.[3]

Q: Do you agree with Mr. Trzaska's assertion that the WNA would reduce a consumer's risk and increase bill predictability?

A: No. As a preliminary matter, I do not believe bill predictability is the appropriate goal if that bill predictability comes with a consistently higher bill. As discussed below, the WNA is likely to result in consistently higher bills as average temperatures across the state continue to rise. Moreover, I do not agree that the WNA will increase bill predictability. To the contrary, the WNA increases the likelihood that customers will receive *unpredictably* high bills because it would allow PECO to charge more during unseasonably warm months when customers use less gas for heating and, thus, reasonably predict that their gas bill will be correspondingly lower.

I note, too, that PECO's WNA proposal is both confusing and opaque, and will not empower customers to predict how much they will be charged – frustrating efforts to promote conservation and efficiency. Indeed, the WNA creates a scenario where a customer is charged more for the commodity the less they use. I cannot think of a single other consumer commodity where such an obtuse pricing structure is applied.

Below is the set of equations PECO plans to use to calculate how much a customer should be charged under the proposed WNA.

[3] Id. at 20.

Fig. 1 – Screenshot of WNA Equations from Mr. Trzaska's Testimony[4]

$$\text{WNBC} = \text{BLMC} + [\frac{\text{NHDD} +/- (NHDD * 1\%)}{\text{AHDD}} \text{x (AMC} - \text{BLMC)}]$$
$$\text{WNAC} = \text{WNBC} - \text{AMC}$$
$$\text{WNA} = \text{WNAC x Distribution Charge}$$

The explanation for each of the components of these three equations then goes on for another two pages. From October through May, the months PECO has proposed for its WNA, PECO customers will have no way of predicting how the WNA will impact their bill, because the bill can only be calculated using the complicated equations above. In addition, these equations rely on a separate model used to calculate which days are abnormally hot or cold – a model customers have no way to access and are unlikely to understand. Rather than create "predictability" the WNA will only create uncertainty and confusion for customers.

Q: Do you agree with Mr. Trzaska's assertion that the WNA will not affect affordability for consumers?

A: No. As I noted above, the WNA is likely to result in consistently higher charges. As temperatures rise because of climate change, we will see more unseasonably warm weather when compared to the 30-year average employed by PECO.[5] The Pennsylvania Department of Environmental Protection's (DEP) most recent Climate Impact Assessment concluded the following:

[4] PECO St. 3 at 71.
[5] See Pa. DEP, Pa. Climate Action Plan (Sept. 2021); "Winter Days Above Normal," Climate Central, https://www.climatecentral.org/graphic/2023-winter-package?graphicSet=Winter+Days+Above+Normal (showing that compared to 1970, 2023 had 13 more warm winter days above normal in the Harrisburg area and in Pittsburgh, 11 more in Central PA, and 22 more in Philadelphia).

> The average annual temperature statewide is expected to increase by about 6 degrees Fahrenheit. Extreme heat events will also increase: 90+- degree temperatures are expected to occur approximately 37 days per year, up from 5 days historically; such impacts will, for example, alter the growing season, increase cooling energy use, and decrease heating energy use.[6]

The state's Climate Impact Assessment does not contain any indication that Pennsylvania will experience equally pronounced cold weather trends. Yet in developing its WNA proposal, PECO has explicitly stated that it has not accounted for climate change in its calculation.[7] PECO's exclusion of climate change to account for increasingly warm weather within the calculation of the WNA, and its reliance on a historical-leaning 30-year average temperatures, will likely result in far more "warmer than average" months than "colder than average" months. As such, contrary to Mr. Trzaska's claim that the WNA will "mutually benefit" consumers and the Company,[8] PECO's approach to the WNA will result in the benefit consistently going to the Company, not to the customers. Indeed, this is what we have experienced with WNA mechanisms implemented across the state, from Erie to Philadelphia and all places in-between.[9] PECO has provided no indication that its WNA will be any different.

As I discussed in my direct testimony, low-income customers are especially vulnerable to unaffordable bills and, thus, will be uniquely harmed by the WNA.[10] Mr. Trzaska argues that low income customers not enrolled in CAP "will not be treated differently than any other residential

[6] Pa. DEP, Pa. Climate Action Plan, at xi, fig. ES-1 (Sept. 2021) (citing the 2021 Climate Impact Assessment).
[7] See CAUSE-PA-I-42 ("PECO has not taken into account the impacts of climate change in developing its proposed WNA.")
[8] PECO St. 3-R at 12.
[9] See Pa. PUC v. Philadelphia Gas Works, R-2017-2586783, PGW Annual WNA Reporting (filed Dec. 31, 2019; June 9, 2021; Jan. 6, 2022). See also UGI Utilities, Inc. Gas Division, Docket No. R-2021-3030218, Weather Normalization Adjustment Pilot Reporting (filed June 28, 2024); Nat'l Fuel Gas, Weather Normalization Report – October 2023 – May 2024, Docket No. R-2022-3035730 (filed June 28, 2024); Pa. PUC v. Columbia Gas of Pa., Inc., R-2020-3018835, Columbia St. 3 at 17-18 (Submitted Apr. 24, 2020).
[10] CAUSE-PA St. 1 at 67.

customer."[11] In making this argument, Mr. Trzaska misses the point. I did not state, nor did I suggest in any way, that PECO would intentionally discriminate against low income households in its application of a WNA. Rather, I pointed out the differences in low income usage patterns and economic instability among low income customers, which will be exacerbated by imposition of a WNA – causing disparities in the resulting impact of PECO's proposed WNA on low income customers.

Further, despite Mr. Trzaska's statements to the contrary,[12] I note that CAP customers are not shielded from experiencing direct bill impacts caused by the WNA. PECO's CAP program provides two CAP rate options, and applies the lesser of the customer's actual bill or their applicable percentage of income rate.[13] In the shoulder months of October, November, April, and May, when temperatures are often mild, a greater number of CAP customers receive an actual bill, as opposed to a percentage of income rate. The WNA would allow PECO to charge more in these shoulder months, causing the actual usage-based bill for CAP customers to be higher – and pushing a greater number of customers into the percentage of income CAP rate.[14] Thus, a greater number of CAP customers are likely to experience higher CAP bills and, in turn, the overall cost of the program is likely to increase.

[11] PECO St. 3-R at 20.
[12] PECO St. 3-R at 20.
[13] PECO Energy Company Universal Service and Energy Conservation Plan 2019 to 2028 at 63 (Third Amended Plan, Oct. 30, 2023); https://www.puc.pa.gov/media/2690/peco_2019_usecp_10-2023.pdf.
[14] I note that increased bills as a result of the WNA will also result in an increase to the CAP shortfall, further increasing rates.

Q: Mr. Trzaska argues that the Commission "has already evaluated decoupling mechanisms" and that it "ultimately established a framework through which utilities may seek alternative rate mechanisms, which the Company has complied with in this proceeding."[15] How do you respond?

A: Mr. Trzaska is correct that the Commission has adopted a policy framework for assessing the justness and reasonableness of alternative rate designs and revenue decoupling mechanisms. However, I strongly disagree that PECO's proposal fits this framework, and I likewise disagree with his assertion that the Commission should not revisit this framework. We are in the midst of a rapid energy transition, and it is critical that the Commission ensure that its alternative ratemaking policies are responsive to that transition.

While other gas utilities may have implemented WNAs in the past, that is not an indication that those WNAs are or remain consistent with the Commission's alternative ratemaking framework – nor is it an indication that PECO's proposed WNA is compliant with the Commission's alternative ratemaking framework. The Commission has established factors for consideration of alternative rate designs, which are enshrined in a formal Commission policy statement at 52 Pa. Code § 69.3302. Application of these factors to PECO's proposed WNA will be addressed by Counsel for CAUSE-PA through briefing. Nevertheless, I note specifically that my direct testimony addressed the failure of PECO's proposed WNA to meet several key factors in the Commission's established framework; namely, the impact the WNA will have on conservation and the uniquely harmful impact PECO's WNA will have on low income customers.

[15] PECO St. 3-R at 13-14.

The Commission's recent order in the Pennsylvania American Water Company (PAWC) rate proceeding is also instructive in response to Mr. Trzaska's unsupported claim that PECO's proposal is compliant with the Commission's decoupling framework. In that order, the Commission rejected a revenue decoupling mechanism proposed by Pennsylvania American Water Company (PAWC) based on (1) the lack of indication that a decoupling mechanism would reduce the frequency of rate filings; (2) the likelihood the decoupling mechanism would "diminish the value of any savings achieved from …conservation efforts"; (3) the likelihood the decoupling mechanism "would produce guaranteed rate recovery where no guarantee existed in the past"; (4) the likelihood the decoupling mechanism would "shift the risk of recovery entirely onto customers without any benefit"; (5) the likelihood the decoupling mechanism would cause low income customers to bear additional costs; and (6) the likelihood the decoupling mechanism would be "confusing and difficult for consumers due to its complex design."[16]

PECO files rate proceedings frequently and with regularity, with filings in 2020, 2022, and now in 2024. There is no indication that PECO will file less frequent rate proceedings in the past, and I am unaware of any PECO witness making any such commitment to reduce the frequency of rate filings if the WNA were approved. As explained, PECO's WNA proposal will have a negative impact on conservation and efficiency, eroding the ability to achieve savings, and will shift the risk onto consumers without a demonstrated or reasonably likely benefit. PECO's WNA will also have a disproportionately negative impact on low income customers and is likely to cause substantial confusion given the complexity of the calculation. In my estimation, PECO's

[16] Pa. PUC v. Pa. American Water Co., Opinion and Order, Docket Nos. R-2023-3043189, -190, at 307-08 (order adopted July 11, 2024, order entered July 22, 2024).

WNA proposal does not fit the framework established by the Commission for decoupling mechanisms, and should be rejected.

II. RESPONSE TO PECO WITNESS JOSEPH BISTI (PECO ST. 7-R)

Q: Could you summarize Mr. Bisti's testimony related to the residential fixed charge and low-income customers?

A: Mr. Bisti claims that high-usage, low-income customers would benefit from having a higher fixed rate and a comparatively lower volumetric rate.[17] Mr. Bisti presents an analysis of average monthly charges for low-income customers split by income level that compares charges using PECO's proposed fixed charge of $19.38 and a fixed charge of $15.70 proposed by OCA with correspondingly adjusted volumetric rates. The table presenting this analysis is further subdivided into CAP and non-CAP confirmed low-income customers and by Federal Poverty Level tier. Based on that analysis, Mr. Bisti concludes "that the cost impact of the proposed change in the residential customer charge is not material (between -0.1% and -0.9%)." He further asserts that "PECO believes that its proposal to provide a relative benefit to higher- usage low-income customers, who are more likely to experience high monthly bills and therefore would benefit more from lessening the impact of the overall rate increase, is reasonable."[18]

Q: Do you have any concerns with this analysis?

A: Yes. First, there are some incongruencies that undermine the quality of the data. For example, the table is subdivided into CAP and non-CAP confirmed low-income customers, which is then further subdivided into income tiers based on percentage of the Federal Poverty Level (FPL). The section for CAP customers includes a category for customers from 151-200% FPL, but

[17] PECO St. 7-R at 10-12.
[18] PECO St. 7-R at 10-12.

the income limit for being on CAP is 150%, so there should not be any customers in this category. The CAP section also includes an 'Unknown' income category, but this also does not make sense. PECO needs to have a customer's specific income to calculate their percentage of income bill amount for CAP. These glaring defects raise serious concerns about the data used to produce this table.

Second, even if one were to ignore the issues raised above, the table is missing a critical piece of information, which is the number of customers in each category. It is impossible to conclude the scope of the savings from this table if the fixed charge were to remain the same. What we can conclude, however, is that every category of low-income customer would pay more with an increase to the fixed charge. Without the number of customers in each category, it is impossible to determine the cumulative impact on low-income customers.

Third, there appears to be a significant difference in the results depending on whether you use the *median* or the *mean* for the average usage. Table 1 below reproduces the same table from PECO Statement 7-R, replacing mean usage with median usage.[19] When using median monthly usage, it becomes even more apparent that low-income customers would be charged less overall per month with a lower fixed rate. This is likely because the mean usage used for the table in Mr. Bisti's rebuttal testimony is skewed by outlier customers with very high monthly usage. I should emphasize that I do not believe that either this table or the one in Mr. Bisti's rebuttal testimony accurately demonstrates the effect of an increased fixed rate on low-income customers, in part because of the flaws in the data described above. But, this table shows that even when we use PECO's flawed categorization of customer groups, low income customers with median usage do

[19] CAUSE-PA IV-32(a).

not have lower rates when the fixed rate is increased. As shown below, monthly rates are lower for every category of low-income customer under the lower fixed rate proposed by OCA.

Table 1: Rate Design Impact on PECO Low Income Customers With Median Usage[20]

	Federal Poverty Level	2023 Median Usage (mcf)	PECO-Proposed Rate GR, $19.38 Cust Charge Plus $6.8279/mcf	OCA-Proposed Rate GR, $15.70 Cust Charge Plus $7.3594/mcf	$ Diff	% Diff
CAP	0% - 25%	4.11	$92.21	$90.71	($1.50)	-1.6%
	25% - 50%	5.01	$98.57	$97.55	($1.02)	-1.0%
	51% - 100%	4.07	$91.92	$90.40	($1.52)	-1.7%
	101% - 150%	4.10	$92.15	$90.65	($1.50)	-1.6%
	151% - 200%	2.98	$84.26	$82.16	($2.09)	-2.5%
	Unknown	3.95	$91.09	$89.51	($1.58)	-1.7%
Non-CAP Confirmed Low-Income	0% - 25%	5.06	$98.93	$97.93	($0.99)	-1.0%
	25% - 50%	5.33	$100.81	$99.96	($0.85)	-0.8%
	51% - 100%	5.02	$98.63	$97.62	($1.01)	-1.0%
	101% - 150%	4.98	$98.40	$97.36	($1.03)	-1.1%
	151% - 200%	5.01	$98.57	$97.55	($1.02)	-1.0%
	Unknown	4.64	$95.98	$94.77	($1.21)	-1.3%

If PECO were to maintain its current fixed charge, it would save low income customers even more – preserving their ability to reduce their bill through conservation.

Finally, Mr. Bisti's analysis ignores the basis of my objection to raising the fixed rate: Recovery of rates through higher fixed charges reduces the amount of control the customer has to reduce their bill by reducing their usage. As discussed in my direct testimony, this directly undermines the goals of the Low-income Usage Reduction Program (LIURP) by reducing the amount of savings that can be achieved by participating in LIURP. And those savings can be significant - according to the most recent APPRISE report from April 2024, LIURP services in

[20] CAUSE-PA IV-32(a), monthly data averaged over 2023.

2022 reduced usage by 7.2% for gas heating customers.[21] The potential for savings through LIURP is far greater than the pennies Mr. Bisti claims low income households will save under a high fixed charge structure. As explained, the presence of high usage outlier customers likely caused a significant difference between the median and the mean monthly usage in Mr. Bisti's analysis and the analysis above, which confirms my understanding that there are significant number of low-income customers with high usage who would benefit from LIURP services.

For these reasons, and the reasons set forth in my direct testimony, I reiterate my recommendation that PECO's fixed charge remain unchanged.[22] To the extent any increase in the Company's residential distribution rate is approved, it should be applied to the volumetric charge.

III. RESPONSE TO PECO WITNESS JAQUELINE F. GOLDEN (PECO ST. 10-R)

A. Affordability of Rate Increase

Q: How does Ms. Golden address your concerns about affordability of current and proposed rates for low-income customers?

A: My testimony, as well as testimony from Roger Colton on behalf of the Office of Consumer Advocate, emphasized the unaffordability of current rates for low-income households in PECO's service territory, and raised concerns that increasing rates would exacerbate this affordability crisis.[23] In response, Ms. Golden describes PECO's existing efforts to "connect customers in need with programs that can reduce their bill" and describes PECO's robust community education and outreach.[24]

[21] See JFG-1, PECO Energy 2022 LIURP Evaluation Final Report at 7.
[22] CAUSE-PA/TURN St. 1 at 66.
[23] See, e.g., CAUSE-PA St. 1 at 9-10, 17; OCA St. 4 at 12-16.
[24] PECO St. 10-R at 2-3.

Q: Can you summarize Ms. Golden's rebuttal testimony regarding PECO's existing outreach efforts?

A: According to Ms. Golden, PECO conducts hundreds of outreach events throughout the Company's service territory, partners with social service agencies to provide materials and trainings, sends out CAP-specific mailings and conducts outbound calls to confirmed low-income customers and non-CAP recipients of LIHEAP.[25] Ms. Golden also highlights PECO's virtual outreach and the launch of an "Assistance Finder" tool on its websites.[26]

Q: Do you believe the outreach efforts described by Ms. Golden address your concerns about affordability of this rate increase for low income households?

A: No. As I discussed in my direct testimony, CAP enrollment is critical to minimizing the impact of any rate increase on low-income households. While PECO claims to conduct outreach and promote the availability of CAP, its CAP enrollment rates have not meaningfully increased in proportion to PECO's estimated low income population over the past 5 years. As Table 2 indicates, since 2017, PECO's CAP enrollment rates have hovered around one-third of PECO's estimated eligible low-income customers.[27]

[25] PECO St. 10-R at 3:14-18.
[26] PECO St. 10-R at 4:4-7.
[27] I note that PECO tracks the number of "unconfirmed low-income customers," which PECO defines as "a customer that has provided a verbal statement of income but has not provided physical documentation of income." PECO St. 10-R at 13 n.5. In January 2024, the number of "unconfirmed" gas and dual service low-income customers was 20,480. CAUSE-PA IV-13. I use estimated low-income customers rather than confirmed low-income customers in part because these 20,480 customers would otherwise not be included in PECO's count of low-income customers. As I explained at length in my direct testimony, PECO's definition of "confirmed low income customers" is unduly restrictive and is not reflective of the Commission's regulatory definition of the term – which explicitly includes customers who provide self certification of income. 52 Pa. Code § 62.2.

Table 2: Monthly Average CAP Enrollment, Estimated Low-Income Customers[28]

Year	CAP Enrollment	Estimated Low-Income	Percent of Estimated Low-Income
2017	21,921	73,381	30%
2018	24,209	74,121	33%
2019	23,551	74,914	31%
2020	19,908	80,638	25%
2021	21,079	78,201	27%
2022	21,807	78,627	28%
2023	26,495	79,853	33%

Meanwhile, PECO boasts about its outreach to confirmed low-income customers and non-CAP recipients of LIHEAP – while at the same time rejecting my proposal to leverage data and streamline administrative processes through the implementation of automated CAP enrollment and recertification, effectively using LIHEAP recipient data shared by the Department of Human Services. It is a waste of funds to invest money in outbound calling to non-CAP LIHEAP recipients when PECO will soon have, in hand, all of the information it needs to enroll LIHEAP recipients in CAP directly – without duplicative administrative processes.

Q: Has PECO produced evidence that its outreach efforts have resulted in increased CAP enrollment?

A: PECO's outreach efforts have yielded limited results. PECO states that it sent 57,178 CAP-specific mailings to households in 2023, including mailing CAP applications to 31,392 non-CAP LIHEAP recipients.[29] PECO further states that it doesn't track response rates (applications

[28] Pa. P.U.C. Bureau of Consumer Services, 2019 Universal Service Report at 7, https://www.puc.pa.gov/General/publications_reports/pdf/EDC_NGDC_UniServ_Rpt2019.pdf, 51; Pa. P.U.C. Bureau of Consumer Services, 2022 Universal Service Report at 10, 59; https://www.puc.pa.gov/media/2573/2022-universal-service-report-final.pdf; OCA-II-1(a).
[29] CAUSE-PA IV-2.

received, number of CAP approvals and denials, etc.) for CAP specific mailings.[30] The only data that PECO was able to provide was unimpressive – of the 31,392 non-CAP LIHEAP recipients PECO sent CAP applications to in 2023, approximately 10% (3,111 customers) enrolled in CAP. PECO's data did not capture the total response rate, or how many of those households were denied following submission of an application.[31] PECO further boasts that it conducts outbound calling to confirmed low-income customers and non-CAP recipients of LIHEAP – but again fails to collect any data on the outcomes of those calls.[32] An outreach program must focus on meaningful results to households, and not just "awareness" without follow up.

Q: Do you have other concerns about the outreach services Ms. Golden describes as it relates to other PECO Universal Service Programs?

A: Yes. PECO's outreach is failing to ensure customers have access to its Matching Energy Assistance Fund (MEAF) and is failing to ensure that CAP customers with high usage are able to access LIURP services to reduce usage.

MEAF is critical to helping households avoid termination of service – especially in the summer months when LIHEAP is not available. As discussed below, as well as in my direct testimony, the number of MEAF grants awarded to households has been unacceptably low over the last few years, with a lot of money left unspent to help households. I believe PECO can and must do more to make households aware of the availability of MEAF, CAP, LIURP, and other

[30] CAUSE-PA-IV-4.
[31] CAUSE-PA-IV-4.
[32] PECO St. 10-R at 3; CAUSE-PA IV-7. Similarly, PECO boasts of its "Assistance Finder" tool on its website, stating that "from May 2023 through April 2024, almost 40,000 customers completed the survey in the tool . . . with nearly 5000 customers submitting CAP applications." PECO St. 10-R at 4. Yet, PECO was unable to identify how many of those 5000 customers were approved or denied for CAP. CAUSE-PA-IV-8.

utility rate and efficiency assistance programs to help address both chronic and acute financial hardship in the face of ever-increasing rates.

Generally, to effectively reach underserved, disinvested, and marginalized communities, outreach must be intentionally targeted and personalized. Without this intentional targeting, PECO leaves a significant number of customers facing unaffordable bills and not benefiting from PECO's Universal Service Programs. At the same time, reaching these communities also requires lowering barriers to access assistance. Unnecessarily burdensome hurdles to program enrollment keep out customers who are in great need of assistance.

Contrary to Ms. Golden's assertions, PECO's outreach and community engagement does not appear to be adequately addressing the broad crisis of unaffordability faced by PECO's low-income customers. To meaningfully address this unaffordability, especially if a rate increase is granted in this proceeding, PECO should adopt the recommendations throughout my direct testimony – including adopting automatic recertification and enrollment in CAP using LIHEAP data, targeted outreach to CAP customers to ensure access to usage reduction services, and increased oversight of MEAF agencies.

B. CAP enrollment

Q: Ms. Golden opposes auto-enrollment in CAP via DHS data sharing in part because of concern about customers being able to make an affirmative choice before enrolling in CAP and in part because of the potential costs. Do you share these concerns?

A: No, Ms. Golden's concern is misplaced. While I agree that customers should make an affirmative choice to enroll in CAP, I do not agree that utilizing the DHS data in the manner I suggest would require additional steps to obtain such consent. DHS has developed a process – in

close collaboration with low income consumers, consumer advocates, utilities, and the Commission – to share data with utilities only after a customer has already made an affirmative choice on their LIHEAP application to participate in the data-sharing program to facilitate streamlined enrollment in utility assistance programs. The following language will be included on the LIHEAP application for program year 2024-2025 to obtain consent from LIHEAP participants to share their information for the purposes of enrolling in utility-run assistance programs such as CAP:

> *Do you want DHS to share information from your application with your utility to help enroll your household in a utility or energy assistance program?*
>
> *Many Pennsylvania gas and electric utilities offer programs that help low-income customers reduce monthly bills, save energy, and eliminate past-due balances. DHS can share information from your application with your utility, including your income and household members (such as names and dates of birth) to help you enroll in these programs if you want us to share it. Your information will be kept confidential.*
>
> *This is optional. You can get a LIHEAP grant if you qualify even if you do not want DHS to share your information with your utility.*

Notably, this language was adopted by DHS from a consensus recommendation of the LIHEAP Advisory Committee (LAC), which was developed in close collaboration with LAC members and stakeholders – including several members of PECO's staff.

Under my proposal, the precise mechanics of the auto-enrollment process for new and returning CAP participants would be determined in a separate proceeding, because I recognize that there are some complex questions involved in how that process works. PECO could address any remaining concerns about notification and consent through that process.

I also note my agreement with Ms. Golden that customers should be informed about the program they are enrolled in and believe that any auto-enrollment process should include program education as a prominent feature of the process. PECO's commitment to CAP auto-enrollment

would change only the burdensome requirement to complete multiple applications for assistance, not the amount of education available about the program. Under Section 1303 of the Public Utility Code, PECO has an obligation to provide customers with the most advantageous rate available. If a CAP rate is the best rate available for a customer and PECO has knowledge via the customer's participation in LIHEAP that the customer is eligible for that rate, it is incumbent on PECO to ensure that that customer is enrolled in CAP. As discussed in my direct testimony, LIHEAP alone often does not create an affordable bill or mitigate the impact of the proposed rate increase.[33] Many LIHEAP recipients are in need of and could benefit from CAP enrollment. PECO must take advantage of the opportunity LIHEAP data sharing presents to enroll eligible households in CAP efficiently, allowing customers who may otherwise be missed by PECO's outreach efforts to benefit from CAP.

Q: Ms. Golden asserts she disagrees with your proposal for auto-recertification through DHS data sharing because CAP customers who receive LIHEAP grants already may recertify on a four-year cycle instead of the standard two-year cycle. Do you agree that the four-year recertification cycle makes auto-recertification unnecessary?

A: First and foremost, I note that PECO filed a letter with the Commission on July 31, 2024, indicating that PECO intends to begin using LIHEAP data to automatically recertify CAP eligibility for households that receive a LIHEAP grant.[34]

Once data sharing begins in the fall, PECO will have – in hand – all of the data necessary to confirm income through the LIHEAP data sharing program, obviating the need for a separate

[33] CAUSE-PA St. 1 at 20, 21.
[34] PECO Energy Company 2019-2028 Universal Service and Energy Conservation Plan, Docket No. M-2018-3005795, Letter re: LIHEAP Data Sharing (filed July 31, 2024).

recertification process altogether. It would be a waste of administrative resources to require separate recertification every four years if PECO already knows the household is eligible to maintain enrollment in the program. Doing so would eliminate the need for duplicative administrative work by both PECO and the customer, helping families in need to stay enrolled in the program. CAP stabilizes categorically unaffordable rates for low-income households. Without CAP, many low-income customers fall quickly into arrears – ultimately increasing collections costs, uncollectible expenses, and involuntary terminations. Once enrolled in CAP, PECO should do everything it can to ensure eligible households remain enrolled in the program. Relying on the state's income verification process to streamline recertification is a sound, cost-effective solution to do just that.

C. Security Deposits

Q: What concerns do you have with Ms. Golden's testimony about PECO's processes with respect to low-income customers and security deposits?

A: In response to my concerns about how PECO is assessing security deposits, Ms. Golden states that a security deposit might be assessed based on several factors such as the customer's credit history or their previous account history with PECO. Then, if a customer "says that they cannot pay the assessed deposit, PECO informs the customer that PECO will send a letter with contact information that the customer can use to call and speak to a Company representative regarding the customer's income information and request to waive the deposit after verifying their low-income eligibility for such a waiver."[35]

[35] PECO St. 10-R at 6.

Ms. Golden's description does not appear to be accurate. As shown in Appendix A, which includes an example of such a letter referred to in Ms. Golden's testimony, the letter does not contain any information about the statutory prohibition on assessing a security deposit on a low-income customer. In fact, it does not contain any information about any low-income programs at all, who a customer could contact to verify that they are low-income, or even a website they could go to for information about low-income programs or a waiver of the security deposit. The only website listed on the letter is the generic PECO website. The only phone numbers on the letter are to the main customer service line, 1-800-494-4000, and to a number to pay by phone, 1-877-432-9384. In fact, any customer who would receive such a letter would likely believe that their only option would be to pay the security deposit, because the letter states: "If you do not pay the deposit, we may shut off your service." The letter does note that if customers are "having trouble paying" they may be eligible for budget billing or a payment arrangement, but there is not so much as a hint in the letter that the assessed deposit must be removed if the customer is low-income [36]

The Commission requires notice of the low-income security deposit exemption to be provided to applicants and customers at the time the security deposit is assessed, along with instructions for how the applicant or customer can verify income in order for the deposit to be removed.[37] It is especially important for a utility to provide notice of the low-income security deposit exemption to prevent that utility from violating the statutory prohibition on assessing a security deposit on a low-income customer. Contrary to Ms. Golden's testimony, I see no evidence that PECO provides any notice about the low-income security deposit prohibition to applicants or customers at the time a deposit is assessed. This means that it is very likely PECO is repeatedly

[36] See Appendix A.
[37] Rulemaking to Amend the Provisions of 52 Pa. Code, Chapter 56 to Comply with the Amended Provisions of 66 Pa. C.S. Ch. 14, L-2015-2508421, Final Rulemaking Order, Attach. One at 48 (Feb. 28, 2019); see also 52 Pa. Code §§ 56.36, 56.286.

violating the statutory prohibition on assessing a security deposit on a low-income customer. PECO should be ordered to (1) inform all customers and applicants for service of the low-income security deposit prohibition at the time a security deposit is assessed, (2) provide information to the customers about how PECO gathers income information to prevent imposition of a deposit, and (3) explain what customers can do to access the exemption if it is not automatically applied.

Q: Ms. Golden has stated that PECO only provides a customer with a direct refund of a security deposit if the customer contacts PECO to affirmatively request a direct refund. Is this process consistent with the Commission regulations?

A: No. Commission regulations clearly state that a public utility "*shall* refund a deposit, along with any applicable interest, within 60 days upon determining that the customer or applicant from whom a deposit was collected is not subject to a deposit under § 56.32(e) (relating to security and cash deposits) or § 56.41(4) (relating to general rule)."[38] The Commission has held repeatedly, even as recently as a few weeks ago, that this regulation requires public utilities to directly return security deposits to customers unless they have gotten informed consent from a customer allowing the deposit to be applied to their account.[39] Instead, PECO's practice of applying a deposit to a customer account absent an affirmative request of the customer for a refund achieves the opposite result, and violates Commission regulations. PECO should be required to provide low-income customers with a direct refund of any previously collected deposits, and should only apply the deposit to a customer's account if they provide explicit and informed consent to do so.

[38] See 52 Pa. Code § 56.53(f).
[39] See Columbia 2023 USCEP Order on Columbia 2024 Petition Docket No M-2023-3039487 (order entered on July 11, 2024) at 7, PGW 2023 USCEP Order, Docket No M-2021-3029323 (order entered on January 12, 2023) at 28, PPL 2023 USECP Order, Docket No M-2022-3031727 (order entered on February 9, 2023) at 55-56, and Duquesne 2020 USECP Order (order entered on April 14, 2022) at 57.

D. Low Income Usage Reduction Program (LIURP)

Q: Ms. Golden notes that PECO has "consistently increased its LIURP budget and believe the current budget is appropriate." How do you respond?

A: What Ms. Golden omits is that each of the increases she mentions were agreed to by PECO and approved by the Commission in the context of its prior proposals to increase rates.[40] These prior increases –intended to reduce the impact of previous increases in residential rates – do not address the need for expanded usage reduction programming to help offset *further* negative impacts presented by PECO's *current* proposed rate increase. PECO cannot now point to a *prior* increase in LIURP – agreed to as part of a comprehensive settlement in a prior rate case to mitigate the impact on high usage customers – to absolve it from addressing the further increased need driven by its current rate proposal.

Q: Ms. Golden responds to your critique that PECO is completing a smaller number of LIURP jobs by stating that "[t]he number of jobs completed in a year is also dependent upon a number of factors, including how many measures are being installed, and their costs." How do you respond?

[40] See Pa. P.U.C. v. PECO Energy – Gas, Docket No, Docket No. R-2022-3031113, Joint Petition for Settlement of Rate Investigation (Sept. 19, 2022); https://www.puc.pa.gov/pcdocs/1759065.pdf at 9 (agreeing that "PECO will provide an additional $650,000 in annual LIURP funding" and "PECO will also establish a three-year pilot program with an additional $100,000 annual budget ($300,000 total) to support health and safety remediation for natural gas customers who are deferred for participation in LIURP due to health and safety issues with their home.")(recommended decision at Pa. P.U.C. v. PECO Energy – Gas, Docket No. R-2022-3031113, Recommended Decision (Oct. 11, 2022); https://www.puc.pa.gov/pcdocs/1760716.pdf. (adopted by Pa. P..U.C v. PECO Energy – Gas, Docket No, R-2022-3031113, Order (Oct. 27, 2022); https://www.puc.pa.gov/pcdocs/1762493.pdf. For CAUSE-PA's Statement in Support of this settlement term, see Pa. P.U.C. v. PECO Energy – Gas, Docket No, Docket No. R-2022-3031113, Joint Petition for Settlement of Rate Investigation (Sept. 19, 2022); https://www.puc.pa.gov/pcdocs/1759065.pdf at Statement E, 8-11 (describing that LIURP budget increases will "help mitigate the disproportionate impact of the proposed rate increase on low income, high usage households").

A: It is well documented that the costs for goods and services has increased over recent years and I have no doubt that costs for LIURP jobs has increased. Asked about the referenced cost drivers, PECO stated:

> Costs have increased for the measures listed above primarily driven by inflation. As stated in the direct testimony of Ms. Humphrey, St. No. 2 on page 5, inflation spiked significantly in 2022, averaging 6.25% inflation increase in the Consumer Price Index, over the two-year period of 2021-2023. As a result, PECO has faced steadily increasing costs including labor, appliances, and other related materials.[41]

PECO's response underscores why a significant increase in LIURP funding is necessary – to keep pace with inflation and to offset the impact of any rate increase in this proceeding.

Q: Ms. Golden suggested that the LIURP Notice of Proposed Rulemaking ("NOPR") proceeding would be a more appropriate venue for you to make recommendations about LIURP. Do you agree with that?

A: No. The detailed analysis and recommendations I made in my testimony were tailored specifically toward PECO, and are proposed as a direct mitigation measure to help lessen the severe consequences of the current proposed rate increase on low income high usage customers. The LIURP NOPR proceeding is not a more appropriate venue to make these recommendations and perform this analysis, because the LIURP NOPR proceeding covers LIURP regulations across all of Pennsylvania, not just for PECO. As stated by Ms. Golden, "[t]he latest APPRISE LIURP Evaluation Final Report completed in 2024 for 2022 found that…savings from gas heating jobs were 7.2%".[42] Low income PECO customers could benefit greatly from LIURP, though only very few customers are currently able to access the program. Thus, it is critically important that PECO bring its LIURP spending in line with the other electric distribution companies and adopt practices

[41] CAUSE-PA IV-24.
[42] PECO St. 10-R at 15 n.8.

that maximize the number of low income customers who can access LIURP, as outlined in my previous testimony. It is especially critical for PECO to improve investments in comprehensive, long-term energy reduction programs for its low income customers in order to reduce the increasing costs associated with universal service programs as a result of higher rates like the ones requested in this case.

Q: Ms. Golden stated that PECO had two multi-family collaboratives. Does that satisfy your recommendation for a collaborative about tenant access to LIURP?

A: No. The multi-family collaboratives were organized to "determine (1) if it is necessary to establish a LIURP pilot program designed to serve multifamily residents whose usage is comparatively high but does not meet PECO's high usage threshold and (2) how such pilot program would be funded."[43] This is an entirely different issue from the one I raised in my direct testimony. The disparity between LIURP services for homeowners and tenants has been significant and persists with 307 homeowners receiving LIURP services while only 118 tenants received LIURP services in 2023.[44] As I stated in my direct testimony, what is needed here is an examination of the barriers to tenant participation in LIURP and what measures the company can feasibly provide to tenants without landlord approval. In addition, I am concerned that PECO does not track any data specifically related to the barriers to tenant participation in LIURP. In response to discovery about the number of times a tenant customer's landlord was contacted or how many landlords returned consent forms, PECO stated that it does not track that data.[45] It is impossible to

[43] Pa. P.U.C. v. PECO Energy – Gas, Docket No, Docket No. R-2022-3031113, Joint Petition for Settlement of Rate Investigation at 10 (Sept. 19, 2022); https://www.puc.pa.gov/pcdocs/1759065.pdf.
[44] CAUSE-PA I-25.
[45] CAUSE-PA IV-26.

evaluate whether tenants are appropriately able to access LIURP absent data that could help PECO and stakeholders understand why tenants are underserved by LIURP.

E. Matching Energy Assistance Fund

Q: Ms. Golden rejects your suggestion to set higher grant amounts than proposed and to vary the grant amounts based on heating types, arguing that an increase in grants for higher balances will provide assistance to fewer people. How do you respond?

A: As discussed in my direct testimony, PECO has been consistently underspending its MEAF dollars.[46] PECO is failing to ensure that hardship funds are reaching customers. Indeed, as of the end of 2023, the MEAF agencies had a combined $260,000 on hand for grant assistance, all of which was eligible for PECO's shareholder match.[47] After PECO distributed an additional $210,000 in January 2024, PECO's MEAF agencies had a combined $471,000 on hand – *totaling almost a million dollars of grant assistance dollars after shareholder matching*.[48] PECO Gas terminated 20,767 households in 2023 alone,[49] and issued 59 termination notices in May 2024 and 28,653 termination notices in June 2024.[50] Meanwhile, in 2023, only 547 MEAF applications were submitted – and only 280 approved.[51] With this much money available to help customers, Ms. Golden's concerns that increasing grant amounts will provide assistance to fewer households rings hollow.

In my opinion, PECO's proposal to increase grant amounts to $1000 per account (from $500 per commodity) doesn't go far enough. As described in my direct testimony, in 2022,

[46] CAUSE-PA St. 1 at 40-45.
[47] Attachment CAUSE-PA II-14(a) at 11.
[48] Id.
[49] OCA-II-1(a).
[50] CAUSE-PA Attachment III-1(a).
[51] CAUSE-PA V-2(a-c).

confirmed low-income PECO gas customers in arrears had average arrears of more than $2000.[52] In 2023, and to date in 2024, approximately a quarter of MEAF applicants who were denied were denied because their balance was too high.[53] My proposal, to provide grants of $1000 for Rate R, $1000 for gas customers (combined $2000 for dual service customers) and $2000 for Rate RH customers, would ensure more households are able to get the money they need to avoid termination and restore service.

In addition, in changing the grant amounts from a per commodity amount to a per account amount, PECO is increasing the grant amount for electric-only and gas-only customers while maintaining the same grant amount for dual service (gas and electric) customers. I don't believe this is appropriate, as it unreasonably discriminates against dual service customers. Because PECO serves customers for both electric non-heating needs and heating needs (whether as electric heating/Rate RH customers or as dual service electric and gas customers), PECO's hardship fund must have grant amounts that provide an additional benefit to those customers that depend entirely on PECO for their home energy needs.

Q: Ms. Golden also rejects your proposal to eliminate PECO's zero-balance requirement, stating that "MEAF is not intended to be a supplemental grant program, but rather a means to address collections risk by achieving a zero balance."[54] How do you respond?

A: I strongly disagree with Ms. Golden's characterization of MEAF as a "means to address collections risk." Rather, as Ms. Golden rightly states in the preceding paragraph of her testimony, *MEAF is an emergency program to help customers avoid termination*.[55] By failing to work in

[52] CAUSE-PA St. 1 at 49. In 2022, the average arrears for PECO gas confirmed low-income customers in debt was $2,158.61. Id.
[53] CAUSE-PA/TURN V-2(a-c).
[54] PECO St. 10-R at 18:2-4.
[55] Id. at 17:13-14.

tandem with other relief, like CAP and payment arrangements, to resolve the immediate crisis faced by the household and prevent termination or restore service, PECO is wasting hardship fund dollars and setting the bar too high for most households in crisis to meet. Especially given the amount of money currently unspent on hardship funds, PECO should prioritize making MEAF dollars available to customers by allowing MEAF funds to cover an amount that PECO would otherwise accept from the customer or other grant sources to resolve the crisis.

Q: In recent months, has PECO made any progress in distributing MEAF dollars?

A: No. As shown in the table below, in May and June 2024, only 83 applications were submitted for PECO's MEAF.[56] Of those applications, only 6 were approved – a paltry 7% of applications received.[57]

Table 4: May 2024 and June 2024 MEAF Applications[58]

	May 2024 MEAF Applications			June 2024 MEAF Applications		
County	**Total**	**Approved**	**Denied**	**Total**	**Approved**	**Denied**
Bucks	1	1	0	1	1	0
Chester	9	0	9	12	1	11
Delaware	5	1	4	17	0	17
Mongomery	0	0	0	0	0	0
Philadelphia	23	2	21	15	0	15
York	0	0	0	0	0	0
Total	38	4	34	45	2	43

[56] CAUSE-PA Attachment III-8(a).
[57] CAUSE-PA Attachment III-9(a).
[58] Total MEAF Application numbers taken from CAUSE-PA Attachment III-8(a). Approved MEAF Application numbers taken from CAUSE-PA Attachment III-9(a). Denied MEAF Application numbers taken from CAUSE-PA Attachment III -10(a).

Q: Is there any available information on MEAF application denials?

A: Yes. MEAF agencies report on the number of denials for a number of different denial reasons. As shown in Table 5 below, approximately one quarter of denials in 2023 and in 2024 to date were because the balance exceeded the program limit. An additional 14% of denials were due to missing documentation or incomplete applications (household did not send required documentation; incomplete application; household did not follow up). Because we don't know processing times on these applications, it is also possible that some of the "no balance owed" and "not in shutoff status" denials were due to the amount of time between initial application and processing.

Table 5: MEAF Application Denial Reasons in 2023 and 2024[59]

Denial Reason	2023 Denials	2024 Denials	2023 Percentage of denials	2024 Percentage of denials
Household income exceeds program limit	16	28	6%	12%
Household did not send required documentation	6	5	2%	2%
Household already received LIHEAP benefit	24	28	9%	12%
Balance exceeds program limit	65	56	24%	24%
Household already received MEAF benefit this year	2	1	1%	0%
Incomplete application	6	1	2%	0%
No balance owed	16	13	6%	6%
Account closed	7	7	3%	3%
Household did not follow-up	26	1	10%	0%
ERAP	16	0	6%	0%
Not in shutoff status	71	77	27%	34%
Other	12	12	4%	5%
Total	267	229		

[59] CAUSE-PA Attachment V-2(a-c).

I am also alarmed to see that 9% of MEAF denials in 2022 and 12% of MEAF denials in 2023 were based on the household's prior receipt of a LIHEAP grant. Receipt of a LIHEAP grant should never *disqualify* a household from receiving other forms of needed assistance.

Q: How do these denial numbers compare to the total number of applications submitted in 2023 and 2024?

A: In 2023, PECO MEAF agencies received 547 applications, and in 2024 through the end of June, PECO MEAF agencies received 253 applications.[60] This reflects a denial rate of 48% of applications in 2023, and 90% of applications in 2024.

Q: One requirement of MEAF is for service to be off, or for the household to be in danger of an involuntary termination. Was PECO issuing termination notices during May and June 2024?

A: Yes. While PECO's involuntary terminations were paused due to a billing system constraint, PECO issued 59 termination notices in May 2024 and 28,653 termination notices in June.[61] PECO data suggests that the company was on track to send even more termination notices in July. In the first five days of July, inclusive of the July 4 holiday, PECO issued 22,287 termination notices.[62]

Q: How do these application and denial numbers affect your recommendations?

A: If anything, the low approval and high denial rates for PECO's MEAF underscore the critical need to adopt my recommendations regarding PECO's MEAF to increase grant amounts

[60] CAUSE-PA Attachment V-2 (a-c).
[61] CAUSE-PA Attachment III-1(a).
[62] Id.

and eliminate its zero-balance requirement. PECO must break down these arbitrary barriers to assistance, and ensure donated funds are reaching households in crisis as intended.

The low application numbers also underscore a lack of PECO oversight as to whether its hardship fund is actually available to customers in its service territory. While PECO's MEAF agencies processed only 547 applications in 2023 for both electric and gas, PECO shutoff service to more than 20,000 gas service households.[63] This disparity is striking – especially because, as noted previously, across all of the counties in PECO's service territory, there is close to a million dollars in grant assistance remaining unspent – yet seemingly unavailable to most PECO customers.

Q: Do you believe PECO has sufficient processes in place to monitor MEAF agency activity?

A: No. PECO cannot claim to have sufficient processes in place if customers aren't applying for or receiving hardship funds. It is PECO's responsibility – subject to PUC oversight – to ensure that hardship funds are available to customers. As shown in the data shared above, a tiny fraction of PECO customers are applying for MEAF grants, and an even smaller fraction are approved. Low *approval* numbers in the face of profound need for assistance strongly suggests that PECO's eligibility requirements are too strict, and its assistance levels are inadequate to resolve acute financial hardship. Low *application* numbers, in turn, suggest that PECO is not properly advertising the program or monitoring whether its agencies are properly making MEAF available to customers.

[63] Attachment OCA II-1(a).

Q: Ms. Golden further suggests that PECO's MEAF implementation issues do not warrant Commission investigation because PECO will affirmatively communicate significant issues with a MEAF agency to the Commission's Bureau of Consumer Services ("BCS") and provide them with status reports as appropriate. Do you believe this is sufficient to address your concerns?

A: No, I do not. I stand firmly behind my recommendation that PECO's handling of MEAF funds and oversight over its MEAF program be referred to the PUC's Bureau of Audits and the Bureau of Investigation and Enforcement for further investigation. I would add to my recommendation that the Bureau of Consumer Services should also be consulted in the audit and investigation, given its role in resolving individual complaints and reviewing universal service program plans.

Q: Can you explain your reasoning?

A: Yes. I am deeply concerned that PECO has taken little to no action to address and resolve MEAF application numbers and processing issues. Either PECO knew of the issues and ignored them, or its oversight of MEAF was so lax that it did not even realize the issues were occurring. Indeed, given PECO's MEAF is set up to require interaction with the agency for each and every grant issued in order to release "match" funding, I have to assume that PECO personnel were aware that grants were not being issued with any regularity. Likewise, PECO personnel were certainly aware of the infrequent processing of applications since an approved application results in a hold on termination activity (as discussed below). These concerns underscore my recommendation for further investigation by the Bureau of Audits, I&E and BCS to ensure appropriate use and allocation of donations collected.

F. Language Access

Q: Ms. Golden states that PECO believes its existing processes to address language access issues are appropriate. Do you agree?

A: No. As detailed in my direct testimony, I believe PECO is not providing adequate service to its non-English speaking customers. Ms. Golden cites general concerns about costs as justification for not tracking customer language and opposes my proposal to include a tagline about interpretation service on residential customer bills and termination notices. If PECO does not track customer language and is therefore not able to reach out to customers in a language they can understand, a logical alternative would be to provide a blanket notice in the most common languages of the availability of interpretation services.

G. Payment Processing

Q: Ms. Golden rejects a suggestion from OCA Witness Roger Colton that PECO should allow dual service customers to designate that all or part of their combined PECO bill payment be applied to electric service, or vice versa, stating that there is no basis for permitting customers to "prefer" one service over another. Do you agree?

A: No. If a customer can only afford to pay for electricity charges, and prioritizes maintaining electric service over gas service, they have the right to do so. Low and moderate income households across the state who receive electric and gas service from different companies frequently make such impossible tradeoffs as to what bills and necessities to pay for with limited means. It is inappropriate for PECO to take this choice away from its customers, especially in the face of a changing climate that could change a customer's decision making regarding the importance of electric. I note that application of a single payment across PECO's two utilities –

electric and natural gas – may raise legal questions regarding PECO's processes. I anticipate counsel for TURN/CAUSE-PA will address such issues further through briefing.

Q: Does Ms. Golden's response raise other concerns for you?

A: Yes. Ms. Golden states that "a customer in arrears is at risk of termination of both services."[64] I read this to mean that for dual service customers, PECO terminates both services at the same time. Because of PECO's payment posting rules, insufficient payments are equally applied between gas and electric and so, inevitably, households are in arrears for both services – even if their payments were sufficient to retain electric or gas service alone. It is unjust and unreasonable for PECO to take this choice between electricity and gas away from its customers.

H. Exemplary Management

Q: Ms. Golden rebuts OCA's witness Mr. Colton, claiming that PECO has provided "extensive support" for exemplary management performance. Do you agree?

A: No. Ms. Golden cites a number of areas where PECO has provided substantial assistance to low-income customers, but the examples she cites do not support her contention of exemplary management performance.[65] First, Ms. Golden cites to PECO incorporating updated energy burdens and converting to a CAP PIPP. While I support these changes, I note that PECO failed to implement these updates until almost three years after the Commission updated its CAP Policy Statement – and only after extensive litigation around their obligation to do so. Similarly, Ms. Golden points to increased LIURP budgets – all of which were put in place because of settlement agreements in previous rate cases.

[64] PECO St. 10-R at 23.
[65] PECO St. 10-R at 20-22.

I have discussed at length, both in this testimony and in my direct testimony, my concerns with PECO's oversight of MEAF, as well as PECO's unimpressive CAP enrollment efforts and lackluster LIURP referrals and coordination. I also explained at length the disproportionate level of arrears and terminations amongst PECO's low-income customers, and the inadequacy of its assistance programs to serve identified need.

Finally, I note that two witnesses identified possible racially discriminatory impacts of PECO's practices.[66] In each instance, PECO defends its practices by claiming its policies apply equally to all customers. But racially disparate impacts remain problematic, even absent specific intent to discriminate. All of these factors support Mr. Colton's original contention that PECO is not entitled to a claim of "exemplary management" as a basis to further inflate rates.

IV. RESPONSE TO I&E WITNESS CHRISTOPHER KELLER (I&E ST. 1-R)

Q: Please summarize the rebuttal testimony of Mr. Christopher Keller, witness for I&E, related to your LIURP recommendations.

A: Mr. Keller suggests in his rebuttal testimony that my recommendations related to the LIURP budget should be denied because they are not properly considered in the context of the present proceeding.[67] Mr. Keller disagrees with my recommended increase to PECO's LIURP budget. In support of this argument, Mr. Keller cites dicta from Commission decisions and the Commission's Notice of Proposed Rulemaking for the *Initiative to Review and Revise the Exhibit Low-Income Usage Reduction (LIURP) Regulations at 52 Pa. Code §§ 58.1-58.18*.[68] In the cited proposed rulemaking, the Commission initially proposed that the "LIURP budget can only be

[66] OCA St. 4 at 68; CAUSE-PA St. 1 at 63-64.
[67] I&E St. 1-R at 6.
[68] Id. at 8.

revised through USECP proceedings initiated pursuant to the periodic USECP review process or in response to a petition to amend a USECP earlier than the periodic USECP review process."[69] Mr. Keller also cites, from the Proposed Rulemaking, the following language: "As LIURP is a ratepayer-funded program, considerations impacting its budget determination should be open to scrutiny and comment. USECP proceedings allow all interested parties to provide comments, raise questions, and review information justifying the proposed change to the LIURP budget in an on-the-record proceeding."[70]

Q: What is your response to Mr. Keller's arguments against review of PECO's LIURP budget in the context of this proceeding?

A: Mr. Keller's assertions that universal service issues, specifically changes to PECO's LIURP, should not be considered within the context of the base rate proceedings precludes the important consideration of whether rates and terms and conditions of service for low-income customers are just, reasonable, and in the public interest. Any evaluation of the justness and reasonableness of existing and proposed rates must include an analysis of the adequacy and design of rate assistance programs.

Further, I note that Mr. Keller's arguments are primarily legal in nature. They cite to dicta from various Commission Orders, language in a proposed, not final, rulemaking, and a Commissioner's non-precedential statement. I am advised that Counsel for CAUSE-PA will address these arguments through briefing and will not address them in detail here. However, I do

[69] Initiative to Review and Revise the Existing Low-Income Usage Reduction Program (LIURP) Regulations at 52 Pa. Code §§ 58.1—58.18, Notice of Proposed Rulemaking, Docket No. L-2016-2557886, at 36 (NOPR entered on May 18, 2023).
[70] I&E St. 1-R at 8, citing Notice of Proposed Rulemaking for the *Initiative to Review and Revise the Exhibit Low-Income Usage Reduction Program (LIURP) Regulations at 52 Pa. Code §§ 58.1-58.18*, Docket No. L-2016-2557886, p. 36, 37 (Order Entered May 18, 2023).

note that multiple commenters to the Commission's proposed rulemaking submitted comments opposing the proposed language that Mr. Keller cites in his testimony. [71]

Q: Does this conclude your surrebuttal testimony?

A: Yes.

[71] Initiative to Review and Revise the Existing Low-Income Usage Reduction Program (LIURP) Regulations Pa. Code §§ 58.1—58.18, Comments of the Consumer Advisory Council at 2-3; Joint Comments of the Commission on Economic Opportunity and Pa. Weatherization Providers Task Force, at 3-5; Comments of OCA, at 20-23; Comments of the Tenant Union Representative Network, at 5-6; Comments of Energy Justice Advocates, at 3; Comments of the Pa. Coalition of Local Energy Efficiency Contractors, Inc. at 7 (Comments Respectively filed, January 16, 2024); see also Comments of the Independent Regulatory Review Commission at 4 (filed March 18, 2024).

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission **v.** **PECO Energy Company – Gas Division**	**Docket No. R-2024-3046932**

APPENDIX A

TO THE
SURREBUTTAL TESTIMONY OF ELIZABETH R. MARX

On Behalf of

Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania

August 2, 2024

0086

An Exelon Company

December 08, 2023

[redacted]

Account Number: [redacted]
Service Address:
[redacted]

We require you to pay a deposit of $160.00

We ask customers for a deposit if we cannot verify their credit history or if they have multiple late or missed payments.

About the deposit

- For **residential customers**, the amount will be two times your average monthly bill. We will add 50% of the amount to your next bill, and 25% to each of the two bills after this.
- For **non-residential customers**, the amount will be equal to the total of your two largest monthly bills. We will bill the amount to your next bill.
- If you pay your bills in full and on time for 12 consecutive months (24 months for commercial services), we will refund your account with the amount of the deposit, plus any interest earned on it.
- If you stop or transfer your service before we refund your deposit, we will apply it to your final bill, plus any interest.

If you do not pay the deposit, **we may shut off your service**.

Where to find out more

You can see copies of our deposit and credit policies at our main office 2301 Market Street, Philadelphia, PA. You may also visit our website www.peco.com for a review of PECO policies.

Questions
1-800-494-4000
peco.com
7 am - 7 pm, Mon - Fri

Ways to pay

- At an authorized payment location - call **1-800-494-4000** to find one near you. Please make sure you get a receipt as proof of payment.
- By credit card or check - phone **1-877-432-9384** (the service provider will charge a convenience fee).
- Through online banking.
- At our website **peco.com**

Having trouble paying?

We have several programs that could help you manage your monthly bills, such as:

- budget billing to even out the cost of monthly bills throughout the year
- payment arrangements to pay off amounts you owe.

Learn more about how we can help you reduce your energy costs by visiting our website **www.peco.com**

BEFORE THE

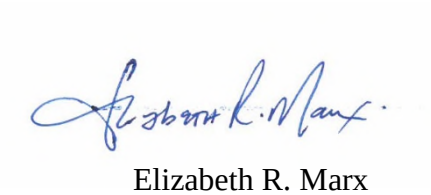
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2024-3046932
PECO Energy Company - Gas Division	:	

VERIFICATION

I, Elizabeth R. Marx, hereby state that the facts set forth in my Surrebuttal Testimony labeled CAUSE-PA Statement No. 1-SR 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 2, 2024



Elizabeth R. Marx

1

[redacted]:(PECO)

From: [redacted]:(PECO)
Sent: Wednesday, July 10, 2024 3:01 PM
To: [redacted]@bcoc.org; [redacted]@bcoc.org; [redacted]@bcoc.org; [redacted]@bcoc.org; [redacted]@uesfacts.org; [redacted]@uesfacts.org; [redacted]; [redacted]@cadcom.org; [redacted]@cadcom.org; [redacted]; [redacted]@cadcom.org; [redacted]; [redacted]; [redacted]@mason-dixon.org
Cc: [redacted]; [redacted]; [redacted]; [redacted]@bcoc.org; [redacted]@mason-dixon.org; [redacted]@uesfacts.org
Subject: MEAF Data Tracking

Importance: High

Follow Up Flag: Follow up
Due By: Wednesday, July 10, 2024 2:00 PM
Flag Status: Flagged

Hello All:

When you get a chance, please forward total # of applications= approved + denied for May and June 2024. Please send this information to me ASAP.

Thanks for your cooperation.
[redacted]

[redacted]:(PECO)

Subject: PECO/UESF Weekly Checkpoint
Location: Microsoft Teams Meeting

Start: Tue 6/18/2024 4:00 PM
End: Tue 6/18/2024 4:30 PM
Show Time As: Tentative

Recurrence: Weekly
Recurrence Pattern: every 2 week(s) on Monday from 4:00 PM to 4:30 PM

Meeting Status: Not yet responded

Organizer: [redacted]:(PECO)
Required Attendees: [redacted] - UESF; [redacted] - UESF; [redacted]:(PECO); [redacted]:(PECO); [redacted]:(PECO)

Updating attendees and changing to bi-weekly.

Thanks!
[redacted]

Microsoft Teams meeting

Join on your computer, mobile app or room device
Click here to join the meeting

Meeting ID: 220 909 405 975
Passcode: WXqYQp
Download Teams | Join on the web

Join with a video conferencing device

exelon@m.webex.com
Video Conference ID: 111 246 096 2
Alternate VTC instructions

Or call in (audio only)

+1 443-529-0267,,469418303# United States, Baltimore
Phone Conference ID: 469 418 303#
Find a local number | Reset PIN

Learn More | Meeting options

[redacted]:(PECO)

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

peco℠
AN EXELON COMPANY

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

CAUSE-PA Hearing Exhibit 2 (6)

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

From: [redacted] <[redacted]@pa.gov>
Sent: Friday, June 14, 2024 10:17 AM
To: [redacted]:(PECO) <[redacted].[redacted]@exeloncorp.com>
Cc: [redacted] <[redacted]@pa.gov>
Subject: RE: [External] RE: [EXTERNAL]PECO's Hardship Fund

Hi [redacted],

Hope you are well. Yesterday, BCS received concerns from low-income advocates that UESF is not accepting Hardship Fund grant applications or issuing payments for PECO customers in Philadelphia. We told them that we had previously confirmed with PECO that UESF was still accepting MEAF applications and issuing grants for Philadelphia residents.

I just want to confirm with you that this information is still correct. Also, is there any data PECO could provide us on the number of MEAF applications approved and grants issued by UESF for each month in 2024?

Thanks in advance for your help with this. Have a great weekend!

[redacted] | Energy Policy Manager
Pennsylvania Public Utility Commission | Bureau of Consumer Services
400 North Street | 2nd Floor | Harrisburg, PA 17120
Tel: [redacted] | Email: [redacted]@pa.gov
www.puc.pa.gov | **Consumer Hotline** 1-800-692-7380

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From: [redacted]:(PECO) <[redacted].[redacted]@exeloncorp.com>
Sent: Monday, May 06, 2024 3:18 PM
To: [redacted] <[redacted]@pa.gov>
Cc: [redacted] <[redacted]@pa.gov>; [redacted] <[redacted]@pa.gov>
Subject: [External] RE: [EXTERNAL]PECO's Hardship Fund

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Hi [redacted],

I can confirm that UESF is still processing PECO Hardship applications and that PECO is matching approved grants when the initial donation funding is received.

Thanks!
[redacted]

[redacted] (he/him) | customer financial operations – universal services manager | W: [redacted]

peco℠
AN EXELON COMPANY

From: [redacted] <[redacted]@pa.gov>
Sent: Thursday, May 2, 2024 8:39 AM
To: [redacted]:(PECO) <[redacted].[redacted]@exeloncorp.com>
Cc: [redacted] <[redacted]@pa.gov>; [redacted] <[redacted]@pa.gov>
Subject: [EXTERNAL]PECO's Hardship Fund

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Good Morning [redacted],

BCS was notified that the Utility Emergency Service Fund (UESF) is no longer providing matching grant funds or processing applications for PGW. Just checking to see if the same thing is happening with PECO. Has there been a suspension or delay in PECO's Hardship Fund application processing or a decrease in the grant amounts?

Thanks.

PAPUC
www.puc.pa.gov
Ask Aira! PAPUC

[redacted]
Energy Policy Manager
Bureau of Consumer Services
Phone: [redacted]
Email: [redacted]@pa.gov
Consumer Hotline:
1-800-692-7380

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[redacted]:(PECO)

From: [redacted]:(PECO)
Sent: Tuesday, June 18, 2024 9:47 AM
To: [redacted]; [redacted]
Cc: [redacted]:(PECO)
Subject: RE: [EXTERNAL]Automatic reply: PECO/UESF Weekly Checkpoint

No problem! We can check in real quick and see if anyone has questions/updates.

From: [redacted] <[redacted]@uesfacts.org>
Sent: Monday, June 17, 2024 4:22 PM
To: [redacted]:(PECO) <[redacted].[redacted]@exeloncorp.com>; [redacted] <[redacted]@uesfacts.org>
Cc: [redacted]:(PECO) <[redacted]@exeloncorp.com>
Subject: RE: [EXTERNAL]Automatic reply: PECO/UESF Weekly Checkpoint

[redacted]

I believe she meant June 28th.

If you all want to meet tomorrow that is fine with me.

Or we can wait until Ms. [redacted] returns.

Sorry for the delay I was in a training.
Thanks

From: [redacted]:(PECO) <[redacted].[redacted]@exeloncorp.com>
Sent: Monday, June 17, 2024 2:57 PM
To: [redacted] <[redacted]@uesfacts.org>; [redacted] <[redacted]@uesfacts.org>
Cc: [redacted]@exeloncorp.com
Subject: RE: [EXTERNAL]Automatic reply: PECO/UESF Weekly Checkpoint

FYI [redacted]'s OOO says she'll return 5/28.

Please let me know if we need to reschedule our meeting tomorrow.

Thanks!
[redacted]

From: [redacted] <[redacted]@uesfacts.org>
Sent: Monday, June 17, 2024 2:45 PM
To: [redacted]:(PECO) <[redacted].[redacted]@exeloncorp.com>
Subject: [EXTERNAL]Automatic reply: PECO/UESF Weekly Checkpoint

EXTERNAL MAIL. Do not click links or open attachments from unknown senders or unexpected Email.

Good Day,
I will be out of the office on vacation with limited acces but will monitor my mails and respond accordingly on or before my return on Tuesday May 28, 2024.
Thank you,
[redacted] "[redacted]" [redacted]

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[redacted]:(PECO)

From: [redacted] <[redacted]@uesfacts.org>
Sent: Wednesday, July 10, 2024 3:34 PM
To: [redacted]:(PECO)
Subject: RE: MEAF Data Tracking
Attachments: MEAF Agency Tracking Report - 7.10.2024 PHILA FY 2023-2024 .xlsx

Good Afternoon, [redacted]

Sorry for the delay I was in a Board Meeting most of the afternoon.

Attached is the information that you requested. Thanks

From: [redacted]:(PECO) <[redacted]@exeloncorp.com>
Sent: Wednesday, July 10, 2024 3:01 PM
To: [redacted]@bcoc.org; [redacted]@bcoc.org; [redacted]@bcoc.org; [redacted]@bcoc.org; [redacted] <[redacted]@uesfacts.org>; [redacted] <[redacted]@uesfacts.org>; [redacted] <[redacted]@caadc.org>; [redacted]@cadcom.org; [redacted]@cadcom.org; [redacted] <[redacted]@cadcom.org>; [redacted]@cadcom.org; [redacted] <[redacted]@humanservicesinc.org>; [redacted] <[redacted]@humanservicesinc.org>; [redacted]@mason-dixon.org
Cc: [redacted] <[redacted]@cadcom.org>; [redacted] <[redacted]@humanservicesinc.org>; [redacted] <DMILLER@CAADC.ORG>; [redacted]@bcoc.org; [redacted]@mason-dixon.org; [redacted] <[redacted]@uesfacts.org>
Subject: MEAF Data Tracking
Importance: High

Hello All:

When you get a chance, please forward total # of applications= approved + denied for May and June 2024. Please send this information to me ASAP.

Thanks for your cooperation.
[redacted]

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	Docket No. R-2024-3046932
	:	
v.	:	
	:	
PECO Energy Company – Gas Division	:	

LIST OF EVIDENCE TO BE ADMITTED INTO THE EVIDENTIARY RECORD BY THE OFFICE OF CONSUMER ADVOCATE

The Office of Consumer Advocate (OCA) intends to submit the following evidence into the evidentiary record in the above captioned proceedings at the evidentiary hearings scheduled for August 7, 8, 12 and 13, 2024.

DIRECT TESTIMONY

OCA Statement 1:	Public Version of Direct Testimony of John Defever consisting of 34 pages of testimony, Appendix I consisting of 6 pages, and Exhibit JD-G-1 consisting of Schedules A through D along with a signed verification of John Defever.
OCA Statement 1:	Confidential Version of Direct Testimony of John Defever consisting of 34 pages of testimony, Appendix I consisting of 6 pages, and Exhibit JD-G-1 consisting of Schedules A through D along with a signed verification of John Defever.
OCA Statement 2:	Direct Testimony of David J. Garrett consisting of 66 pages of testimony, Exhibits DJG-1 through DJG-16 and Appendices A-B along with a signed verification of David J. Garrett
OCA Statement 3:	Direct Testimony of Clarence L. Johnson consisting of 35 pages of testimony, Attachment A and Exhibit CJ-1 through CJ-4 with a signed verification of Clarence L. Johnson (corrected version distributed on July 10, 202 is offered for the record).
OCA Statement 4:	Direct Testimony of Roger Colton consisting of 109 pages of testimony and Exhibits RDC-1 through RDC-9 with a signed verification of Roger Colton.
OCA Statement 5:	Public Version of Direct Testimony of Nicholas A. DeMarco consisting of 23 pages of testimony and Exhibits NAD-1 through NAD-2 with a signed verification of Nicholas A. DeMarco.

OCA Statement 5: Confidential Version of Direct Testimony of Nicholas A. DeMarco consisting of 23 pages of testimony and Exhibits NAD-1 through NAD-2 with a signed verification of Nicholas A. DeMarco.

OCA Statement 6: Direct Testimony of Ron Nelson consisting of 28 pages of testimony and Exhibits RN-1 through RN-6 with a signed verification of Ron Nelson.

SUPPLEMENTAL DIRECT TESTIMONY

OCA Statement 5 Supp: Supplemental Direct Testimony of Nicholas A. DeMarco consisting of 3 pages of testimony and Exhibit NAD-1-SD along with a signed verification of Nicholas A. DeMarco.

REBUTTAL TESTIMONY

OCA Statement 2R: Rebuttal Testimony of David J. Garrett consisting of 2 pages of testimony and a signed verification of David J. Garrett

OCA Statement 3R: Rebuttal Testimony of Clarence L. Johnson consisting of 5 pages of testimony and a signed verification of Clarence L. Johnson

OCA Statement 6R: Rebuttal Testimony of Ron Nelson consisting of 8 pages of testimony with a signed verification of Ron Nelson.

SURREBUTTAL TESTIMONY

OCA Statement 1SR: Surrebuttal Testimony of John Defever consisting of 15 pages of testimony along with a signed verification of John Defever.

OCA Statement 2SR: Surrebuttal Testimony of David J. Garrett consisting of 8 pages of testimony along with a signed verification of David J. Garrett.

OCA Statement 3SR: Surrebuttal Testimony of Clarence L. Johnson consisting of 20 pages of testimony with a signed verification of Clarence L. Johnson.

OCA Statement 4SR: Surrebuttal Testimony of Roger Colton consisting of 23 pages of testimony with a signed verification of Roger Colton.

OCA Statement 5SR: Surrebuttal Testimony of Nicholas A. DeMarco consisting of 18 pages of testimony with a signed verification of Nicholas A. DeMarco.

OCA Statement 6SR: Surrebuttal Testimony of Ron Nelson consisting of 23 pages of testimony and Exhibit RN-1-SR through RN-4-SR along with a signed verification of Ron Nelson.

ADDITIONAL EVIDENCE

OCA Hearing Exh. 1:	List of Evidence to be Admitted into the Evidentiary Record by the Office of Consumer Advocate
OCA Hearing Exh. 2:	PECO responses to Interrogatories OCA-20-1 through OCA-20-5, including Attachments OCA-20-1 (a-b) and OCA-20-2 (a-b)

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 20

Response Date: July 30, 2024

OCA-20-1

Please reference page 36 of Company Witness Golden's Rebuttal testimony. She states that "If PECO were to include these third-party processing vendor fees in its revenue requirement, this could potentially increase the revenue requirement by a minimum of five million dollars ($5,000,000) annually for residential payments."

a. Please provide the computation and methods used to estimate this number.
b. Please provide the calculations in a live excel spreadsheet.
c. Please identify the source for each individual input used in the computation, including a reference to the Company's rate filing, testimony, exhibits, or discovery replies as applicable.

RESPONSE:

a. The computation utilizes the volume of 2023 customer payments (i.e. residential eCheck pay as guest, debit and credit cards) multiplied by the payment fee amount. Refer to Attachment OCA-20-1(a-b).
b. Refer to Attachment OCA-20-1(a-b).
c. Not applicable.

Responsible Witness: Jacqueline F. Golden

Attachment OCA-20-1(a-b)

Total Fee Based Payments for Residential eCheck Pay as Guest, Credit Cards, and Debit Cards -2023

Volume of Payments	Payment Fee	Total Fee Amount
3,198,066	$1.75	$5,596,616

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 20

Response Date: July 30, 2024

OCA-20-2

Please reference page 36 of Company Witness Golden's Rebuttal testimony. Ms. Golden states "fees assessed for payments made outside of PECO's no-fee payment options are primarily associated with the processing of debit and credit card payments and are collected by the third-party processing vendor."

a. For the most recent 24 months available, provide:
    i. The monthly number of residential payments by credit card and the fee charged per transaction;
    ii. The monthly number of residential payments by debit card and the fee charged per transaction.
b. Please explain what other residential payment transactions result in fees assessed, other than payment by credit card or payment by debit card.
    i. For the most recent 24 months available, provide a monthly break-out for each other type of residential payment transaction and the associated fee assessed per transaction.

RESPONSE:

a. Refer to Attachment OCA-20-2(a). Payment fees are not disaggregated by electric and gas.
b. Residential payment transactions resulting in fees assessed, other than payment by credit card or payment by debit card include eCheck pay as guest and walk in payment

transaction fees at authorized payment locations, which are subsequently credited to the customer's account by PECO. Refer to Attachment OCA-20-2(b).

Responsible Witness: Jacqueline F. Golden

Credit Card Volume

Month	22-Jul	22-Aug	22-Sep	22-Oct	22-Nov	22-Dec	23-Jan	23-Feb	23-Mar	23-Apr	23-May	23-Jun	23-Jul	23-Aug	23-Sep	23-Oct	23-Nov	23-Dec	24-Jan	24-Feb	24-Mar	24-Apr	24-May	24-Jun	Total
Volume	251,929	293,691	278,134	276,807	253,378	228,761	235,001	231,700	262,345	252,442	298,845	288,719	279,931	297,988	283,692	302,598	264,583	226,962	282,990	362,775	247,188	269,742	261,938	234,287	6,466,426
Fee	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75
Total	$440,875.75	$513,959.25	$486,734.50	$484,412.25	$443,411.50	$400,331.75	$411,251.75	$405,475.00	$459,103.75	$441,773.50	$522,978.75	$505,258.25	$489,879.25	$521,479.00	$496,461.00	$529,546.50	$463,020.25	$397,183.50	$495,232.50	$634,856.25	$432,579.00	$472,048.50	$458,391.50	$410,002.25	$11,316,245.50

Debit Card Volume

Month	22-Jul	22-Aug	22-Sep	22-Oct	22-Nov	22-Dec	23-Jan	23-Feb	23-Mar	23-Apr	23-May	23-Jun	23-Jul	23-Aug	23-Sep	23-Oct	23-Nov	23-Dec	24-Jan	24-Feb	24-Mar	24-Apr	24-May	24-Jun	Total
Volume	33,982	44,664	44,338	44,105	39,046	47,595	47,629	46,238	46,599	44,691	47,212	46,787	45,630	47,077	43,950	47,040	39,243	35,742	39,968	44,854	51,068	49,494	50,019	45,136	1,072,107
Fee	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75
Total	$59,468.50	$78,162.00	$77,591.50	$77,183.75	$68,330.50	$83,291.25	$83,350.75	$80,916.50	$81,548.25	$78,209.25	$82,621.00	$81,877.25	$79,852.50	$82,384.75	$76,912.50	$82,320.00	$68,675.25	$62,548.50	$69,944.00	$78,494.50	$89,369.00	$86,614.50	$87,533.25	$78,988.00	$1,876,187.25

Walk-In Payments

Month	22-Jul	22-Aug	22-Sep	22-Oct	22-Nov	22-Dec	23-Jan	23-Feb	23-Mar	23-Apr	23-May	23-Jun	23-Jul	23-Aug	23-Sep	23-Oct	23-Nov	23-Dec	24-Jan	24-Feb	24-Mar	24-Apr	24-May	24-Jun	Total
Volume	22,748	28,372	24,544	24,629	22,993	21,818	21,848	20,955	22,496	19,965	23,851	21,990	21,496	22,682	20,733	22,825	20,658	18,517	19,848	18,181	18,219	21,801	20,242	18,193	519,604
Fee	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
Total	$45,496.00	$56,744.00	$49,088.00	$49,258.00	$45,986.00	$43,636.00	$43,696.00	$41,910.00	$44,992.00	$39,930.00	$47,702.00	$43,980.00	$42,992.00	$45,364.00	$41,466.00	$45,650.00	$41,316.00	$37,034.00	$39,696.00	$36,362.00	$36,438.00	$43,602.00	$40,484.00	$36,386.00	$1,039,208.00

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 20

Response Date: July 30, 2024

OCA-20-3

When was the last time PECO negotiated the fees collected by third-party processing vendors for credit and debit cards?

RESPONSE:

The fees collected by third-party processing vendors for credit and debit cards was last negotiated by PECO in Q1 2024.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 20

Response Date: July 30, 2024

OCA-20-4

Reference page 36 of Company Witness Golden's Rebuttal testimony, where Ms. Golden states "Additionally, while a payment fee initially is charged to customers who make payments at authorized bill payment locations (e.g., large retail stores and drug stores) via check, cash, or credit card, payment fees collected are reimbursed to 15 the customer on their next bill." Why has PECO not arranged for these authorized bill payment locations to direct bill PECO for the fees assessed? Please explain.

RESPONSE:

PECO has not conducted an analysis to determine if functionality exists and, if so, what process, IT, and administrative changes and associated costs would be required to implement direct billing to the Company by the authorized bill payment locations for fees assessed.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 20

Response Date: July 30, 2024

OCA-20-5

When was the last time PECO negotiated the arrangement with authorized bill payment locations for in-person payments, including the level of fees collected by those locations?

RESPONSE:

The last time PECO negotiated the arrangement with authorized bill payment locations for in-person payments was Q1 2022.

Responsible Witness: Jacqueline F. Golden

OCA Statement 1

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	)	
	)	
v.	)	Docket No. R-2024-3046932
	)	
PECO Energy Company – Gas Division	)	

DIRECT TESTIMONY OF
JOHN DEFEVER, CPA

ON BEHALF OF

THE OFFICE OF CONSUMER ADVOCATE

JUNE 17, 2024

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APPENDIX:

Appendix I, Experience and Qualifications

EXHIBITS:

JD-G-1, Schedules showing Revenue Requirement, Rate Base, Net Operating Income and Adjustments

JD-G-2, Schedules showing alternative rate of return and revenue requirement impact calculations that OCA requested be performed

INTRODUCTION

Q. WHAT IS YOUR NAME, OCCUPATION AND BUSINESS ADDRESS?

A. My name is John Defever. I am a Certified Public Accountant, licensed in the State of Michigan. I am a senior regulatory consultant in the firm of Larkin & Associates, PLLC, with offices at 15728 Farmington Road, Livonia, Michigan.

Q. PLEASE DESCRIBE THE FIRM LARKIN & ASSOCIATES, PLLC.

A. Larkin & Associates, PLLC is a Certified Public Accounting and Regulatory Consulting Firm. The firm performs independent regulatory consulting primarily for public service/utility commission staffs and consumer interest groups (public counsels, public advocates, consumer counsels, attorneys general, etc.). Larkin & Associates, PLLC, has extensive experience in the utility regulatory field as expert witnesses in over 600 regulatory proceedings including numerous electric, gas, water and sewer, and telephone utilities.

Q. HAVE YOU PREPARED AN EXHIBIT DESCRIBING YOUR QUALIFICATIONS AND EXPERIENCE?

A. Yes. I have attached Appendix I, which summarizes my experience and qualifications.

Q. ON WHOSE BEHALF ARE YOU APPEARING?

A. Larkin & Associates, PLLC was retained by the Pennsylvania Office of Consumer Advocate ("OCA") to conduct a review of PECO Energy Company – Gas Division's ("PECO Gas" or "Company") proposed revenue requirement. Accordingly, I am appearing on behalf of the OCA.

Q. PLEASE SUMMARIZE THE TESTIMONY OF THE OCA'S OTHER EXPERTS IN THIS PROCEEDING.

A. OCA's witness touch on most all aspects of the Company's rate case.

- Mr. David J. Garrett, OCA Statement 2, addresses the appropriate capital structure for ratemaking, return on equity, impact of the PECO's claim for alternative ratemaking, and the Company's request for an additional 15 basis points for management performance. He recommends a market-based return on equity of 9.0% based on the analytical methods he used. Mr. Garrett also proposes a capital structure of 50% debt and 50% equity, as more reasonable and between PECO's equity-rich capital structure and average debt and equity ratio of the proxy group companies used to assess PECO's cost of equity. His adjustments reduce the revenue requirement impact by $64.996 million per year. (Exhibit JD-G-2, p. 4).

- Mr. Clarence Johnson, OCA Statement 3, is the OCA's expert witness on cost-of-service studies, revenue allocation, rate structure and rate design. Mr. Johnson provides adjustments to the Company's cost of service, which reveal that residential customers are being allocated a disproportionate share of costs under PECO's proposed cost of service study. He further provides recommendations regarding proposed rate designs to reduce inter-class cost shifting onto residential customers while promoting energy efficiency and affordability.

- Mr. Roger Colton, OCA Statement 4, addresses the impact of the Company's existing and proposed rates on low-income customers. He recommends changes in the Company's procedures and processes to address PECO's under-enrollment of CAP customers, high number of unsuccessful payment arrangements, and other concerns pertaining to affordability. Mr. Colton also demonstrates that the customer charge proposals will disproportionately harm low-income customers. He also addresses the Company's performance in key areas that impact customers.

- Mr. Nicholas DeMarco, OCA Statement 5, provides an analysis and recommendations regarding customer-service issues, including management performance.
- Mr. Ron Nelson, OCA Statement 6, addresses PECO Gas's proposal to implement a Weather Normalization Adjustment mechanism (WNA). Mr. Nelson provides an analysis that demonstrates how PECO's WNA proposal unjustifiably shifts weather risk from shareholders to ratepayers. Mr. Nelson also demonstrates that PECO's WNA is based on unquantified assumptions and that it is flawed in several other respects that would be harmful to ratepayers, warranting its denial.

ORGANIZATION

Q. HOW WILL YOUR TESTIMONY BE ORGANIZED?

A. The testimony is organized as follows: Introduction, Overall Financial Summary, and Operating Income.

OVERALL FINANCIAL SUMMARY

Q. HAVE YOU PREPARED ANY EXHIBITS IN SUPPORT OF YOUR TESTIMONY?

A. Yes. I have prepared Exhibit JD-G-1 consisting of Schedules A, B, C, and D with supporting Schedules B-1 and C-1 through C-17.

Q. HAVE YOU INCORPORATED THE RECOMMENDATIONS OF OTHER OCA WITNESSES IN YOUR SUMMARY SCHEDULES?

A. Yes, I have incorporated the capital structure and rate of return recommendations of OCA witness David Garrett, set forth in OCA Statement 2.

Q. PLEASE DISCUSS SCHEDULE A OF EXHIBIT JD-G-1, WHICH IS ENTITLED "OVERALL FINANCIAL SUMMARY."

A. Schedule A presents the overall financial summary for the Fully Projected Future Test Year ("FPFTY") ending December 31, 2025 giving effect to all the adjustments I recommend in my testimony, and the rate of return sponsored by Mr. Garrett.

The rate base and operating income amounts for the FPFTY ending December 31, 2025 are taken from Schedules B and C, respectively. The overall rate of return of 6.79%, for the FPFTY as presented in the pre-filed testimony of OCA Witness David Garrett, is provided on Schedule D for convenience. The income deficiency shown on line 5 is obtained by subtracting the achieved operating income on line 4 (adjusted operating income) from the required operating income on line 3. The income deficiency is then grossed up by the Gross Revenue Conversation Factor (line 6)[1] to calculate the recommended revenue increase on line 7.

Q. PLEASE DISCUSS SCHEDULE B, WHICH SUMMARIZES RATE BASE, AS ADJUSTED.

A. Adjusted rate base amounts are taken from PECO Gas's Schedule A-1 for the FPFTY ending December 31, 2025. The adjustment I recommend to the Company's FPFTY rate base amount is illustrated on Schedule B.

[1] The calculation of the gross revenue conversion factor is shown on Exhibit JD-G-1, Schedule A-1 GRCF.

Q. PLEASE DISCUSS SCHEDULE C, WHICH SUMMARIZES NET OPERATING INCOME, AS ADJUSTED.

A. My recommended adjustments to PECO Gas's expenses for the FPFTY that are presented in this testimony are provided on Schedule C. Schedules C-1 through C-17 provide further support and calculations for the adjustments I recommend.

Q. BASED ON THE OCA'S REVIEW OF PECO GAS'S FILING, WHAT CHANGE IN REVENUE REQUIREMENT IS THE OCA RECOMMENDING AT THIS TIME?

A. Based on the adjustments that have been quantified to date, coupled with the OCA's recommended overall rate of return of 6.79%, the result is a revenue increase of $41,690,000 for the FPFTY (twelve months ending December 31, 2025).

Q. DID YOU PERFORM ADDITIONAL CALCULATIONS WITH REGARD TO PECO'S CAPITAL STRUCTURE AND RETURN ON EQUITY ("ROE") AT OCA'S REQUEST?

A. Yes. I was requested by OCA to perform additional calculations with regard to PECO's requested capital structure and ROE. Specifically, OCA requested I perform the following calculations:

- Calculate the revenue requirement impact of 15 basis points ROE change utilizing PECO's rate base and capital structure.

- Calculate the revenue requirement impact of comparing the difference between PECO's proposed capital structure and OCA's recommended capital structure utilizing PECO's rate base.

- Calculate the revenue requirement impact of comparing the difference between PECO's proposed ROE of 11.15 percent and OCA's recommended ROE of 9.0 percent utilizing PECO's rate base.

- Calculate the revenue requirement impact of comparing the difference between PECO's proposed capital structure and ROE and OCA's recommended capital structure and ROE utilizing PECO's rate base

Q. WHAT IS THE IMPACT ON THE REVENUE REQUIREMENT OF ADOPTING THE COMPANY'S PERFORMANCE-BASED ADDER TO ROE OF 15 BASIS POINTS?

A. As shown on Exhibit JD-G-2, page 1, the impact of a 15-basis points ROE change, at PECO's claimed rate base and proposed capital structure, is approximately $3.904 million.

Q. WHAT IS THE IMPACT ON THE REVENUE REQUIREMENT OF ADOPTING THE OCA'S RECOMMENDED CAPITAL STRUCTURE OVER PECO'S PROPOSED CAPITAL STRUCTURE?

A. As shown on Exhibit JD-G-2, page 2, line 14, the impact on the revenue requirement of adopting the OCA's recommended capital structure over PECO's proposed capital structure, at PECO's claimed rate base and at PECO's proposed ROE of 11.15 percent, is a reduction of approximately $12.364 million.

Q. WHAT IS THE IMPACT ON THE REVENUE REQUIREMENT OF ADOPTING THE OCA'S RECOMMENDED 9.0 PERCENT ROE OVER PECO'S PROPOSED ROE OF 11.15 PERCENT?

A. As shown on Exhibit JD-G-2, page 3, line 12, the revenue requirement impact of adopting the OCA's recommended 9.0 percent ROE over PECO's proposed 11.15 percent ROE is a reduction of approximately $55.556 million.

Q. WHAT IS THE IMPACT ON THE REVENUE REQUIREMENT OF ADOPTING OCA'S RECOMMENDED CAPITAL STRUCTURE AND ROE?

A. As shown on Exhibit JD-G-2, page 4, line 14, the impact of OCA's versus PECO's proposed cost of capital and ROE using PECO's rate base, reduces PECO's proposed revenue deficiency by approximately $64.996 million.

Q. PLEASE DESCRIBE THE COMPANY'S REQUEST.

A. On March 28, 2024, PECO Gas filed a base rate case with the Pennsylvania Public Utility Commission (Commission) requesting an overall increase in rates for its natural gas distribution service of approximately $111 million or 23.1% above current operating revenue. (Amy Hamilton Direct Testimony, page 5; PECO Exhibit JAB-1). PECO Gas last filed for a rate increase in 2022.

OPERATING INCOME

Payroll

Q. WHAT AMOUNT DOES THE COMPANY REQUEST FOR PAYROLL IN THE FPFTY?

A. The Company has included $52.481 million in the FPFTY. (Exhibit MJT-1 Schedule D-6)

Q. DO YOU HAVE ANY CONCERNS WITH THE COMPANY'S REQUEST?

A. Yes. The Company applied a vacancy factor of 2%. (OCA-VII-22). However, as the following chart shows, the Company has had a significantly higher percentage of vacancies. The Company's request is overstated based on the historical record. The chart below compares the Company's budgeted to actual Full Time Equivalent Employees ("FTEs").

Budgeted to Actual FTEs 2019-2023															
	2019			2020			2021			2022			2023		
	Actual	Budget	Vacancy	Actual	Budget	Vacancy	Actual	Budget	Vacancy	Actual	Budget	Vacancy	Actual	Budget	Vacancy
Jan	600	600	0	611	646	(35)	624	663	(39)	627	656	(29)	655	682	(27)
Fev	587	598	(11)	617	645	(28)	627	665	(38)	629	656	(27)	661	682	(21)
Mar	585	601	(16)	616	646	(30)	623	666	(43)	624	658	(34)	665	682	(17)
Apr	584	617	(33)	610	637	(27)	618	663	(45)	617	661	(44)	666	683	(17)
May	595	618	(23)	608	638	(30)	620	662	(42)	640	680	(40)	689	683	6
Jun	592	614	(22)	604	633	(29)	639	666	(27)	639	683	(44)	683	684	(1)
Jul	585	607	(22)	602	631	(29)	609	666	(57)	637	681	(44)	681	687	(6)
Aug	582	609	(27)	599	625	(26)	614	664	(50)	635	681	(46)	690	687	3
Sep	605	608	(3)	601	626	(25)	625	665	(40)	634	695	(61)	700	687	13
Oct	606	615	(9)	602	635	(33)	625	676	(51)	648	693	(45)	700	688	12
Nov	605	613	(8)	604	634	(30)	625	675	(50)	648	691	(43)	698	688	10
Dec	601	614	(13)	606	635	(29)	627	678	(51)	653	687	(34)	696	688	8
Avg Vacancies		(26.7)													
Avg Budgeted		655.0													
Vacancy %		4.07%													

(OCA-VII-21(b))

As shown, over the last five years the Company has averaged 26.7 vacancies or 4.07%.

Q. WHY ARE VACANCIES A CONCERN?

A. Vacancies represent employees that have not been hired or retained. If the Company hires and retains less employees than allowed in rates, ratepayers will pay costs for salaries and benefits for non-existent employees.

Q. WHAT DO YOU RECOMMEND?

A. I recommend the use of a vacancy factor of 4%. As the Company has averaged vacancies of 4.07%, this is a more appropriate vacancy factor than the Company's proposed vacancy factor of 2%. This is a reduction to payroll of 2% or $1,049,000.[2] This adjustment also results in flow-through impacts to payroll tax and benefits, as discussed below. My adjustment is shown on Exhibit JD-G-1, Schedule C-1.

Incentive Compensation

Q. WHAT AMOUNT HAS THE COMPANY INCLUDED FOR INCENTIVE COMPENSATION EXPENSE IN THE FPFTY?

A. The Company has included $4.961 million in the FPFTY. (IE-I-RE-8(d))

[2] Note I have excluded the union ratification payment from my payroll adjustment as I am making a separate adjustment for this which is discussed later in my testimony.

Q, DO YOU HAVE ANY CONCERNS WITH THE COMPANY'S INCENTIVE COMPENSATION PLAN?

A. Yes. The design of the incentive compensation plan does not appear to provide sufficient motivation to employees. If employees are not motivated by the plan, ratepayers are not benefited.

Q. PLEASE EXPLAIN.

A. By definition, for an incentive compensation plan to be successful, it must provide motivation for greater achievement. Incentive compensation should be rewarded to employees that show greater effort while underperforming employees would receive no award.

However, the issue with the Company's plan is that every eligible employee receives an award. The Company's response to OCA-VI-46 states the following:

> There were incentive payments made to all eligible employees in the plan years 2018 through 2023.

PECO has made no showing that every employee is exceeding expectations, and it is not reasonable to expect that is the case, which means the plan also rewards employees that are only meeting or even failing to meet expectations. Ratepayers should not be responsible for additional awards provided for standard or less than standard performance.

Although the Company has identified goals tied to customer benefits, to the extent that an employee can assume that a bonus will be received, the motivational factor is diminished and ratepayers do not receive the intended benefit. The Company's approach can also result in a negative impact on effort as overperforming employees know that their underperforming coworkers will also receive bonuses.

Q. HAS THE COMPANY PROVIDED ANY STUDIES OR OTHER DOCUMENTATION DEMONSTRATING THAT RATEPAYERS BENEFIT FROM THE INCENTIVE COMPENSATION PLAN?

A. No. The Company stated in its response to OCA-VI-48 that it "does not have any studies or analysis regarding its incentive compensation plan's direct benefits to ratepayers." This is another basis for denial of PECO's incentive compensation expense claim.

Q. WHAT IS YOUR RECOMMENDED ADJUSTMENT?

A. Arguably, based on the insufficient motivation provided by the plan and the lack of evidence provided by the Company; it could be recommended that all incentive compensation be denied rate recovery. However, I recommend a more moderate approach of 50/50 sharing of incentive compensation costs between shareholders and ratepayers, a reduction of $2.481 million. This adjustment is shown on Exhibit JD-G-1, Schedule C-2. I consider this to be a conservative adjustment because, as stated, the

plan has not been demonstrated to motivate better performance by employees.

Employee Recognition/Service Awards

Q. WHAT HAS THE COMPANY REQUESTED FOR EMPLOYEE RECOGNITION/SERVICE AWARDS IN THE FPFTY?

A. For employee recognition and employee service awards, the Company requests recovery of $45,966 in the FPFTY. (OCA-VI-36)

Q. WHAT DO EMPLOYEE SERVICE AWARDS INCLUDE?

A. The awards include framed certificates, pins, small mementos, and goods and services of nominal value. Id.

Q. SHOULD THESE COSTS BE RECOVERED FROM RATEPAYERS?

A. No. As these awards are not necessary for the provision of utility service and do not benefit ratepayers, the costs should be disallowed.

Q. WHAT IS YOUR RECOMMENDATION?

A. If the Company wants to provide such awards it should be at shareholder, not ratepayer expense. I recommend the disallowance of the total amount, a reduction of $45,966 to the FPFTY. This adjustment is shown on Exhibit JD-G-1, Schedule C-3.

Supplemental Executive Retirement Plan

Q. HAS THE COMPANY INCLUDED SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN ("SERP") EXPENSE IN THE FPFTY?

A. Yes. The Company has included $89,925 for SERP in the FPFTY. (OCA-VII-51)

Q. WHAT IS SERP?

A. SERP, generally speaking, constitutes an additional retirement benefit for a select few highly-compensated executives that exceeds IRS limits for qualified pension plans. It is not based upon performance criteria, but upon employment.

Q. DO RATEPAYERS BENEFIT FROM THIS EXPENSE?

A. No. The Company has not demonstrated that the SERP has any connection to any metrics regarding the provision of utility service. In addition, [redacted] (OCA-VII-53 Confidential)

Q. WHO SHOULD BE RESPONSIBLE FOR THE COSTS OF THIS EXPENSE?

A. The Company's customers should not be responsible for this overly generous benefit. These costs benefit top executives rather than benefit

ratepayers. The issue is not whether the utility may provide compensation to select executives in excess of the retirement limits allowed by the IRS, but if the Company chooses to do so, then shareholders rather than ratepayers should be responsible for the retirement benefits afforded only to those executives.

Q. WHAT IS YOUR RECOMMENDED ADJUSTMENT?

A. I recommend the disallowance of all SERP costs. This is a reduction of $89,925 in the FPFTY as shown on Exhibit JD-G-1, Schedule C-4.

Q. IS THIS ADJUSTMENT CONSISTENT WITH DECISIONS IN PENNSYLVANIA?

A. Yes. In a recent Aqua Pennsylvania, Inc. base rate case, the Pennsylvania Public Utility Commission disallowed that utility's entire claim, based on its agreement with the OCA that customers "who receive no benefit from and have no ties to the SERP, should not be required to fund these costs."[3]

[3] *Pennsylvania Public Utility Commission v. Aqua Pennsylvania, Inc.*, Docket No. R-2021-3027385, May 16, 2022 Opinion and Order, at 101-105.

Q. IS THIS ADJUSTMENT CONSISTENT WITH DECISIONS IN OTHER JURSIDICTIONS?

A. Yes. In Connecticut, in Docket No. 13-02-20, the Authority disallowed SERP expense (Final Decision dated September 24, 2013, pp. 66-67). SERP has also been disallowed in other proceedings.[4]

Severance

Q. HAS THE COMPANY REQUESTED RECOVERY OF SEVERANCE EXPENSE?

A. Yes. The Company has requested $95,000 for severance expense in the FPFTY. (OCA-VII-55)

Q. SHOULD THIS EXPENSE BE RECOVERED FROM RATEPAYERS?

A. No. This expense is more appropriately borne by the Company's shareholders. Ratepayers should not be responsible for costs for these employees that are no longer providing utility service. The Company may choose to spend these amounts, but shareholders should be responsible for the costs that are not necessary for the provision of utility service. In addition, the Company states that it does not have plans to terminate employees in the Future Test Year ("FTY") or FPFTY. (Id.) Since

[4] *See, e.g.*, *Pacificorp, d/b/a Rocky Mountain Power*, Idaho Public Utilities Commission Case No. PAC-E-10-07, at 20-21 (2011); District of Columbia Public Service Commission Formal Case No. 939, at 122-128 (1995); *UNS Electric, Inc.,* Arizona Corporation Commission Docket No. E-04204A-09-0206, at 30-31 (2010); *Potomac Electric Power Company*, Maryland Public Service Commission Case No. 9311, at 59-61 (2013).

ratemaking is prospective, this is all the more reason to disallow this expense.

Q. WHAT IS YOUR RECOMMENDED ADJUSTMENT?

A. I recommend disallowance of all severance expense. This is a reduction of $95,000 in the FPFTY as shown on Exhibit JD-G-1, Schedule C-5.

Employee Cafeteria

Q. PLEASE DESCRIBE THE COMPANY'S REQUEST FOR COSTS RELATED TO THE EMPLOYEE CAFETERIA.

A. The Company's filing includes a request for $23,244 for the employee cafeteria. (OCA-VI-40)

Q. WHAT IS INCLUDED IN THIS EXPENSE?

A. This expense includes preventative and corrective maintenance, consumable materials, maintenance of industrial machines in the cafeteria, and third-party cafeteria operator expense. (OCA-9-11)

Q. SHOULD THESE COSTS BE RECOVERABLE FROM THE COMPANY'S CUSTOMERS?

A. No. Ratepayers should not be responsible for these costs related to providing meals to employees. These costs are not related to, or necessary for, the safe or reliable provision of service nor do ratepayers

benefit from them. In addition, the cafeteria is located in PECO's main office building on Market Street in Center City, Philadelphia, and PECO acknowledges there are nearby restaurants and stores offering food and drink within walking distance. (OCA-9-11)

Q. WHAT IS YOUR RECOMMENDATION?

A. I recommend disallowing all employee cafeteria costs, a reduction of $23,244 as shown on Exhibit JD-G-1, Schedule C-6.

Board of Directors

Q. WHAT AMOUNT HAS THE COMPANY INCLUDED FOR BOARD OF DIRECTORS EXPENSE?

A. In the FPFTY, The Company has included $172,000 for BOD expense. (OCA-VI-5)

Q. SHOULD THE COMPANY'S CUSTOMERS BE RESPONSIBLE FOR THESE COSTS?

A. Not entirely. As the Board of Directors serves primarily the interests of the Company's shareholders, they are the primary beneficiaries of the costs. As such, the Company's shareholders should bear the larger share of the costs.

Q. WHAT IS YOUR RECOMMENDATION?

A. I recommend a 75/25 sharing of BOD costs by shareholders and ratepayers, respectively. However, the board of directors expense includes corporate air travel, which I address below. To avoid double counting this expense, I have removed the air travel component in my calculation of this adjustment. The result is a reduction of $99,748 as shown on Exhibit JD-G-1, Schedule C-7.

Directors and Officers Liability Insurance

Q. HAS THE COMPANY REQUESTED RECOVERY OF DIRECTORS AND OFFICERS LIABILITY INSURANCE ("D&O") IN THE FPFTY?

A. Yes. For the FPFTY, the Company has included $218,000 for D&O. (OCA-VI-27)

Q. PLEASE DESCRIBE D&O.

A. D&O is a liability insurance used by the Company to protect its officers and directors from lawsuits that arise as a result of their decisions. The Company's shareholders commonly bring such lawsuits against the Company and its officers.

Q. WHO SHOULD BE RESPONSIBLE FOR D&O EXPENSE?

A. As the Company and its shareholders are the primary beneficiaries of this insurance, it is inappropriate to recover the full amount from ratepayers. The Company's shareholders should bear more of the burden.

Q. WHAT IS YOUR RECOMMENDED ADJUSTMENT?

A. I recommend a 75/25 sharing of D&O expense between shareholders and ratepayers, respectively. This results in a reduction of $163,500 ($218,000 x 75%) as shown on Exhibit JD-G-1, Schedule C-8.

Non-Industry Dues

Q. WHAT AMOUNT IS INCLUDED IN THE FILING FOR NON-INDUSTRY DUES?

A. The Company requests $37,353 for non-industry dues in the FPFTY, including $20,073 not related to chambers of commerce. (OCA-VI-29)

Q. WHAT NON-INDUSTRY ORGANIZATIONS DUES ARE INCLUDED?

A. The Company includes dues to chambers of commerce, Economy League of Greater Philadelphia, and World Trade Center Greater Philadelphia (Id.)

Q. SHOULD THESE COSTS BE RECOVERED FROM RATEPAYERS?

A. No. The Company has not demonstrated that ratepayers receive specific benefits from these memberships. The Company was asked to provide

documentation for any resulting benefits to ratepayers and replied as follows:

> …non-Industry memberships provide PECO engagement with organizations that promote commerce, the interests of PECO's commercial and industrial customers, and the residents of PECOs service territory overall. Membership in these organizations benefits customers by engaging with diverse interests in the business community and promoting socially responsible partnerships to help grow the local economy. (Id.)

Also, these expenses relate primarily to societal, economic, and civic issues, which I believe do not directly benefit ratepayers in the provision of utility services. The memberships are purely discretionary costs on the part of the Company and, if the Company wants to provide this funding, the Company's shareholders should pay for these costs, and not expect ratepayers to fund its choices.

While the purpose of some of these groups may be commendable, that does not make them recoverable through rates. This is consistent with Commission decisions holding that charitable contributions are not permitted to be recovered from ratepayers.

Q. WHAT IS YOUR RECOMMENDED ADJUSTMENT?

A. Because prior Commission precedent has allowed the chamber of commerce dues to be recovered in rates, I recommend disallowance of all non-industry dues expense not related to chambers of commerce, a

reduction of $20,073 to the FPFTY as shown on Exhibit JD-G-1 Schedule C-9.

Industry Dues

Q. WHAT AMOUNT HAS THE COMPANY INCLUDED IN THE FPFTY FOR INDUSTRY DUES?

A. The Company is requesting recovery of $722,666 in the FPFTY for industry association dues. (OCA-VI-28). The Company projects these costs to increase in 2024 and 2025 over the Historic Test Year ("HTY") level. (Id.)

Q. DO YOU AGREE WITH THE COMPANY'S REQUEST?

A. No, I have a number of concerns which I discuss below.

Q. PLEASE DISCUSS YOUR FIRST CONCERN.

A. As can be seen below, total costs have fluctuated during 2018 through 2023 rather than continuously increasing. Also, ICE Data dues fluctuated and weren't even incurred in some of the years.

Industry Organization	2018 Actuals	2019 Actuals	2020 Actuals	2021 Actuals	2022 Actuals	2023 Actuals	2024 Budget	2025 Budget
American Gas Assoc	$ 388,105	$ 378,769	$ 379,299	$ 386,753	$ 379,279	$ 371,843	$ 371,922	$ 381,220
Energy Association of Pennsylvania	$ 94,668	$ 111,528	$ 116,976	$ 116,248	$ 117,963	$ 128,859	$ 138,703	$ 142,171
S&P Global				$ 170,668				
OTD Operations Tech Development				$ 104,525		$ 108,894	$ 135,238	$ 141,916
Intelligence Press Inc				$ 15,920				
ICE Data LP	$ 15,950		$ 28,620		$ 18,900	$ 27,255	$ 25,200	$ 25,200
Distributed Energy Financial Group				$ 1,440	$ 2,160			
Center for Energy Workforce and Development							$ 2,160	$ 2,160
National Energy & Utility Affordability coalition							$ 2,160	$ 2,160
Yes Energy				$ 2,709				
ABB Enterprise Software				$ 2,988				
R&D Memberships	$ 46,000	$ 5,500	$ 103,040	$ 82,160	$ 95,395	$ 62,607	$ 27,160	$ 27,839
	$ 544,723	$ 495,797	$ 627,935	$ 883,412	$ 613,697	$ 699,458	$ 702,543	$ 722,666

It should be noted that that the American Gas Association ("AGA") dues declined each year from 2021-2023, yet the Company has reflected an increase in the FPFTY (2025) for this organization.

Q. DID THE COMPANY PROVIDE INVOICES SUPPORTING THE FPFTY AMOUNTS?

A. The Company's response to OCA-9-6 stated that it had not received invoices for the FPFTY amounts. The Company did provide some invoices for the FTY (2024) amounts.

Q. WHAT OTHER CONCERNS DO YOU HAVE?

A. The Company has not demonstrated the benefits to ratepayers from memberships in these organizations.

Q. HOW DID THE COMPANY RESPOND TO THE REQUEST FOR SUPPORT FOR RATEPATER BENEFITS OF THESE ORGANIZATIONS?

A. When asked for documentation supporting the benefits to ratepayers in OCA-VI-28, the Company provided a description of non-specific benefits. The response stated:

> As detailed for each Industry Organization listed in Attachment OCA-VI-29(b), Industry memberships provide PECO with access to current information on a wide array of topics impacting utility business stakeholders. Membership in these organizations benefits customers by ensuring that PECO is leveraging industry best practices and fostering innovations that enhance reliability and customer experience, while maintaining affordability and promoting sustainability.

Additionally, a listing of the purpose of each of the industry organizations was provided in OCA-VI-28(b).

Q. DO YOU HAVE ANY OTHER CONCERNS?

A. I have some concerns with the AGA dues amount included in the FPFTY.

Q. WHAT DOES THE AGA DO?

A. The AGA is a national gas industry group that represents more than 200 utilities.[5] The Company's website lists its mission as:

> The American Gas Association (AGA) develops and advocates for informed, innovative, and durable policy that fulfills our nation's energy needs, environmental aspirations and economic potential.

[5] OCA-VI-28(b), https://www.aga.org/about/ .

> Additionally, the AGA provides state-of-the-art solutions for AGA members to safely and securely deliver reliable and affordable natural gas and advanced fuels to homes and businesses across the nation.

Q. WHAT IS THE CONCERN WITH THESE DUES?

A. This organization engages in lobbying and political advocacy, and these types of costs are typically excluded for ratemaking purposes.

Q. DO THE AGA DUES INCLUDED IN THE FPFTY INCLUDE LOBBYING?

A. The Company's response to OCA 9-4 stated that lobbying amounts are not included in the FTY and FPFTY.

Q. ARE YOU SATISFIED THAT THE COMPANY HAS REMOVED ALL INAPPROPRIATE AMOUNTS OF AGA DUES, E.G., LOBBYING, POLITICAL ADVOCACY, GOVERNMENT AFFAIRS, AND ADVERTISING?

A. Not entirely. The Company was asked in OCA 9-7 to identify the amount of FPFTY AGA dues that are attributed to advertising, lobbying, government affairs and political advocacy. The Company's response stated:

> The AGA invoice for the FTY identifies that 4.3% of the total dues are "allocable to lobbying." The lobbying portion of dues are charged directly to non-utility accounts and are therefore never included in the FTY or the FPFTY. PECO is not aware of any advertising, government affairs, or political advocacy.

However, OCA-9-8 asked for a copy of the AGA budget detailing how the membership funds are spent but the Company stated it did not have a copy. The Company's response to OCA 9-9 identified an employee that is a Board Member of the AGA. As such, it is not unreasonable to expect the Company to have access to such information, especially to support the requested costs in this proceeding.

Q. WHAT DO YOU RECOMMEND?

A. As the Company has not supported its projected increases in dues with invoices and not demonstrated that membership in any of the industry organizations directly benefits ratepayers, I recommend removing 50% of the industry dues from the FPFTY as the Company has not demonstrated the ratepayer benefits to its membership in these organizations nor that all inappropriate amounts have been removed. This is a reduction of $361,333 which is shown on Exhibit JD-G-1, Schedule C-10.

Q. ARE THERE ANY STATUTES BEARING ON RECOVERY OF INDUSTRY DUES IN PENNSYLVANIA?

A. There is a Pennsylvania statute that, with limited exceptions, prohibits recovery of political advertising, which is defined to include lobbying. 66 Pa. C.S. § 1316.

Corporate Aircraft

Q. WHAT AMOUNT HAS THE COMPANY REQUESTED FOR RECOVERY OF CORPORATE AIRCRAFT COSTS IN THE FPFTY?

A. The Company has included $504,000 for employee corporate aircraft costs in the FPFTY. (OCA-VI-21)

Q. DO RATEPAYERS BENEFIT FROM THESE COSTS?

A. In OCA-9-27, the Company was asked to explain the benefits of these costs to ratepayers. The response stated the following:

> Senior executives and members of the Board of Directors use the corporate aircraft due to the significant amount of travel required to represent the Company and fulfill their respective responsibilities. Such travel requirements often do not conform to traditional airline schedules. In addition, corporate air travel serves as a means of protecting the interests of both senior executives and the company by minimizing unexpected delays which prevent the fulfillment of company responsibilities. The ability for senior executives to avoid commercial travel allows them to spend greater amounts of time on company business, and to engage in confidential discussions when necessary, to the benefit of the company and customers.

Q. IS IT THE COMPANY'S RESPONSIBILITY TO DEMONSTRATE THAT THIS COST BENEFITS RATEPAYERS?

A. Yes, and the Company has not done so. The Company's explanation serves as a mere platitude about the convenience associated with corporate travel, it does not mean that customers paying their electric bill reasonably benefit from this convenience. Moreover, in its response to OCA-VI-21 the Company stated it does not compare the use of commercial flights to the use of corporate aircraft. The Company has not

demonstrated that the use of corporate aircraft is necessary or beneficial in comparison to commercial flights.

Q. WHAT IS YOUR ADJUSTMENT FOR THIS EXPENSE?

A. Yes. Because it is the Company's burden to demonstrate the benefit of this cost and that has not been done, I recommend the removal of corporate aircraft costs, a reduction of $504,000 in the FPFTY. This is shown on Exhibit JD-G-1, Schedule C-11.

Employee Volunteer Activities

Q. DOES THE COMPANY PAY EMPLOYEES FOR VOLUNTEER ACTIVITIES?

A. Yes. The Company states "If the volunteer opportunity occurs during work hours, and the employee is approved to participate, they are paid." (OCA-VI-35)

Q. SHOULD RATEPAYERS BE RESPONSIBLE FOR THE COSTS OF COMPANY EMPLOYEE VOLUNTEER ACTIVITIES?

A. No. Charity and volunteer activities, while laudable, should not be recovered from ratepayers. The ratepayers can make their own decisions regarding whether they want to be charitable and if so, to what they would direct their efforts. If the Company wants to support charitable efforts it should be at its own cost. This is consistent with Commission decisions

holding that charitable contributions are not permitted to be recovered from ratepayers.

Q. WHAT IS THE COST FOR THIS PROGRAM INCLUDED IN THE FPFTY?

A. The cost for volunteer activities in the FPFTY was not provided by the Company. In OCA-VI-35, the Company was asked to provide that amount but stated the following:

> PECO does not track the amount of paid time off for employees to volunteer.

This is problematic. The response indicates that ratepayers are funding the Company's charitable activities but did not provide the amount so that it can be disallowed.

Q. HAVE YOU MADE AN ADJUSTMENT FOR VOLUNTEER ACTIVITIES?

A. Yes. Because the Company did not provide the amount included in the FPFTY, I calculated an estimate based on each employee volunteering for 4 hours annually. This is a reduction of $98,985 in the FPFTY as shown on schedule C-12. This adjustment can be considered conservative as the Company has stated that PECO employees have volunteered nearly 60,000 hours. (Hamilton Direct at 38.)

I also recommend that the Commission direct the Company to track the costs of this program so that it can be removed from the revenue requirement in future rate cases.

Union Ratification Payment

Q. PLEASE DISCUSS THE COMPANY'S REQUEST TO INCLUDE A UNION CONTRACT RATIFICATION PAYMENT IN THE FPFTY.

A. The Company has included $42,000 in the FPFTY for a union contract ratification payment. (Exhibit MJT-1, Schedule D-6)

Q. HOW WAS THIS AMOUNT DERIVED?

A. The Company proposes to normalize the $249,000 payment allocated to PECO Gas over six years. (Id.)

Q. WHAT IS THE COMPANY'S BASIS FOR INCLUDING THE UNION PAYMENT IN THE FPFTY?

A. The Company was asked if the union contract payment was a one-time payment and to explain and to provide supporting documentation for the cost. The Company's response stated:

> Pursuant to Exhibit M of the CBA dated April 13, 2021 (provided as Confidential Attachment IE-I-RE-30(A)), the Company agreed to pay a one-time ratification bonus of $1,000 to each Local 614 employee of PECO who is actively working (including employees on STD) as of the date of ratification in connection with the new CBA. (IE-I-RE-30(B))

Q. SHOULD THIS COST BE INCLUDED IN THE FPFTY?

A. No, the Company stated this was a one-time payment. It cannot be assumed that such a payment will occur again or what the amount would be if it were to occur. As such, it should not be included in the FPFTY. In addition, as this cost occurred in 2021 and the FPFTY is 2025, this constitutes retroactive ratemaking.

Q. WHAT DO YOU RECOMMEND?

A. I recommend removing the entire amount of $42,000 from the FPFTY. This is shown on Exhibit JD-G-1, Schedule C-13.

Q. IS YOUR ADJUSTMENT CONSISTENT WITH PRIOR PENNSYLVANIA ORDERS?

A. Yes, the Commission disallowed a union ratification bonus in a prior PECO rate case.[6]

Rate Case Expense

Q. WHAT AMOUNT HAS THE COMPANY INCLUDED IN THE FPFTY FOR RATE CASE EXPENSE?

A. The Company has included $1,072,000 in the FPFTY. (Exhibit MJT-1 Schedule D-7)

[6] Pennsylvania Public Utility Commission v. PECO Energy Company – Gas Division, June 22, 2021 Opinion and Order, R-2020-3018929, at 81.

Q. HOW DID THE COMPANY CALCULATE THIS AMOUNT?

A. The Company estimates $2,144,000 million of rate case expenses and proposes to normalize this over two years. (Id.)

Q. WHAT IS THE COMPANY'S BASIS FOR USING A TWO-YEAR PERIOD?

A. The Company stated that "the Company projects that it will need to file another rate case in two to three years, which formed the basis for the two-year normalization period." (I&E-I-RE-14(C)).

Q. DO YOU AGREE WITH THE COMPANY'S APPROACH?

A. No. The use of historic filing frequency is more appropriate than the Company's anticipated future filing periods. A Guide to Utility Ratemaking (2018 Edition) states:

> The Commission's practice is to recognize all prudently-incurred rate case expense and set a normalization period based upon historic filing frequency. So, if Typical Utility's history in the 2018 filed case shows previous base case filings in 2013, 2008, and 2003, then the normalized rate case expense for a case costing Typical Utility a total of $100,000 would be $20,000 per year ($100,000/5 years). (Page 112.)

Further, in prior cases, the Commission has approved rate case expense based on historic filing frequency.[7]

[7] See, e.g., Pennsylvania Public utility Commission v. Columbia Water Company, Docket No. R-2023-3040258, January 18, 2024 Opinion and Order at 34; Pennsylvania Public utility Commission v. City of Lancaster – Bureau of Water, Docket No. R-2010-2179103, July 14, 2011 Opinion and Order at 38.

Q. PLEASE DESCRIBE THE COMPANY'S HISTORIC FILING FREQUENCY.

A. PECO Gas filed cases in 2010, 2020, 2022, and 2024.[8] As such, the Company has averaged approximately 4.5 years between rate cases.

Q. WHAT DO YOU RECOMMEND?

A. Based on the Company's historic filing frequency, I recommend a 4.5-year normalization. This reduces the Company's request by $596,000 which is shown on Exhibit JD-G-1, Schedule C-14.

O&M Flow Through Adjustments

Payroll Tax Expense

Q. PLEASE DISCUSS YOUR ADJUSTMENT TO PAYROLL TAX.

A. The adjustment is a flowthrough from the OCA's adjustment to payroll and incentive compensation. OCA's adjustment reduces payroll tax by $304,000 in the FPFTY, which is shown on Exhibit JD-G-1, Schedule C-15.

[8] Docket Nos. R-2010-2161592, R-2020-3018929, R-2022-3-31113 and R-2024-3046932.

Benefits Expense

Q. PLEASE DISCUSS YOUR ADJUSTMENT TO BENEFITS EXPENSE.

A. The adjustment is a flow through from the OCA's adjustment to payroll. OCA's adjustment reduces benefits expense by $569,000 in the FPFTY, which is shown on Exhibit JD-G-1, Schedule C-16.

Income Tax Expense

Q. PLEASE DISCUSS YOUR ADJUSTMENT TO INCOME TAX EXPENSE.

A. The adjustment is a flowthrough from the OCA's adjustment to O&M expenses. OCA's adjustment increases federal and state income taxes by $1.786 million, in the FPFTY, as shown on Exhibit JD-G-1, Schedule C-17.

Rate Base Flow Through Adjustments

Working Capital

Q. PLEASE DISCUSS YOUR FLOW THROUGH ADJUSTMENT TO WORKING CAPITAL.

A. The adjustment is a flow through from the OCA's adjustments to O&M expenses. My adjustments decrease working capital by $409,000 in the FPFTY, as shown on Exhibit JD-G-1, Schedule B.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes, at this time. I reserve the right to supplement my testimony following the receipt of additional information from the Company. Further, my silence on an issue should not be interpreted as agreement with the Company's position.

QUALIFICATIONS OF JOHN DEFEVER

John Defever, CPA is a senior regulatory consultant with Larkin & Associates. As such, Mr. Defever is responsible for the review and analysis of regulatory filings and the preparation of testimony, discovery requests, briefs, schedules, exhibits and reports. Mr. Defever also assists with the annual audit of a Michigan Railroad Company. Mr. Defever has been employed with the firm of Larkin and Associates since 2010.

Mr. Defever has performed work in the field of utility regulation on behalf of public service commission staffs, state attorney generals and consumer groups concerning regulatory matters before regulatory agencies in Alaska, California, Connecticut, District of Columbia, Florida, Hawaii, Iowa, Maine, Maryland, Massachusetts, Mississippi, Oregon, New Hampshire, and Vermont.

Mr. Defever received a Bachelor of Business Administration, Major: Accounting from Eastern Michigan University and an Associate in Applied Science at Schoolcraft College. Mr. Defever is a member of the Michigan Association of Certified Public Accountants and maintains continuing professional education in accounting, auditing, and taxation.

Partial list of utility cases participated in:

Docket No. 10-02-13	Aquarion Water Company of Connecticut Connecticut Department of Utility Control
Docket No. 10-70	Western Massachusetts Electric Company Massachusetts Department of Public Utilities
Docket No. 10-12-02	Yankee Gas Services Company Connecticut Department of Utility Control
Docket No. 11-01	Fitchburg Gas & Electric Light Company Massachusetts Department of Public Utilities
Case No. 9267	Washington Gas Light Company Maryland Public Service Commission

QUALIFICATIONS OF JOHN DEFEVER

Case No. 9286	Potomac Electric Power Company Maryland Public Service Commission
Docket No. 13-06-08	Connecticut Natural Gas Corporation Connecticut Public Utility Regulatory Authority
Docket No. 13-90	Fitchburg Gas & Electric Light Company Massachusetts Department of Public Utilities
Docket No. 8190	Green Mountain Power Company Before the Vermont Public Service Board
Docket No. 8191	Green Mountain Power Company Alternative Regulation Before the Vermont Public Service Board
Case No. 9354	Columbia Gas of Maryland, Inc. Maryland Public Service Commission
Docket No. 13-135	Western Massachusetts Electric Company Massachusetts Department of Public Utilities
Docket No. 14-05-06	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 13-85	Massachusetts Electric Company and Nantucket Electric Company D/B/A/ as National Grid Massachusetts Department of Public Utilities
Case No. 9390	Columbia Gas of Maryland, Inc. Maryland Public Service Commission
Docket No. 15-03-01	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 15-03-02	United Illuminating Company Connecticut Public Utilities Regulatory Authority
Docket No. 15-149	Western Massachusetts Electric Company Massachusetts Department of Public Utilities

QUALIFICATIONS OF JOHN DEFEVER

Docket No. 8710	Vermont Gas Systems Inc. Before the Vermont Public Service Board
Docket No. 8698	Vermont Gas Systems Inc. Alternative Regulation Before the Vermont Public Service Board
U-15-091 / U-15-092	College Utilities Corporation Golden Heart Utilities, Inc. Regulatory Commission of Alaska
Docket No.16-06-04	United Illuminating Company Connecticut Public Utilities Regulatory Authority
Docket No. 15-05-42	Southern Connecticut Gas Company Connecticut Public Utilities Regulatory Authority
Docket No. 20160251-EI	Florida Power & Light Company Florida Public Service Commission
Docket No. 20170141-SU	KW Resort Utilities Florida Public Service Commission
Application No. A.16-09-001	Southern California Edison California Public Utilities Commission
Case No. 18-0409-TF	Vermont Gas Systems, Inc. Vermont Public Utility Commission
Docket No. 17-10-46	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 2017-0105	Hawaii Gas Company Hawaii Public Utilities Commission
Docket No. 18-03-01	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 18-03-02	United Illuminating Company Connecticut Public Utilities Regulatory Authority

QUALIFICATIONS OF JOHN DEFEVER

Docket No. A.17-11-009	Pacific Gas & Electric California Public Utilities Commission
Docket No. 18-05-16	Connecticut Natural Gas Connecticut Public Utilities Regulatory Authority
Docket No. 18-05-10	Yankee Gas Connecticut Public Utilities Regulatory Authority
Docket No. 18-11-12	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 18-07-10	SJW Group and Connecticut Water Service Connecticut Public Utilities Regulatory Authority
Docket No. RPU-2019-0001	Interstate Power and Light Iowa Utilities Board
Docket No. 2018-0388	Kona Water Service Company Hawaii Public Utilities Commission
Docket No. DE 19-057	Public Service Company of New Hampshire New Hampshire Public Utilities Commission
Application No. A.19-08-013	Southern California Edison Public Utilities Commission
Docket No. D.P.U. 19-120	NSTAR Gas Company d/b/a Eversource Energy Massachusetts Department of Public Utilities
Docket No. 2019-00333	Maine Water Company – Skowhegan Division Public Utilities Commission
Docket No. D.P.U. 19-113	Massachusetts Electric Company & Nantucket Electric Company Each d/b/a National Grid Massachusetts Department of Public Utilities

QUALIFICATIONS OF JOHN DEFEVER

Docket No. 20-03-01	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 20-03-02	United Illuminating Company Connecticut Public Utilities Regulatory Authority
Docket No. 20-12-30	Connecticut Water Company Connecticut Public Utilities Regulatory Authority
Docket No. 20-08-03	The Connecticut Light and Power Company & The United Illuminating Company Connecticut Public Utilities Regulatory Authority
Docket No. 20-120	National Grid Massachusetts Department of Public Utilities
Docket No. 21-01-03	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 21-01-04	United Illuminating Company Connecticut Public Utilities Regulatory Authority
Case No. 21-887-EL-AIR	Duke Energy Ohio Public Utilities Commission of Ohio
Application No. 21-06-021	Pacific Gas & Electric 2023 GRC California Public Utilities Commission
Docket No. 22-07-01	Aquarion Water Company Connecticut Public Utilities Regulatory Authority
Docket No. 22-01-03	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 22-01-04	United Illuminating Company Connecticut Public Utilities Regulatory Authority
Docket No. 22-057-03	Dominion Energy Resources Utah Public Service Commission

QUALIFICATIONS OF JOHN DEFEVER

Docket No. 22-22	NSTAR Electric Massachusetts Department of Public Utilities
Docket No. 22-08-08	United Illuminating Company, Connecticut Public Utilities Regulatory Authority
Formal Case No. 1169	Washington Gas Light District of Columbia Public Service Commission
Case No. 22-900-EL-SSO	Dayton Power & Light, d/b/a AES Ohio Public Utilities Commission of Ohio
Docket No. 23-01-03	Connecticut Light & Power Company Connecticut Public Utilities Regulatory Authority
Docket No. 24-01-04	United Illuminating Company Connecticut Public Utilities Regulatory Authority

PECO GAS
FPFTY Ending December 2025
Docket No. R-2024-3046932

Exhibit JD-G-1
Accompanying the Direct Testimony of
John Defever, CPA

Schedule No.	Schedule Title
A	Overall Financial Summary
A-1	Gross Revenue Conversion Factor
B	Rate Base Summary
B-1	Working Capital
C	Adjusted Net Operating Income
C-1	Payroll Expense
C-2	Incentive Compensation
C-3	Service Awards
C-4	SERP
C-5	Severance Expense
C-6	Employee Cafeteria
C-7	Board of Directors Expense
C-8	Directors & Officers Liability Insurance
C-9	Non-Industry Dues
C-10	Industry Dues
C-11	Corporate Aircraft
C-12	Employee Volunteer Activities
C-13	Union Ratification Payment
C-14	Rate Case Expense
C-15	Payroll Tax
C-16	Benefits Expense
C-17	Income Tax
D	Rate of Return Summary

PECO GAS
FPFTY Ending December 2025

Docket No. R-2024-3046932
Exhibit JD-G-1
Schedule A
Page 1 of 1

Overall Financial Summary
(000s of Dollars)

Line No.	Description	PECO Gas	Difference	OCA	Reference
		(A)	(B)	(C)	(D)
1	Rate Base	$ 3,524,007	$ (409)	$ 3,523,597	Schedule B
2	Earned Rate of Return/Requested Rate of Return	8.08%	-1.29%	6.79%	Schedule D
3	Actual Operating Income/Required Operating Income	$ 284,740	$ (45,488)	$ 239,252	(Ln 1 X Ln 2)
4	Less: Adjusted for Ratemaking Operating Income	$ 204,351	$ 4,754	$ 209,105	Schedule C
5	Income Deficiency / (Sufficiency)	$ 80,389	$ (50,242)	$ 30,147	(Ln 3 - Ln 4)
6	Gross Revenue Conversion Factor	1.383	0.000	1.383	Schedule A-1
7	Revenue Increase Requested	$ 111,168	$ (69,478)	$ 41,690	(Ln 5 X Ln 6)

PECO GAS
FPFTY Ending December 2025

Docket No. R-2024-3046932
Exhibit JD-G-1
Schedule A-1

Gross Revenue Conversion Factor

Line No.	Description		FPFTY
1	Gross Revenue Factor		1.000000
2	Forfeited Discounts Amount	$	1,329
3	Total Customer Revenue	$	740,896
4	Shopping Revenue	$	82,479
5	LPC Revenue		0.001614
6	Gross receipts tax		
7	Uncollectible Expenses		(0.003692)
8	PUC/OCA & SBA Assessment as a % of Revenue		(0.003087)
9	Net Revenues		0.994834
10	State Income Tax Rate		0.0799
11	State Income Tax Factor		(0.079487)
12	Factor After State Taxes		0.915347
13	Federal Income Tax Rate		21.000%
14	Federal Income Tax Factor		(0.192223)
15	Net Operating Income Factor		0.723124
16	Gross Revenue Conversion Factor		1.382888

Source:
Exhibit MJT-1 Schedule D-19

PECO GAS
FPFTY Ending December 2025

Docket No. R-2024-3046932
Exhibit JD-G-1
Schedule B
Page 1 of 1

Rate Base Summary
(000s of Dollars)

Line No.		Per Company	OCA Adjustments	Per OCA
		(A)	(B)	(C)
1	Utility Plant	$ 4,630,050		$ 4,630,050
2	Accumulated Depreciation	$ 1,022,690		$ 1,022,690
3	Common Plant Net of Accum Depr	$ 190,266		$ 190,266
4	Net Plant-In-Service	$ 3,797,627	$ -	$ 3,797,627
5	Working Capital	$ 13,737	$ (409)	$ 13,328
6	Accum Deferred Income Taxes	$ (220,306)		$ (220,306)
7	Customer Deposits	$ (13,354)		$ (13,354)
8	Customer Advances for Construction	$ (1,323)		$ (1,323)
9	Materials and Supplies	$ 2,123		$ 2,123
10	Accum Deferred Income Taxes-Reg Liability	$ (111,469)		$ (111,469)
11	Gas Storage	$ 56,972		$ 56,972
12	Total Rate Base	$ 3,524,007	$ (409)	$ 3,523,597

Source:
Exhibit MJT-1 Schedule A-1

PECO GAS
FPFTY Ending December 2025

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Exhibit JD-G-1
Schedule B-1
Page 1 of 1

Working Capital
(000s of Dollars)

Line No.	Description	Reference	FPFTY Expenses	OCA Adjs	OCA FPFTY Expenses	(Lead)/Lag Days	Dollar-Days
1	Revenue Lag Days					48.86	
2	Expense Lag Days						
3	Payroll (Dist Only)		$ 52,481	$ (3,571)	$ 48,909	13.58	$ 664,351
4	Pension Expense		$ 973		$ 973	(167.00)	$ (162,441)
5	Commodity Purchased - Gas		$ 260,915		$ 260,915	33.24	$ 8,671,521
6	Payment to Suppliers		$ 82,479		$ 82,479	56.21	$ 4,636,002
7	Other Expenses		$ 111,873	$ (2,666)	$ 109,208	40.07	$ 4,376,172
8	Total O&M and POR Payments	Sum L3 to L7	$ 508,720	$ (6,237)	$ 502,483		$ 18,185,604
9	O&M Expense / POR Payment Lag Days					36.19	
10	Net Lead/(Lag) Days	L1 - L9				12.66	
11	Days in Current Year					365	
12	Operating Expenses Per Day		$ 1,377				
13	Working Capital for O&M Expense		$ 17,435				
14	Average Prepayments		$ 2,733				
15	Accrued Taxes		$ 1,896				
16	Interest Payments		$ (8,736)				
17	Total Working Capital Requirement per OCA	Sum L13 to L16	$ 13,328				
18	Pro Forma O&M Expense		$ 428,619				
19	Uncollectible Expense		$ 2,378				
20	Pro Forma Cash O&M Expense	L20 - L21	$ 426,241				

Adjusted Net Operating Income
(000s of Dollars)

Line No.	Description	FPFTY Company (A)	OCA Adjustments (B)	FPFTY OCA (C)
1	Operating Revenues	$ 746,445	$ -	$ 746,445
2	Operating Expenses	$ 556,448	$ (6,540)	$ 549,908
3	Net Operating Income Before Income Tax	$ 189,997	$ 6,540	$ 196,537
4	Income Taxes @ Eff Inc Tax Rate	$ 14,354	$ (1,786)	$ 12,568
5	Income Taxes @ Statutory Rates			
6	Net Operating Income	$ 204,351	$ 4,754	$ 209,105

Source:
Exhibit MJT-1 Schedule A-1

Adjusted Net Operating Income
Summary of Adjustments
(000s of Dollars)

Line No.	Schedule	Description	Operating Revenues	O&M Expenses	Depreciation & Amortization	Amortization of Regulatory Expense	Taxes Other Than Income Taxes Other	Income Taxes	Operating Income
1		Company Request	$ 746,445	$ 428,619	$ 116,982	$ 1,780	$ 9,067	$ 14,354	$ 204,351
2		OCA Adjustments:							
3	C-1	Payroll Expense		$ (1,049)				$ 286	$ 762
4	C-2	Incentive Compensation		$ (2,481)				$ 677	$ 1,803
5	C-3	Service Awards		$ (46)				$ 13	$ 33
6	C-4	SERP		$ (90)				$ 25	$ 65
7	C-5	Severance Expense		$ (95)				$ 26	$ 69
8	C-6	Employee Cafeteria		$ (23)				$ 6	$ 17
9	C-7	Board of Directors Expense		$ (100)				$ 27	$ 73
10	C-8	Directors & Officers Liability Insurance		$ (164)				$ 45	$ 119
11	C-9	Non-Industry Dues		$ (20)				$ 5	$ 14
12	C-10	Industry Dues		$ (361)				$ 98	$ 262
13	C-11	Corporate Aircraft		$ (504)				$ 138	$ 366
14	C-12	Employee Volunteer Activities		$ (99)				$ 27	$ 72
15	C-13	Union Ratification Payment		$ (42)				$ 11	$ 31
16	C-14	Rate Case Expense		$ (596)				$ 163	$ 433
17	C-15	Payroll Tax					$ (304)	$ 83	$ 221
18	C-16	Benefits Expense		$ (569)				$ 155	$ 414
19		Total OCA Adjustments	$ -	$ (6,237)	$ -	$ -	$ (304)	$ 1,786	$ 4,754
20		Total NOI	$ 746,445	$ 434,855	$ 116,982	$ 1,780	$ 9,371	$ 16,141	$ 209,105

Source:
Exhibit MJT-1 Schedules A-1, D-1

Payroll Expense
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	Company Amount	$	52,481	MJT-1 Schedule D-6
2	OCA Recommended Amount	$	51,432	
3	OCA Adjustment	$	(1,049)	Line 6
4	Company Payroll excluding Union Payment	$	52,439	MJT-1 Schedule D-6
5	OCA % Recommended Reduction		-2.00%	
6	OCA Recommended Reduction	$	(1,049)	

PECO GAS
FPFTY Ending December 2025

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Schedule C-2
Page 1 of 1

Incentive Compensation
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	Amount Per Company	$	4,961	IE-I-RE-8
2	Percentage Allocated to Shareholders		-50%	
3	OCA Adjustment	$	(2,481)	Line 1 x Line 2

PECO GAS
FPFTY Ending December 2025

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Schedule C-3
Page 1 of 1

Service Awards
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	Company Amount	$	46	OCA-VI-36
2	OCA Recommended Amount	$	-	
3	OCA Adjustment	$	(46)	Line 2 - Line 1

SERP
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	Company Amount	$	90	OCA-VII-51
2	OCA Recommended Amount	$	-	
3	OCA Adjustment	$	(90)	Line 2 - Line 1

Severance Expense
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 95	OCA-VII-55
2	OCA Recommended Amount	$ -	
3	OCA Adjustment	$ (95)	Line 2 - Line 1

Employee Cafeteria
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 23	OCA-VI-40
2	OCA Recommended Amount	$ -	
3	OCA Adjustment	$ (23)	Line 3 - Line 1

Board of Directors Expense
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	Company Amount	$	172	OCA-VI-5
2	OCA Recommended Amount	$	72	
3	OCA Adjustment	$	(100)	Line 8
4	BOD Expenses	$	172	OCA-VI-5
5	Percent disallowance		-75%	
6	Amount disallowed	$	(129)	Line 4 X Line 5
7	Less BOD Corporate Air Travel	$	29	OCA 9-26
8	OCA Disallowance	$	(100)	Line 6 X Line 7

Directors & Officers Liability Insurance
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 218	OCA-VI-27
2	Percent Allocated to Shareholders	-75%	
3	OCA Adjustment	$ (164)	Line 1 x Line 2

Non-Industry Dues
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	Company Amount	$	37	OCA-VI-29
2	OCA Recommended Amount	$	17	
3	OCA Adjustment	$	(20)	Line 2 - Line 1
4	Chamber of Commerce Dues			
5	Greater Philadelphia Chamber	$	15,120	
6	Greater Philadelphia Hispanic Chamber of Commerce	$	2,160	
		$	17,280	

Industry Dues
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 723	OCA-VI-28(a)
2	Recommended Disallowance	-50%	
3	OCA Adjustment	$ (361)	Line 1 X Line 2

Corporate Aircraft
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 504	OCA-VI-21
2	OCA Recommended Amount	$ -	
3	OCA Adjustment	$ (504)	Line 2 - Line 1

Employee Volunteer Activities
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	OCA Adjustment	$	(99)	Line 8
2	FPFTY Employees		705	Exhibit MJT-1 Schedule D-6
3	Annual Payroll per employee	$	74,500	Exhibit MJT-1 Schedule D-6
4	number of working days in a year		260	[a]
5	payroll per day	$	287	Line 3/Line 4
6	1/2 day volunteer time	$	143	Line 5 / 2
7	Volunteer time less OCA vacancy adjustment (Sch C-1)	$	140	Line 6 x 98%
8		$	98,985	Line 2 x Line 7

Note [a]
https://hr.uiowa.edu/pay/payroll-services/payroll-calendars/working-day-payroll-calendar

Union Ratification Payment
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 42	Exhibit MJT-1 Schedule D-6
2	OCA Recommended Amount	$ -	
3	OCA Adjustment	$ (42)	Line 2 - Line 1

Rate Case Expense
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Company Amount	$ 1,072	Line 4
2	OCA Recommended Amount	$ 476	Line 6
3	OCA Adjustment	$ (596)	Line 2 - Line 1
4	Company projected rate case expense	$ 2,144	Exhibit MJT-1 Schedule D-7
5	OCA recommended normalization period	4.5	
6	OCA recommended annual expense	$ 476	

Payroll Tax
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	OCA Adjustments to Payroll, Incentive Compensation and Union Payment	$ (3,571)	Schedules C-1 & C-2
2	Payroll Tax Percentage	8.50%	Exhibit MJT-1 Schedule D-16
3	OCA Adjustment	$ (304)	Line 1 X Line 2

PECO GAS
FPFTY Ending December 2025

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Schedule C-16
Page 1 of 1

Benefits Expense
(000s of Dollars)

Line No.	Description		FPFTY	Reference
1	OCA Adjustments to Payroll, Incentive Compensation and Union Payment	$	(3,571)	Schedules C-1 & C-2
2	Benefit Expense Ratio		15.94%	Line 6
3	OCA Adjustment to Benefits Expense	$	(569)	Line 1 X Line 2
4	Benefits Expense	$	8,359	Exhibit MJT-1 Schedule D-8 & D-9
5	Payroll Expense	$	52,439	Exhibit MJT-1 Schedule D-6
6	Benefits Expense Ratio		15.94%	Line 4/Line 5

Income Tax
(000s of Dollars)

Line No.	Description	FPFTY	Reference
1	Operating Expense Adjustments	$ (6,540)	Schedule C-2
2	Combined Tax Rate	27.312%	Exhibit MJT-1 Schedule D-19
3	OCA Adjustment to Income Taxes	$ 1,786	Line 1 X Line 2

Rate of Return Summary

Line No.	PECO Description	Capitalization	Capitalization Ratio	Embedded Cost	Return %
		(A)	(B)	(C)	(D)
1	Long Term Debt	6,583,898	46.60%	4.58%	2.13%
2	Common Equity	7,544,811	53.40%	11.15%	5.95%
3	Total	14,128,708	100.000%		8.08%

Line No.	OCA Description	Capital Structure	Cost	Weighted Cost
		(A)	(B)	(C)
4	Debt	50.00%	4.58%	2.30%
5	Equity	50.00%	9.00%	4.50%
6	Total	100.000%		6.79%

Source:
Lines 1-3: Exhibit MJT-1 Schedule B-7
Lines 4-6: OCA Witness David Garrett

Fully Projected Future Test Year Ending December 2025
($000s)

Line No.	Description		PECO Gas
	15 Basis Point ROE Impact		
1	Rate Base per PECO Gas	$	3,524,007
2	Rate of return (15 basis points ROE change)		0.15%
3	Net operating income required	$	5,286
4	Weighted cost of equity in capital structure		53.40%
5	Net operating income deficiency	$	2,823
6	Gross revenue conversion factor		1.38289
7	Revenue deficiency	$	3,904

Notes and Source

Company Schedule A-1

Line No.	Description		Amount	Percent	Cost Rate	Weighted Cost
			(A)	(B)	(C)	(D)
	Per Company					
1	Long Term Debt	$	6,583,898	46.60%	4.58%	2.13%
2	Preferred Stock					
3	Common Equity	$	7,544,811	53.40%	11.15%	5.95%
4	Total Capital Structure	$	14,128,708	100.00%		8.08%
	Per OCA Using OCA Recommended Capital Structure					
5	Long-Term Debt	$	6,583,898	**50.00%**	4.58%	2.29%
6	Preferred Stock					
7	Common Equity	$	7,544,811	**50.00%**	11.15%	5.58%
8	Total Capital Structure	$	14,128,708	100.00%		7.87%
9	Difference					-0.21%

	RATE BASE REVENUE REQUIREMENT IMPACT				
10	Rate of Return Difference			-0.21%	Rev Req
11	GRCF			1.382888	Impact
12	Rate Base per PECO Gas's Filing ($000s)	$	3,524,007	-0.290%	$ (10,234)

	NOI REVENUE REQUIREMENT IMPACT Description	Net Operating Income Amount		GRCF	Rev Req Impact
13	Interest Synchronization	$	1,540	1.382888	$ (2,130)
14				Combined Revenue Requirement Impa	$ (12,364)

	Interest Synchronization Calculation		Amount	
15	Adjusted Rate Base, per PECO Gas	$	3,524,007	
16	Difference in Weighted Cost of Debt		0.16%	(Col. D, line 5 - line 1)
17	Change in Interest Deduction for Tax Purposes	$	5,638	
18	State Income Tax Rate		7.99%	
19	Decrease to State Income Tax	$	(451)	
20	Change in Federal Taxable Income	$	5,188	
21	Federal Income Tax Rate		21.00%	
22	Decrease to Federal Income Tax Expense	$	(1,089)	
23	Overall Increase (Decrease) to Income Tax Expense	$	(1,540)	
24	Impact on Net Operating Income	$	1,540	(Col. A, line 13)

Line No.	Description		Amount	Percent	Cost Rate	Weighted Cost
			(A)	(B)	(C)	(D)
	Per Company					
1	Long Term Debt	$	6,583,898	46.60%	4.58%	2.13%
2	Preferred Stock					
3	Common Equity	$	7,544,811	53.40%	11.15%	5.95%
4	Total Capital Structure	$	14,128,708	100.00%		8.08%
	Per OCA Using OCA Recommended ROE					
5	Long-Term Debt	$	6,583,898	46.60%	4.58%	2.13%
6	Preferred Stock					
7	Common Equity	$	7,544,811	53.40%	**9.00%**	4.81%
8	Total Capital Structure	$	14,128,708	100.00%		6.94%
9	Difference					-1.14%
	RATE BASE REVENUE REQUIREMENT IMPACT					
10	Rate of Return Difference			-1.14%		Rev Req
11	GRCF			1.382888		Impact
12	Rate Base per PECO's Filing ($000s)	$	3,524,007	-1.576%		$ (55,556)

Line No.	Description		Amount	Percent	Cost Rate	Weighted Cost
			(A)	(B)	(C)	(D)
	Per Company					
1	Long Term Debt	$	6,583,898	46.60%	4.58%	2.13%
2	Preferred Stock					
3	Common Equity	$	7,544,811	53.40%	11.15%	5.95%
4	Total Capital Structure	$	14,128,708	100.00%		8.08%
	Per OCA Using OCA Recommended Capital Structure/ROE					
5	Long-Term Debt	$	6,583,898	**50.00%**	**4.58%**	**2.29%**
6	Preferred Stock					
7	Common Equity	$	7,544,811	**50.00%**	**9.00%**	**4.50%**
8	Total Capital Structure	$	14,128,708	100.00%		**6.79%**
9	Difference					-1.29%

	RATE BASE REVENUE REQUIREMENT IMPACT				
10	Rate of Return Difference			-1.29%	Rev Req
11	GRCF			1.382888	Impact
12	Rate Base per PECO Gas's Filing ($000s)	$	3,524,007	-1.784%	$ (62,866)

	NOI REVENUE REQUIREMENT IMPACT	Net Operating		Rev Req
	Description	Income Amount	GRCF	Impact
13	Interest Synchronization	$ 1,540	1.382888	$ (2,130)
14		Combined Revenue Requirement Impact		$ (64,996)

	Interest Synchronization Calculation		Amount	
15	Adjusted Rate Base, per PECO	$	3,524,007	
16	Difference in Weighted Cost of Debt		0.16%	(Col. D, line 5 - line 1)
17	Change in Interest Deduction for Tax Purposes	$	5,638	
18	State Income Tax Rate		7.99%	
19	Decrease to State Income Tax	$	(451)	
20	Change in Federal Taxable Income	$	5,188	
21	Federal Income Tax Rate		21.00%	
22	Decrease to Federal Income Tax Expense	$	(1,089)	
23	Overall Increase (Decrease) to Income Tax Expense	$	(1,540)	
24	Impact on Net Operating Income	$	1,540	

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, John Defever, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 1, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: June 17, 2024

Signature: _____
John Defever

Address: Larkin & Associates, PLLC
15728 Farmington Road
Livonia, MI 48154

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	)	
	)	
v.	)	Docket No. R-2024-3046932
	)	
PECO Energy Company - Gas Division	)	

SURREBUTTAL TESTIMONY OF
JOHN DEFEVER, CPA

ON BEHALF OF

THE OFFICE OF CONSUMER ADVOCATE

AUGUST 2, 2024

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Union Ratification Payment 13

Rate Case Expense 15

INTRODUCTION

Q. PLEASE STATE YOUR NAME.

A. My name is John Defever.

Q. ARE YOU THE SAME JOHN DEFEVER THAT SUBMITTED DIRECT TESTIMONY ON BEHALF OF THE OCA IN THIS PROCEEDING?

A. Yes, in OCA Statement 1.

Q. BASED ON YOUR REVIEW OF PECO GAS'S AND OTHER PARTIES' DIRECT AND REBUTTAL TESTIMONY, DID YOUR RECOMMENDATION FOR A REVENUE REQUIREMENT INCREASE CHANGE?

A. No. My exhibits are attached to my direct testimony in Exhibit JD-G-1 consisting of Schedules A, B, C, and D with supporting Schedules B-1 and C-1 through C-17.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. Schedule A of Exhibit JD-G-1 presents the overall financial summary for the Fully Projected Future Test Year ("FPFTY") ending December 31, 2025 giving effect to all the adjustments I recommend in my testimony, and the rate of return sponsored by Mr. Garrett. Based on the adjustments that have been quantified to date, coupled with the OCA's recommended overall rate of return of 6.79%, the result is a revenue increase of $41,690,000 for the FPFTY (twelve months ending December

31, 2025). This compares to the Company's requested revenue increase of approximately $111 million per year.

Q. DO YOU HAVE ANY OTHER INITIAL COMMENTS?

A. Yes. The $111 million per year revenue increase is what was noticed to the PECO Gas customers and the amount that I (and the Bureau of Investigation & Enforcement ("BIE") witness used as the starting point for our recommended adjustments. However, that is not a complete view of the increase to revenue requirement that the Company is claiming. PECO Gas is currently recovering about $18 million in annual revenues through its Distribution System Improvement Charge ("DSIC") and PECO proposes for the revenues from base rates established in this proceeding to increase – in total – by $129 million ($111 million plus $18 million).[1]

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. My surrebuttal testimony responds to rebuttal testimony filed by PECO Energy Company - Gas Division ("PECO Gas" or "Company") and Local 614 of the International Brotherhood of Electrical Workers ("IBEW").

[1] The DSIC will be set at 0% when new base rates take effect. 66 Pa. C.S. § 1358(b)(1).

Payroll

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL TESTIMONY REGARDING PAYROLL.

A. The Company's rebuttal states that it was unreasonable to average the prior five years of vacancies to calculate my payroll adjustment due to the impact of the COVID-19 pandemic on hiring. (Humphrey, Statement No. 2-R at 2)

Q. DO YOU AGREE?

A. No. The historical record does not support the Company's position. In 2019, which was pre-COVID-19, the Company averaged 2.6% vacancies which is above the Company's proposed 2%. The only year of the prior five that had average vacancies lower than the Company's proposed 2% was 2023. Further, I note that for PECO Electric, 2019 had the highest vacancy factor for all five of the years. As such, the Company's position that it is unreasonable to use the years 2020-2022 is not supported.

Incentive Compensation

Q. DID THE COMPANY ADDRESS YOUR ADJUSTMENT TO INCENTIVE COMPENSATION?

A. Yes. The Company states that my conclusion that the Company's incentive compensation plan appears to provide insufficient motivation is contradicted by the testimony of Company witness Hamilton in PECO Statements No. 1 and 1-R. (Humphrey, Statement No. 2-R at 4)

However, after reviewing those documents, I do not see where the Company has demonstrated that the incentive compensation plan was responsible for increased motivation in employees. My conclusion is also supported by the response to OCA-VI-48 which states that the Company does not have any studies that demonstrate that ratepayers benefit from the Company's incentive compensation plan.

Q. THE REBUTTAL STATES THAT YOU ASSERT THAT INCENTIVE COMPENSATION SHOULD ONLY BE AWARDED TO EMPLOYEES THAT SHOW GREATER EFFORT. (HUMPHREY, STATEMENT NO. 2-R AT 4) IS THAT YOUR OPINION?

A. Yes. To be effective, incentive compensation should be awarded to only those that provide extra effort. Employees that simply meet expectations or fail to meet expectations should not be rewarded. Instead, the Company's plan rewards all eligible employees regardless of performance.

Q. THE REBUTTAL STATES THAT THE PLAN PROVIDES THAT UNDERPERFORMERS MAY RECEIVE A REDUCED INCENTIVE PAYOUT COMPARED TO OVERPEFORMERS (HUMPHREY, STATEMENT NO. 2-R AT 7) WHY IS THAT NOT SATISFACTORY?

A. The issue isn't with overperformers receiving incentive compensation, but instead that underperformers receive any additional compensation. Ultimately, the Company's plan functions more like a year-end bonus program, where everyone gets a bonus but everyone doesn't get the same amount. Such a plan has less motivational impact.

As stated in my direct testimony, based on the insufficient motivation provided by the plan and the lack of evidence provided by the Company, it could be recommended that all incentive compensation be denied rate recovery. However, I recommend a more moderate approach of sharing incentive compensation costs between shareholders (50%) and ratepayers (50%), resulting in a reduction of 50% of the costs imposed on ratepayers. (See Exhibit JD-G-1, Schedule C-2.)

Employee Recognition Awards

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL TO YOUR EMPLOYEE RECOGNITION AWARDS ADJUSTMENT.

A. The Company's rebuttal claims that the employee recognition awards benefit ratepayers as they improve employee morale, productivity, engagement, and helps attract and retain talent. (Hamilton, Statement No. 1-R at 25) However, none of these claims were supported by the Company and seem unlikely given the size of the awards. For example, it seems unlikely that anyone makes the decision to begin working for, or to stay with a Company, based on the possibility of receiving a pin or small gift after years of service.

I do not see a nexus between Company service awards and safe, adequate and reliable service to customers. If the Company wants to provide such awards it should be at shareholder, not ratepayer expense.

Supplemental Executive Retirement Plan

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL OF YOUR TESTIMONY REGARDING SERP.

A. The Company argues that SERP benefits customers because it supports employee retention. (Humphrey, Statement No. 2-R at 9-10)

Q. DO YOU AGREE WITH THAT ARGUMENT?

A. No. The Company has not demonstrated that SERP is necessary or even a factor in employee retention. It should be noted that it is the Company's burden to support the costs for which it seeks recovery. As the Company has not demonstrated any ratepayer benefits, the SERP costs should be disallowed.

Severance

Q. DID THE COMPANY'S REBUTTAL ADDRESS YOUR ADJUSTMENT TO SEVERANCE?

A. Yes. The Company's Rebuttal argues that customers are benefitted because the Company utilizes Exelon Business Service Company ("EBSC") employees and EBSC includes a severance plan which aids in efficiently terminating low performers and upgrading talent. (Humphrey, Statement No. 2-R at 11-12)

Q. DO YOU AGREE WITH THIS POSITION?

A. No. My original adjustment was based on removing costs for employees that were terminated and no longer providing utility service. The

Company's rebuttal provides an additional reason to disallow the cost. Based on the rebuttal, the Company may be requesting ratepayers to pay severance expense for terminated low performing workers. Ratepayers should not be responsible for costs for these workers that are no longer providing utility service and especially those who were not performing satisfactorily when they were employed.

Q. PLEASE RESPOND TO IBEW'S REBUTTAL TESTIMONY.

A. IBEW's Rebuttal testimony recommends recovery for severance expense because it limits liability exposure and prevents legal fees related to defending lawsuits. (Glenn, IBEW Rebuttal, at Q&A 5)

Q. DO YOU AGREE WITH THIS POSITION?

A. No. Ratepayers should not pay severance for workers that have been terminated as a form of insurance against lawsuits. It makes no sense for ratepayers to pay for these employees who are no longer providing services to ratepayers because they are no longer employed by the Company even with the alleged threat of lawsuits. There is no basis in the record to suggest that but for severance there would be a substantial number of lawsuits for wrongful termination as implied by IBEW. Moreover, it is not at all clear why ratepayers should pay severance to avoid litigation where PECO may be liable for malfeasance. Had the issue in the case been recovery of a liability for wrongful termination, it is incredibly likely that the OCA would contest ratepayers paying those costs too. Paying to prevent those costs should not be the domain of

ratepayers. This expense is more appropriately borne by the Company's shareholders.

Employee Cafeteria

Q. DID THE COMPANY'S REBUTTAL TO YOUR EMPLOYEE CAFETERIA ADJUSTMENT HAVE ANY IMPACT ON YOUR POSITION?

A. No. The rebuttal states that the cafeteria offers employees the ability to buy and eat their meals in allotted lunch times. (Hamilton, Statement No. 1-R at 26) It also states that boxed lunches are provided for crews going off-system for mutual assistance support and catering services for employees working around the clock. It further states that it provides a quick option for breakfast and/or lunch. (Statement No. 1-R at 10)

Q. IS THIS ARGUMENT COMPELLING?

A. No. In some limited circumstances, it may make sense for the Company to provide meals for employees. However, there are a few problems with the Company's rebuttal. The Company has already acknowledged that there are food options within walking distance. (OCA-9-11) Food delivery options are widely available, and certainly within Center City, Philadelphia. As such, it isn't clear why employees can't get their food during a reasonable break period. Further, the Company doesn't explain why employees cannot eat breakfast at home instead of needing a breakfast option at the utility. Ultimately, the rebuttal doesn't satisfactorily make the case for ratepayers to be responsible for these costs.

Board of Directors

Q. DID YOU REVIEW THE COMPANY'S REBUTTAL TO YOUR BOARD OF DIRECTORS ADJUSTMENT?

A. Yes. The rebuttal stated that I ignored the importance to customers of the board of directors. (Humphrey, Statement No. 2-R at 13-14)

Q. DID YOU IGNORE THE IMPORTANCE OF THE BOARD OF DIRECTORS TO RATEPAYERS?

A. No. My disallowance was based on shareholders being the primary beneficiaries, not the only beneficiaries, of the efforts of the board of directors. This is why I recommended removing only 75% of the costs. As such, my position is unchanged as a result of the Company's rebuttal.

Directors and Officers Liability Insurance

Q. DID THE COMPANY'S REBUTTAL ADDRESS YOUR ADJUSTMENT TO DIRECTORS AND OFFICERS ("D&O") LIABILITY INSURANCE?

A. Yes. The rebuttal states that D&O should be allowed because it is necessary and prudent. (Humphrey, Statement No. 2-R at 14)

Q. DO YOU AGREE WITH THE REBUTTAL?

A. I am aware that D&O may be a legitimate business expense. However, not all legitimate business expenses are recoverable. For example, in many jurisdictions, costs for lobbying and image-related advertising are disallowed for recovery from ratepayers.

Non-industry Dues

Q. WAS THE COMPANY'S REBUTTAL OF YOUR POSITION ON NON-INDUSTRY DUES COMPELLING?

A. No. My adjustment to industry dues was based on the lack of specific benefits to ratepayers and that the expenses were related more to societal, civic, and economic issues than the provision of utility service. Much of the benefits discussed in the Company's rebuttal were related to economic issues such as "promoting partnerships to grow the local economy," "attract businesses to the region," and "expand their businesses internationally." (Hamiliton, Statement No. 1-R at 23-24) While these may be laudable goals, they are not necessary for the provision of service. In addition, they provide indirect, more than direct, benefits to ratepayers. These are discretionary expenses that should be borne by the Company and its shareholders.

Industry Dues

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL TO YOUR ADJUSTMENT TO INDUSTRY DUES.

A. First, I want to clarify an issue with the Company's rebuttal. The rebuttal states that I classify AGA's primary purpose as lobbying and political advertising. (Hamilton, Statement No. 1-R at 22) Although my testimony did state that the AGA engages in lobbying and political advocacy, it did not state that it was the AGA's primary purpose.

Q. DO YOU HAVE ANY OTHER COMMENTS ON THE COMPANY'S REBUTTAL?

A. Yes. My adjustment was based on concerns that the Company had not sufficiently supported its request for industry dues with invoices and had not demonstrated direct benefits to ratepayers. The Company's rebuttal does not provide or point to any invoices. In addition, the rebuttal states that the primary value of AGA membership relates to shaping energy regulation and policy. (Hamilton, Statement No. 1-R at 22) It is my opinion that such costs should not be recovered from ratepayers as shaping regulation and policy may benefit shareholders more than ratepayers.

Q. HAS YOUR RECOMMENDATION CHANGED IN RESPONSE TO THE COMPANY'S REBUTTAL?

A. No. I continue to recommend removing 50% of the industry dues from the FPFTY as the Company has not demonstrated the ratepayer benefits to its membership in these organizations nor that all inappropriate amounts, e.g., amounts related to lobbying, political advocacy and advertising, have been removed.

Corporate Aircraft

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL TO YOUR RECOMMENDED DISALLOWANCE OF CORPORATE AIRCRAFT EXPENSE.

A. The rebuttal argues for allowing the costs for the corporate aircraft based on flexibility, ability to discuss sensitive information, and productivity. (Humphrey, Statement No. 2-R at 15)

Q. DO YOU AGREE THAT THESE COSTS SHOULD BE ALLOWED?

A. No. These claims of customer benefits are unsupported because the Company does not compare the costs to commercial flights. (OCA-VI-21) Without such a comparison, it cannot be determined if the claimed benefits outweigh the costs. Also, responsive to the Company's claim about having a secure environment for Company senior leaders and Board members to discuss sensitive information, it seems unlikely that those discussions could not be conducted at times other than during flight, e.g., by phone or virtually, or in a secure location at the destination to which they all flew. As the Company cannot demonstrate ratepayer benefits, the corporate aircraft costs should be disallowed.

Employee Volunteer Activities

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL OF YOUR ADJUSTMENT TO EMPLOYEE VOLUNTEER ACTIVITIES.

A. The Company argues that the costs should be allowed because the volunteerism benefits the community, benefits the environment, and supports employee engagement. (Hamilton, Statement No. 1-R at 26-27)

Q. DOES THIS AFFECT YOUR POSITION?

A. No. The rebuttal supports my position that this volunteer activity is comparable to charitable activities that belong below the line. While it may benefit the community and the environment, it is clearly unnecessary for the provision of utility service and the costs should be borne by the Company's shareholders. The Company should not be in the position of dictating charitable donations from ratepayers.

Union Ratification Payment

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL CONCERNING YOUR UNION RATIFICATION ADJUSTMENT.

A. The Company claims that this payment should be allowed as it is necessary to retain employees and such bonuses have been paid consistently. (Trzaska Statement No. 3-R, at 7.)

Q. DO YOU AGREE WITH THE COMPANY'S REASONING?

A. No. The Company's claim that a ratification bonus "is necessary to retain PECO's talented labor pool and ensure that the Company has access to skilled union workers to meet customer and system needs" is problematic. (Trzaska, Statement No. 3-R at 7) There are two claims in that statement that have not been demonstrated to be accurate. The Company has not demonstrated that a union ratification bonus is necessary to retain employees nor has the Company shown that a ratification bonus ensures that the Company has access to necessary skilled union workers. The latter claim appears to be false based on the Company's historical vacancies as discussed in my direct testimony.

In addition, the Company has not supported the claim that it is a "consistent" cost. The Company has not demonstrated that this cost will occur again, when it would occur again or what the amount would be. As such, the cost should be disallowed. It should also be noted that the Company referred to the cost as a "one time" bonus. (IE-II-RE-30(B))

Q. PLEASE DISCUSS THE IBEW'S REBUTTAL REGARDING THIS ISSUE.

A. IBEW's rebuttal testimony does not address my concern that it is unknown when or if such a payment will occur in the future. (Glenn, IBEW Rebuttal, at Q&A 6) As such, the testimony did not impact my recommendation.

Rate Case Expense

Q. PLEASE DISCUSS THE COMPANY'S REBUTTAL TO YOUR RATE CASE EXPENSE ADJUSTMENT.

A. The Company's rebuttal disagrees with my recommendation of a 4.5-year normalization period. The rebuttal states that "it is not reasonable to assume that PECO could delay a subsequent base rate filing for more than three years." (Trzaska, Statement No. 3-R at 10)

Q. IS IT UNREASONABLE TO ASSUME THAT THE COMPANY MAY WAIT MORE THAN 2 YEARS FOR ITS NEXT RATE CASE?

A. Based on the historical record, it would not be unreasonable. The historical record shows that the Company has averaged 4.5 years between rate cases. (Defever, OCA Statement 1 at 32) As such a 4.5-year normalization period is appropriate. Going forward, if PECO files rate cases in shorter intervals, that will adjust the Company's actual filing frequency for the purpose of setting an appropriate normalization period.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes. However, I reserve the right to supplement my testimony based on the receipt of additional relevant information. In addition, my silence on an issue should not be interpreted as agreement with the Company's position.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, John Defever, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement 1SR, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: August 2, 2024

Signature: 

John Defever

Address: Larkin & Associates, PLLC
15728 Farmington Road
Livonia, MI 48154

OCA Statement 2

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	**:**	
v.	**:**	**Docket No. R-2024-3046932**
PECO Energy Company – Gas Division	**:**	

DIRECT TESTIMONY

OF

DAVID J. GARRETT

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

June 17, 2024

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APPENDICES

Appendix A:	Discounted Cash Flow Model Theory
Appendix B:	Capital Asset Pricing Model Theory

I. INTRODUCTION

Q. State your name and occupation.

A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I am the managing member of Resolve Utility Consulting PLLC.

Q. Summarize your educational background and professional experience.

A. I received a B.B.A. with a major in Finance, an M.B.A., and a Juris Doctor from the University of Oklahoma. I worked in private legal practice for several years before accepting a position as assistant general counsel at the Oklahoma Corporation Commission in 2011. At the commission, I worked in the Office of General Counsel in regulatory proceedings. In 2012, I began working for the Public Utility Division as a regulatory analyst providing testimony in regulatory proceedings. After leaving the commission, I formed Resolve Utility Consulting PLLC, where I have represented various consumer groups and state agencies in utility regulatory proceedings, primarily in the areas of cost of capital and depreciation. I am a Certified Depreciation Professional with the Society of Depreciation Professionals. I am also a Certified Rate of Return Analyst with the Society of Utility and Regulatory Financial Analysts. A more complete description of my qualifications and regulatory experience is included in my curriculum vitae.[1]

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the Pennsylvania Office of Consumer Advocate ("OCA").

[1] Exhibit DJG-1.

Q. Describe the purpose and scope of your testimony in this proceeding.

A. My testimony addresses the PECO Energy Company Gas Division's ("PECO Gas" or the "Company") proposed rate of return in response to the direct testimony of Company witness Paul Moul.

Q. Please describe the organization of your testimony.

A. In the executive summary below, I provide an overview of cost of capital issues, my recommendations, and my response to the Company's testimony on these issues. In the sections that follow, I discuss the legal standards governing the awarded return issue as well as the general concepts involved in estimating the cost of equity. I discuss the concepts of risk and return. I provide detailed analysis of the Discounted Cash Flow ("DCF") Model, the Capital Asset Pricing Model ("CAPM"), including my results for these models and my responses to Mr. Moul's results. I also address capital structure, which is a key component to the cost of capital.

II. EXECUTIVE SUMMARY

Q. Please summarize your rate of return recommendation to the Commission.

A. The key points of my testimony are as follows:

- The Commission should reject PECO Gas's proposed return on equity ("ROE") of 11.15% as excessive and unsupported. An objective cost of equity analysis shows that the market-determined cost of equity for PECO Gas is notably lower than the Company's proposed ROE.
- Mr. Moul basis for arriving at his ROE recommendation of 11.15% is unsupported and has no logical connection to the results of his financial models, which are also based on unrealistic assumptions.

- Based on the results of my financial modeling using the DCF and CAPM models, I recommend that the Commission set the Company's market-determined cost of equity at 9.0%, which is the average result of my financial modeling in this case (excluding the sustainable growth DCF Model). If the Commission were to adopt the Company's proposed 11.15% ROE over my recommended 9.0% ROE, at PECO Gas's claimed rate base for gas operations, it would cost consumers an additional $56.5 million per year in rates.[2]
- The Commission should reject the Company's request for a performance-based adder of 15 basis points to its ROE as a reward for its managerial performance.[3] The requested increment in return on equity is unsupported and excessive, and the at the Company's as-filed request it would impose up to $3.9 million of additional costs on PECO Gas ratepayers per year.[4]
- I propose the Commission impute a capital structure for ratemaking purposes of 50% debt and 50% equity. This capital structure for ratemaking would be between the average capital structure of the total proxy group (51% debt, 49% equity) and PECO Gas's capital structure (46.6% debt, 53.40% equity). If the Commission were to adopt the Company's proposed capital structure, it would unreasonably increase the revenue requirement by approximately $12.3 million per year.[5]

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[2] OCA St. 1, John DeFever Direct, p. 7, Exh. JD-G-2, p. 3.

[3] PECO Gas Witness Paul Moul states that his ROE recommendation of 11.15% for PECO Gas includes "0.15% in recognition of the exemplary performance of the Company's management." PECO Gas St. 5 at 2. PECO Gas Witness Amy E. Hamilton addresses "PECO's overall management performance in relation to the factors identified in Section 523 of the Public Utility Code," as support for Mr. Moul's recommended "return on equity enhancement." PECO Gas St. 1 at 2, 39.

[4] OCA St. 1, John DeFever Direct, p. 6, Exh. JD-G-2, p. 1.

[5] OCA St. 1, John DeFever Direct, p. 6, Exh. JD-G-2, p. 2.

- PECO Gas's proposed cost of debt is 4.58%. I am not proposing any adjustments to PECO's proposed cost of debt.
- My proposed adjustments to the Company's ROE and capital structure result in an overall weighted rate of return of 6.79%. This rate of return balances the interests of consumers and shareholders in contrast to the Company's excessive rate of return proposal.

Q. Please describe the basis for Mr. Moul's 11.15% ROE recommendation.

A. According to Mr. Moul, his proposed 11.15% ROE is composed of a 10.80% cost of equity determined from the results of his proxy group analyses and 0.15% for a management performance adder. Mr. Moul also adds 20 basis points "to recognize the higher risk of the Company's Gas Division. . . ."[6] Mr. Moul also states that his cost of equity estimate is derived from a blended rate plus a risk adjustment applicable to the Gas Division to reflect the risk reducing benefits that arise from PECO being a combination utility.[7]

Q. Do you agree with Mr. Moul's rationale for the basis of his ROE recommendation?

A. No. There are several flaws in Mr. Moul's rationale. First, as discussed in my testimony, it is unreasonable to apply a management performance adder to a cost of equity estimation or an authorized ROE. Second, there is no need to have a "blended rate" for PECO. There are separate proxy groups in the Electric and Gas cases that have different risk profiles and should result in different cost of equity estimates (as they do). Finally, the average beta of the Gas Division rate case is less than the average beta of the proxy group in the Electric

[6] PECO St. 5, p. 8, li. 16-17.

[7] PECO St. 5, p. 2, li. 7-8.

Division case.[8] Thus, there is an objective basis on which to conclude that PECO Gas has less risk than PECO Electric in direct contradiction to Mr. Moul's claims that we should recognize the additional risks of the Gas Division. Thus, Mr. Moul's recommended ROE for PECO Gas has no logical or supported connection with the results of his models in this case. In addition, since his financial model results are upwardly-biased and unreasonable, the Commission should reject Mr. Moul's proposed ROE in this case.

III. REGULATORY STANDARDS

Q. Discuss the legal standards governing the awarded rate of return on capital investments for regulated utilities.

A. In *Wilcox v. Consolidated Gas Co. of New York,*[9] the Supreme Court first addressed the meaning of a fair rate of return for public utilities. The Court found that "the amount of risk in the business is a most important factor" in determining the appropriate allowed rate of return.[10] Later, in two landmark cases, the Court set forth the standards by which utilities are allowed to earn a return on capital investments. In *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*,[11] the Court held:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public . . . but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial

[8] *See* OCA St. 2, Direct Testimony of David J. Garrett, Exhibit DJG-8, Docket No. R-2024-3046931. In the Electric Division case, Mr. Moul and I used the same proxy group of electric companies. These companies and their individual betas according to Value Line are as follows: Avangrid, Inc (0.95), Consolidated Edison Inc. (0.80), Dominion Energy, Inc. (0.90), Duke Energy Corporation (0.90), Eversource Energy (0.95), FirstEnergy Corp (0.90), NextEra Energy Inc. (1.05), PPL Corp (1.15), and Public Services Enterprise Group Inc. (0.95). The average beta of this proxy group is 0.95.

[9] *Wilcox v. Consolidated Gas Co. of New York*, 212 U.S. 19 (1909).

[10] *Id*. at 48.

[11] *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923).

> soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.[12]

In *Federal Power Commission v. Hope Natural Gas Company*,[13] the Court expanded on the guidelines set forth in *Bluefield* and stated:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[14]

The cost of capital models I have employed in this case are in accordance with the foregoing legal standards.

Q. Should the awarded rate of return be based on the Company's actual cost of capital?

A. Yes. The *Hope* Court makes it clear that the allowed return should be based on the actual cost of capital. Moreover, the awarded return must also be fair, just, and reasonable under the circumstances of each case. Under the rate base rate of return model, a utility should be allowed to recover all its reasonable expenses, its capital investments through depreciation, and a return on its capital investments sufficient to satisfy the required return of its investors. The "required return" from the investors' perspective is synonymous with the "cost of capital" from the utility's perspective. Scholars agree that the allowed rate of return should be based on the actual cost of capital:

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[12] *Id.* at 692-93.

[13] *Federal Power Commission v. Hope Natural Gas Co*., 320 U.S. 591 (1944).

[14] *Id.* at 603 (emphasis added).

> Since by definition the cost of capital of a regulated firm represents precisely the expected return that investors could anticipate from other investments while bearing no more or less risk, and since investors will not provide capital unless the investment is expected to yield its opportunity cost of capital, the correspondence of the definition of the cost of capital with the court's definition of legally required earnings appears clear.[15]

The models I have employed in this case closely estimate the Company's market-based cost of equity. If the Commission sets the awarded return based on my lower, and more reasonable, rate of return, it will comply with the U.S. Supreme Court's standards, allow the Company to maintain its financial integrity, and satisfy the claims of its investors. On the other hand, if the Commission sets the allowed rate of return *higher* than the true cost of capital, it arguably results in an inappropriate transfer of wealth from ratepayers to shareholders.

Q. What does this legal standard mean for determining the awarded return and the cost of capital?

A. It is important to understand that the *awarded* return and the *cost* of capital are different but related concepts. The two concepts are related in that the legal and technical standards encompassing this issue require that the awarded return reflect the true cost of capital. On the other hand, the two concepts are different in that the legal standards do not mandate that awarded returns exactly match the cost of capital. Awarded returns are set through the regulatory process and may be influenced by factors other than objective market drivers. The cost of capital, on the other hand, should be evaluated objectively and be closely tied to economic realities. In other words, the cost of capital is driven by stock prices, dividends, growth rates, and — most importantly — it is driven by risk. The cost of capital

[15] A. Lawrence Kolbe, James A. Read, Jr. & George R. Hall, *The Cost of Capital: Estimating the Rate of Return for Public Utilities*, p. 21 (The MIT Press 1984).

can be estimated by financial models used by firms, investors, and academics around the world for decades. The problem is, with respect to regulated utilities, there has been a trend in which awarded returns fail to closely track with actual market-based cost of capital as further discussed below. To the extent this occurs, the results are detrimental to ratepayers and the state's economy.

Q. Describe the economic impact that occurs when the awarded return strays too far from the U.S. Supreme Court's cost of equity standard.

A. When the awarded ROE is set far above the *cost* of equity, it runs the risk of violating the U.S. Supreme Court's standards that the awarded return should be *based on the cost of capital*. If the Commission were to adopt the Company's position in this case, it would be permitting an excess transfer of wealth from customers to Company shareholders. Moreover, establishing an awarded return that far exceeds the true cost of capital effectively prevents the awarded returns from changing along with economic conditions. This is especially true given the fact that regulators tend to be influenced by the awarded returns in other jurisdictions, regardless of the various unknown factors influencing those awarded returns. This is yet another reason why it is crucial for regulators to focus on the target utility's actual *cost* of equity, rather than awarded returns from other jurisdictions. Awarded returns may be influenced by settlements and other political factors not based on true market conditions. In contrast, the market-based cost of equity as estimated through objective models is not influenced by these factors but is instead driven by market-based factors. If regulators rely too heavily on the awarded returns from other jurisdictions, it can create a cycle over time that bears little relation to the market-based cost of equity.

IV. GENERAL CONCEPTS AND METHODOLOGY

Q. Discuss your approach to estimating the cost of equity in this case.

A. While a competitive firm must estimate its own cost of capital to assess the profitability of competing capital projects, regulators determine a utility's cost of capital to establish a fair rate of return. The legal standards set forth above do not include specific guidelines regarding the models that must be used to estimate the cost of equity. Over the years, however, regulatory commissions have consistently relied on several models. The models I have employed in this case have been the two most widely used and accepted in regulatory proceedings for many years. These models are the DCF Model and the CAPM. The specific inputs and calculations for these models are described in more detail below.

Q. Please explain why multiple models are used to estimate the cost of equity.

A. The models used to estimate the cost of equity attempt to measure the return on equity required by investors by estimating several different inputs. It is preferable to use multiple models because the results of any one model may contain a degree of imprecision, especially depending on the reliability of the inputs used at the time of conducting the model. By using multiple models, the analyst can compare the results of the models and look for outlying results and inconsistencies. Likewise, if multiple models produce a similar result, it may indicate a narrower range for the cost of equity estimate.

Q. Please discuss the benefits of choosing a proxy group of companies in conducting cost of capital analyses.

A. The cost of equity models in this case can be used to estimate the cost of capital of any individual, publicly-traded company. There are advantages, however, to conducting cost of capital analyses on a "proxy group" of companies that are comparable to the target company. First, it is better to assess the financial soundness of a utility by comparing it to

a group of other financially sound utilities. Second, using a proxy group provides more reliability and confidence in the overall results because there is a larger sample size. Finally, the use of a proxy group is often a pure necessity when the target company is a subsidiary that is not publicly traded. This is because the financial models used to estimate the cost of equity require information from publicly-traded firms, such as stock prices and dividends.

Q. Describe the proxy group you selected in this case.

A. In this case, I chose to use the same gas utility proxy group that Mr. Moul used for his analyses. Mr. Moul's proxy group is comprised of eight gas utilities. There could be reasonable arguments made for the inclusion or exclusion of a particular company in a proxy group; however, the cost of equity results are influenced far more by the underlying assumptions and inputs to the various financial models than the composition of the proxy group.[16] By using the same gas utility proxy group, we can remove a relatively insignificant variable from the equation and focus on the primary factors driving the Company's cost of equity estimate in this case.

V. RISK AND RETURN CONCEPTS

Q. Please discuss the general relationship between risk and return.

A. As discussed above, risk is the most important factor for the Commission to consider when determining the allowed return. There is a direct relationship between risk and return: the more (or less) risk an investor assumes, the larger (or smaller) return the investor will demand. There are two primary types of risk: firm-specific risk and market risk. Firm-

[16] *See* Exhibit DJG-2.

specific risk affects individual companies, while market risk affects all companies in the market to varying degrees.

Q. Discuss the differences between firm-specific risk and market risk.

A. Firm-specific risk affects individual companies, rather than the entire market. For example, a competitive firm might overestimate customer demand for a new product, resulting in reduced sales revenue. This is an example of a firm-specific risk called "project risk."[17] There are several other types of firm-specific risks, including: (1) "financial risk" — the risk that equity investors of leveraged firms face as residual claimants on earnings; (2) "default risk" — the risk that a firm will default on its debt securities; and (3) "business risk" — which encompasses all other operating and managerial factors that may result in investors realizing less than their expected return in that particular company.

While firm-specific risk affects individual companies, market risk affects all companies in the market to varying degrees. Examples of market risk include interest rate risk, inflation risk, and the risk of major socio-economic events. When there are changes in these risk factors, they affect all firms in the market to some extent.[18]

Analysis of the U.S. market in 2001 provides a good example for contrasting firm-specific risk and market risk. During that year, Enron Corp.'s stock fell from $80 per share and the company filed for bankruptcy at the end of the year. If an investor's portfolio had held only Enron stock at the beginning of 2001, this irrational investor would have lost the entire investment by the end of the year due to assuming the full exposure of Enron's firm-

[17] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, pp. 62-63 (3rd ed., John Wiley & Sons, Inc. 2012).

[18] *See* Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments*, p. 149 (9th ed., McGraw-Hill/Irwin 2013).

specific risk (in that case, imprudent management). On the other hand, a rational, diversified investor who invested the same amount of capital in a portfolio holding every stock in the S&P 500 would have had a much different result that year. The rational investor would have been relatively unaffected by the fall of Enron because her portfolio included 499 other stocks. Each of those stocks, however, would have been affected by various *market* risk factors that occurred that year, including the terrorist attacks on September 11th, which affected all stocks in the market. Thus, the rational investor would have incurred a relatively minor loss due to market risk factors, while the irrational investor would have lost everything due to firm-specific risk factors.

Q. Can investors minimize firm-specific risk through portfolio diversification?

A. Yes. A fundamental concept in finance is that firm-specific risk can be minimized through diversification.[19] If someone irrationally invested all their funds in one firm (such as Enron), they would be exposed to all the firm-specific risk *and* the market risk inherent in that single firm. Rational investors, however, are risk-averse and seek to eliminate risk they can control. Investors can essentially eliminate firm-specific risk by adding more stocks to their portfolio through a process called "diversification."

There are two reasons why diversification eliminates firm-specific risk. First, each stock in a diversified portfolio represents a much smaller percentage of the overall portfolio than it would in a portfolio of just one or a few stocks. Thus, any firm-specific action that

[19] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, pp. 179-80 (3rd ed., South Western Cengage Learning 2010).

changes the stock price of one stock in the diversified portfolio will have only a small impact on the entire portfolio.[20]

The second reason why diversification eliminates firm-specific risk is that the effects of firm-specific actions on stock prices can be either positive or negative for each stock. Thus, in large diversified portfolios, the net effect of these positive and negative firm-specific risk factors will be essentially zero and will not affect the value of the overall portfolio.[21] Firm-specific risk is also called "diversifiable risk" because it can be easily eliminated through diversification.

Q. Do investors expect an additional return for assuming firm-specific risks?

A. No. Because investors eliminate firm-specific risk through diversification, they know they cannot expect a higher return for assuming the firm-specific risk in any one company. Thus, the risks associated with an individual firm's operations are not rewarded by the market. In fact, firm-specific risk is also called "unrewarded" risk for this reason. Market risk, on the other hand, cannot be eliminated through diversification. Because market risk cannot be eliminated through diversification, investors expect a return for assuming this type of risk. Market risk is also called "systematic risk." Scholars recognize the fact that market risk, or "systematic risk," is the only type of risk for which investors expect a return for bearing:

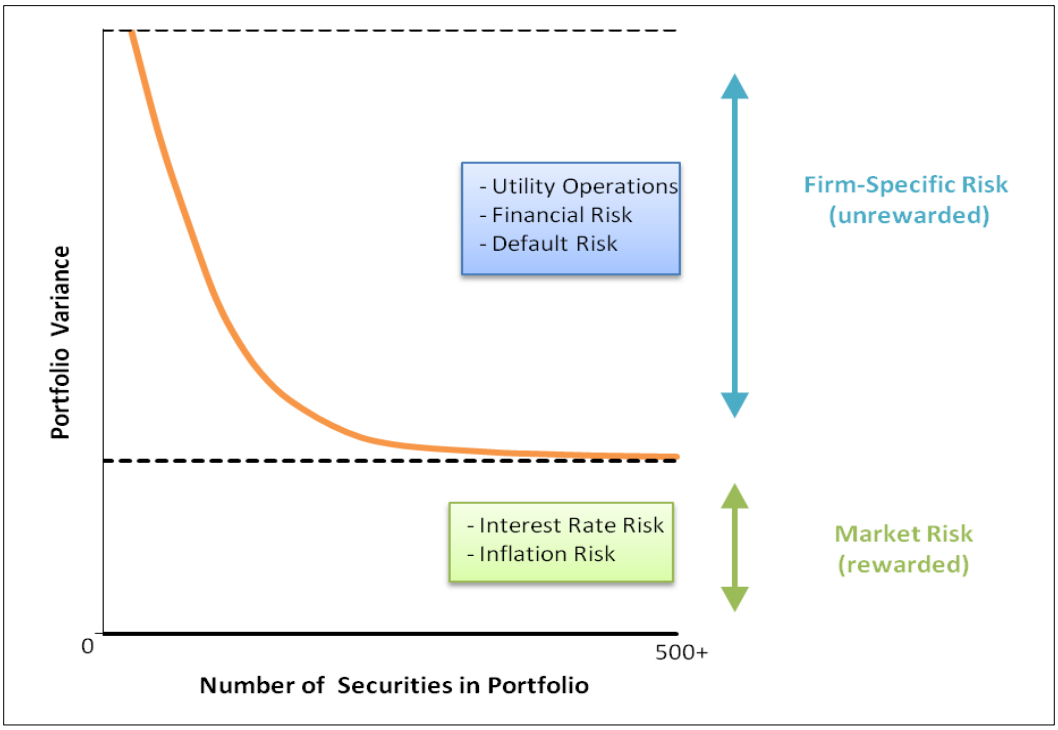
[20] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, p. 64 (3rd ed., John Wiley & Sons, Inc. 2012).

[21] *Id*.

> If investors can cheaply eliminate some risks through diversification, then we should not expect a security to earn higher returns for risks that can be eliminated through diversification. Investors can expect compensation *only* for bearing systematic risk (i.e., risk that cannot be diversified away).[22]

These important concepts are illustrated in the figure below. Some form of this figure is found in many financial textbooks.

Figure 1:
Effects of Portfolio Diversification



This figure shows that as stocks are added to a portfolio, the amount of firm-specific risk is reduced until it is essentially eliminated. No matter how many stocks are added, however, there remains a certain level of fixed market risk. The level of market risk will vary from firm to firm. Market risk is the only type of risk that is rewarded by the market

[22] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 180 (3rd ed., South Western Cengage Learning 2010).

and is thus the primary type of risk the Commission should consider when determining the allowed return for the utilities it regulates.

Q. Describe how market risk is measured.

A. Investors who want to eliminate firm-specific risk must hold a fully diversified portfolio. To determine the amount of risk that a single stock adds to the overall market portfolio, investors measure the covariance between a single stock and the market portfolio. The result of this calculation is called "beta."[23] Beta represents the sensitivity of a given security to the market as a whole. The market portfolio of all stocks has a beta equal to one. Stocks with betas greater than one are relatively more sensitive to market risk than the average stock. For example, if the market increases (decreases) by 1.0%, a stock with a beta of 1.5 will, on average, increase (decrease) by 1.5%. In contrast, stocks with betas of less than one are less sensitive to market risk, such that if the market increases (decreases) by 1.0%, a stock with a beta of 0.5 will, on average, only increase (decrease) by 0.5%. Thus, stocks with low betas are relatively insulated from market conditions. The beta term is used in the CAPM to estimate the cost of equity, which is discussed in more detail later.[24]

Q. Are public utilities characterized as defensive firms that have low betas, low market risk, and are relatively insulated from overall market conditions?

A. Yes. Although market risk affects all firms in the market, it affects different firms to varying degrees. Firms with high betas are affected more than firms with low betas, which is why firms with high betas are riskier. Stocks with betas greater than one are generally

[23] *Id*. at 180-81.

[24] Though it will be discussed in more detail later, Exhibit DJG-9 shows that the average beta of the proxy group was less than 1.0. This confirms the well-known concept that utilities are relatively low-risk firms.

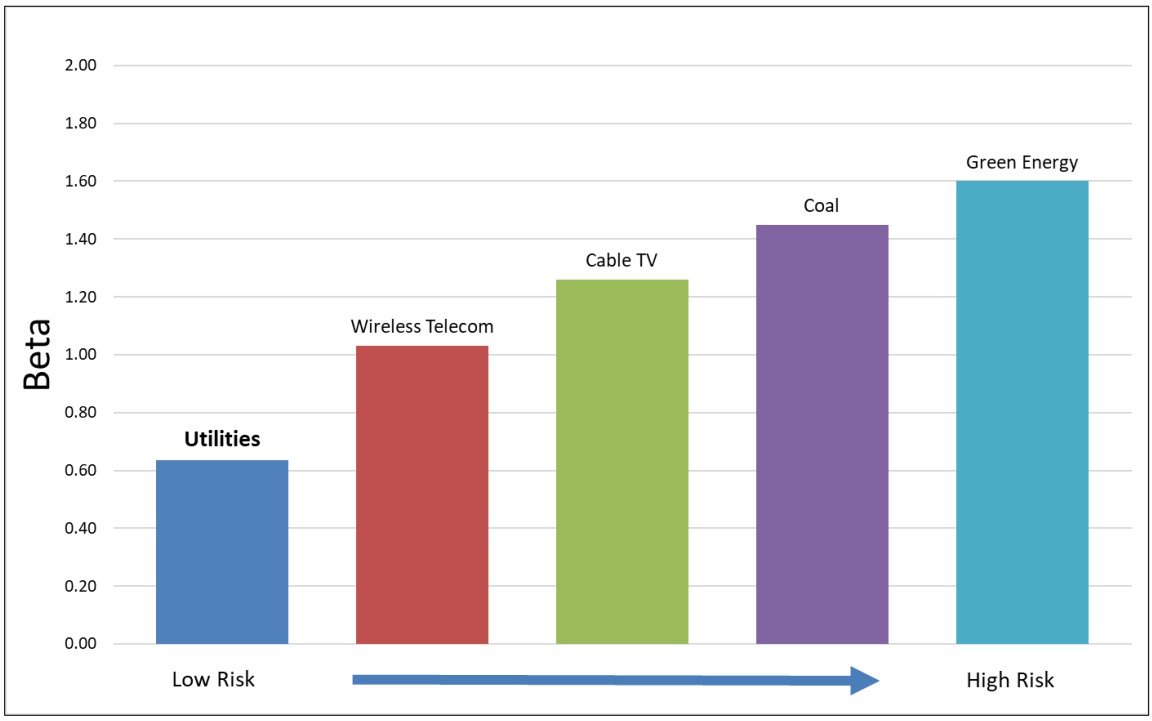
known as "cyclical stocks." Firms in cyclical industries are sensitive to recurring patterns of recession and recovery known as the "business cycle."[25] Thus, cyclical firms are exposed to a greater level of market risk. Securities with betas less than one, on the other hand, are known as "defensive stocks." Companies in defensive industries, such as public utility companies, "will have low betas and performance that is comparatively unaffected by overall market conditions."[26] In fact, financial textbooks often use utility companies as prime examples of low-risk, defensive firms. The figure below compares the betas of several industries and illustrates that the utility industry is one of the least risky industries in the U.S. market.[27]

[25] *See* Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments*, p. 382 (9th ed., McGraw-Hill/Irwin 2013).

[26] *Id*. at 383.

[27] *See* Betas by Sector (US) available at http://pages.stern.nyu.edu/~adamodar/ (2018). (After clicking the link, click "Data" then "Current Data" then "Risk / Discount Rate" from the drop down menu, then "Total Beta by Industry Sector"). The exact beta calculations are not as important as illustrating the well-known fact that utilities are very low-risk companies. The fact that the utility industry is one of the lowest risk industries in the country should not change from year to year.

Figure 2:
Beta by Industry



The fact that utilities are defensive firms that are exposed to little market risk is beneficial to society. When the business cycle enters a recession, consumers can be assured that their utility companies will be able to maintain normal business operations and provide safe and reliable service under efficient management. Likewise, utility investors can be confident that utility stock prices will not widely fluctuate. So, while it is recognized and accepted that utilities are defensive firms that experience little market risk and are relatively insulated from market conditions, this fact should also be appropriately reflected in the Company's awarded return.

VI. DISCOUNTED CASH FLOW ANALYSIS

Q. Describe the DCF Model.

A. The DCF Model is based on a fundamental financial model called the "dividend discount model," which maintains that the value of a security is equal to the present value of the future cash flows it generates.[28] Cash flows from common stock are paid to investors in the form of dividends. There are several variations of the DCF Model. These versions, along with other formulas and theories related to the DCF Model, are discussed in more detail in Appendix A.

Q. Describe the inputs to the DCF Model.

A. There are three primary inputs in the DCF Model: (1) stock price; (2) dividend; and (3) the long-term growth rate. The stock prices and dividends are known inputs based on recorded data, while the growth rate projection must be estimated. I discuss each of these inputs separately below.

A. Stock Price

Q. How did you determine the stock price input of the DCF Model?

A. For the stock price (P_0), I used a 30-day average of stock prices for each company in the proxy group.[29] Analysts sometimes rely on average stock prices for longer periods (*e.g.*, 60, 90, or 180 days). According to the efficient market hypothesis, however, markets reflect all relevant information available at a particular time, and prices adjust

[28] Present value (PV) is the current value of a future sum of money or stream of cash flows given a specified rate of return. Present value takes the future value and applies a discount rate or the interest rate that could be earned if invested.

[29] Exhibit DJG-3.

instantaneously to the arrival of new information.[30] Past stock prices, in essence, reflect outdated information. The DCF Model used in utility rate cases is a derivation of the dividend discount model, which is used to determine the current value of an asset. Thus, according to the dividend discount model and the efficient market hypothesis, the value for the "P_0" term in the DCF Model should technically be the current stock price, rather than an average.

Q. Why did you use a 30-day average for the current stock price input?

A. Using a short-term average of stock prices for the current stock price input adheres to market efficiency principles while avoiding any irregularities that may arise from using a single current stock price. In the context of a utility rate proceeding, there is a significant length of time between when an application is filed and when testimony is due. Choosing a current stock price for one particular day could raise a separate issue concerning which day was chosen to be used in the analysis. In addition, a single stock price on a particular day may be unusually high or low. It is arguably ill-advised to use a single stock price in a model that is ultimately used to set rates for several years, especially if a stock is experiencing some volatility. Thus, it is preferable to use a short-term average of stock prices, which represents a good balance between adhering to well-established principles of market efficiency while avoiding any unnecessary contentions that may arise from using a

[30] *See* Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, Vol. 25, No. 2 The Journal of Finance, p. 383 (1970); *see also* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 357 (3rd ed., South Western Cengage Learning 2010). The efficient market hypothesis was formally presented by Eugene Fama in 1970 and is a cornerstone of modern financial theory and practice.

single stock price on a given day. The stock prices I used in my DCF analysis are based on 30-day averages of adjusted closing stock prices for each company in the proxy group.[31]

B. Dividend

Q. Describe how you determined the dividend input of the DCF Model.

A. The dividend term in the DCF Model represents dividends per share (d_0). I used forward-looking annualized dividends published by Yahoo! Finance for the dividend input to my constant growth DCF Model.[32] Dividing these dividends by the stock prices for each proxy company results in the dividend yield for each company.[33]

Q. Are the stock price and dividend inputs for each proxy company a significant issue in this case?

A. No. Although my stock price and dividend inputs are more recent than those used by Mr. Moul, there is not a statistically significant difference between them because utility stock prices and dividends are generally quite stable. This is another reason that cost of capital models such as the CAPM and the DCF Model are well-suited to be conducted on utilities. The differences between my DCF Model and Mr. Moul's DCF Model are primarily driven by differences in our growth rate estimates, which are further discussed below.

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[31] Exhibit DJG-3. Adjusted closing prices, rather than actual closing prices, are ideal for analyzing historical stock prices. The adjusted price provides an accurate representation of the firm's equity value beyond the mere market price because it accounts for stock splits and dividends.

[32] Exhibit DJG-4.

[33] *Id.*

C. Growth Rate

Q. Please Summarize the growth rate input in the DCF Model.

A. The most critical input in the DCF Model is the growth rate. Unlike the stock price and dividend inputs, the growth rate input (g) must be estimated. As a result, the growth rate is often the most contentious issue related to DCF model inputs in utility rate cases. The DCF model used in this case is based on the sustainable growth valuation model. Under this model, a stock is valued by the present value of its future cash flows in the form of dividends. Before future cash flows are discounted by the cost of equity, however, they must be "grown" into the future by a sustainable growth rate. As stated above, one of the inherent assumptions of this model is that these cash flows in the form of dividends grow at a sustainable rate forever. For young, high-growth firms, estimating the growth rate to be used in the model can be especially difficult, and may require the use of multi-stage growth models. For mature, low-growth firms such as utilities, however, estimating the sustainable growth rate is more transparent. The growth term of the DCF Model is one of the most important, yet least understood, aspects of cost of equity estimations in utility regulatory proceedings. I provide a more detailed explanation on the various determinants of growth below.

Q. Describe the various determinants of growth that can be considered for the growth rate input in the DCF Model.

A. Although the DCF Model directly considers the growth of dividends, there are a variety of growth determinants that should be considered when estimating growth rates. It should be noted that these various growth determinants are used primarily to determine the short-term growth rates in multi-stage DCF models. For utility companies, it is necessary to focus primarily on a long-term growth rate in dividends. This is also known as a

"sustainable" growth rate, since this is the growth rate assumed for the company's dividends in perpetuity. That is not to say that these growth determinants cannot be considered when estimating sustainable growth; however, as discussed below, sustainable growth must be constrained much more than short-term growth, especially for young firms with high growth opportunities. Additionally, I briefly discuss these growth determinants here because it may reveal some of the sources of confusion in this area.

(1) Historical Growth

Looking at a firm's actual historical experience may theoretically provide a good starting point for estimating short-term growth. However, past growth is not always a good indicator of future growth. Some metrics that might be considered here are a historical growth in revenues, operating income, and net income. Since dividends are paid from earnings, estimating historical earnings growth may provide an indication of future earnings and dividend growth.

(2) Analyst Growth Rates

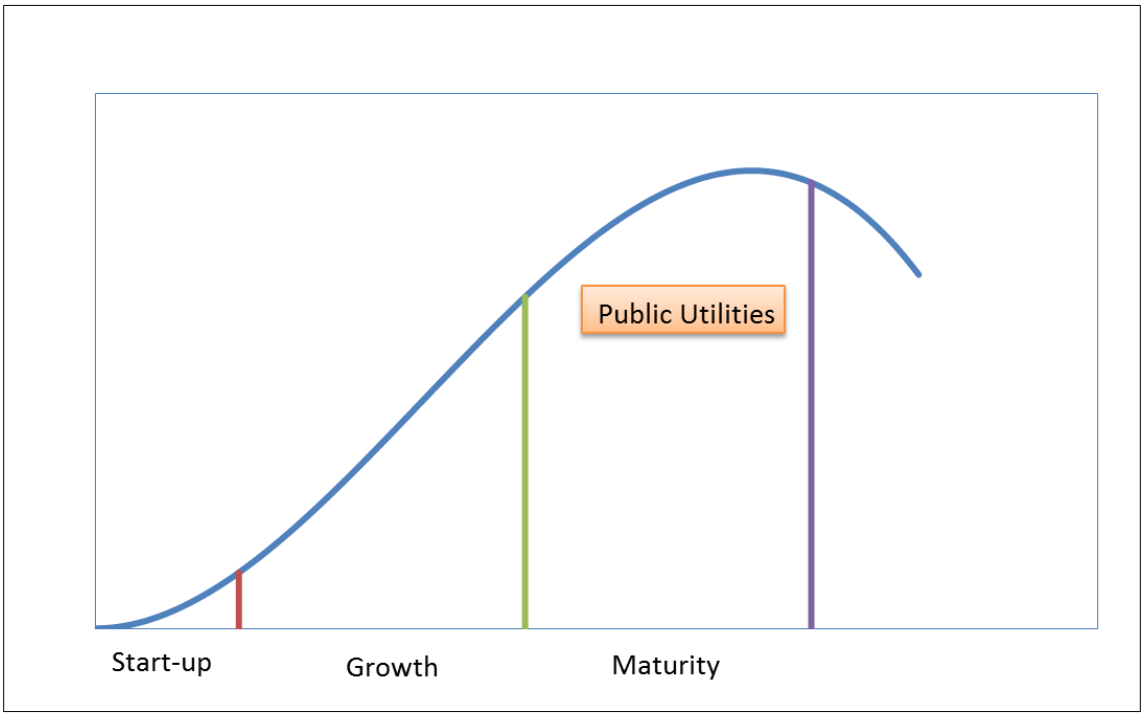
Analyst growth rates refer to short-term projections of earnings growth published by institutional research analysts such as Value Line and Bloomberg. Analyst growth rates, including the limitations with using them in the DCF Model to estimate utility cost of equity, are discussed in more detail below.

(3) Sustainable Growth Rates

In order to make the DCF Model a viable, practical model, an infinite stream of future cash flows must be estimated and then discounted back to the present. Otherwise, each annual cash flow would have to be estimated separately. Some analysts use "multi-stage" DCF Models to estimate the value of high-growth firms through two or more stages

of growth, with the final stage of growth being sustainable. However, it is not necessary to use multi-stage DCF Models to analyze the cost of equity of regulated utility companies. This is because regulated utilities are already in their "sustainable," low growth stage. Unlike most competitive firms, the growth of regulated utilities is constrained by physical service territories and limited primarily by ratepayer and load growth within those territories. The Figure below illustrates the well-known business/industry life-cycle pattern.

Figure 3:
Industry Life Cycle



In an industry's early stages, there are ample opportunities for growth and profitable reinvestment. In the maturity stage however, growth opportunities diminish, and firms choose to pay out a larger portion of their earnings in the form of dividends instead of reinvesting them in operations to pursue further growth opportunities. Once a firm is in the maturity stage, it is not necessary to consider higher short-term growth metrics in multi-

stage DCF Models; rather, it is sufficient to analyze the cost of equity using a stable growth DCF Model with one sustainable growth rate.

Q. Is the aggregate growth rate of the economy typically a limiting factor for the terminal growth rate in the DCF Model?

A. Yes. A fundamental concept in finance is that no firm can grow forever at a rate higher than the growth rate of the economy in which it operates.[34] Thus, the terminal growth rate used in the DCF Model should not exceed the aggregate economic growth rate. This is especially true when the DCF Model is conducted on public utilities because these firms have defined service territories. As stated by Dr. Damodaran: "[i]f a firm is a purely domestic company, either because of internal constraints . . . or external constraints (such as those imposed by a government), the growth rate in the domestic economy will be the limiting value."[35]

In fact, it is reasonable to assume that a regulated utility would grow at a rate that is less than the U.S. economic growth rate. Unlike competitive firms, which might increase their growth by launching a new product line, franchising, or expanding into new and developing markets, utility operating companies with defined service territories cannot do any of these things to grow. Gross Domestic Product ("GDP") is one of the most widely used measures of economic production and is used to measure aggregate economic growth. According to the Congressional Budget Office's Budget Outlook, the long-term forecast for nominal U.S. GDP growth is 3.8%, which includes an inflation rate of 1.7%.[36] For

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[34] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 306 (3rd ed., John Wiley & Sons, Inc. 2012).

[35] Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 306 (3rd ed., John Wiley & Sons, Inc. 2012).

[36] Congressional Budget Office Long-Term Budget Outlook, https://www.cbo.gov/publication/59014.

mature companies in mature industries, such as utility companies, the terminal growth rate will likely fall between the expected rate of inflation and the expected rate of nominal GDP growth.

Q. Did you also consider a variation of the DCF Model that incorporates analysts' growth rate projections?

A. Yes. Despite the potential flaws in this variation of the DCF Model, I conducted this model because it is often presented in rate cases and considered by regulators.

Q. Please describe the results of your DCF Models?

A. For my DCF Models, I considered two variations: one using a sustainable growth rate and one using analysts' growth rates. The results of these models are 7.8% and 8.7%, respectively.[37]

Q. Why did you not directly include the results of you sustainable growth DCF model in your final ROE recommendation in this case?

A. In this case, the sustainable growth variation of the DCF Model produced a result that is notably lower than the result of the CAPM and analyst growth variation of the DCF Model. In particular, the CAPM directly measures the impact of market risk of individual firms and in that regarding may result in a more direct assessment of market-based equity costs. Thus, in my professional judgment I did not directly consider the results of the sustainable growth variation of the DCF Model in my final ROE recommendation.

[37] Exhibit DJG-6.

D. Response to Mr. Moul's DCF Model

Q. Please summarize the results of Mr. Moul's DCF analyses.

A. Mr. Moul's DCF Model produced a result of 12.05%, which includes a long-term growth rate input of 6.75% and a "leverage adjustment" of 1.31%.[38] Without the leverage adjustment, Mr. Moul's DCF result for the gas proxy group is 10.74%, a value that Mr. Moul describes as "the low end of the range."[39] Mr. Moul's final ROE recommendation of 11.15% is based upon more than his DCF result for the Gas Group. Mr. Moul uses the 10.74% Gas Group result and averages that with a 10.4% DCF value for an electric proxy group. So, Mr. Moul's final ROE recommendation is based in part upon his application of his DCF model to two different proxy groups for two different industries. Mr. Moul bases his final ROE recommendation on the DCF average of 10.57%. As I discussed previously, it is unnecessary to attempt to blend the cost of equity estimates of the electric and gas cases, which have different proxy groups. The inputs used from those proxy groups, including stock prices, dividends, and capital structure, are mathematically connected with each other. Blending the separate proxy group analyses further distorts Mr. Moul's results, and ultimately his recommendation.

Q. Are Mr. Moul's DCF results reasonable?

A. No. As I address below, Mr. Moul' DCF result of 12.05% is overstated. Even Mr. Moul's 10.74% DCF result for the gas proxy group, without a leverage adjustment, is not a reasonable measure of a market-based cost of equity to set rates for PECO Gas. Although

[38] PECO Gas St. 5, Exh. PRM-1, p. 2, Sch. 1.

[39] PECO Gas St. 5, pp. 7-8.

Mr. Moul states it is "the low end of the range,[40] Mr. Moul did not separately measure the cost of equity for each individual company within the gas proxy group.[41] So, there is no "range" of DCF results evident.

Q. Describe the problems with Mr. Moul's assumed sustainable growth input.

A. First, Mr. Moul assumes a sustainable growth rate of 6.75% in his DCF Model.[42] This effectively means that he assumes the Company's earnings will grow at a rate of 6.75% per year, every year, in perpetuity. This assumption is especially inappropriate considering the earnings , dividends, book value and cash flow growth rate inputs reported for the proxy companies. Mr. Moul's own exhibits shows that the average growth rates for these metrics range from 4.575% - 6.69%,[43] all of which are lower than the 6.75% growth rate he ultimately used in his DCF Model. Mr. Moul also shows analysts' projected growth rates for his proxy companies, which average only 5.77%.[44] Thus, Mr. Moul's long-term growth rate input of 6.75% is substantially higher than the average growth rate reported by analysts from his own cited sources. In the analyst growth rate variation of my DCF Model, I used an average growth rate of only 4.8%, which represents the average dividend growth rate for the proxy group as reported by Value Line. Given these facts, it is evident that the 6.75% long-term growth rate estimate used by Mr. Moul in his DCF Model is clearly too high, and as a result, his DCF cost of equity estimate is grossly overstated.

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[40] PECO Gas St. 5, p. 7, li. 18.

[41] PECO Gas St. 5, p. 5, li. 19-22.

[42] PECO Gas St. 5, p. 7, li. 18.

[43] PECO Gas St. 5, Exh. PRM-1, p. 16, Sch. 8.

[44] PECO Gas St. 5, Exh PRM-1, p. 17, Sch. 9 (taking an average of the average projected growth rate results).

Q. Please describe Mr. Moul's leverage adjustment.

A. According to Mr. Moul, a leverage adjustment is necessary to account for the risk differential between market-value and book-value capital structures.[45]

Q. Are you aware of any other ROE witnesses applying a leverage adjustment in a similar manner as Mr. Moul is proposing in this case?

A. No. Other than Mr. Moul in previous cases, I am not aware of any other witnesses who apply a leverage adjustment to their cost of equity model results in the way that Mr. Moul does. According to Mr. Moul's logic, this would apparently mean that every other ROE expert, including those testifying for utility companies, is underestimating their cost of equity results.

Q. Does the original DCF model have an input for a leverage adjustment?

A. No. The DCF model has been used by investors, analysts, managers, and academics for decades to assist with pricing assets and estimate the cost of equity of various assets and projects. I have not seen a variation of the DCF model in any financial textbook or other reliable source that presents the model with a "leverage adjustment" input similar to the way in which Mr. Moul presents the model in his testimony.

Q. Has the Commission rejected Mr. Moul's leverage adjustment in prior cases?

A. Yes.[46] In PPL's 2012 rate case, Mr. Moul proposed a substantially similar leverage adjustment. The Commission found that "[f]or the reasons developed by the OCA and I&E, the Company's leverage adjustment should be denied."[47] In Columbia Gas's 2020 base rate case and PECO Gas's 2020 base rate case, the Commission allowed ROEs based

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[45] PECO Gas St. 5, p. 37, li. 6-8.

[46] *Pa. P.U.C. v. PPL Elec. Util. Corp.*, Docket No. R-2012-2290597, Order at 52 (Dec. 28, 2012).

[47] *Id*. at p. 52.

upon DCF dividend yield and growth rate inputs, without leverage adjustments.[48] In Aqua PA's 2021 base rate case, the Commission denied Aqua PA's request to include a leverage adjustment as contrary to the public interest.[49]

Q. Have other commissions recently rejected Mr. Moul's leverage adjustment?

A. Yes. Recently, in the Application of Palmetto Wastewater Reclamation ("PWR"), the Public Service Commission of South Carolina rejected Mr. Moul's leverage adjustment.[50] Relying in part on my testimony in the PWR case, the South Carolina commission agreed that "Mr. Moul's 0.97% leverage adjustment is not appropriate."[51]

Q. Do you agree with Mr. Moul's leverage adjustment?

A. No. Mr. Moul's proposed leverage adjustment is entirely unnecessary and inappropriate, and it has the effect of further inflating a DCF result that is already overestimated. Mr. Moul's leverage adjustment is based on the Hamada model, which is further discussed below. The base result (without the leverage adjustment) of Mr. Moul's DCF Model is 10.74%, which is substantially higher than my analyst-growth DCF result of 8.7%.

Q. What is the premise of the Hamada model?

A. The Hamada formula can be used to analyze changes in a firm's cost of capital as it adds or reduces financial leverage, or debt, in its capital structure by starting with an "unlevered" beta and then "relevering" the beta at different debt ratios. As leverage increases, equity

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[48] *Pa. P.U.C. v. Columbia Gas of Pennsylvania, Inc.*, Docket No. R-2020-3018835, Order at 141 (Feb. 19, 2021) (Columbia 2020 Order); *Pa. P.U.C. v. PECO Energy – Gas Div.*, Docket No. R-2020-3018929, Order at 160-161 (June 22, 2021) (PECO 2020 Order).

[49] *Pa. P.U.C. v. Aqua Pennsylvania, Inc., et al.*, Docket Nos., R-2021-3027385, R-2021-3027386, Order at 166-167 (May 16, 2022) (Aqua 2021 Order).

[50] *In re Application of Palmetto Wastewater Reclamation, Inc. for an Adjustment of Rates and Charges*, 2021 S.C. PUC LEXIS *1, *23 (Dec. 21, 2021).

[51] *Id.*

investors bear increasing amounts of risk, leading to higher betas. Before the effects of financial leverage can be accounted for, however, the effects of leverage must first be removed, which is accomplished through the Hamada model. I discuss the results of the Hamada model in the section below regarding capital structure.

Q. Did Mr. Moul conduct the Hamada Model correctly?

A. No. Mr. Moul uses the Hamada Model to ultimately conclude that PECO Gas is *riskier* than the gas proxy group (thus forming the basis for his upward adjustment to the Company's cost of equity estimate). However, it is obviously an adjustment in the wrong direction because of this fact: PECO Gas has less debt in its capital structure than the proxy group. It is undisputed that more debt results in more financial risk. Thus, it is impossible for PECO Gas to have less financial risk than the proxy group average. Therefore, there should actually be a *downward* adjustment to PECO's cost of equity estimate (as properly made to the CAPM rather than the DCF Model) to reflect the fact that PECO Gas has less financial risk than the proxy group average.

VII. CAPITAL ASSET PRICING MODEL ANALYSIS

Q. Please describe the CAPM.

A. The CAPM is a market-based model founded on the principle that investors expect higher returns for incurring additional risk.[52] The CAPM estimates this expected return. The various assumptions, theories, and equations involved in the CAPM are discussed further in Appendix B. Using the CAPM to estimate the cost of equity of a regulated utility is

[52] William F. Sharpe, *A Simplified Model for Portfolio Analysis*, pp. 277-93 (Management Science IX 1963); *see also* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 208 (3rd ed., South-Western Cengage Learning 2010).

consistent with the legal standards governing the fair rate of return. The U.S. Supreme Court has recognized that "the amount of *risk* in the business is a most important factor" in determining the allowed rate of return,[53] and that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding *risks*."[54] The CAPM is a useful model because it directly considers the amount of risk inherent in a business and directly measures the most important component of a fair rate of return analysis: Risk.

Q. Describe the inputs for the CAPM.

A. The basic CAPM equation requires only three inputs to estimate the cost of equity: (1) the risk-free rate; (2) the beta coefficient; and (3) the equity risk premium. Each input is discussed separately below.

A. The Risk-Free Rate

Q. Please explain the risk-free rate.

A. The first term in the CAPM is the risk-free rate (R_F). The risk-free rate is simply the level of return investors can achieve without assuming any risk. The risk-free rate represents the bare minimum return that any investor would require on a risky asset. Even though no investment is technically devoid of risk, investors often use U.S. Treasury securities to represent the risk-free rate because they accept that those securities essentially contain no default risk. The Treasury issues securities with different maturities, including short-term Treasury Bills, intermediate-term Treasury Notes, and long-term Treasury Bonds.

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[53] *Wilcox*, 212 U.S. at 48 (emphasis added).

[54] *Hope Natural Gas Co*., 320 U.S. at 603 (emphasis added).

Q. Is it preferable to use the yield on long-term Treasury bonds for the risk-free rate in the CAPM?

A. Yes. In valuing an asset, investors estimate cash flows over long periods of time. Common stock is viewed as a long-term investment, and the cash flows from dividends are assumed to last indefinitely. As a result, short-term Treasury bill yields are rarely used in the CAPM to represent the risk-free rate. Short-term rates are subject to greater volatility and thus can lead to unreliable estimates. Instead, long-term Treasury bonds are usually used to represent the risk-free rate in the CAPM. I considered a 30-day average of daily Treasury yield curve rates on 30-year Treasury bonds in my risk-free rate estimate, which resulted in a risk-free rate of 4.67%.[55]

B. The Beta Coefficient

Q. How is the beta coefficient used in this model?

A. As discussed above, beta represents the sensitivity of a given security to movements in the overall market. The CAPM states that in efficient capital markets, the expected risk premium on each investment is proportional to its beta. Recall that a security with a beta greater than 1.0 is riskier than the market portfolio. Conversely, a security with a beta less than one is less risky than the market portfolio. An index such as the S&P 500 Index is used as a proxy for the market portfolio. The historical betas for publicly traded firms are published by various institutional analysts. Beta may also be calculated through a linear regression analysis, which provides additional statistical information about the relationship between a single stock and the market portfolio. The market portfolio of all stocks has a

[55] Exhibit DJG-7.

beta equal to one. Stocks with betas greater than one are relatively more sensitive to market risk than the average stock. In contrast, stocks with betas of less than one are less sensitive to market risk.

Q. Describe the source for the betas you used in your CAPM analysis.

A. I used betas recently published by Value Line Investment Survey. The average beta for the total proxy group is 0.95.[56] Thus, we have an objective measure to prove the well-known concept that utility stocks are less risky than the average stock in the market. While there is evidence suggesting that betas published by sources such as Value Line may actually overestimate the risk of utilities (and thus overestimate the CAPM), I used the betas published by Value Line in the interest of reasonableness.[57]

C. The Equity Risk Premium

Q. Describe the equity risk premium.

A. The final term of the CAPM is the equity risk premium ("ERP"), which is the required return on the market portfolio less the risk-free rate ($R_M - R_F$). In other words, the ERP is the level of return investors expect above the risk-free rate in exchange for investing in risky securities. Many experts agree that "the single most important variable for making investment decisions is the equity risk premium."[58] Likewise, the ERP is arguably the single most important factor in estimating the cost of capital in this matter. There are three basic methods that can be used to estimate the ERP: (1) calculating a historical average;

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[56] Exhibit DJG-8.

[57] *See* Appendix B for a more detailed discussion of raw beta calculations and adjustments.

[58] Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns*, p. 4 (Princeton University Press 2002).

(2) taking a survey of experts; and (3) calculating the implied ERP. I will discuss each method in turn, noting advantages and disadvantages of these methods.

1. Historical Average

Q. Describe the historical equity risk premium.

A. The historical ERP may be calculated by simply taking the difference between returns on stocks and returns on government bonds over a certain period of time. Many practitioners rely on the historical ERP as an estimate for the forward-looking ERP because it is easy to obtain. However, there are disadvantages to relying on the historical ERP.

Q. What are the limitations of relying solely on a historical average to estimate the current or forward-looking ERP?

A. Some investors may rely on the historic ERP because it is convenient and easy to calculate. But what matters in the CAPM model is the current and forward-looking risk premium.[59] Some investors may think that a historic ERP provides some indication of what the prospective risk premium is; however, there is empirical evidence to suggest the prospective, forward-looking ERP is actually *lower* than the historical ERP. In a landmark publication on risk premiums around the world, *Triumph of the Optimists*, the authors suggest through extensive empirical research that the prospective ERP is lower than the historical ERP.[60] This is due in large part to what is known as "survivorship bias" or "success bias" — a tendency for failed companies to be excluded from historical indices.[61]

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[59] John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 330 (3rd ed., South-Western Cengage Learning 2010).

[60] Elroy Dimson, Paul Marsh & Mike Staunton, Triumph of the Optimists: 101 Years of Global Investment Returns, p. 34 (Princeton University Press 2002).

[61] *Id*. at 194.

From their extensive analysis, the authors make the following conclusion regarding the prospective ERP:

> The result is a forward-looking, geometric mean risk premium for the United States . . . of around 2½ to 4 percent and an arithmetic mean risk premium . . . that falls within a range from a little below 4 to a little above 5 percent.[62]

Indeed, these results are lower than many reported historical risk premiums. Other noted experts agree:

> The historical risk premium obtained by looking at U.S. data is biased upwards because of survivor bias. . . . The true premium, it is argued, is much lower. This view is backed up by a study of large equity markets over the twentieth century (*Triumph of the Optimists*), which concluded that the historical risk premium is closer to 4%.[63]

Regardless of the variations in historic ERP estimates, many leading scholars and practitioners agree that simply relying on a historic ERP to estimate the risk premium going forward is not ideal. Fortunately, "a naïve reliance on long-run historical averages is not the only approach for estimating the expected risk premium."[64]

Q. Did you rely on the historical ERP as part of your CAPM analysis in this case?

A. No. Due to the limitations of this approach, I primarily relied on the ERP reported in expert surveys and the implied ERP method discussed below.

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[62] *Id.*

[63] Aswath Damodaran, *Equity Risk Premiums: Determinants, Estimation and Implications – The 2015 Edition*, p. 17 (New York University 2015).

[64] John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do*, p. 330 (3rd ed., South Western Cengage Learning 2010).

2. Expert Surveys

Q. Describe the expert survey approach to estimating the ERP.

A. As its name implies, the expert survey approach to estimating the ERP involves conducting a survey of experts including professors, analysts, chief financial officers, and other executives around the country and asking them what they think the ERP is. The IESE Business School conducts such a survey each year. Its 2024 expert survey reported an average ERP of 5.5%.[65]

3. Implied Equity Risk Premium

Q. Describe the implied equity risk premium approach.

A. The third method of estimating the ERP is arguably the best. The implied ERP relies on the stable growth model proposed by Gordon, often called the "Gordon Growth Model," which is a basic stock valuation model that has been widely used in finance for many years.[66] This model is a mathematical derivation of the DCF Model. In fact, the underlying concept in both models is the same: The current value of an asset is equal to the present value of its future cash flows. Instead of using this model to determine the discount rate of one company, we can use it to determine the discount rate for the entire market by substituting the inputs of the model. Specifically, instead of using the current stock price (P_0), we will use the current value of the S&P 500 (V_{500}). Instead of using the dividends of a single firm, we will consider the dividends paid by the entire market. Additionally,

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[65] Pablo Fernandez, et al., *Survey: Market Risk Premium and Risk-Free Rate used for 96 countries in 2024* (IESE Business School 2024), copy available at

https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID4754347_code12696.pdf?abstractid=4754347&mirid=1

IESE Business School is the graduate business school of the University of Navarra.

[66] Myron J. Gordon and Eli Shapiro, *Capital Equipment Analysis: The Required Rate of Profit* 102-10 (Management Science Vol. 3, No. 1 Oct. 1956).

we should consider potential dividends. In other words, stock buybacks should be considered in addition to paid dividends, as stock buybacks represent another way for the firm to transfer free cash flow to shareholders. Focusing on dividends alone without considering stock buybacks could understate the cash flow component of the model, and ultimately understate the implied ERP. The market dividend yield plus the market buyback yield gives us the gross cash yield to use as our cash flow in the numerator of the discount model. This gross cash yield is increased each year over the next five years by the growth rate. These cash flows must be discounted to determine their present value. The discount rate in each denominator is the risk-free rate (R_F) plus the discount rate (K). Equation 1 below shows how the implied return is calculated. Since the current value of the S&P is known, we can solve for K, the implied market return.[67]

Equation 1:
Implied Market Return

$$V_{500} = \frac{CY_1(1+g)^1}{(1+R_F+K)^1} + \frac{CY_2(1+g)^2}{(1+R_F+K)^2} + \cdots + \frac{CY_5(1+g)^5 + TV}{(1+R_F+K)^5}$$

where:

V_{500}	=	*current value of index (S&P 500)*
$CY_{1\text{-}5}$	=	*average cash yield over last five years (includes dividends and buybacks)*
g	=	*compound growth rate in earnings over last five years*
R_F	=	*risk-free rate*
K	=	*implied market return (this is what we are solving for)*
TV	=	*terminal value = $CY_5 (1+R_F) / K$*

The discount rate is called the "implied" return because it is based on the current value of the index as well as the value of free cash flow to investors projected over the next five years. Thus, based on these inputs, the market is "implying" the expected return; or in

[67] *See* Exhibit DJG-9 for detailed calculation.

other words, based on the current value of all stocks (the index price) and the projected value of future cash flows, the market is telling us the return expected by investors for investing in the market portfolio. After solving for the implied market return (K), we simply subtract the risk-free rate from it to arrive at the implied ERP as shown in the following equation.

Equation 2:
Implied Equity Risk Premium

$$Implied\ Expected\ Market\ Return - R_F = Implied\ ERP$$

Q. Discuss the results of your implied ERP calculation.

A. After collecting data for the index value, operating earnings, dividends, and buybacks for the S&P 500 over the past six years, I calculated the dividend yield, buyback yield, and gross cash yield for each year. I also calculated the compound annual growth rate (g) from operating earnings. I used these inputs, along with the risk-free rate and current value of the index to calculate a current required return on the U.S. equity market of 9.8%. I subtracted the risk-free rate to arrive at the implied equity risk premium of 5.1%.[68] Dr. Damodaran, one of the world's leading experts on the ERP, promotes the implied ERP method discussed above. He calculates monthly and annual implied ERPs with this method and publishes his results. Dr. Damodaran's average ERP estimate for May 2024 using several implied ERP variations was 4.6%.[69] Additionally, Kroll (formerly Duff & Phelps) recently published an ERP estimate of 5.5%.[70]

[68] *Id.*

[69] http://pages.stern.nyu.edu/~adamodar/

[70] Kroll, Cost of Capital Recommendations and Potential Upcoming Changes – February 8, 2024 Update.

Q. What are the results of your final ERP estimate?

A. For the final ERP estimate I used in my CAPM analysis, I considered the results of the ERP surveys, the estimated ERP reported by Kroll, the estimated ERP calculated by Dr. Damodaran, and the implied ERP based on my calculations.[71] The results are presented in the following figure:

Figure 4:
Equity Risk Premium Results

IESE Business School Survey	5.5%
Kroll (Duff & Phelps) Report	5.5%
Damodaran (average)	4.6%
Garrett	5.1%
Average	**5.2%**

I used the average ERP of 5.2% from these sources in my CAPM.

Q. Please explain the final results of your CAPM analysis.

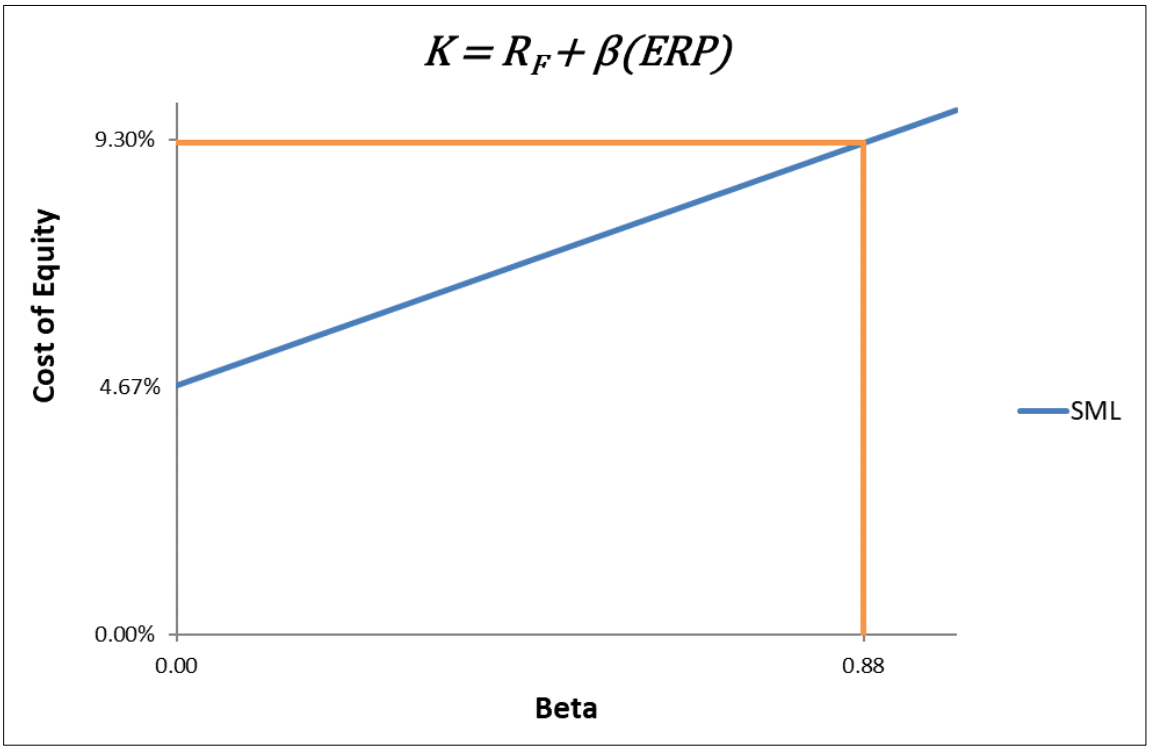
A. Using the inputs for the risk-free rate, beta, and equity risk premium discussed above, I estimate that the Company's CAPM cost of equity is 9.6%, but only if the proxy group average debt ratio is assumed; otherwise, the Company's CAPM cost of equity estimate is only 8.9%.[72] The CAPM can be displayed graphically through what is known as the Security Market Line ("SML"). The figure below shows the expected return (cost of equity) on the y-axis, and the average beta for the proxy group on the x-axis. The SML

[71] *See also* Exhibit DJG-10.

[72] Exhibits DJG-11 and DJG-12.

intercepts the y-axis at the level of the risk-free rate. The slope of the SML is the equity risk premium.

Figure 5:
CAPM Graph



The SML provides the rate of return that will compensate investors for the beta risk of that investment. Thus, at an average beta of 0.88 for the proxy group, and assuming the proxy group's average capital structure is used, the CAPM result is 9.3%.

D. Response to Mr. Moul's CAPM Analysis and Other Issues

Q. Please summarize the results of Mr. Moul's CAPM.

A. Yes, I did. Mr. Moul estimates a CAPM cost of equity of 12.84%.[73] This includes a beta estimate of 1.1% and an ERP input of 8.26%. These inputs are clearly overestimated, which cause Mr. Moul's CAPM results to be unrealistically high. These issues are discussed further below. below. I also address Mr. Moul's risk premium model in this this section because the CAPM itself is a risk premium model. I also address Mr. Moul's risk premium model in this this section because the CAPM itself is a risk premium model.

1. Beta

Q. Describe Mr. Moul's beta input to the CAPM.

A. Mr. Moul used a beta of 1.1 in his CAPM.[74] This beta is much higher than the average beta of Mr. Moul's proxy group as reported by Value Line, which is only 0.88.[75] The difference between a beta of 0.95 and 1.1 is significant, especially considering the fact that the beta of the entire market is 1.0. The betas reported by Value Line show that the proxy group is less risky than the market average, while the inflated beta derived by Mr. Moul would indicate the proxy group of utilities is riskier than the market average. Mr. Moul is essentially suggesting that the betas published by Value Line, an objective and widely-used source in utility regulation, are notably underestimated.

[73] PECO Gas St. 5, Exh. PRM-1, p. 2, Sch. 1.

[74] PECO Gas St. 5, Exh. PRM-1, p. 2, Sch. 1.

[75] Exhibit DJG-8.

Q. Do you agree with Mr. Moul's beta input?

A. No. By using a beta of 1.1, Mr. Moul is implying that PECO is *riskier* than average company in the U.S. market. Such a proposition contradicts any objective or intuitive understanding of a regulated utility's position and operations in the U.S. market. In fact, it is more accurate to say that PECO, and its utility peers, are among the least risky companies in the world. PECO is a regulated monopoly with a captive customer base who provides an essential product with a relatively inelastic demand; it operates under a regulatory framework that would essentially prevent it from experiencing financial failure. Competitive firms in the market do not enjoy the same risk-mitigating framework and protections. I have also discussed my disagreement with Mr. Moul's beta input from a technical perspective when I addressed his leverage adjustment above. In short, it is inappropriate to use Value Line betas as a starting point and then increase them to account for leverage. The Commission should reject Mr. Moul's CAPM results for his beta input alone. However, his estimate for the ERP is also unreasonably high, as further discussed below.

2. <u>Equity Risk Premium</u>

Q. Did Mr. Moul rely on a reasonable measure for the ERP?

A. No, he did not. Mr. Moul used an input of 8.26% for the ERP, which is not realistic.[76] The ERP is one of three inputs in the CAPM equation, and it is one of the most important factors for estimating the cost of equity in this case. As discussed above, I used three widely accepted methods for estimating the ERP, including consulting expert surveys, calculating

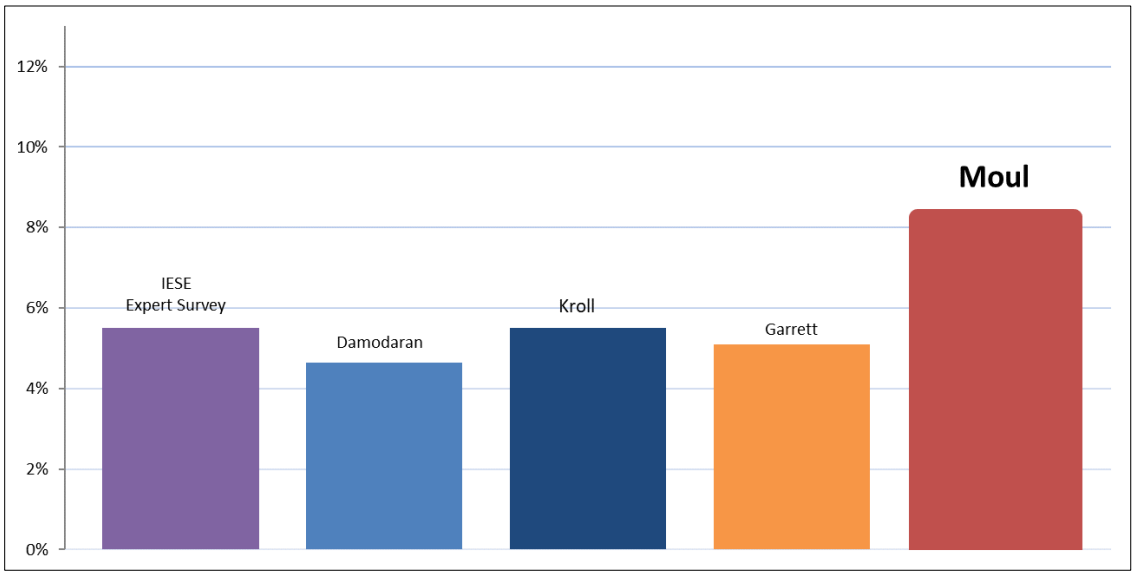
[76] PECO Gas St. 5, p. 45, li. 19-20.

the implied ERP based on aggregate market data, and considering the ERPs published by reputable analysts. The highest ERP found from my research and analysis is only 5.5%.

Q. Please discuss and illustrate how Mr. Moul's ERP compares with other estimates for the ERP.

A. The 2024 IESE Business School expert survey reports an average ERP of 5.5%. Similarly, Kroll (formerly Duff & Phelps) recently estimated an ERP of 5.5%. Dr. Damodaran, one of the leading experts on the ERP, recently estimated an ERP of only 4.6%.[77] The chart in the following figure illustrates that Mr. Moul's ERP estimate is far out of line with other reasonable, objective estimates for the ERP.[78]

Figure 6:
Equity Risk Premium Comparison



[77] Aswath Damodaran, *Implied Equity Risk Premium Update*, DAMODARAN ONLINE, http://pages.stern.nyu.edu/~adamodar/. Dr. Damodaran estimates several ERPs using various assumptions.

[78] The ERP estimated by Dr. Damodaran is the highest of several ERP estimates under slightly differing assumptions.

When compared with other independent sources for the ERP, as well as my estimate, Mr. Moul's ERP estimate is clearly not within the range of reasonableness. As a result, his CAPM cost of equity estimate is overstated.

3. Size Effect

Q. Describe Mr. Moul's size premium adjustment to his CAPM.

A. Mr. Moul also suggests that PECO's size relative to the proxy group has an increasing effect to its risk.[79]

Q. Do you agree with Mr. Moul's opinion regarding PECO's size?

A. No. PECO should not receive any upward adjustment or consideration to its cost of equity estimate or authorized ROE due to its size. The "size effect" phenomenon arose from a 1981 study conducted by Banz, which found that "in the 1936 – 1975 period, the common stock of small firms had, on average, higher risk-adjusted returns than the common stock of large firms."[80] According to Ibbotson, Banz's size effect study was "[o]ne of the most remarkable discoveries of modern finance."[81] Perhaps there was some merit to this idea at the time, but the size effect phenomenon was short lived. Banz's 1981 publication generated much interest in the size effect and spurred the launch of significant new small cap investment funds. However, this "honeymoon period lasted for approximately two years. . . ." [82] After 1983, U.S. small-cap stocks actually underperformed relative to large cap stocks. In other words, the size effect essentially reversed. In *Triumph of the Optimists*,

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[79] PECO Gas St. 5, p. 16, li. 10-13.

[80] Rolf W. Banz, *The Relationship Between Return and Market Value of Common Stocks* 3-18 (Journal of Financial Economics 9 (1981)).

[81] 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook 99 (Morningstar 2015).

[82] Elroy Dimson, Paul Marsh & Mike Staunton, *Triumph of the Optimists: 101 Years of Global Investment Returns* 131 (Princeton University Press 2002).

the authors conducted an extensive empirical study of the size effect phenomenon around the world. They found that after the size effect phenomenon was discovered in 1981, it disappeared within a few years:

> It is clear . . . that there was a global reversal of the size effect in virtually every country, with the size premium not just disappearing but going into reverse. Researchers around the world universally fell victim to Murphy's Law, with the very effect they were documenting – and inventing explanations for – promptly reversing itself shortly after their studies were published.[83]

In other words, the authors assert that the very discovery of the size effect phenomenon likely caused its own demise. The authors ultimately concluded that it is "inappropriate to use the term 'size effect' to imply that we should automatically expect there to be a small-cap premium," yet, this is exactly what utility witnesses often do in attempting to artificially inflate the cost of equity with a size premium. Other prominent sources have agreed that the size premium is a dead phenomenon. According to Ibbotson:

> The unpredictability of small-cap returns has given rise to another argument against the existence of a size premium: that markets have changed so that the size premium no longer exists. As evidence, one might observe the last 20 years of market data to see that the performance of large-cap stocks was basically equal to that of small cap stocks. In fact, large-cap stocks have outperformed small-cap stocks in five of the last 10 years.[84]

In addition to the studies discussed above, other scholars have concluded similar results. According to Kalesnik and Beck:

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[83] *Id*. at 133.

[84] 2015 Ibbotson Stocks, Bonds, Bills, and Inflation Classic Yearbook 112 (Morningstar 2015).

> Today, more than 30 years after the initial publication of Banz's paper, the empirical evidence is extremely weak even before adjusting for possible biases. . . . The U.S. long-term size premium is driven by the extreme outliers, which occurred three-quarters of a century ago. . . . Finally, adjusting for biases . . . makes the size premium vanish. If the size premium were discovered today, rather than in the 1980s, it would be challenging to even publish a paper documenting that small stocks outperform large ones.[85]

For all of these reasons, the Commission should reject the arbitrary size premium proposed by the Company.

Q. Have other commissions recently rejected Mr. Moul's size adjustment?

A. Yes. Recently, in the Application of Palmetto Wastewater Reclamation ("PWR"), the Public Service Commission of South Carolina rejected Mr. Moul's size premium adjustment.[86] Relying in part on my testimony in the PWR case, the South Carolina commission agreed that "Mr. Moul's 1.02% size adjustment is not appropriate."[87]

Q. Has the Commission adopted Mr. Moul's size adjustment in recent cases?

A. No. In utility base rate cases decided by the Commission in 2020 through May 2022, the Commission did not rely upon the utility's CAPM results that included size adjustments.[88]

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[85] Vitali Kalesnik and Noah Beck, *Busting the Myth About Size* (Research Affiliates 2014), available at https://www.researchaffiliates.com/Our%20Ideas/Insights/Fundamentals/Pages/284_Busting_the_Myth_About_Size.aspx (emphasis added).

[86] Order issued December 21, 2021, Application of Palmetto Wastewater Reclamation, before the Public Service Commission of South Carolina, p. 24.

[87] *Id.*

[88] PECO 2020 Order at 141; PECO Gas 2020 Order at 155, 160; Aqua 2021 Order at 177.

4. Risk Premium Model

Q. Please describe Mr. Moul's risk premium model.

A. Mr. Moul conducts another model that takes the yield on utility bonds and adds 6.5% as a premium to arrive at a result of 11.5%.[89]

Q. Do you believe the results of Mr. Moul's risk premium model indicated a reasonable cost of equity for PECO Electric?

A. No. There are several problems with Mr. Moul's model. First, this model does not actually measure the cost of equity, which is the most important measure that should be used to assess a reasonable authorized ROE. Both the CAPM and DCF Model have been used for many years across all industries to assess the cost of equity for companies. The CAPM in particular is a risk premium model itself. It takes the expected return on a riskless asset (i.e., the risk-free rate) and adds a "premium" (i.e., the equity risk premium) to represent the return investors expect for investing in all equity securities in the U.S. market. The premise of the CAPM model is simple, it lead to a Nobel Prize for its creators, and it has been discussed in all textbooks I have seen related to finance and investments. In contrast, the risk premium model offered by Mr. Moul does not actually assess the cost of equity. First, it does not begin with a risk-free rate, but rather a yield on utility bonds, which already includes a premium above the real risk-free rate. Then, Mr. Moul adds 6.5% to this figure, which is apparently supposed to represent some form of an equity risk premium. According to Mr. Moul, "the equity risk premium of 6.50% is between the premiums associated with low interest rates (i.e., 7.13%) and average for the entire historical period

[89] PECO St. 5, Exh. PRM-1, p. 2, Sch. 1.

interest rates (i.e., 5.96%)."[90] As thoroughly discussed above in the section of my testimony regarding the equity risk premium, the approach offered by Mr. Moul is not remotely close to how an ERP would be properly estimated. Moreover, as also illustrated above, the average ERP reported by thousands of experts across the country is currently about 5.5%, which is significantly less than the 6.5% used by Mr. Moul. For all of these reasons, the Commission should reject Mr. Moul's risk premium model and result.

5. WNA and Business Risks

Q. Describe Mr. Moul's testimony regarding business risks.

A. In his Direct Testimony, Mr. Moul suggests that the Company is exposed to additional risks beyond those inherent in the proxy group. According to Mr. Moul, such risks include regulatory risks and operational risks, among other risks.[91] Mr. Moul also suggests that his cost of equity estimate for PECO Gas is based on the Company having a weather normalization adjustment ("WNA") because other companies in the proxy group have a similar mechanism.[92]

Q. Do you agree with Mr. Moul that these firm-specific risk factors should influence PECO's cost of equity or awarded ROE?

A. No. All companies face business risks, including the other utilities in the proxy group; business risks are not unique to PECO. As discussed above, it is a well-known concept in finance that firm-specific risks are unrewarded by the market. This is largely because firm-specific risk can be eliminated through portfolio diversification. Scholars widely recognize

[90] PECO St. 5, pp. 10-14.

[91] PECO St. 5, pp. 7-13.

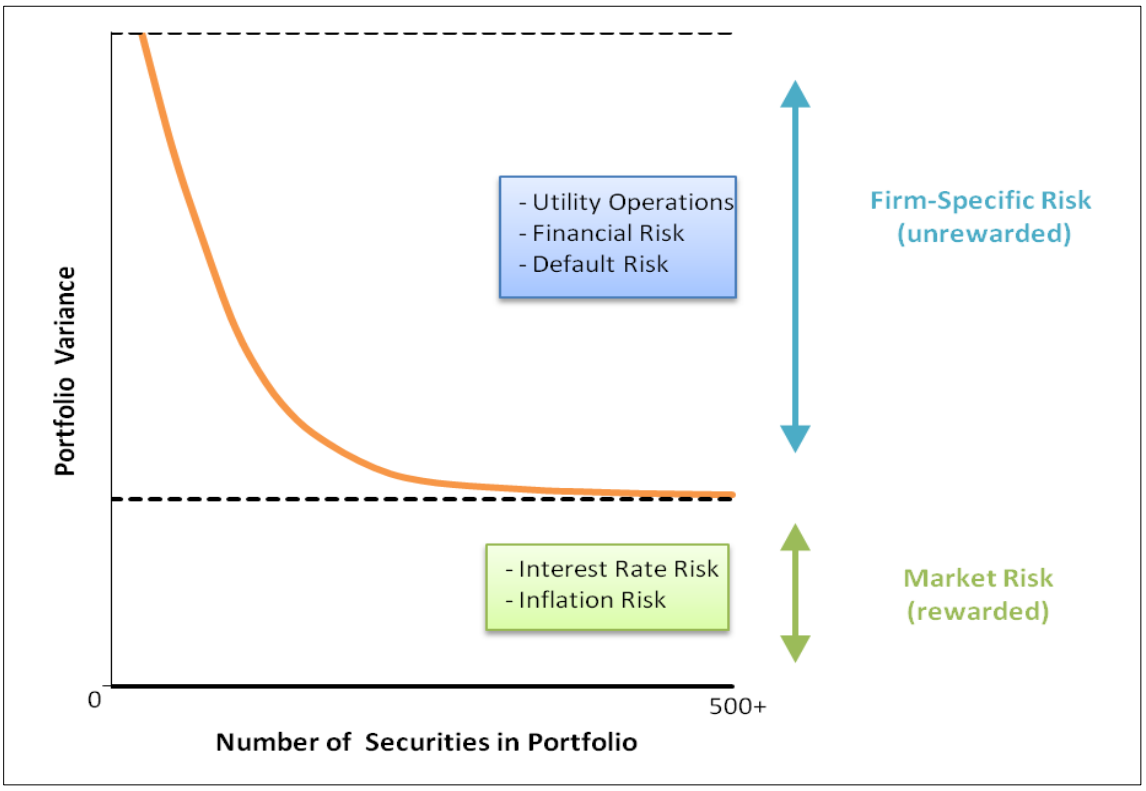
[92] PECO St. 5, pp. 10, li. 9-19.

the fact that market risk, or "systematic risk," is the only type of risk for which investors expect a return for bearing.[93]

Unlike interest rate risk, inflation risk, and other market risks that affect all companies in the stock market, the risk factors discussed by Mr. Moul are merely business risks specific to PECO. Investors do not require an additional term for these firm-specific business risks. Another way to consider this issue is to look at the CAPM and DCF Model. Neither model includes an input for business risks due to the well-known truth that investors do not expect a return for such risks. Therefore, the Company's firm-specific business risks, while perhaps relevant to other issues in the rate case, have no meaningful effect on the cost of equity estimate. Rather, it is market risk that is rewarded by the market, and this concept is thoroughly addressed in my CAPM analysis discussed above. Thus, the Commission should reject any additional premium Mr. Moul has added to an already overstated cost of equity estimate to account for any firm-specific risks. This concept was also discussed and illustrated above in my testimony.

[93] *See* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 180 (3rd ed., South Western Cengage Learning 2010).

Figure 7:
Effects of Portfolio Diversification



The financial models presented in my testimony (particularly the CAPM) directly measure market risk, which is the type of risk the Commission should focus on when determining a fair authorized ROE.

VIII. MANAGEMENT PERFORMANCE AND COMPANY'S OVERALL CLAIM

Q. Mr. Moul stated that his final ROE recommendation includes 15 basis points for management performance. Do you agree with this approach?

A. No. Mr. Moul's 11.15% recommended cost of equity for the Gas Division is comprised of two parts. There is Mr. Moul's 11.00% cost of equity that he derived from consideration

of "PECO being a combination utility…"[94] Additionally, Mr. Moul included 0.15% in recognition of "the exemplary performance of the Company's management," relying on the testimony of other PECO Gas witnesses.[95] As discussed in my testimony, the primary driver of the cost of equity and required rate of return is how the market risk impacts individual firms. Managerial performance and the risk of imprudent management is related to firm-specific risks, which are not rewarded by the market because investors can eliminate such risk through diversification of the portfolio, and do not have a material effect on the cost of equity. As investors in competitive firms in the marketplace cannot expect an additional return on equity simply due to prudent managerial performance, the Company as a regulated firm should not receive any premium in addition to an authorized market-based ROE due to prudent managerial performance.

Q. Are Mr. Moul and the PECO Gas witnesses recommending the 0.15% performance adder based upon the performance of the Gas Division management or PECO Energy as the diversified utility?

A. Mr. Moul refers to "the Company's management," which could imply PECO Gas management. However, as discussed by OCA witnesses Nicholas DeMarco and Roger Colton, a number of the activities cited by PECO Gas witness Amy Hamilton as support for the management adder are specific to PECO Energy and may serve customers of both the Gas Division and Electric Division.[96] In other words, Mr. Moul's recommended addition of 15 basis points for management performance would charge Gas Division ratepayers a higher ROE for services provided by the diversified PECO Energy.

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[94] PECO Gas St. 5, p. 2, li. 9-11.

[95] PECO Gas St. 5, p. 2, li. 5-7, 12-14.

[96] OCA St. 5, Nicholas DeMarco Direct, pp. 2-23; OCA St. 4, Roger Colton Direct, pp. 4, 8, 16-17, 95-103.

Q. Do you agree with Mr. Moul's recommended addition of 0.15% to set the ROE for PECO Gas?

A. No. While Section 523 of the Public Utility Code gives the Commission the discretion to consider the efficiency, effectiveness and adequacy of service when determining just and reasonable rates, it requires the Commission to "give effect to this section by making such adjustments to specific components of the utility's claimed cost of service as it may determine to be proper and appropriate." I my opinion, it would be neither proper nor appropriate for the Commission to award an ROE bump for prudent managerial performance when they invest in competitive firms in the marketplace. For all the reasons I have explained in my testimony, and despite any contrary notion advocated for by regulated utilities, ROE is not a "quid-pro-quo" concept. Increments to cost of equity should not be awarded in return for a utility's management operating the public utility company in a prudent manner as required by law.

Q. What is the monetary value of Mr. Moul's recommendation for an ROE increase for managerial performance?

A. Mr. Moul's recommendation for a performance-based increment of 15 basis points in the Company's ROE would cost PECO Gas consumers up to an additional $3.9 million per year in rates, which is excessive and unsupported.

Q. What is your conclusion?

A. In conclusion, for the reasons stated above, the Commission should reject the Company's request for an ROE at 11.15% inclusive of a performance-based adder of 15 basis points. Mr. Moul's 11.00% ROE is not a market-determined ROE for PECO Gas. The request for the 15 basis point increment to return on equity is unsupported, excessive, and inappropriate. An objective cost of equity analysis shows that PECO Gas's market-determined equity return is notably lower than the Company's proposed ROE of 11.15%.

Based on the results of my financial modeling using the DCF and CAPM models, I recommend that the Commission set the Company's market-determined cost of equity at 9.0%. My recommended 9.0% ROE for PECO Gas is based upon the average of my model results (excluding the sustainable growth variation of the DCF Model) as applied to the gas utility proxy group.

IX. CAPITAL STRUCTURE

Q. Describe in general the concept of a company's "capital structure."

A. "Capital structure" refers to the way a company finances its overall operations through external financing. The primary sources of long-term, external financing are debt capital and equity capital. Debt capital usually comes in the form of contractual bond issues that require the firm to make payments, while equity capital represents an ownership interest in the form of stock. Because a firm cannot pay dividends on common stock until it satisfies its debt obligations to bondholders, stockholders are referred to as "residual claimants." The fact that stockholders have a lower priority to claims on company assets increases their risk and the required return relative to bondholders. Thus, equity capital has a higher cost than debt capital. Firms can reduce their WACC by recapitalizing and increasing their debt financing. In addition, because interest expense is deductible, increasing debt also adds value to the firm by reducing the firm's tax obligation.

Q. Please explain the concept of the "weighted average cost of capital."

A. The term "cost of capital" refers to the weighted average cost of all the components of a company's capital structure, including debt and equity. Determining the cost of debt is relatively straightforward. Interest payments on bonds are contractual, "embedded costs" that are generally calculated by dividing total interest payments by the book value of

outstanding debt. Determining the cost of equity, on the other hand, is more complex. Unlike the known, contractual cost of debt, there is no explicit "cost" of equity; the cost of equity must be estimated through various financial models. Thus, the overall weighted average cost of capital includes the cost of debt and the estimated cost of equity. It is a "weighted average" because it is based upon the Company's relative levels of debt and equity, or "capital structure." Companies in the competitive market often use their WACC as the discount rate to determine the value of capital projects, so it is important that this figure be closely estimated. The basic WACC equation used in regulatory proceedings is presented as follows:

Equation 3:
Weighted Average Cost of Capital

$$WACC = \left(\frac{D}{D+E}\right)C_D + \left(\frac{E}{D+E}\right)C_E$$

where: $WACC$ = *weighted average cost of capital*
D = *book value of debt*
C_D = *embedded cost of debt capital*
E = *book value of equity*
C_E = *market-based cost of equity capital*

Thus, the three components of the weighted average cost of capital include the following:

(1) Cost of Equity

(2) Cost of Debt

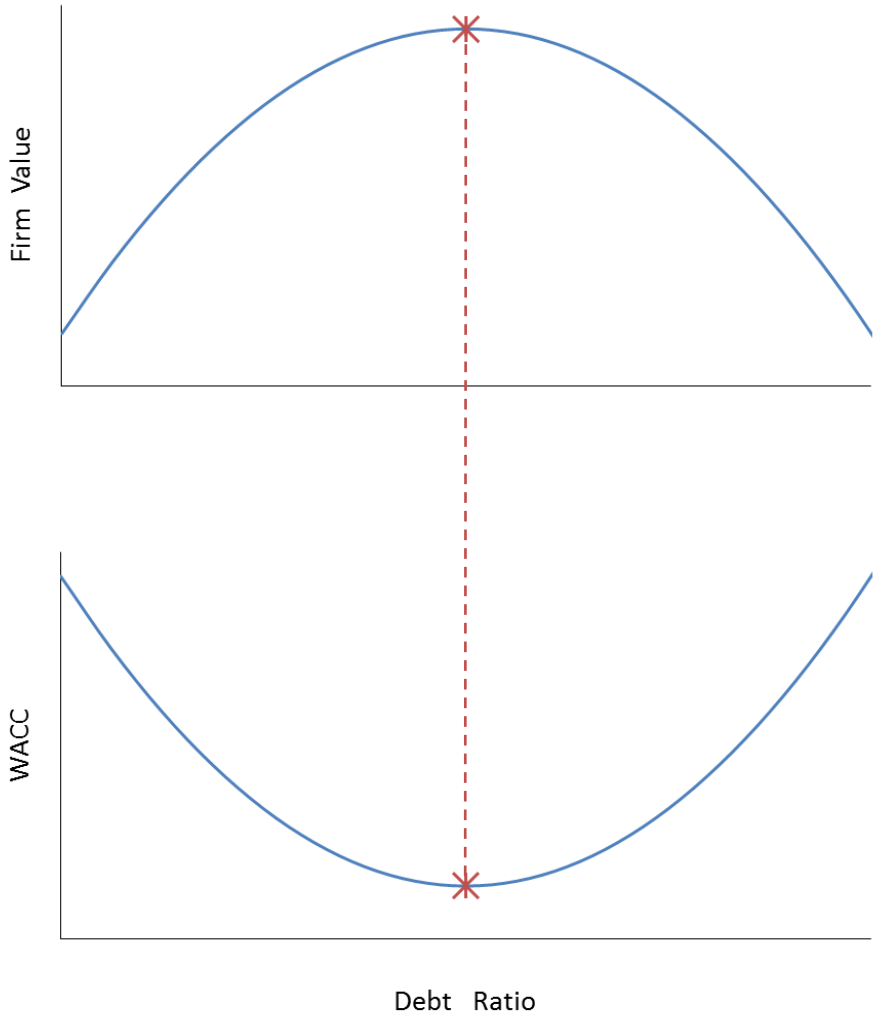
(3) Capital Structure

The term "cost of capital" is necessarily synonymous with the "weighted average cost of capital," and the terms are used interchangeably throughout this testimony.

Q. Is it true that, by increasing debt, competitive firms can add value and reduce their WACC?

A. Yes, it is. A competitive firm can add value by increasing debt. After a certain point, however, the marginal cost of additional debt outweighs its marginal benefit. This is because the more debt the firm uses, the higher interest expense it must pay, and the likelihood of loss increases. This also increases the risk of non-recovery for both bondholders and shareholders, causing both groups of investors to demand a greater return on their investment. Thus, if debt financing is too high, the firm's WACC will increase instead of decrease. The following Figure illustrates these concepts.

Figure 8:
Optimal Debt Ratio



As shown in this figure, a competitive firm's value is maximized when the WACC is minimized. In both graphs, the debt ratio is shown on the x-axis. By increasing its debt ratio, a competitive firm can minimize its WACC and maximize its value. At a certain point, however, the benefits of increasing debt do not outweigh the costs.

Q. Does the rate base rate of return model effectively incentivize utilities to operate at the optimal capital structure?

A. No. While it is true that competitive firms maximize their value by minimizing their WACC, this is not the case for regulated utilities. Under the rate base rate of return model,

a higher WACC results in higher rates, all else held constant. The basic revenue requirement equation is as follows:

Equation 4:
Revenue Requirement for Regulated Utilities

$$RR = O + d + T + \boldsymbol{r}(A - D)$$

where:	*RR*	=	*revenue requirement*
	O	=	*operating expenses*
	d	=	*depreciation expense*
	T	=	*corporate tax*
	r	=	***weighted average cost of capital (WACC)***
	A	=	*plant investments*
	D	=	*accumulated depreciation*

As shown in this equation, utilities can increase their revenue requirement by *increasing* their WACC, not by minimizing it. Thus, because there is no incentive for a regulated utility to minimize its WACC, a commission standing in the place of competition must ensure that the regulated utility is operating at the lowest reasonable WACC. Left unrestrained, utilities will increase their equity and decrease their debt to unreasonably increase their profits that flow through to shareholders.

Q. Can utilities generally afford to have higher debt levels than other industries?

A. Yes. Because regulated utilities have large amounts of fixed assets, stable earnings, and low risk relative to other industries, they can afford to have relatively higher debt ratios (or "leverage"). As aptly stated by Dr. Damodaran:

> Since financial leverage multiplies the underlying business risk, it stands to reason that firms that have high business risk should be reluctant to take on financial leverage. It also stands to reason that firms that operate in stable businesses should be much more willing to take on financial leverage. *Utilities*, for instance, have historically had high debt ratios but have not had high betas, mostly because their underlying businesses have been stable and fairly predictable.[97]

Note that Dr. Damodaran explicitly contrasts utilities with firms that have high underlying business risk. Because utilities have low levels of risk and operate a stable business, they should generally operate with relatively high levels of debt to achieve their optimal capital structure.

A. Proxy and Industry Debt Ratios

Q. Please describe the debt ratios of the proxy group.

A. According to the debt ratios recently reported in Value Line for the gas utility proxy group, the average debt ratio of the proxy group is 51% and the average equity ratio is 49%.[98] This debt ratio is notably higher than PECO Gas's proposed debt ratio of only 46.6%.[99] More importantly, this means that PECO Gas has a lower level of financial risk relative to the gas utility proxy group – a discrepancy that can be mathematically accounted for in terms of cost of equity estimation through the Hamada Model, which is discussed in more detail below.

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[97] *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, p. 196 (emphasis added).

[98] Exhibit DJG-13.

[99] PECO Gas St. 5, Exh. PRM-1, p. 1, Sch. 1.

Q. Please describe the debt ratios recently observed in competitive U.S. industries.

A. There are nearly 2,000 firms in U.S. industries with higher debt ratios than 50%, and with an average debt ratio of about 61%.[100] The following figure shows a sample of these industries with debt ratios higher than 56%.

[100] *See* Exhibit DJG-14.

Figure 9:
Industries with Debt Ratios Greater than 56%

Industry	# Firms	Debt Ratio
Air Transport	21	84%
Hotel/Gaming	69	82%
Hospitals/Healthcare Facilities	34	82%
Retail (Automotive)	30	78%
Brokerage & Investment Banking	30	76%
Computers/Peripherals	42	71%
Bank (Money Center)	7	68%
Cable TV	10	68%
Food Wholesalers	14	67%
Advertising	58	67%
Oil/Gas Distribution	23	66%
Rubber& Tires	3	65%
Transportation (Railroads)	4	65%
Real Estate (Operations & Services)	60	64%
Retail (Grocery and Food)	13	64%
Retail (Special Lines)	78	64%
Recreation	57	62%
Insurance (Life)	27	61%
Trucking	35	61%
Packaging & Container	25	61%
Power	48	60%
Telecom. Services	49	60%
Telecom (Wireless)	16	60%
R.E.I.T.	223	60%
Auto & Truck	31	59%
Utility (General)	15	59%
Household Products	127	58%
Office Equipment & Services	16	58%
Environmental & Waste Services	62	57%
Utility (Water)	16	57%
Retail (Distributors)	69	57%
Transportation	18	57%
Green & Renewable Energy	19	57%
Total / Average	**1,349**	**65%**

Many of the industries shown here, like public utilities, are generally well-established industries with large amounts of capital assets. The shareholders of these industries

generally prefer these higher debt ratios in order to maximize their profits. There are several notable industries that are relatively comparable to public utilities. For example, the Cable TV, Telecom, Power, and Water Utility industries all have an average debt ratio of about 60%.

Q. Are you basing your capital structure recommendation on any industry or company outside of the proxy group?

A. No. My recommended capital structure of 50% debt and 50% equity is based upon, though not equal to the proxy group's average capital structure consisting of 51% debt and 49% equity.[101] I present the capital structures observed in other competitive industries to show it is not uncommon for firms to operate with relatively higher amounts of leverage.

B. The Hamada Model: Capital Structure's Effect on ROE

Q. Have you considered the impact that your capital structure recommendation could have on the company's indicated cost of equity?

A. Yes. I assessed the impact of my capital structure proposal of 50% debt and 50% equity on the Company's cost of equity estimate by using the Hamada model.

Q. What is the premise of the Hamada model?

A. The Hamada formula can be used to analyze changes in a firm's cost of capital as it adds or reduces financial leverage, or debt, in its capital structure by starting with an "unlevered" beta and then "relevering" the beta at different debt ratios. As leverage increases, equity investors bear increasing amounts of risk, leading to higher betas. Before the effects of financial leverage can be accounted for, however, the effects of leverage must first be

[101] Exhibit DJG-13.

removed, which is accomplished through the Hamada formula. The Hamada formula for unlevering beta is stated as follows:[102]

Equation 5:
Hamada Formula

$$\beta_U = \frac{\beta_L}{\left[1 + (1 - T_c)\left(\frac{D}{E}\right)\right]}$$

where: β_U = *unlevered beta (or "asset" beta)*
β_L = *average levered beta of proxy group*
T_C = *corporate tax rate*
D = *book value of debt*
E = *book value of equity*

Using this equation, the beta for the firm can be unlevered, and then "relevered" based on various debt ratios (by rearranging this equation to solve for β_L).

Q. Please summarize the results of the Hamada formula based on your proposed capital structure for the company.

A. The average capital structure of the gas proxy group consists of 51% debt and 49% equity. Because PECO Gas's debt ratio is notably lower than that of the proxy group, when PECO is "relevered" to match the gas proxy group, it results in a lower ROE than if PECO Gas had been operating with a capital structure equal to that of the proxy group. This makes sense because PECO Gas has less financial risk relative to the proxy group due to the lower amount of debt in its capital structure. The results of my Hamada model are presented in the following figure.

[102] Damodaran *supra* n. 22 at 197. This formula was originally developed by Hamada in 1972.

Figure 10:
Hamada Model ROE

Unlevering Beta	
Proxy Debt Ratio	51%
Proxy Equity Ratio	49%
Proxy Debt / Equity Ratio	1.0
Tax Rate	21%
Equity Risk Premium	5.2%
Risk-free Rate	4.7%
Proxy Group Beta	0.88
Unlevered Beta	0.48

Relevered Betas and Cost of Equity Estimates

Debt Ratio	D/E Ratio	Levered Beta	Cost of Equity
0%	0.0	0.48	7.2%
20%	0.3	0.58	7.7%
30%	0.4	0.65	8.0%
40%	0.7	0.74	8.5%
47%	0.9	0.82	8.9%
51%	1.0	0.88	9.2%
60%	1.5	1.06	10.1%

According to the results of the Hamada model, if the Commission were to adopt the Company's proposed capital structure, its indicated cost of equity estimate (under the CAPM) would be 8.9%.

Q: What is your ultimate conclusion?

A. It would be reasonable based on the foregoing to reflect a capital structure that is 51% debt and 49% equity, the gas proxy group average. However, for ratemaking purposes, I have chosen to reflect a 50% debt and 50% equity capital structure as a reasonable capital structure that begins to pull the Company closer to the reality that should be reflected for

ratemaking purposes. In my view, the Commission must exercise the restraint that a competitive market would and not allow the Company to artificially inflate its capital structure to increase its revenue requirement. A 50% debt and 50% equity capital structure for ratemaking strikes a reasonable balance.

X. CONCLUSION

Q. Please summarize your analyses and conclusions regarding PECO's cost of equity.

A. A utility's awarded ROE should be based on its cost of equity, which can be estimated using various financial models. In estimating PECO Gas's cost of equity, I performed a cost of equity analysis on a proxy group of gas utility companies using the two most widely-used and widely-accepted financial models for calculating cost of equity in utility rate proceedings: the CAPM and DCF Model. I conducted two variations of both the CAPM and DCF Model. The results are shown in the figure below.

Figure 11:
Cost of Equity Model Summary

Model	Cost of Equity
CAPM (at Proxy Debt Ratio)	9.3%
Hamada CAPM (at Company-Proposed Debt Ratio)	8.9%
DCF Model (Analyst Growth)	8.7%
DCF Model (Sustainable Growth)	7.8%
Average all Models	**8.7%**
Average (without Sustainable DCF)	**9.0%**

As shown in this figure, the average result of my models is 8.7%, and if the results of the sustainable growth variation of the DCF Model are removed from the calculation, the average result of my models is 9.0%.

Q. Please summarize your recommendation to the Commission regarding PECO's authorized rate of return.

A. I am recommending an authorized ROE of 9.0% for PECO. I also recommend the Commission impute a capital structure for PECO for ratemaking purposes consisting of 50% debt and 50% equity.

Q. Please describe why the Commission should reject Mr. Moul's ROE recommendation.

A. According to Mr. Moul, his proposed 11.15% ROE is composed of a 10.80% cost of equity determined from the results of my proxy group analysis and 0.15% for a management performance adder. Mr. Moul also adds 20 basis points to recognize the higher risk of the PECO Gas Division. Mr. Moul also states that his cost of equity estimate is derived from a blended rate plus a risk adjustment applicable to the Gas Division to reflect the risk reducing benefits that arise from PECO being a combination utility. It is unreasonable to apply a management performance adder to a cost of equity estimation or an authorized ROE. Second, there is no need to have a "blended rate" for PECO Gas. There are separate proxy groups in the Electric and Gas cases that have different risk profiles and should result in different cost of equity estimates (as they do). Finally, the average beta of the Gas Division rate case is less than the average beta of the proxy group in the Electric Division case. Thus, there is an objective basis on which to conclude that PECO Gas has less risk than PECO Electric in direct contradiction to Mr. Moul's claims that we should recognize the additional risks of the Gas Division. Thus, Mr. Moul's recommended ROE for PECO Gas has no logical or supported connection with the results of his models in this case. In

addition, since his financial models are based on upwardly-biased and unreasonable, the Commission should reject Mr. Moul's proposed ROE in this case.

Q. Please summarize your recommendation to the Commission regarding PECO's authorized rate of return.

A. I am recommending an authorized ROE of 9.0% for PECO Gas. I also recommend the Commission impute a capital structure for PECO Gas for ratemaking purposes consisting of 50% debt and 50% equity. My recommendations are summarized in the following table.

Figure 12:
Awarded Rate of Return Recommendation

Capital Component	Proposed Ratio	Cost Rate	Weighted Cost
Long-Term Debt	50.0%	4.58%	2.3%
Common Equity	50.0%	9.00%	4.5%
Total	100.0%		6.79%

As shown in this figure, adopting my proposed adjustments to the Company's ROE and capital structure would result in a weighted average authorized rate of return of 6.79%.

Q. Does this conclude your testimony?

A. Yes.

APPENDIX A:

DISCOUNTED CASH FLOW MODEL THEORY

The Discounted Cash Flow ("DCF") Model is based on a fundamental financial model called the "dividend discount model," which maintains that the value of a security is equal to the present value of the future cash flows it generates. Cash flows from common stock are paid to investors in the form of dividends. There are several variations of the DCF Model. In its most general form, the DCF Model is expressed as follows:[1]

Equation 1:
General Discounted Cash Flow Model

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \cdots + \frac{D_n}{(1+k)^n}$$

where: P_0 = *current stock price*
$D_1 \ldots D_n$ = *expected future dividends*
k = *discount rate / required return*

The General DCF Model would require an estimation of an infinite stream of dividends. Since this would be impractical, analysts use more feasible variations of the General DCF Model, which are discussed further below.

The DCF Models rely on the following four assumptions:

1. Investors evaluate common stocks in the classical valuation framework; that is, they trade securities rationally at prices reflecting their perceptions of value;
2. Investors discount the expected cash flows at the same rate (K) in every future period;

[1] *See* Zvi Bodie, Alex Kane & Alan J. Marcus, *Essentials of Investments* 410 (9th ed., McGraw-Hill/Irwin 2013).

3. The K obtained from the DCF equation corresponds to that specific stream of future cash flows alone; and

4. Dividends, rather than earnings, constitute the source of value.

The General DCF can be rearranged to make it more practical for estimating the cost of equity. Regulators typically rely on some variation of the Constant Growth DCF Model, which is expressed as follows:

Equation 2:
Constant Growth Discounted Cash Flow Model

$$K = \frac{D_1}{P_0} + g$$

where: K = *discount rate / required return on equity*
D_1 = *expected dividend per share one year from now*
P_0 = *current stock price*
g = *expected growth rate of future dividends*

Unlike the General DCF Model, the Constant Growth DCF Model solves directly for the required return (K). In addition, by assuming that dividends grow at a constant rate, the dividend stream from the General DCF Model may be essentially substituted with a term representing the expected constant growth rate of future dividends (g). The Constant Growth DCF Model may be considered in two parts. The first part is the dividend yield (D_1/P_0), and the second part is the growth rate (g). In other words, the required return in the DCF Model is equivalent to the dividend yield plus the growth rate.

In addition to the four assumptions listed above, the Constant Growth DCF Model relies on four additional assumptions as follows:[2]

[2] *Id.* at 254-56.

1. The discount rate (K) must exceed the growth rate (g);
2. The dividend growth rate (g) is constant in every year to infinity;
3. Investors require the same return (K) in every year; and
4. There is no external financing; that is, growth is provided only by the retention of earnings.

Because the growth rate in this model is assumed to be constant, it is important not to use growth rates that are unreasonably high. In fact, the constant growth rate estimate for a regulated utility with a defined service territory should not exceed the growth rate for the economy in which it operates.

APPENDIX B:

CAPITAL ASSET PRICING MODEL THEORY

The Capital Asset Pricing Model ("CAPM") is a market-based model founded on the principle that investors demand higher returns for incurring additional risk.[1] The CAPM estimates this required return. The CAPM relies on the following assumptions:

1. Investors are rational, risk-adverse, and strive to maximize profit and terminal wealth;
2. Investors make choices based on risk and return. Return is measured by the mean returns expected from a portfolio of assets; risk is measured by the variance of these portfolio returns;
3. Investors have homogenous expectations of risk and return;
4. Investors have identical time horizons;
5. Information is freely and simultaneously available to investors.
6. There is a risk-free asset, and investors can borrow and lend unlimited amounts at the risk-free rate;
7. There are no taxes, transaction costs, restrictions on selling short, or other market imperfections; and,
8. Total asset quality is fixed, and all assets are marketable and divisible.[2]

[1] William F. Sharpe, *A Simplified Model for Portfolio Analysis* 277-93 (Management Science IX 1963); *see also* John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 208 (3rd ed., South Western Cengage Learning 2010).

[2] *Id*.

While some of these assumptions may appear to be restrictive, they do not outweigh the inherent value of the model. The CAPM has been widely used by firms, analysts, and regulators for decades to estimate the cost of equity capital.

The basic CAPM equation is expressed as follows:

Equation 1:
Capital Asset Pricing Model

$$K = R_F + \beta_i(R_M - R_F)$$

where: K = *required return*
R_F = *risk-free rate*
β = *beta coefficient of asset i*
R_M = *required return on the overall market*

There are essentially three terms within the CAPM equation that are required to calculate the required return (K): (1) the risk-free rate (R_F); (2) the beta coefficient (β); and (3) the equity risk premium ($R_M - R_F$), which is the required return on the overall market less the risk-free rate.

Raw Beta Calculations and Adjustments

A stock's beta equals the covariance of the asset's returns with the returns on a market portfolio, divided by the portfolio's variance, as expressed in the following formula:[3]

Equation 2:
Beta

$$\beta_i = \frac{\sigma_{im}}{\sigma_m^2}$$

where: β_i = *beta of asset i*
σ_{im} = *covariance of asset i returns with market portfolio returns*
σ^2_m = *variance of market portfolio*

[3] John R. Graham, Scott B. Smart & William L. Megginson, *Corporate Finance: Linking Theory to What Companies Do* 180-81 (3rd ed., South Western Cengage Learning 2010).

Betas that are published by various research firms are typically calculated through a regression analysis that considers the movements in price of an individual stock and movements in the price of the overall market portfolio. The betas produced by this regression analysis are considered "raw" betas. There is empirical evidence that raw betas should be adjusted to account for beta's natural tendency to revert to an underlying mean.[4] Some analysts use an adjustment method proposed by Blume, which adjusts raw betas toward the market mean of one.[5] While the Blume adjustment method is popular due to its simplicity, it is arguably arbitrary, and some would say not useful at all. According to Dr. Damodaran: "While we agree with the notion that betas move toward 1.0 over time, the [Blume adjustment] strikes us as arbitrary and not particularly useful."[6] The Blume adjustment method is especially arbitrary when applied to industries with consistently low betas, such as the utility industry. For industries with consistently low betas, it is better to employ an adjustment method that adjusts raw betas toward an industry average, rather than the market average. Vasicek proposed such a method, which is preferable to the Blume adjustment method because it allows raw betas to be adjusted toward an industry average, and also accounts for the statistical accuracy of the raw beta calculation.[7] In other words, "[t]he Vasicek adjustment seeks to overcome one weakness of the Blume model by not applying the same adjustment to every security; rather, a security-specific adjustment is made depending on the

[4] *See* Michael J. Gombola and Douglas R. Kahl, *Time-Series Processes of Utility Betas: Implications for Forecasting Systematic Risk* 84-92 (Financial Management Autumn 1990).

[5] See Marshall Blume, *On the Assessment of Risk*, Vol. 26, No. 1, The Journal of Finance 1 (1971).

[6] *See* Aswath Damodaran, *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset* 187 (3rd ed., John Wiley & Sons, Inc. 2012).

[7] Oldrich A. Vasicek, *A Note on Using Cross-Sectional Information in Bayesian Estimation of Security Betas* 1233-1239 (Journal of Finance, Vol. 28, No. 5, December 1973).

statistical quality of the regression."[8] The Vasicek beta adjustment equation is expressed as follows:

Equation 3:
Vasicek Beta Adjustment

$$\beta_{i1} = \frac{\sigma^2_{\beta i0}}{\sigma^2_{\beta 0} + \sigma^2_{\beta_{i0}}}\beta_0 + \frac{\sigma^2_{\beta 0}}{\sigma^2_{\beta 0} + \sigma^2_{\beta_{i0}}}\beta_{i0}$$

where: β_{i1} = *Vasicek adjusted beta for security i*
β_{i0} = *historical beta for security i*
β_0 = *beta of industry or proxy group*
$\sigma^2_{\beta 0}$ = *variance of betas in the industry or proxy group*
$\sigma^2_{\beta i0}$ = *square of standard error of the historical beta for security i*

The Vasicek beta adjustment is an improvement on the Blume model because the Vasicek model does not apply the same adjustment to every security. A higher standard error produced by the regression analysis indicates a lower statistical significance of the beta estimate. Thus, a beta with a high standard error should receive a greater adjustment than a beta with a low standard error. As stated in Ibbotson:

> While the Vasicek formula looks intimidating, it is really quite simple. The adjusted beta for a company is a weighted average of the company's historical beta and the beta of the market, industry, or peer group. How much weight is given to the company and historical beta depends on the statistical significance of the company beta statistic. If a company beta has a low standard error, then it will have a higher weighting in the Vasicek formula. If a company beta has a high standard error, then it will have lower weighting in the Vasicek formula. An advantage of this adjustment methodology is that it does not force an adjustment to the market as a whole. Instead, the adjustment can be toward an industry or some other peer group. *This is most useful in looking at companies in industries that on average have high or low betas*.[9]

[8] 2012 Ibbotson Stocks, Bonds, Bills, and Inflation Valuation Yearbook 77-78 (Morningstar 2012).

[9] *Id*. at 78 (emphasis added).

Thus, the Vasicek adjustment method is statistically more accurate, and is the preferred method to use when analyzing companies in an industry that has inherently low betas, such as the utility industry. The Vasicek method was also confirmed by Gombola, who conducted a study specifically related to utility companies. Gombola concluded that "[t]he strong evidence of auto-regressive tendencies in *utility* betas lends support to the application of adjustment procedures such as the . . . adjustment procedure presented by Vasicek."[10] Gombola also concluded that adjusting raw betas toward the market mean of 1.0 is *too high*, and that "[i]nstead, they should be adjusted toward a value that is less than one."[11] In conducting the Vasicek adjustment on betas in previous cases, it reveals that utility betas are even lower than those published by Value Line.[12] Gombola's findings are particular important here, because his study was conducted specifically on utility companies. This evidence indicates that using Value Line's betas in a CAPM cost of equity estimate for a utility company may lead to overestimated results. Regardless, adjusting betas to a level that is *higher* than Value Line's betas is not reasonable, and it would produce CAPM cost of equity results that are too high.

[10] Michael J. Gombola and Douglas R. Kahl, *Time-Series Processes of Utility Betas: Implications for Forecasting Systematic Risk* 92 (Financial Management Autumn 1990) (emphasis added).

[11] *Id*. at 91-92.

[12] *See e.g.* Responsive Testimony of David J. Garrett, filed March 21, 2016 in Cause No. PUD 201500273 before the Corporation Commission of Oklahoma (the Company's 2015 rate case), at pp. 56 – 59.

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EDUCATION

University of Oklahoma — Norman, OK
Master of Business Administration — 2014
Areas of Concentration: Finance, Energy

University of Oklahoma College of Law — Norman, OK
Juris Doctor — 2007
Member, American Indian Law Review

University of Oklahoma — Norman, OK
Bachelor of Business Administration — 2003
Major: Finance

PROFESSIONAL DESIGNATIONS

Society of Depreciation Professionals
Certified Depreciation Professional (CDP)

Society of Utility and Regulatory Financial Analysts
Certified Rate of Return Analyst (CRRA)

WORK EXPERIENCE

Resolve Utility Consulting PLLC — Oklahoma City, OK
Managing Member — 2016 – Present
Provide expert analysis and testimony specializing in depreciation and cost of capital issues for clients in utility regulatory proceedings.

Oklahoma Corporation Commission — Oklahoma City, OK
Public Utility Regulatory Analyst — 2012 – 2016
Assistant General Counsel — 2011 – 2012
Represented commission staff in utility regulatory proceedings and provided legal opinions to commissioners. Provided expert analysis and testimony in depreciation, cost of capital, incentive compensation, payroll and other issues.

Perebus Counsel, PLLC — Oklahoma City, OK
Managing Member — 2009 – 2011
Represented clients in the areas of family law, estate planning, debt negotiations, business organization, and utility regulation.

Moricoli & Schovanec, P.C. — Oklahoma City, OK
Associate Attorney — 2007 – 2009
Represented clients in the areas of contracts, oil and gas, business structures and estate administration.

TEACHING EXPERIENCE

University of Oklahoma — Norman, OK
Adjunct Instructor – "Conflict Resolution" — 2014 – 2021
Adjunct Instructor – "Ethics in Leadership"

Rose State College — Midwest City, OK
Adjunct Instructor – "Legal Research" — 2013 – 2015
Adjunct Instructor – "Oil & Gas Law"

PROFESSIONAL ASSOCIATIONS

Oklahoma Bar Association — 2007 – Present

Society of Depreciation Professionals — 2014 – Present
Board Member – President — 2017
Participate in management of operations, attend meetings, review performance, organize presentation agenda.

Society of Utility Regulatory Financial Analysts — 2014 – Present

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utilities Commission of Nevada	Southwest Gas Corporation	23-09012	Depreciation rates, service lives, net salvage	Bureau of Consumer Protection
Public Utilities Commission of the State of California	Southern California Edison	A.23-05-010	Depreciation rates, service lives, net salvage	The Utility Reform Network
Pennsylvania Public Utility Commission	Pennsylvania-American Water Company	R-2023-3043189 R-2023-3043190	Cost of capital, depreciation rates, net salvage	Pennsylvania Office of Consumer Advocate
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45967	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Massachusetts Department of Public Utilities	Massachusetts Electric Company and Nantucket Electric Company D/B/A National Grid	D.P.U. 23-150	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Iowa Utilities Board	Interstate Power and Light Company	RPU-2023-0002	Depreciation rates, service lives, net salvage	Office of Consumer Advocate
Public Service Commission of South Carolina	Duke Energy Carolinas	2023-388-E 2023-403-E	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Indiana Utility Regulatory Commission	Citizens Energy Group	45988	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Railroad Commission of Texas	CenterPoint Energy Resources Corp.	OS-23-00015513	Depreciation rates, service lives, net salvage	Alliance of CenterPoint Municipalities
Indiana Utility Regulatory Commission	CenterPoint Energy Indiana South	45990	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Delaware Public Service Commission	Artesian Water Company, Inc.	23-0601	Cost of capital, depreciation rates, net salvage	Division of the Public Advocate
Maryland Public Service Commission	Washington Gas Light Company	9704	Cost of capital, awarded rate of return, capital structure	Maryland Office of People's Counsel
Delaware Public Service Commission	Veolia Water Delaware Inc.	23-0598	Cost of capital, awarded rate of return, capital structure	Division of the Public Advocate
Connecticut Public Utilities Regulatory Authority	United Illuminating Company	22-08-08	Depreciation rates, service lives, net salvage	PURA Staff

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 54634	Depreciation rates, service lives, net salvage	Alliance of Xcel Municipalities
Railroad Commission of Texas	SiEnergy, LP	OS-23-00013504	Depreciation rates, service lives, net salvage	Texas municipal intervenor group
Pennsylvania Public Utility Commission	Aqua Pennsylvania, Inc.	A-2022-3034143	Fair market value review	Pennsylvania Office of Consumer Advocate
Wyoming Public Service Commission	Rocky Mountain Power	20000-633-ER-23	Cost of capital and authorized rate of return	Wyoming Industrial Energy Consumers
Maryland Public Service Commission	Potomac Electric Power Company	9702	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Public Utilities Commission of Nevada	Nevada Power Company d/b/a NV Energy	23-06007 23-06008	Depreciation rates, service lives, net salvage	Bureau of Consumer Protection
Public Utilities Commission of Ohio	Northeast Ohio Natural Gas Corp.	23-0154-GA-AIR	Cost of capital, awarded rate of return, capital structure	Office of the Ohio Consumers' Counsel
New York State Public Service Commission	The Brooklyn Untion Gas Company and Keyspan Gas East Corporation d/b/a Nation Grid	23-G-0225 23-G-0226	Depreciation rates, service lives, net salvage, depreciation reserve	The City of New York
Idaho Public Utilities Commission	Idaho Power Company	IPC-E-23-11	Cost of capital, awarded rate of return, capital structure	Micron Technology, Inc.
Indiana Utility Regulatory Commission	Indiana Michigan Power Company	45933	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Massachusetts Department of Public Utilities	Fitchburg Gas and Electric Company d/b/a Unitil	D.P.U. 23-80; D.P.U. 23-81	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Kansas Corporation Commission	Evergy Kansas Central, Evergy Kansas South, and Evergy Metro	23-EKCE-775-RTS	Depreciation rates, service lives, net salvage	The Citizens' Utility Ratepayer Board
Delaware Public Service Commission	Delmarva Power & Light Company	22-0897	Cost of capital, awarded rate of return, capital structure	Division of the Public Advocate
Connecticut Public Utilities Regulatory Authority	Connecticut Water Company	23-08-32	Depreciation rates, service lives, net salvage	PURA Staff

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Connecticut Public Utilities Regulatory Authority	Connecticut Natural Gas Corporation and The Southern Connecticut Gas Company	23-11-02	Depreciation rates, service lives, net salvage	PURA Staff
Railroad Commission of Texas	Atmos Pipeline – Texas	OS-23-00013758	Depreciation rates, service lives, net salvage	Atmos Texas Municipalities
Wyoming Public Service Commission	Black Hills Wyoming Gas	30026-78-GR-23	Depreciation rates, service lives, net salvage	Wyoming Office of Consumer Advocate
Indiana Utility Regulatory Commission	Indianapolis Power & Light Company d/b/a AES Indiana	45911	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
New Mexico Public Regulation Commission	Southwestern Public Service Company	22-00286-UT	Cost of capital, depreciation rates, net salvage	The New Mexico Large Customer Group; Occidental Permian
Public Utilities Commission of the State of California	Southern California Gas Company San Diego Gas & Electric Company	A.22-05-015 A.22-05-016	Depreciation rates, service lives, net salvage	The Utility Reform Network
Public Utilties Commission of the State of Colorado	Public Service Company of Colorado	22AL-0530E 22AL-0478E	Cost of capital, awarded rate of return, capital structure	Colorado Energy Consumers
New Mexico Public Regulatory Commission	Public Service Company of New Mexico	22-00270-UT	Cost of capital, depreciation rates, net salvage	The Albuquerque Bernalillo County Water Utility Authority
Florida Public Service Commission	Peoples Gas System	20230023-GU 20220219-GU 20220212-GU	Cost of capital, depreciation rates, net salvage	Florida Office of Public Counsel
Maryland Public Service Commission	Potomac Edison Company	9695	Cost of capital, depreciation rates, net salvage	Maryland Office of People's Counsel
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	2022.11.099	Depreciation rates, service lives, net salvage	Montana Consumer Counsel and Denbury Onshore
Indiana Utility Regulatory Commission	Indiana-American Water Company	45870	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Service Commission of South Carolina	Dominion Energy South Carolina	2023-70-G	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Maryland Public Service Commission	Columbia Gas of Maryland	9701	Cost of capital, awarded rate of return, capital structure	Maryland Office of People's Counsel

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Pennsylvania Public Utility Commission	Columbia Water Company	R-2023-3040258	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Maryland Public Service Commission	Baltimore Gas and Electric Company	9692	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Arizona Corporation Commission	Arizona Public Service Company	E-01345A-22-0144	Cost of capital, awarded rate of return, capital structure	Residential Utility Consumer Office
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 2022-000093	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Public Service Commission of the State of Montana	NorthWestern Energy	2022.07.078	Cost of capital, depreciation rates, net salvage	Montana Consumer Counsel and Montana Large Customer Group
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45772	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor
Public Service Commission of South Carolina	Duke Energy Progress	2022-254-E	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Wyoming Public Service Commission	Cheyenne Light, Fuel and Power Company D/B/A Black Hills Energy	20003-214-ER-22	Depreciation rates, service lives, net salvage	Wyoming Office of Consumer Advocate
Railroad Commission of Texas	Texas Gas Services Company	OS-22-00009896	Depreciation rates, service lives, net salvage	The City of El Paso
Public Utilities Commission of Nevada	Sierra Pacific Power Company	22-06014	Depreciation rates, service lives, net salvage	Bureau of Consumer Protection
Washington Utilities & Transportation Commission	Puget Sound Energy	UE-220066 UG-220067 UG-210918	Depreciation rates, service lives, net salvage	Washington Office of Attorney General
Public Utility Commission of Texas	Oncor Electric Delivery Company LLC	PUC 53601	Depreciation rates, service lives, net salvage	Alliance of Oncor Cities
Florida Public Service Commission	Florida Public Utilities Company	20220067-GU	Cost of capital, depreciation rates	Florida Office of Public Counsel
Public Utility Commission of Texas	Entergy Texas, Inc.	PUC 53719	Depreciation rates, decommissioning costs	Texas Municipal Group

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Florida Public Service Commission	Florida City Gas	2020069-GU	Cost of capital, depreciation rates	Florida Office of Public Counsel
Connecticut Public Utilities Regulatory Authority	Aquarion Water Company of Connecticut	22-07-01	Depreciation rates, service lives, net salvage	PURA Staff
Washington Utilities & Transportation Commission	Avista Corporation	UE-220053 UG-220054 UE-210854	Cost of capital, awarded rate of return, capital structure	Washington Office of Attorney General
Federal Energy Regulatory Commission	ANR Pipeline Company	RP22-501-000	Depreciation rates, service lives, net salvage	Ascent Resources - Utica, LLC
Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania, Inc.	R-2022-3031211	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Service Commission of South Carolina	Piedmont Natural Gas Company	2022-89-G	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Pennsylvania Public Utility Commission	UGI Utilities, Inc. - Gas Division	R-2021-3030218	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Utilities Commission of the State of California	Pacific Gas & Electric Company	A.21-06-021	Depreciation rates, service lives, net salvage	The Utility Reform Network
Pennsylvania Public Utility Commission	PECO Energy Company - Gas Division	R-2022-3031113	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 202100164	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Massachusetts Department of Public Utilities	NSTAR Electric Company D/B/A Eversource Energy	D.P.U. 22-22	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Michigan Public Service Company	DTE Electric Company	U-20836	Cost of capital, awarded rate of return, capital structure	Michigan Environmental Council and Citizens Utility Board of Michigan
New York State Public Service Commission	Consolidated Edison Company of New York, Inc.	22-E-0064 22-G-0065	Depreciation rates, service lives, net salvage, depreciation reserve	The City of New York
Pennsylvania Public Utility Commission	Aqua Pennsylvania Wastewater / East Whiteland Township	A-2021-3026132	Fair market value estimates for wastewater assets	Pennsylvania Office of Consumer Advocate

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Service Commission of South Carolina	Kiawah Island Utility, Inc.	2021-324-WS	Cost of capital, awarded rate of return, capital structure	South Carolina Office of Regulatory Staff
Pennsylvania Public Utility Commission	Aqua Pennsylvania Wastewater / Willistown Township	A-2021-3027268	Fair market value estimates for wastewater assets	Pennsylvania Office of Consumer Advocate
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45621	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Arkansas Public Service Commission	Southwestern Electric Power Company	21-070-U	Cost of capital, depreciation rates, net salvage	Western Arkansas Large Energy Consumers
Federal Energy Regulatory Commission	Southern Star Central Gas Pipeline	RP21-778-002	Depreciation rates, service lives, net salvage	Consumer-Owned Shippers
Railroad Commission of Texas	Participating Texas gas utilities in consolidated proceeding	OS-21-00007061	Securitization of extraordinary gas costs arising from winter storms	The City of El Paso
Public Service Commission of South Carolina	Palmetto Wastewater Reclamation, Inc.	2021-153-S	Cost of capital, awarded rate of return, capital structure, ring-fencing	South Carolina Office of Regulatory Staff
Public Utilties Commission of the State of Colorado	Public Service Company of Colorado	21AL-0317E	Cost of capital, depreciation rates, net salvage	Colorado Energy Consumers
Pennsylvania Public Utility Commission	City of Lancaster - Water Department	R-2021-3026682	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 51802	Depreciation rates, service lives, net salvage	The Alliance of Xcel Municipalities
Pennsylvania Public Utility Commission	The Borough of Hanover - Hanover Municipal Waterworks	R-2021-3026116	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Maryland Public Service Commission	Delmarva Power & Light Company	9670	Cost of capital and authorized rate of return	Maryland Office of People's Counsel
Oklahoma Corporation Commission	Oklahoma Natural Gas Company	PUD 202100063	Cost of capital, awarded rate of return, capital structure	Oklahoma Industrial Energy Consumers
Indiana Utility Regulatory Commission	Indiana Michigan Power Company	45576	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utility Commission of Texas	El Paso Electric Company	PUC 52195	Depreciation rates, service lives, net salvage	The City of El Paso
Pennsylvania Public Utility Commission	Aqua Pennsylvania	R-2021-3027385	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Public Service Commission of the State of Montana	NorthWestern Energy	D2021.02.022	Cost of capital, awarded rate of return, capital structure	Montana Consumer Counsel
Pennsylvania Public Utility Commission	PECO Energy Company	R-2021-3024601	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
New Mexico Public Regulation Commission	Southwestern Public Service Company	20-00238-UT	Cost of capital and authorized rate of return	The New Mexico Large Customer Group; Occidental Permian
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 202100055	Cost of capital, depreciation rates, net salvage	Oklahoma Industrial Energy Consumers
Pennsylvania Public Utility Commission	Duquesne Light Company	R-2021-3024750	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Maryland Public Service Commission	Columbia Gas of Maryland	9664	Cost of capital and authorized rate of return	Maryland Office of People's Counsel
Indiana Utility Regulatory Commission	Southern Indiana Gas Company, d/b/a Vectren Energy Delivery of Indiana, Inc.	45447	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utility Commission of Texas	Southwestern Electric Power Company	PUC 51415	Depreciation rates, service lives, net salvage	Cities Advocating Reasonable Deregulation
New Mexico Public Regulatory Commission	Avangrid, Inc., Avangrid Networks, Inc., NM Green Holdings, Inc., PNM, and PNM Resources	20-00222-UT	Ring fencing and capital structure	The Albuquerque Bernalillo County Water Utility Authority
Indiana Utility Regulatory Commission	Indiana Gas Company, d/b/a Vectren Energy Delivery of Indiana, Inc.	45468	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utilities Commission of Nevada	Nevada Power Company and Sierra Pacific Power Company, d/b/a NV Energy	20-07023	Construction work in progress	MGM Resorts International, Caesars Enterprise Services, LLC, and the Southern Nevada Water Authority
Massachusetts Department of Public Utilities	Boston Gas Company, d/b/a National Grid	D.P.U. 20-120	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Service Commission of the State of Montana	ABACO Energy Services, LLC	D2020.07.082	Cost of capital and authorized rate of return	Montana Consumer Counsel
Maryland Public Service Commission	Washington Gas Light Company	9651	Cost of capital and authorized rate of return	Maryland Office of People's Counsel
Florida Public Service Commission	Utilities, Inc. of Florida	20200139-WS	Cost of capital and authorized rate of return	Florida Office of Public Counsel
New Mexico Public Regulatory Commission	El Paso Electric Company	20-00104-UT	Cost of capital, depreciation rates, net salvage	City of Las Cruces and Doña Ana County
Public Utilities Commission of Nevada	Nevada Power Company	20-06003	Cost of capital, awarded rate of return, capital structure, earnings sharing	MGM Resorts International, Caesars Enterprise Services, LLC, Wynn Las Vegas, LLC, Smart Energy Alliance, and Circus Circus Las Vegas, LLC
Wyoming Public Service Commission	Rocky Mountain Power	20000-578-ER-20	Cost of capital and authorized rate of return	Wyoming Industrial Energy Consumers
Florida Public Service Commission	Peoples Gas System	20200051-GU 20200166-GU	Cost of capital, depreciation rates, net salvage	Florida Office of Public Counsel
Wyoming Public Service Commission	Rocky Mountain Power	20000-539-EA-18	Depreciation rates, service lives, net salvage	Wyoming Industrial Energy Consumers
Public Service Commission of South Carolina	Dominion Energy South Carolina	2020-125-E	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Pennsylvania Public Utility Commission	The City of Bethlehem	2020-3020256	Cost of capital, awarded rate of return, capital structure	Pennsylvania Office of Consumer Advocate
Railroad Commission of Texas	Texas Gas Services Company	GUD 10928	Depreciation rates, service lives, net salvage	Gulf Coast Service Area Steering Committee
Public Utilities Commission of the State of California	Southern California Edison	A.19-08-013	Depreciation rates, service lives, net salvage	The Utility Reform Network
Massachusetts Department of Public Utilities	NSTAR Gas Company	D.P.U. 19-120	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Georgia Public Service Commission	Liberty Utilities (Peach State Natural Gas)	42959	Depreciation rates, service lives, net salvage	Public Interest Advocacy Staff

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Florida Public Service Commission	Florida Public Utilities Company	20190155-EI 20190156-EI 20190174-EI	Depreciation rates, service lives, net salvage	Florida Office of Public Counsel
Illinois Commerce Commission	Commonwealth Edison Company	20-0393	Depreciation rates, service lives, net salvage	The Office of the Illinois Attorney General
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 49831	Depreciation rates, service lives, net salvage	Alliance of Xcel Municipalities
Public Service Commission of South Carolina	Blue Granite Water Company	2019-290-WS	Depreciation rates, service lives, net salvage	South Carolina Office of Regulatory Staff
Railroad Commission of Texas	CenterPoint Energy Resources	GUD 10920	Depreciation rates and grouping procedure	Alliance of CenterPoint Municipalities
Pennsylvania Public Utility Commission	Aqua Pennsylvania Wastewater / East Norriton Township	A-2019-3009052	Fair market value estimates for wastewater assets	Pennsylvania Office of Consumer Advocate
New Mexico Public Regulation Commission	Southwestern Public Service Company	19-00170-UT	Cost of capital and authorized rate of return	The New Mexico Large Customer Group; Occidental Permian
Indiana Utility Regulatory Commission	Duke Energy Indiana	45253	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor
Maryland Public Service Commission	Columbia Gas of Maryland	9609	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Washington Utilities & Transportation Commission	Avista Corporation	UE-190334	Cost of capital, awarded rate of return, capital structure	Washington Office of Attorney General
Indiana Utility Regulatory Commission	Indiana Michigan Power Company	45235	Cost of capital, depreciation rates, net salvage	Indiana Office of Utility Consumer Counselor
Public Utilities Commission of the State of California	Pacific Gas & Electric Company	18-12-009	Depreciation rates, service lives, net salvage	The Utility Reform Network
Oklahoma Corporation Commission	The Empire District Electric Company	PUD 201800133	Cost of capital, authorized ROE, depreciation rates	Oklahoma Industrial Energy Consumers and Oklahoma Energy Results
Arkansas Public Service Commission	Southwestern Electric Power Company	19-008-U	Cost of capital, depreciation rates, net salvage	Western Arkansas Large Energy Consumers

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Public Utility Commission of Texas	CenterPoint Energy Houston Electric	PUC 49421	Depreciation rates, service lives, net salvage	Texas Coast Utilities Coalition
Massachusetts Department of Public Utilities	Massachusetts Electric Company and Nantucket Electric Company	D.P.U. 18-150	Depreciation rates, service lives, net salvage	Massachusetts Office of the Attorney General, Office of Ratepayer Advocacy
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 201800140	Cost of capital, authorized ROE, depreciation rates	Oklahoma Industrial Energy Consumers and Oklahoma Energy Results
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	D2018.9.60	Depreciation rates, service lives, net salvage	Montana Consumer Counsel and Denbury Onshore
Indiana Utility Regulatory Commission	Northern Indiana Public Service Company	45159	Depreciation rates, grouping procedure, demolition costs	Indiana Office of Utility Consumer Counselor
Public Service Commission of the State of Montana	NorthWestern Energy	D2018.2.12	Depreciation rates, service lives, net salvage	Montana Consumer Counsel
Oklahoma Corporation Commission	Public Service Company of Oklahoma	PUD 201800097	Depreciation rates, service lives, net salvage	Oklahoma Industrial Energy Consumers and Wal-Mart
Nevada Public Utilities Commission	Southwest Gas Corporation	18-05031	Depreciation rates, service lives, net salvage	Nevada Bureau of Consumer Protection
Public Utility Commission of Texas	Texas-New Mexico Power Company	PUC 48401	Depreciation rates, service lives, net salvage	Alliance of Texas-New Mexico Power Municipalities
Oklahoma Corporation Commission	Oklahoma Gas & Electric Company	PUD 201700496	Depreciation rates, service lives, net salvage	Oklahoma Industrial Energy Consumers and Oklahoma Energy Results
Maryland Public Service Commission	Washington Gas Light Company	9481	Depreciation rates, service lives, net salvage	Maryland Office of People's Counsel
Indiana Utility Regulatory Commission	Citizens Energy Group	45039	Depreciation rates, service lives, net salvage	Indiana Office of Utility Consumer Counselor
Public Utility Commission of Texas	Entergy Texas, Inc.	PUC 48371	Depreciation rates, decommissioning costs	Texas Municipal Group
Washington Utilities & Transportation Commission	Avista Corporation	UE-180167	Depreciation rates, service lives, net salvage	Washington Office of Attorney General

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
New Mexico Public Regulation Commission	Southwestern Public Service Company	17-00255-UT	Cost of capital and authorized rate of return	HollyFrontier Navajo Refining; Occidental Permian
Public Utility Commission of Texas	Southwestern Public Service Company	PUC 47527	Depreciation rates, plant service lives	Alliance of Xcel Municipalities
Public Service Commission of the State of Montana	Montana-Dakota Utilities Company	D2017.9.79	Depreciation rates, service lives, net salvage	Montana Consumer Counsel
Florida Public Service Commission	Florida City Gas	20170179-GU	Cost of capital, depreciation rates	Florida Office of Public Counsel
Washington Utilities & Transportation Commission	Avista Corporation	UE-170485	Cost of capital and authorized rate of return	Washington Office of Attorney General
Wyoming Public Service Commission	Powder River Energy Corporation	10014-182-CA-17	Credit analysis, cost of capital	Private customer
Oklahoma Corporation Commission	Public Service Co. of Oklahoma	PUD 201700151	Depreciation, terminal salvage, risk analysis	Oklahoma Industrial Energy Consumers
Public Utility Commission of Texas	Oncor Electric Delivery Company	PUC 46957	Depreciation rates, simulated analysis	Alliance of Oncor Cities
Nevada Public Utilities Commission	Nevada Power Company	17-06004	Depreciation rates, service lives, net salvage	Nevada Bureau of Consumer Protection
Public Utility Commission of Texas	El Paso Electric Company	PUC 46831	Depreciation rates, interim retirements	City of El Paso
Idaho Public Utilities Commission	Idaho Power Company	IPC-E-16-24	Accelerated depreciation of North Valmy plant	Micron Technology, Inc.
Idaho Public Utilities Commission	Idaho Power Company	IPC-E-16-23	Depreciation rates, service lives, net salvage	Micron Technology, Inc.
Public Utility Commission of Texas	Southwestern Electric Power Company	PUC 46449	Depreciation rates, decommissioning costs	Cities Advocating Reasonable Deregulation
Massachusetts Department of Public Utilities	Eversource Energy	D.P.U. 17-05	Cost of capital, capital structure, and rate of return	Sunrun Inc.; Energy Freedom Coalition of America

Utility Regulatory Proceedings

Regulatory Agency	Utility Applicant	Docket Number	Issues Addressed	Parties Represented
Railroad Commission of Texas	Atmos Pipeline - Texas	GUD 10580	Depreciation rates, grouping procedure	City of Dallas
Public Utility Commission of Texas	Sharyland Utility Company	PUC 45414	Depreciation rates, simulated analysis	City of Mission
Oklahoma Corporation Commission	Empire District Electric Company	PUD 201600468	Cost of capital, depreciation rates	Oklahoma Industrial Energy Consumers
Railroad Commission of Texas	CenterPoint Energy Texas Gas	GUD 10567	Depreciation rates, simulated plant analysis	Texas Coast Utilities Coalition
Arkansas Public Service Commission	Oklahoma Gas & Electric Company	160-159-GU	Cost of capital, depreciation rates, terminal salvage	Arkansas River Valley Energy Consumers; Wal-Mart
Florida Public Service Commission	Peoples Gas	160-159-GU	Depreciation rates, service lives, net salvage	Florida Office of Public Counsel
Arizona Corporation Commission	Arizona Public Service Company	E-01345A-16-0036	Cost of capital, depreciation rates, terminal salvage	Energy Freedom Coalition of America
Nevada Public Utilities Commission	Sierra Pacific Power Company	16-06008	Depreciation rates, net salvage, theoretical reserve	Northern Nevada Utility Customers
Oklahoma Corporation Commission	Oklahoma Gas & Electric Co.	PUD 201500273	Cost of capital, depreciation rates, terminal salvage	Public Utility Division
Oklahoma Corporation Commission	Public Service Co. of Oklahoma	PUD 201500208	Cost of capital, depreciation rates, terminal salvage	Public Utility Division
Oklahoma Corporation Commission	Oklahoma Natural Gas Company	PUD 201500213	Cost of capital, depreciation rates, net salvage	Public Utility Division

Proxy Group Summary

Company	Ticker	Market Cap. ($ millions)	Market Category	Value Line Safety Rank	Financial Strength
Atmos Energy Corp	ATO	17,600	Large Cap	1	A
Chesapeake Utilities Corp	CPK	2,500	Mid Cap	2	A
New Jersey Resources Corporation	NJR	4,400	Mid Cap	2	A
NiSource Inc	NI	12,900	Large Cap	2	B++
Northwest Natural Holding Company	NWN	1,500	Small Cap	2	A
ONE Gas Inc	OGS	3,600	Mid Cap	2	B++
Southwest Gas Holdings Inc	SWX	5,400	Mid Cap	2	A
Spire Inc.	SR	3,600	Mid Cap	2	B++

Value Line Investment Survey

DCF - Stock and Index Prices

Ticker	^GSPC	ATO	CPK	NJR	NI	NWN	OGS	SWX	SR
30-day Average	5131	117.15	106.48	43.37	27.88	37.34	63.28	74.27	60.77
Standard Deviation	92.3	2.13	4.09	1.07	0.85	1.25	1.18	1.34	1.40
04/05/24	5204	116.23	103.22	42.78	26.93	35.95	63.07	73.93	59.34
04/08/24	5202	116.33	104.26	42.93	27.19	36.31	63.18	75.13	60.04
04/09/24	5210	116.64	104.85	42.92	27.38	36.23	63.65	74.54	60.30
04/10/24	5161	115.08	100.91	41.79	27.04	35.26	62.27	72.80	58.48
04/11/24	5199	114.38	100.72	41.87	26.99	35.61	62.07	72.43	58.69
04/12/24	5123	113.99	102.06	41.79	26.81	35.67	61.45	72.26	58.66
04/15/24	5062	113.06	100.50	41.58	26.57	35.27	61.34	71.71	58.39
04/16/24	5051	112.33	99.66	41.28	26.31	35.06	60.44	72.66	58.14
04/17/24	5022	114.56	100.75	41.55	26.89	35.43	60.82	72.97	58.18
04/18/24	5011	114.57	102.51	42.19	27.14	36.12	61.66	72.58	59.40
04/19/24	4967	117.20	104.81	43.36	27.32	37.20	63.73	72.88	60.91
04/22/24	5011	118.08	105.72	43.53	27.65	37.52	63.98	73.64	61.38
04/23/24	5071	117.67	105.67	43.44	27.67	37.82	63.85	73.94	61.17
04/24/24	5072	118.66	106.89	43.70	27.91	38.09	64.27	74.63	62.05
04/25/24	5048	118.17	106.17	43.30	27.83	38.17	63.88	75.33	61.75
04/26/24	5100	116.93	105.13	43.34	27.68	37.83	63.30	74.39	61.40
04/29/24	5116	118.64	106.33	43.48	27.90	38.23	63.96	74.02	61.61
04/30/24	5036	117.90	105.87	43.69	27.86	38.15	63.86	74.01	61.79
05/01/24	5018	118.66	107.14	44.07	28.10	38.17	64.39	74.00	61.90
05/02/24	5064	119.05	109.22	44.55	28.50	38.79	65.21	74.71	61.68
05/03/24	5128	119.32	110.05	44.70	28.54	38.63	64.78	74.52	61.31
05/06/24	5181	119.45	109.59	44.75	28.76	37.86	64.43	75.14	61.17
05/07/24	5188	120.34	110.87	44.85	29.05	38.37	64.17	75.67	61.81
05/08/24	5188	120.59	110.53	44.19	28.72	38.47	63.44	75.17	61.58
05/09/24	5214	119.69	111.40	44.33	28.90	38.36	63.64	76.33	61.67
05/10/24	5223	117.18	111.76	44.33	28.68	38.64	63.50	75.76	61.88
05/13/24	5221	116.33	110.37	44.12	28.80	38.48	63.16	75.22	62.20
05/14/24	5247	117.25	110.75	43.97	28.87	37.99	63.30	74.21	61.85
05/15/24	5308	117.81	112.78	44.12	29.13	38.15	63.51	76.11	62.01
05/16/24	5297	118.56	113.95	44.48	29.15	38.49	64.21	77.37	62.31

All prices are adjusted closing prices reported by Yahoo! Finance, http://finance.yahoo.com

DCF - Dividend Yields

Company	Ticker	[1] Annualized Dividend	[2] Stock Price	[3] Dividend Yield
Atmos Energy Corp	ATO	3.22	117.15	2.75%
Chesapeake Utilities Corp	CPK	2.56	106.48	2.40%
New Jersey Resources Corporation	NJR	1.68	43.37	3.87%
NiSource Inc	NI	1.06	27.88	3.80%
Northwest Natural Holding Company	NWN	1.95	37.34	5.22%
ONE Gas Inc	OGS	2.64	63.28	4.17%
Southwest Gas Holdings Inc	SWX	2.48	74.27	3.34%
Spire Inc.	SR	3.02	60.77	4.97%
Average		**$2.33**	**$66.32**	**3.82%**

[1] Yahoo Finance

[2] Average stock price from Exhibit DJG-3

[3] = [1] / [2]

DCF - Terminal Growth Rate Determinants

Terminal Growth Determinants	Rate	
Nominal GDP	3.8%	[1]
Real GDP	1.7%	[2]
PECO Load Growth (mmcf)	-1.2%	[3]
PECO Gas Customers	1.0%	[4]
Average	1.3%	
Long-Term Growth Ceiling	**3.8%**	

[1],[2] CBO, The 2024 Long-Term Budget Outlook, p. 34

[3], [4] Response to OCA-V-12(a)(b) (CAGR 2014-2023)

DCF - Final Result

Company	Ticker	[1] Dividend Yield	[2] Analyst Growth	[3] Sustainable Growth	[4] DCF Result (Analyst Growth)	[5] DCF Result (Sustainable Growth)
Atmos Energy Corp	ATO	2.7%	7.5%	3.8%	10.5%	6.7%
Chesapeake Utilities Corp	CPK	2.4%	8.0%	3.8%	10.6%	6.3%
New Jersey Resources Corporation	NJR	3.9%	5.0%	3.8%	9.1%	7.8%
NiSource Inc	NI	3.8%	4.5%	3.8%	8.5%	7.7%
Northwest Natural Holding Company	NWN	5.2%	0.5%	3.8%	5.7%	9.2%
ONE Gas Inc	OGS	4.2%	2.5%	3.8%	6.8%	8.1%
Southwest Gas Holdings Inc	SWX	3.3%	5.5%	3.8%	9.0%	7.3%
Spire Inc.	SR	5.0%	4.5%	3.8%	9.7%	9.0%
Average		**3.8%**	**4.8%**	**3.8%**	**8.7%**	**7.8%**

[1] Dividend Yield from Exhibit DJG-4

[2] Forecasted dividend growth rates - Value Line; (projected earnings growth rate used when dividend growth rate not reported or negative rate)

[3] Sustainable growth rate from Exhibit DJG-5

[4] Annual Compounding DCF = $D_0 (1 + g) / P_0 + g$ (using analyst growth rate)

[5] Annual Compounding DCF = $D_0 (1 + g) / P_0 + g$ (using sustainable growth rate)

CAPM - Risk-Free Rate Estimate

Date	Rate
04/05/24	4.54%
04/08/24	4.55%
04/09/24	4.50%
04/10/24	4.64%
04/11/24	4.65%
04/12/24	4.61%
04/15/24	4.74%
04/16/24	4.77%
04/17/24	4.71%
04/18/24	4.74%
04/19/24	4.72%
04/22/24	4.72%
04/23/24	4.73%
04/24/24	4.78%
04/25/24	4.82%
04/26/24	4.78%
04/29/24	4.75%
04/30/24	4.79%
05/01/24	4.74%
05/02/24	4.72%
05/03/24	4.66%
05/06/24	4.64%
05/07/24	4.61%
05/08/24	4.64%
05/09/24	4.60%
05/10/24	4.64%
05/13/24	4.63%
05/14/24	4.59%
05/15/24	4.52%
05/16/24	4.52%
Average	**4.67%**

*Daily Treasury Yield Curve Rates on 30-year T-bonds,
http://www.treasury.gov/resources-center/data-chart-center/interest-rates/

CAPM - Beta Coefficients

Company	Ticker	Beta
Atmos Energy Corp	ATO	0.85
Chesapeake Utilities Corp	CPK	0.80
New Jersey Resources Corporation	NJR	1.00
NiSource Inc	NI	0.95
Northwest Natural Holding Company	NWN	0.85
ONE Gas Inc	OGS	0.85
Southwest Gas Holdings Inc	SWX	0.90
Spire Inc.	SR	0.85
Average		0.88

Betas from Value Line Investment Survey

CAPM - Implied Equity Risk Premium Estimate

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Year	Market Value	Operating Earnings	Dividends	Buybacks	Earnings Yield	Dividend Yield	Buyback Yield	Gross Cash Yield
2013	16,495	956	312	476	5.80%	1.89%	2.88%	4.77%
2014	18,245	1,004	350	553	5.50%	1.92%	3.03%	4.95%
2015	17,900	885	382	572	4.95%	2.14%	3.20%	5.33%
2016	19,268	920	397	536	4.77%	2.06%	2.78%	4.85%
2017	22,821	1,066	420	519	4.67%	1.84%	2.28%	4.12%
2018	21,027	1,282	456	806	6.10%	2.17%	3.84%	6.01%
2019	26,760	1,305	485	729	4.88%	1.81%	2.72%	4.54%
2020	31,659	1,019	480	520	3.22%	1.52%	1.64%	3.16%
2021	40,356	1,739	511	882	4.31%	1.27%	2.18%	3.45%
2022	32,133	1,656	565	923	5.15%	1.76%	2.87%	4.63%
2023	36,870	1,790	588	795	4.85%	1.60%	2.16%	3.75%

Cash Yield	4.50%	[9]
Growth Rate	6.47%	[10]
Risk-free Rate	4.67%	[11]
Current Index Value	5,131	[12]

	[13]	[14]	[15]	[16]	[17]
Year	1	2	3	4	5
Expected Dividends	246	262	279	297	316
Expected Terminal Value					6494
Present Value	224	217	211	205	4274
Intrinsic Index Value	5131	[18]			
Required Return on Market	9.8%	[19]			
Implied Equity Risk Premium	**5.1%**	[20]			

[1-4] S&P Quarterly Press Releases, data found at https://us.spindices.com/indices/equity/sp-500 (additional info tab) (all dollar figures are in $ billions)
[1] Market value of S&P 500
[5] = [2] / [1]
[6] = [3] / [1]
[7] = [4] / [1]
[8] = [6] + [7]
[9] = Average of [8]
[10] = Compund annual growth rate of [2] = (end value / beginning value)^ $^{1/10}$-1
[11] Risk-free rate from DJG risk-free rate exhibit
[12] 30-day average of closing index prices from DJG stock price exhibit
[13-16] Expected dividends = [9]*[12]*(1+[10])^{n} ; Present value = expected dividend / (1+[11]+[19])^{n}
[17] Expected terminal value = expected dividend * (1+[11]) / [19] ; Present value = (expected dividend + expected terminal value) / (1+[11]+[19])^{n}
[18] = Sum([13-17]) present values.
[19] = [20] + [11]
[20] Internal rate of return calculation setting [18] equal to [12] and solving for the discount rate

CAPM - Equity Risk Premium Results

IESE Business School Survey	5.5%	[1]
Kroll (Duff & Phelps) Report	5.5%	[2]
Damodaran (average)	4.6%	[3]
Garrett	5.1%	[4]
Average	**5.2%**	

CAPM - Final Results

Company	Ticker	[1] Beta	[2] CAPM Result
Atmos Energy Corp	ATO	0.85	9.1%
Chesapeake Utilities Corp	CPK	0.80	8.8%
New Jersey Resources Corporation	NJR	1.00	9.9%
NiSource Inc	NI	0.95	9.6%
Northwest Natural Holding Company	NWN	0.85	9.1%
ONE Gas Inc	OGS	0.85	NMF
Southwest Gas Holdings Inc	SWX	0.90	9.3%
Spire Inc.	SR	0.85	9.1%
Average			**9.3%**
Risk-free Rate	[3]	4.7%	
Equity Risk Premium	[4]	5.2%	

[1] From Exhibit DJG-8

[2] = [3] + [1] * [4]

[3] From Exhibit DJG-7

[4] From Exhibit DJG-10

Cost of Equity Summary

Model	Cost of Equity
CAPM (at Proxy Debt Ratio)	9.3%
Hamada CAPM (at Company-Proposed Debt Ratio)	8.9%
DCF Model (Analyst Growth)	8.7%
DCF Model (Sustainable Growth)	7.8%
Average all Models	**8.7%**
Average (without Sustainable DCF)	**9.0%**

Proxy Company Debt Ratios

Company	Ticker	Debt Ratio	Equity Ratio
Atmos Energy Corp	ATO	38%	62%
Chesapeake Utilities Corp	CPK	49%	51%
New Jersey Resources Corporation	NJR	58%	42%
NiSource Inc	NI	52%	48%
Northwest Natural Holding Company	NWN	53%	47%
ONE Gas Inc	OGS	44%	56%
Southwest Gas Holdings Inc	SWX	57%	43%
Spire Inc.	SR	55%	45%
Average		51%	49%

Debt ratios from Value Line Investment Survey - 2023

Competitive Industry Debt Ratios

Industry	# Firms	Debt Ratio
Air Transport	21	84%
Hotel/Gaming	69	82%
Hospitals/Healthcare Facilities	34	82%
Retail (Automotive)	30	78%
Brokerage & Investment Banking	30	76%
Computers/Peripherals	42	71%
Bank (Money Center)	7	68%
Cable TV	10	68%
Food Wholesalers	14	67%
Advertising	58	67%
Oil/Gas Distribution	23	66%
Rubber& Tires	3	65%
Transportation (Railroads)	4	65%
Real Estate (Operations & Services)	60	64%
Retail (Grocery and Food)	13	64%
Retail (Special Lines)	78	64%
Recreation	57	62%
Insurance (Life)	27	61%
Trucking	35	61%
Packaging & Container	25	61%
Power	48	60%
Telecom. Services	49	60%
Telecom (Wireless)	16	60%
R.E.I.T.	223	60%
Auto & Truck	31	59%
Utility (General)	15	59%
Household Products	127	58%
Office Equipment & Services	16	58%
Environmental & Waste Services	62	57%
Utility (Water)	16	57%
Retail (Distributors)	69	57%
Transportation	18	57%
Green & Renewable Energy	19	57%
Computer Services	80	56%
Broadcasting	26	56%
Retail (Online)	63	56%
Apparel	39	56%
Aerospace/Defense	77	56%
Paper/Forest Products	7	55%
Beverage (Soft)	31	55%
Farming/Agriculture	39	54%
Reinsurance	1	53%
Chemical (Diversified)	4	52%
Construction Supplies	49	52%
Retail (General)	15	52%
Business & Consumer Services	164	52%
Real Estate (Development)	18	51%
Furn/Home Furnishings	32	51%
Total / Average	**1,994**	**61%**

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/dbtfund.htm

Hamada Model Results

Unlevering Beta

Proxy Debt Ratio	51%	[1]
Proxy Equity Ratio	49%	[2]
Proxy Debt / Equity Ratio	1.0	[3]
Tax Rate	21%	[4]
Equity Risk Premium	5.2%	[5]
Risk-free Rate	4.7%	[6]
Proxy Group Beta	0.88	[7]
Unlevered Beta	0.48	[8]

Relevered Betas and Cost of Equity Estimates

[9] Debt Ratio	[10] D/E Ratio	[11] Levered Beta	[12] Cost of Equity
0%	0.0	0.48	7.2%
20%	0.3	0.58	7.7%
30%	0.4	0.65	8.0%
40%	0.7	0.74	8.5%
47%	0.9	0.82	8.9%
51%	1.0	0.88	9.2%
60%	1.5	1.06	10.1%

[1] Proxy group average debt ratio

[2] Proxy group average equity ratio

[3] = [1] / [2]

[4] Company assumed tax rate

[5] Equity risk premium from Exhibit DJG-11

[6] Risk-free rate from Exhibit DJG-11

[7] Average proxy beta from Exhibit DJG-11

[8] = [7] / (1 + (1 - [4]) * [3])

[9] Various debt ratios (Garrett proposed highlighted)

[10] = [9] / (1 - [9])

[11] = [8] * (1 + (1 - [4]) * [10])

[12] = [6] + [11] * [5]

Final Rate of Return Recommendation

Capital Component	Proposed Ratio	Cost Rate	Weighted Cost
Long-Term Debt	50.0%	4.58%	2.3%
Common Equity	50.0%	9.00%	4.5%
Total	100.0%		6.79%

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, David J. Garrett, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 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 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: June 17, 2024

Signature: _____
David J. Garrett

Address: Resolve Utility Consulting
101 Park Avenue
Suite 1125
Oklahoma City, OK 73102

OCA Statement 2R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	**:**	
v.	**:**	**Docket No. R-2024-3046932**
PECO Energy Company – Gas Division	**:**	

REBUTTAL TESTIMONY

OF

DAVID J. GARRETT

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

July 16, 2024

I. INTRODUCTION

Q. State your name and occupation.

A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I am the managing member of Resolve Utility Consulting PLLC.

Q. Have you previously filed testimony in this proceeding?

A. Yes. I filed direct testimony in OCA Statement 2 on June 17, 2024, on behalf of the Pennsylvania Office of Consumer Advocate ("OCA"). A summary of my qualifications is included in my direct testimony.

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony addresses the direct testimony of James Glenn, who testifies on behalf of the International Brotherhood of Electrical Workers ("IBEW").

Q. Please summarize the arguments made by Mr. Glenn that you will address.

A. Mr. Glenn is supportive of PECO's requested overall gas rate increase of approximately $111 million.[1] While Mr. Glenn does not directly discuss PECO's authorized ROE or capital structure, he states customers benefit from being serviced by a "financially healthy" utility and that PECO's credit ratings impact the interest and availability of loan options.[2]

Q. What is your response to Mr. Glenn's claims regarding these issues?

A. First, the financial health and credit ratings of PECO is primarily a function of Company management to operate the company in an efficient, prudent and economical manner. Second, Mr. Glenn's concern for high interest on debt overlooks that equity is even higher cost. When an authorized ROE is reflective of a utility's market-based cost of equity, it

[1] Direct Testimony of James Glenn, unpaginated. Approximately pp. 3-4.

[2] Direct Testimony of James Glenn, unpaginated. Approximately pp. 9-10.

allows the utility to earn a fair return and remain financially healthy under good management. My financial analysis of PECO Gas's cost of equity in this case shows that the Company's estimated cost of equity is about 9.0%, and its fair ratemaking capital structure should include a debt ratio of at least 50%. OCA St. 2 at 66, Exhibit DJG-16. Given the fact that the natural gas proxy group's average debt ratio is 51%, and my authorized ROE recommendation is 9.0%, my overall recommended rate of return for PECO Gas in this case is likely higher than its market-based cost of capital estimate. This means that if my recommended rate of return is adopted, it would allow PECO Gas a more-than-fair opportunity to earn a return on equity that is higher than its market-based cost of equity. In contrast, the Company's proposed return on equity of 11.15% and capital structure consisting of only 46.6% debt in this case would result in an excessive and unfairly high rate of return for the Company. Mr. Glenn's recommendation that the Commission approve PECO Gas's entire rate increase is not supported and should not be adopted.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, David J. Garrett, hereby state that the facts above set forth in my Rebuttal Testimony, OCA Statement 2R, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 16, 2024

Signature: _____
David J. Garrett

Address: Resolve Utility Consulting
101 Park Avenue
Suite 1125
Oklahoma City, OK 73102

OCA St. 2SR

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	**:**	
v.	**:**	**Docket No. R-2024-3046932**
PECO Energy Company – Gas Division	**:**	

SURREBUTTAL TESTIMONY

OF

DAVID J. GARRETT

ON BEHALF OF

THE PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

August 2, 2024

Q. State your name and occupation.

A. My name is David J. Garrett. I am a consultant specializing in public utility regulation. I am the managing member of Resolve Utility Consulting PLLC.

Q. Have you previously filed testimony in this proceeding?

A. Yes. I filed direct testimony in OCA Statement 2 on June 17, 2024, on behalf of the Pennsylvania Office of Consumer Advocate ("OCA"). A summary of my qualifications is included in my direct testimony.

Q. What is the purpose of your surrebuttal testimony?

A. My surrebuttal testimony responds to the rebuttal testimony of PECO Energy Company – Gas Division ("PECO Gas" or the "Company") witness Paul Moul regarding rate of return issues.

Q. Did the Company's rebuttal testimony cause you to change any of your positions or recommendations discussed in your direct testimony?

A. No. Additionally, to the extent I do not specifically address a statement made in the Company's rebuttal testimony filed in this case, it should not constitute my agreement with such testimony.

Q. Are you sponsoring any exhibits to your surrebuttal testimony?

A. No.

Q. Please summarize your surrebuttal testimony directed to the rebuttal testimony of Mr. Moul.

A. In my surrebuttal testimony to Mr. Moul, I will address the assertions made in his rebuttal testimony regarding the Discounted Cash Flow ("DCF") Model, the Capital Asset Pricing Model ("CAPM"), and capital structure.

A. DCF Analysis

Q. Please summarize Mr. Moul's criticisms of your DCF Model.

A. Mr. Moul criticizes my use of analyst's dividend growth projections in my DCF Model. He claims I should have used earnings per share rather than dividends per share to assess PECO Gas's long-term growth rate in the DCF Model.[1] Mr. Moul also claims that I did not refute his leverage adjustment that he applies to the DCF Model.

Q. Do you agree with Mr. Moul's criticisms regarding your use of projected dividend growth rates?

A. No. The "D" in the DCF Model formula stands for "dividend." Mr. Moul acknowledges this in his direct testimony.[2] This represents the cash flow that is being discounted to estimate the cost of equity in this model. Mr. Moul also relied on earnings growth rates as part of his DCF Model. I do not believe it is unreasonable to consider earnings growth rates as a proxy for a dividend growth rate in the DCF Model, as long as long-term growth rate projections are generally sustainable. However, in this case, the growth rates assumed

[1] Rebuttal Testimony of Paul Moul, pp. 27-30.

[2] Direct Testimony of Paul Moul, p. 26, line 6.

by Mr. Moul, which is a sustainable growth rate of 6.75%, is not sustainable. In other words, Mr. Moul is assuming that the annual earnings growth of his proxy group will increase its annual earnings at a greater rate than the projected growth rate of the entire U.S. economy (as measured in GDP). I do not believe this assumption is reasonable. As a result, Mr. Moul's DCF cost of equity estimate is overstated.

Q. Please summarize Mr. Moul's rebuttal testimony regarding his leverage adjustment.

A. Mr. Moul states: "Mr. Garrett never really refutes my leverage adjustment."[3] Mr. Moul uses the leverage adjustment to quantify a return for his Gas proxy group of 12.05% - the sum of his DCF result plus a 1.31% leverage adjustment."[4]

Q. Does Mr. Moul's recommended ROE for PECO include a leverage adjustment value?

A. Not directly. Mr. Moul's recommendation of 11.15% is partially based on DCF results "without regard to the leverage adjustment…"[5] In my direct, I reviewed how Mr. Moul arrived at his ROE recommendation of 11.0% plus 0.15% as an adder for management performance.[6] Mr. Moul's calculation of a 1.31% leverage adjustment plays into Mr. Moul's estimate of the cost of equity for the Gas proxy group. Mr. Moul then uses the

[3] Rebuttal Testimony of Paul Moul, p. 33, lines 16-17.

[4] Direct Testimony of Paul Moul, p. 40, lines 15-16.

[5] Direct Testimony of Paul Moul, p. 8 at line 1.

[6] Direct Testimony of David J. Garrett, p, 26 at line 6 to p. 27, line 4.

inflated proxy group results as a point of comparison, to suggest that his recommended 11.15% ROE for PECO is reasonable.[7]

Q. Did you refute Mr. Moul's leverage adjustment in your direct testimony?

A. Yes. In my direct testimony I specifically state that I disagree with Mr. Moul's leverage adjustment,[8] and I devote an entire section of my testimony along with a separate cost of equity estimate under the Hamada Model that shows how leverage should be properly accounted for in estimating PECO Gas's cost of equity – or in other words, a corrected version of Mr. Moul's leverage adjustment.[9] My application of the Hamada model shows that PECO Gas's leverage (or debt levels) relative to the proxy group should result in a *lower* cost of equity estimate under the CAPM, which is the exact opposite of Mr. Moul's conclusion (which results in an upward adjustment). For Mr. Moul to claim that I do not refute his leverage adjustment and that my application of the Hamada Model is false.

Q. Do you agree with Mr. Moul's exclusion of a leverage adjustment in development of an ROE for PECO?

A. Yes, I do. As I stated in my direct testimony, Mr. Moul's leverage adjustment to the DCF is conceptually unnecessary. Indeed, the Commission has not adopted Mr. Moul's leverage adjustment concept in a number of other base rate cases, as noted in my direct testimony.[10]

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[7] Direct Testimony of Paul Moul, p. 54, lines 10-19.

[8] Direct Testimony of David J. Garrett, pp. 28-29.

[9] *Id*. at pp. 56-59.

[10] Direct Testimony of David J. Garrett, p. 28, line 3 to p. 29, line 16.

The 1.31% leverage adjustment calculated by Mr. Moul as part of his estimate of the electric proxy group's cost of equity should not be considered in determining the appropriate return for PECO.

B. CAPM Analysis

Q. Please summarize Mr. Moul's criticisms of your CAPM analysis.

A. Mr. Moul disagrees with my CAPM result of 9.3%.[11] The primary contentious issue under the CAPM is the equity risk premium ("ERP"). However, Mr. Moul does not actually provide any rebuttal regarding the sources for my ERP estimate. Instead, he compares my ERP estimate with recent returns on the market, as well as stock market returns dating back to 1926.[12]

Q. Please briefly reiterate the sources you considered for the ERP estimate.

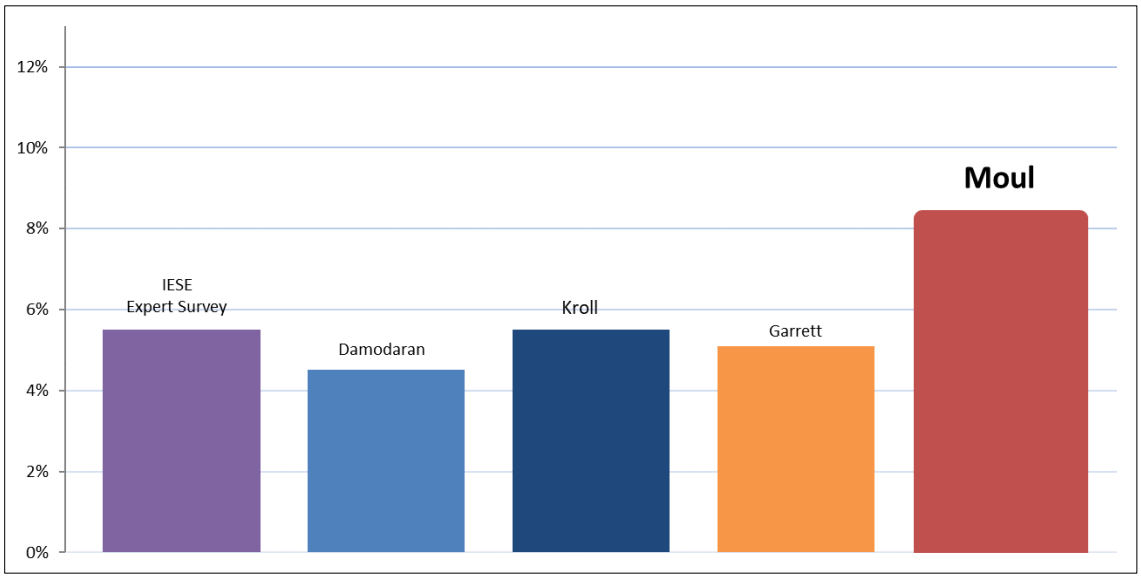
A. The ERP is an important figure for financial and market analysts in all industries, not just utility regulation. Thus, many analysts, managers, investors, and academics are constantly studying and are concerned with obtaining a reliable and accurate estimate of this important number, which can be used in a variety of financial analyses, including the CAPM. All else held constant, a higher ERP will result in a higher indicated cost of equity and apply upward pressure on the authorized ROE. I considered three reliable and objective sources

[11] *Id*. at p. 33.

[12] *Id*. at p. 31, lines 1-2.

to include in my overall ERP estimate, including the result of the IESE Business School survey of experts, the estimate published by Kroll (formerly Duff & Phelps), and the estimate published by one of the world's leading experts on the issue, Dr. Aswath Damodaran. I also conducted and presented my own ERP estimate, the result of which is similar to those from the other sources. The figure below contrasts the ERP estimates from these sources with the ERP estimated by Mr. Moul.[13]

Figure 1:
Equity Risk Premium Comparison



When compared with other independent sources for the ERP (as well as my estimate), which do not have a wide variance, Mr. Moul's ERP estimate is clearly not within the range of reasonableness.

[13] *See also* Exhibit DJG-10.

Q. Do you agree with Mr. Moul that looking at recent or historical market returns indicates a reasonable estimate for the current ERP?

A. No. First, actual market returns are a different concept altogether than the ERP. For example, in 2008 the U.S. stock market return was negative. However, it is impossible to ever have a negative ERP estimate for any risky investment. Even the expected return for a risk-free investment (such as Treasury bonds) must be positive. The expected return on an asset or group of assets is simply a different concept than the actual return the asset earns in a given period. Furthermore, Mr. Moul's reference to market data predating the Great Depression (1926) has no bearing on what the expected return is today. Clearly, the expert survey respondents, Kroll, and Dr. Damodaran have not taken the same approach as Mr. Moul has in estimating the ERP.

C. Capital Structure

Q. Please summarize Mr. Moul's criticisms of your capital structure adjustment.

A. Mr. Moul claims that I do not demonstrate that PECO Gas's proposed capital structure is unreasonable and that it is "simply designed to lower the Company's revenue requirement."[14]

Q. What is your response to Mr. Moul's rebuttal testimony on this issue?

A. First, Mr. Moul has no basis to claim that a proposed adjustment is *designed* to lower the revenue requirement, and his claim with regard to my capital structure adjustment is false.

[14] Rebuttal Testimony of Paul Moul, p. 11, lines 11-12.

My capital structure adjustment simply aligns PECO Gas's capital structure with the average capital structure of Mr. Moul's own proxy group – which is a very fair and reasonable adjustment, regardless of its impact to the revenue requirement. The average debt ratio of Mr. Moul's own proxy group is 51%. To accept a debt ratio less than this for the purpose of calculating the ROR essentially amounts to cherry-picking the metrics of the proxy group to obtain a more favorable ROR for the Company. This is because there is a direct relationship between risk and cost of equity. The more financial risk (or debt) a company has in its capital structure, it will have an increasing effect on its cost of equity. The fact that PECO Gas has less debt in its capital structure relative to the proxy group is significant, and it means that PECO Gas has less financial risk than the proxy group. Since we are obtaining all of the other metrics used to estimate PECO Gas's cost of equity from the proxy group, it would be inaccurate to reject the capital structure of that same proxy group as part of the analyses. The Hamada model I used in this case mathematically reconciles the discrepancy between PECO Gas's low debt ratio relative to the proxy group's average. This capital structure-adjusted CAPM indicates a cost of equity of only 8.9% for PECO Gas, which is actually lower than my final ROE recommendation, which indicates a 9.2% ROE is more than fair for the Company.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does at this time.

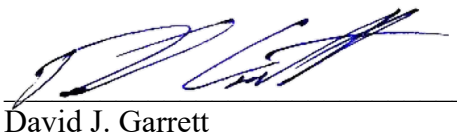
BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, David J. Garrett, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement 2SR, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: August 2, 2024

Signature: 

David J. Garrett

Address: Resolve Utility Consulting
101 Park Avenue
Suite 1125
Oklahoma City, OK 73102

OCA STATEMENT 3
Corrected

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Co. (Gas Division)	:	

DIRECT TESTIMONY
OF
CLARENCE L. JOHNSON

ON BEHALF OF
OFFICE OF CONSUMER ADVOCATE

June 17, 2024

DIRECT TESTIMONY OF CLARENCE JOHNSON

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EXHIBIT CJ-4 OCA REVENUE ALLOCATION

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Clarence L. Johnson. My business address is 3707 Robinson Ave, Austin, Texas 78722.

Q. ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS PROCEEDING?

A. I am presenting testimony on behalf of the Pennsylvania Office of Consumer Advocate ("OCA").

Q. WHAT IS YOUR CURRENT EMPLOYMENT?

A. I am self-employed as a consultant providing technical analysis, advice, and testimony regarding energy and utility regulatory issues.

Q. DO YOU HAVE PREVIOUS EXPERIENCE AS AN EXPERT ON REGULATED UTILITY MATTERS?

A. Yes. I have 40 years of experience as a utility regulatory expert, including 25 years as director of regulatory analysis for the Texas Office of Public Utility Counsel ("OPC"). As a consultant, I have provided expert advice, assistance, and testimony on utility-related issues to a number of parties. My clients have included state consumer advocate offices, customer groups, and various coalitions of municipalities in Texas. Municipalities in Texas act as original jurisdiction regulators over electric utility and gas utility rates within city boundaries. I have previously filed testimony in Peoples Gas, PECO Electric, First Energy, and Duquesne rate cases in Pennsylvania.

Q. HAVE YOU PROVIDED AN ATTACHMENT WHICH DETAILS YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE?

A. Yes. Please see Attachment A. This includes a list of testimony over my career.

Q. PLEASE OUTLINE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I have a B.S. in Political Science and a M.A. in Urban Studies from the University of Houston. My graduate degree is in an interdisciplinary program offered by the University of Houston's College of Social Science, which incorporated substantial training in economics, including course work in the application of cost-benefit analysis to public policy. During my previous tenure at OPC, I gained experience in virtually all phases of economic review required for the ratemaking process. I was chairman of the Economics and Finance Committee of the National Association of State Utility Consumer Advocates ("NASUCA") and served as a presenter for NASUCA's workshops and panels on cost allocation and rate design, demand-side management incentives, market power, load retention rates and electric utility competition.

I have previously filed testimony in approximately 170 proceedings at the Public Utility Commission of Texas, Texas Railroad Commission, Pennsylvania Public Utility Commission, Maryland Public Service Commission and Connecticut Public Utility Regulatory Authority.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?

A. My testimony will address cost allocation and rate design issues pertaining to the PECO Energy Gas Division ("PECO" or "Company") base rate increase requested in this docket.

For purposes of comparability, my analysis generally utilizes the revenue requirements and schedules filed by the Company. My use of PECO's filed costs and revenues should not be construed as agreement or acceptance of the Company's requested revenues. Other witnesses retained by OCA will address the Company's proposed revenue requirements.

Q. WHAT DOCUMENTS HAVE YOU REVIEWED IN PREPARING THIS TESTIMONY?

A. I reviewed relevant testimony and exhibits in this rate case filing. I also propounded interrogatories to the Company and reviewed the responses and accompanying attachments.

II. SUMMARY

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. My recommendations are as follows:

- PECO's proposed Average & Excess method for allocating the costs of mains to customer classes should be rejected. The Company's claimed recognition of average demand in this formula is illusory.
- If the Commission accepts the Average & Excess method for allocation of mains, the formula's weighting factor for average and excess demands should be 50%, instead of 24% as included in the Company's version.
- The more proper allocation method for the cost of mains is Peak & Average. This method gives equal weighting to peak demand and average demand. The OCA class cost of service study recommendation is based on this method.

- The OCA class cost of service study includes a small adjustment for the allocation of customer service personnel who directly serve large industrial customers. The Company's allocation of the cost to large customers is incomplete. My recommendation is to increase the amount of this assignment by $240,000.
- My class revenue distribution recommendation applies gradualism limits on the OCA class cost of service results. The recommended gradualism limits are: (1) No class receives a revenue increase more than 150% of the system base revenue percent increase; and (2) a floor of 50% of the system base revenue increase is applied, so that all classes share in the system increase. The OCA recommended revenue allocation should be scaled back for any decreases to the Company's revenue requirement.
- The Company's proposal to increase the residential customer charge from $14.25 to $19.38 is excessive and should be moderated. My recommendation is to increase the customer charge to $15.70, which is more consistent with the proposed average bill percentage increase as adjusted for OCA's class revenue allocation. This customer charge is subject to being scaled back for reductions in the Company's total revenue requirement. The Company's proposed increase in the customer charge should be moderated in recognition of energy efficiency and equity considerations.

III. CLASS COST OF SERVICE STUDY

A. Overview

Q. WHAT IS A CLASS COST OF SERVICE STUDY (CCOSS)?

A. The CCOSS is a fully allocated cost study which distributes the Company's costs to customer classes. The intent of the study is to allocate costs based on cost causation, generally resulting in a portion of costs allocated on causal measures and the remainder of indirect costs following those costs. The CCOSS is, at best, a general benchmark for evaluating customer class cost responsibility. The CCOSS can provide guidance to the regulator, but considerations other than the CCOSS also are appropriate in determining the ultimate allocation of costs among customer classes. The CCOSS provides rates of return for each customer class at current and proposed class rates. Sometimes the class rates of return are divided by the total retail rate of return to arrive at a relative rate of return (RROR). The relative rate of return (or unitized return) at present rates may be used as a benchmark for guiding the direction of revenue changes at the class level. The CCOSS also provides class required revenues based upon equalized rates of return (all classes' revenue produce the proposed overall retail rate of return). The class revenues at equalized rates of return can be used as a rough target for apportioning class revenue increases, but the results at equalized rates of return do not necessarily dictate the exact levels of class revenue requirement. The class revenues may depart from equalized rates of return in order to recognize rate gradualism, relative risks associated with serving each class, or other non-cost considerations. However, the resulting revenues indicated by the CCOSS may provide

useful information regarding the equitable distribution of a system revenue increase among customer classes.

Q. HOW IS THE COST CAUSATION CRITERION APPLIED IN THE CCOSS?

A. Some costs are incurred directly to serve only an individual customer or set of customers. But these instances are relatively rare. Many of a utility's costs are indivisible.

The provision of gas utility services is predominated by common and joint costs, which either support the overall enterprise or produce shared benefits for all or most customers. These costs often are assigned based upon indirect, and often weak, measures of causation. For example, overhead costs, such as Board of Director fees, might be allocated based upon measures as diverse as revenues, labor costs, energy sales, plant or demand. No single objective economic basis supports the allocation of these costs; therefore, the allocation decisions are subjective or based on ratemaking conventions. Ideally, the analyst selects a method that best recognizes the manner in which customer classes' characteristics contributed to the incurrence of utility investments and expenses. The manner in which a utility plans and installs an investment often informs the analyst's evaluation of causal factors related to classification or allocation of the investment.

The three major steps of the embedded cost of service study are functionalization, classification, and allocation. Functionalization is the procedure for separating costs into functional segments, such as production, transmission, and distribution. The next two accounting steps, classification and allocation, facilitate the recognition of causation. The classification procedure, which pools costs into general categories of causation (i.e., demand, customer, energy), is an intermediate step in determining the allocation factors

that are used to divide costs among jurisdictions and customer classes. The allocation step determines the appropriate percentage of a particular FERC account which is attributed to each customer class.

Q. CAN YOU PROVIDE MORE DETAIL REGARDING THE DEVELOPMENT OF ALLOCATION FACTORS FOR DISTRIBUTION COST OF SERVICE STUDIES?

A. Yes. The principal external allocation factors in the CCOSS are customer, demand, and energy allocators. Customer allocators are based on class customer count as a percentage of total retail customer count. Sometimes weighting factors are applied to the customer count in order to reflect differences in cost per customer. For instance, customer allocators applied to service drops may be weighted to reflect the differences in the cost of average service drops for each customer class.

The predominant demand allocation factor for the distribution system is non-coincident peak demand (NCP). NCP is based on the maximum demand for the class. Since classes may incur peak demand in different time periods, the NCP method is said to reflect demand diversity on the system. Each class's demand allocator is the ratio of the class peak demand relative to the sum of all classes' maximum demands. Average daily demand or throughput allocation factors, based on annual usage, are used to represent Average Demand in the CCOSS. Peak Demand and Average Demand reflect distinct dimensions of causality and the manner in which customers benefit from the system.

Indirect costs in the CCOSS usually are allocated on the basis of internal allocation factors which "follow" the allocation of direct costs. An example is the labor allocator, which may be used to allocate administrative & general expenses; the labor allocator will

be driven by the labor portion of accounts which are classified as customer, demand, or both. A substantial portion of the customer and demand costs in the CCOSS will consist of indirect costs which are not inherently customer or demand related, but which follow the customer/demand classification of other accounts. This explains in part why the results of a CCOSS are frequently sensitive to small changes in the customer/demand classification for certain accounts.

Q. PLEASE DESCRIBE YOUR REVIEW OF THE CCOSS PRESENTED BY THE COMPANY.

A. I evaluated the PECO CCOSS for consistency and accuracy in the allocation of costs among classes. Based on my review, the allocation or classification of several CCOSS elements were identified as insufficiently justified or warranting improvement. My testimony proposes modifications to the treatment of those costs in the CCOSS, discussed in subsections III.(B) through III.(C) below. These changes affect my recommendations with respect to class revenue distribution. My recommendations focus on a limited number of CCOSS issues; omission of other issues should not be construed as agreement with all other aspects of the Company's cost studies. The OCA does not agree with the proposed revenue requirements in the CCOSS; therefore, the revised versions of the CCOSS should be used only to examine class cost relationships rather than absolute revenue levels.

B. Distribution Mains

Q. WHAT PORTION OF THE DISTRIBUTION PLANT ALLOCATION WILL YOU ADDRESS?

A. This section of my testimony will address the classification and allocation of distribution mains. The gas utility's cost structure is dominated by mains that deliver consumable gas from the transmission or production source to the network of end users. The CCOSS classification of mains plant investment indirectly dictates the allocation of related O&M expenses, as well as much of the utility's administrative expense and general plant. Therefore, the decisions with respect to allocation of mains cost are an overwhelming factor in determining class results.

Q. HOW DOES PECO CLASSIFY AND ALLOCATE DISTRIBUTION MAINS?

A. The Company classifies mains as demand-related and utilizes the Average & Excess (A&E) methodology to allocate demand-related costs.

Q. WHAT IS YOUR POSITION REGARDING THE ALLOCATION OF MAINS?

A. I disagree with the Company's proposal to allocate mains based on the A&E method. In my view, the Peak & Average method (P&A) is more appropriate and broadly consistent with cost causation. Both the A&E and P&A methodologies are accepted in the electric and gas industries. However, the P&A methodology is more effective in recognizing average demand. The principal difference between the two methods is the addition of a mathematical step in the A&E method which subtracts average demand from peak demand,

resulting in "excess demands." This step in the formula alters the equation in a manner that suppresses the recognition of average demand.

1. PECO'S A&E ALLOCATION METHOD

Q. PLEASE DESCRIBE THE A&E METHODOLOGY.

A. PECO utilizes the Average & Excess method, utilizing class maximum demands (NCP) as the measure of peak demand.[1] As indicated by the name of the method, A&E is comprised of two principal components, annual average hourly demand (Average Demand) and Excess Demand. Excess Demand is the difference between class average demand and class maximum demand. The system load factor (Average Demand divided by Maximum Demand) is used to weight the components of the formula. Although A&E appears to give significant recognition to average demand, the formula has an algebraic construction which cancels all or most of the impact of average demand on the formula's results. Exhibit CJ-1 provides a hypothetical which demonstrates that the basic A&E formula is equivalent to the allocation factors for peak demand. The A&E equation is a circuitous route to a peak demand allocation, and recognition of average usage is illusory. Although minor changes in the formula's inputs may change the results from exact equivalence to nearly equivalent to the peak demand measure, most applications of the A&E formula are largely ineffective at reflecting average demand. This is a potential flaw in the methodology because the Company's intent is to recognize average demand. Company witness Ms. Ding states that

[1] The formula for A&E is as follows: Class Allocation Factor = [(LF * Class Avg. Demand)] +[(1-LF)*(Class NCP - Class Avg. Demand)] LF is "load factor" which is ratio of system peak demand and average demand.

the purpose of the method is to reflect both design day demand and average usage of the system.[2]

Q. CAN YOU DEMONSTRATE THAT AVERAGE DEMAND HAS ONLY MINOR INFLUENCE ON THE COMPANY'S VERSION OF THE A&E METHOD?

A. Yes. The Company A&E formula gives the appearance of including a 24.22% weighting of average demand.[3] However, the A&E method effectively recognizes only 0.77% and 0.69% average demand for the residential and GC classes, respectively. This conclusion is based on algebraically solving for weighting factors which produce the A&E allocation factors in relation to the Company's NCP and average demand allocation factors.[4]

Q. DO YOU AGREE WITH THE 24.22% LOAD FACTOR USED IN THE COMPANY'S A&E FORMULA?

A. No. The Company computed the load factor based on the sum of class design day demands divided by average daily deliveries. In my opinion, the system's actual load factor is more appropriate. The 2019-2023 average actual system load factor is 33%. This load factor is computed from the average actual maximum day demand and average day demand on the system.[5] A higher load factor input into the A&E formula results in greater recognition of the average demand component.

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2 PECO Response to OCA 4-8.

3 The load factor weighting is 24.22%, as stated in PECO's Response to OCA 4-7.

4 For instance, the A&E factor for residential is 61.4%. (0.77% X 50.9% Average Demand factor) +(99.23% X 61.5% NCP factor) =61.4%.

5 The 2019 – 2023 average Max Day send out is 719 thousand Mcf. (OCA Request 4-4). The average daily demand for the same period is 235 thousand Mcf (OCA 13-1). 235 / 719 = 32.6%.

Q. WHY IS THE ACTUAL SYSTEM LOAD FACTOR MORE APPROPRIATE?

A. The Company's load factor calculation does not reflect an actual system load factor. The system maximum demand is based on the sum of design day demands for each customer class. Design day demands are based on the maximum future weather event that PECO uses for planning purposes.[6] The average daily delivery (which the Company uses for average demand) reflects the actual average day demand rather than a theoretical average day which matches the design day demand. Therefore, calculating a ratio based on comparable actual max days and average days is both preferable and more consistent.[7] Furthermore, utilizing the sum of class demands will be higher than system maximum demand (unless all classes' max demand is coincident). In an A&E method utilizing class non-coincident demands, the system coincident demand should be utilized for computing the load factor if the objective is to recognize average demand.[8] Therefore, if the system load factor is used to weight the A&E method, 33% is a more appropriate representation of system load factor than the 24% applied by the Company.

Q. IS IT REASONABLE TO WEIGHT AVERAGE DEMAND AND EXCESS DEMAND BEYOND THE SIMPLE LOAD FACTOR?

A. Yes. In my view, the weighting of average demand and excess demand components should reflect economies of scale. Economies of scale provide one of the justifications for regulated monopoly service, and the network of gas mains is a key example of this

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6 Design day demand reflects zero degrees temperature for 24 hours. (OCA 4-1) The probability of this occurrence is approximately 4%. Attachment SDR COS 12(a).

7 The maximum day demand is included in the average day demand. One would expect that a winter characterized by abnormally cold weather (such as design day) would be associated with higher than normal average demand.

8 *NARUC Electric Utility Cost Allocation Manual* (1991), page 50 and Table 4-10A.

principle. Due to economies of scale (with all else equal), increasing the diameter of a main will produce a decreasing rate of growth in cost. This is particularly relevant to the A&E method because the formula identifies "extra capacity" as a separate component of cost. The excess demand part of the formula reflects the extra capacity above average use required to serve peak demand. However, the unit cost of capacity is not uniform for the two components of cost, given the impact of scale economies. The incremental cost of sizing the main to accommodate excess demand reduces the average unit cost of the main. The load factor does not recognize the difference in per unit cost between the extra capacity average demand. The solution entails an adjustment to the load factor for the scale factor.

Q. PLEASE EXPLAIN HOW THE LOAD FACTOR IN THE A&E FORMULA CAN BE ADJUSTED FOR A SCALE FACTOR.

A. System average demand represents the size of mains that would be required to serve a constant rate of daily usage. The pipes required to serve this constant rate of usage would be considerably smaller than pipes sized to meet max day usage. Increasing the main size to accommodate demand over and above average demand produces a lower per unit cost. The load factor weighting does not recognize this decreasing rate of unit cost that accompanies growth in peak demand. A reasonable rule of thumb for the economy of scale factor is 0.5 – 0.6.[9] Adjusting the Company's proposed load factor ratio for economies of scale, the appropriate ratio for weighting average day demand is 49% - 51%.[10] Thus, my

[9] "Scale Economies and The 0.6 Rule," (M. Tribe and R. Alpine) *Engineering Costs and Production Economics*, 10 (1986) 271-272. The scale factor based on the relationship between surface area and volume for tanks and pipelines is 0.66 and 0.50, respectively.

[10] Scale factors are applied as an exponent. Applying a 0.5 exponent to the Company's 24% load factor equals 49% and applying a 0.6 exponent to my recommended load factor of 33% equals 51%. This encompasses the range of adjusted load factors.

recommendation is to use a 50% weighting of average demand and excess demand in the A&E formula. This is a reasonable approach that tempers the emphasis on excess demand by also recognizing average demand.

Q. HOW DOES THE LOAD FACTOR AFFECT THE ALLOCATED BASE RATE REVENUE REQUIREMENT?

A. A higher load factor increases the weight given to average demand in the A&E formula. The table below shows the difference in base rate revenue requirement for the largest customer classes, Residential and General Commercial, compared to Company's filed CCOSS. The 33% load factor reflects the actual system load factor based on the five year average max day and average demand and the 50% adjusted load factor represents an A&E ratio which recognizes scale economies.[11] Increasing the load factor will produce a corresponding increase in revenue requirements for the TSF and TSI classes. The table below shows the change in base revenues compared to the PECO A&E method which uses a 24% weighting.

Base Rate Revenue Requirement Difference		
(000s)	**Residential**	**GC**
33% Load Factor	(3,198)	(561)
50% Adj. Load Factor	(9,389)	(1,647)

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE A&E METHOD IN THIS CASE?

A. My primary recommendation is to adopt the P&A instead of the A&E method. But if the Commission prefers to use the A&E method, my recommendation is to use the adjusted

[11] This is based on adjusting the load factors in Confidential Ex. JD-1 through JD5.

version of the A&E method which weights excess demand and average demand on a 50/50 basis. The Commission previously has approved the use of a 50% equally weighted Average & Excess formula, which further supports my alternative A&E method.[12] Exhibit CJ-2 shows the results of my revised CCOSS using the 50/50 A&E version.

2. PEAK & AVERAGE (P&A) ALLOCATION METHOD

Q. IS IT REASONABLE TO CLASSIFY MAINS AS 100% DEMAND?

A. Yes. The next question, though, is how demand should be measured; namely, what is the preferred allocator for mains demand? My recommendation is Peak & Average. In this case, Peak & Average is comprised of 50% Design Day Demand (Max Demand) and 50% Average Demand. Average Demand is equivalent to average annual daily usage. Like the Company's A&E method, class demands are based on non-coincident demand (NCP).

Q. WHAT IS THE MAIN DIFFERENCE BETWEEN THE P&A AND A&E FORMULAS?

A. P&A is the most direct method for recognizing both average demand and peak demand. The variant of P&A which I recommend gives equal recognition to average demand and peak demand. The 50% equal weighting for peak demand is a convention frequently used as part of the P&A. The A&E method utilizes excess demand (the difference between class average demand and class excess demand) instead of peak demand. This difference, combined with the load factor weighting in the A&E method, usually results in recognizing

[12] *PA. PUC v. Philadelphia Gas Works* R-2023-3037933 (Nov. 9, 2023) The Commission cites the PGW testimony that "the weighting of the demand allocation factors are based on the Commission precedent of allocating 50% on average daily usage and 50% to the excess above average daily demand." PGW 2023 Order at 138.

minimal or zero proportions of average demand in the A&E results. The alternative 50/50 weighted A&E method discussed in (1) above is preferable to the Company's A&E results, but still provides a less effective and direct recognition of average demand than P&A. The P&A gives equal recognition to peak demand and average annual use which, in my opinion, is both consistent with a broad view of cost causation and results in the classes' equitably sharing the benefits of PECO's integrated network of mains. The P&A CCOSS which is my primary recommended cost standard is based on class NCP demands (excluding interruptible) and average annual daily demand.

Q. IS THE PEAK & AVERAGE METHOD CONSISTENT WITH COMMISSION PRECEDENT APPLICABLE TO NATURAL GAS DISTRIBUTION UTILITIES?

A. Yes. In the 2021 Columbia Gas order,[13] the Commission reiterated its support for the Peak & Average method to allocate mains cost.

> Furthermore, distribution mains exist and are related to both annual demand and peak demand. Both annual and peak demands must be recognized in the allocation of distribution mains cost if the allocation is to be in accord with the principle of cost-causality. It is not reasonable to allocate distribution mains investment based solely on design peak day demands…The basic reason Columbia invests in its distribution system is to meet the annual demands for gas by customers.[14]

The opinion and order cited several previous Commission gas utility orders adopting the Peak & Average method.[15] The Commission confirmed its support for the

[13] *PA. PUC v*. Columbia *Gas of Pennsylvania, Inc*., R-2020-3018835, Order and Opinion, (February 19, 2021).

[14] Ibid. Order and Opinion at 217.

[15] Pa. PUC v. National Fuel Gas Distribution Co., 83 Pa. P.U.C. 262 (1994); See also Pa. PUC v. National Fuel Gas Distribution Co., 73 Pa. P.U.C. 552 (1990); and Pa. PUC v. Columbia Gas of Pa., 69 Pa. P.U.C. 138 (1989); and Pa. PUC v. Philadelphia Gas Works, Docket No. R-00061931 (Order entered September 28, 2007)

reasoning in the 1994 National Fuel Gas Distribution decision that Peak & Average is appropriate because integrated systems are designed to serve accumulated loads over time and not just current engineering criteria.[16]

Q. CAN 100% PEAK DEMAND BE USED TO ALLOCATE DEMAND COSTS?

A. As noted in the *Columbia Gas* decision, the Commission does not view a pure Design Day peak demand allocation as reasonable. Demand has multiple dimensions, and a method based solely on Max Day demand is incomplete. Design day demand is an important factor in sizing mains, but average demand recognizes the integrated nature of the gas distribution system. The integrated distribution system is not static and evolves over time with the changing patterns of small and large customers' accumulated consumption and revenues. Therefore, a more comprehensive measure of demand includes both peak demand and average demand. As discussed in (1) above, the standard A&E method is a circuitous route to a Max Day peak demand allocation. The results of the Company's A&E method are virtually the same as a pure peak demand allocation.

Q. IS THE PEAK & AVERAGE METHOD JUSTIFIED BY A HIGH LEVEL VIEW OF CAUSATION?

A. Yes. The gas distribution business is established to deliver gas to customers through mains. The business objective is to deliver gas in all months of the year, and commensurately collect revenues from the full 12 months of the year. The business would not exist without annual usage and revenues. Annual usage is equivalent to the average demand component

[16] Ibid. 2021 Columbia Gas Order and Opinion at 216.

of Peak and Average. The Peak & Average method recognizes that the Company must serve both average monthly demand plus an incremental cost for sizing mains sufficient to cover extreme weather conditions. If a gas utility was built to serve only one day per year, the business would not be practicable, because the price per billing unit would be excessive. Load diversity[17] is one of the important characteristics which makes public utility service economical.

Q. DOES THE PROCESS OF EXTENDING MAINS TO SERVE NEW CUSTOMERS PROVIDE ANOTHER ILLUSTRATION OF COST CAUSATION?

A. Yes. The gas distribution utility evaluates the feasibility of extending mains to new customers and may determine a contribution in aid of construction (CIAC) for the customer. In evaluating whether to extend a main to new customer and the required contribution, if any, payable by the customer, the utility will consider the expected demand for sizing the new segment, plus the expected annual revenues generated by the investment.[18] By considering annual revenues, the gas utility takes into account annual usage. Average demand is a measure of annual usage.

[17] Economies of load diversity is based on serving different types of customer loads with varying load profiles.

[18] The PECO Service Pipe and Main Extension Tariff (Tariff Section No. 7.3) states that the General Economic Test for main extensions is based on estimated base annual revenues which is calculated from estimated annual consumption plus the service line portion of annual fixed charges.

Q. IN (B)(1), YOU DISCUSSED THE IMPACT OF SCALE ECONOMIES ON THE ALLOCATION OF MAINS. DOES THIS APPLY TO THE PEAK & AVERAGE METHOD AS WELL AS A&E?

A. Yes. Scale economies support the inclusion of average demand in the P&A. Holding all else constant, doubling the diameter of a pipe results in a four-fold increase in capacity or volume. However, the increase in cost necessary to achieve the increase in volume is substantially smaller.[19] A scale factor of 0.6 means that a doubling of capacity will result in a 50% increase in cost. A study of five gas utilities derived scale factors ranging from 0.583 – 0.849 for distribution plant serving residential customers.[20] Therefore, the incremental cost of adding extra capacity to meet more severe weather conditions will be less, in real terms, than the average cost per unit. Due to economies of scale, the relationship between peak demand and main cost is not linear, and the allocation method should reflect the lower unit costs of increasing the main capacity size. Peak demand is not a direct measure of cost causation and should not be the sole allocator of demand. This is another reason to utilize the P&A method over the A&E method because, as provided above, the A&E method is more reflective of peak or excess demand than it is of average demand.

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19 "Scale Economies and the 0.6 Rule," (M. Tribe and R. Alpine) *Engineering Costs and Production Economics*, 10 (1986) 271-272. The scale factor based on the relationship between surface area and volume for tanks and pipelines is 0.66 and 0.50, respectively, and the cost estimating "0.6 rule" assumes a similar relationship between an increase in capacity and capital cost.

20 "Marginal Cost Pricing for Gas Distribution Utilities: Preliminary Analysis and Models" Guldman, National Regulatory Research Institute (November 1980) Table 3.2, page 88.

Q. GIVEN THE ECONOMIES IN INCREASING THE SIZE OF MAINS, WHY IS THE AVERAGE & PEAK METHOD SUPERIOR TO 100% PEAK DEMAND?

A. The average demand component recognizes the cost of serving a constant annual level of demand. However, the incremental cost of serving peak demand above base demand is less than average cost due to economies of scale. Consequently, the inclusion of average demand in the method effectively reduces the weight given to peak demand. As peak demand increases, main costs increase at a decreasing rate; therefore, tempering the peak demand signal in the method is appropriate. Peak & Average is composed of 50% peak demand and 50% average demand. Assigning equal ratios to design day demand and average demand provides a more balanced recognition of cost causation than either peak day demand alone or the Company's A&E method.

Q. IS THE COMPANY'S CURRENT INFRASTRUCTURE SPENDING DRIVEN PRIMARILY BY GROWTH IN DESIGN DAY DEMAND?

A. No. PECO intends to spend $724 million for distribution infrastructure in 2024 – 2025.[21] This cost includes replacing 60 miles of mains per year.[22] The driving force for this investment is safety improvement and reduction in gas leakage.[23] A commodity classification is appropriate for activities aimed at reducing gas losses and improving

[21] PECO Statement No. 1 at page 13.
[22] PECO Statement No. 1 at page 17.
[23] PECO witness Hamilton refers to this as a long term threat mitigation program.

unsafe mains. The average demand component of Peak & Average is equivalent to a commodity allocation factor.[24]

Q. CAN YOU ILLUSTRATE THE P&A BASE REVENUE IMPACT FOR THE TWO LARGEST RATE CLASSES, GENERAL COMMERCIAL AND RESIDENTIAL, COMPARED TO PECO'S PROPOSAL?

A. Yes. The base revenue increase for the Company's A&E CCOSS and the P&A CCOSS is compared below.[25] The distribution base revenues are based on the Company's total increase of $110.2 million. The table shows that the Residential and GC classes both receive a lower increase with the P&A method. The TSF and TSI classes receive higher increases of 3.7 and 6.7 million respectively, compared to the PECO model.

Revenue Increase for Residential and GC Classes		
(000's)	**Residential**	**GC**
P&A	71,631	21,977
Company A&E	83,980	23,402
Difference	(12,349)	(1,425)

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION.

A. My recommendation is to adopt the Peak & Average method as the measure of demand. This approach is consistent with Commission precedent, recognizes the gas utility's business objectives of delivering gas both on the max day and throughout the year, and

[24] Average demand is annual system usage divided by 365 days. Commodity allocators are based on annual usage and the allocator percentages are equivalent to average daily usage.

[25] This is based on OCA's adjustment to the Company's confidential CCOSS model.

addresses the impact of economies of scale on the installation of mains to serve both average daily load and additional capacity to meet extreme weather conditions.

C. Large Customer Account Representatives

Q. DOES PECO HAVE CUSTOMER ACCOUNT EXECUTIVES WHO PRIMARILY ASSIST LARGE CUSTOMERS?

A. Yes. PECO identified the costs of 37 major customer account managers and staff who assist large industrial/commercial customers.[26] The cost of these employees is $800,000, and the Company states that the personnel support and assist customers in the following classes: GC, L, MV, MVI, TSF, and TSI customers. The Company's CCOSS directly assigns $561,000 in Account 903 to industrial customers.[27] The remaining $240,000 is spread between Account 926 and Account 905 and allocated on either a general customer or payroll basis. My adjustment allocates this remainder only to the classes GC, L, MV, MVI, TSF, and TSL.[28] In my view, the completes the appropriate allocation of the large customer expense.

Q. WHY DO UTILITIES EMPLOY ACCOUNT MANAGERS SPECIFICALLY TO ASSIST LARGE COMMERCIAL AND INDUSTRIAL CUSTOMERS?

A. Large customer accounts tend to be more complex than other accounts and require specialized knowledge and more intensive assistance. Furthermore, given the amount of

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26 PECO's Response to OCA Interrogatory 4-21.

27 Confidential Attachment OCA 1-1 ("A903").

28 The Company response to OCA 4-21 indicates that the activities are focused only on the larger customers in the GC class. My allocator assigns 9.3% to GC and 90.7% to the remaining industrial classes.

revenues per customer generated by large accounts, utilities are motivated to provide individualized customer service in order to retain the customers in the service territory. PECO states that these personnel act as the primary point of contact for industrial/large commercial customers; work with new service requests from large customers to determine if the Company can serve the customers.[29] Assignment of these costs to classes with industrial customers is consistent with cost causation.

D. Allocation of Accounts 908-916

Q. DO YOU HAVE A RECOMMENDATION WITH RESPECT TO CUSTOMER SERVICE AND SALES EXPENSE (A908 – A916)?

A. Yes. I propose a revision to the allocation factors applied to these accounts. These accounts include marketing and economic development activities. The Company develops composite allocation factors based on individual allocators applied to separate activities included in this account series. 80% of the composite allocation factors are based on direct assignment of marketing activities for LIURP (Residential); Residential Marketing (Residential); Residential & Small Commercial Marketing (Residential and Small C&I); and Large Commercial and Industrial Marketing (Large C&I).[30] The remaining 20% of the composite allocation factor is based on other supporting activities, which are allocated based on the number of customers. I recommend changing the allocation method to

[29] PECO's Response to OCA Interrogatory 4-21.
[30] Confidential Attachment to OCA 1-1 ("Account 908-916").

average demand for this 20% balance of the account series. As a result, the composite allocation factor for the account series is revised.[31]

Q. WHY DO YOU RECOMMEND A REVISION TO THE COMPANY'S ALLOCATION OF THESE MARKETING AND ECONOMIC DEVELOPMENT COSTS?

A. The business objectives of economic development and marketing programs are broader than the direct assignments would indicate. According to the Company, the benefits of the program apply to both new/expanding customers and the customer base at large. [32] PECO witness Amy Hamilton states, "these initiatives benefit the customer base at large by bringing additional revenues that reduce the revenue requirement for all other customers."[33] The general customer allocator applied to the 20% balance of these accounts is too narrow to equitably reflect the benefits which accrue to non-participants in the programs. Therefore, a portion of the allocation factor should reflect a broader assignment of the costs among classes.

Q. WHY DID YOU SELECT AVERAGE DEMAND AS THE BROAD ALLOCATION BASIS FOR 20% OF THE ACCOUNT SERIES?

A. Average daily demand reflects the customer classes' usage of the distribution system, and therefore is a reasonable basis for recognizing that a portion of the activities benefit the general body of ratepayers.

[31] The revised allocation factors are Res (87%); GC (5.9%), Large, MVF, MVI, I, Temp. (0.2%), Trans F (4%), Trans I (2.9%).
[32] PECO Response to OCA 13-2.
[33] Ibidem.

E. Results of Revised CCOSS

Q. HOW DID YOU EVALUATE THE IMPACT OF THE RECOMMENDED CLASS COST OF SERVICE MODIFICATIONS?

A. I revised the Company's CCOSS model in accordance with III. (B) – (D). The revenue requirements reflect the Company's request. My use of the class cost of service results does not imply agreement with the Company's proposed revenue requirement. Instead, the Company's revenue requirements is utilized in order to provide an apples-to-apples comparison.

Q. PLEASE SUMMARIZE THE RESULT OF THE OCA P&A CCOSS COMPARED TO THE FILED CCOSS.

A. The table below is based on the distribution CCOSS filed by the Company and the CCOSS revised by OCA. The table shows the indicated base revenue (excluding gas) increases by class for the Company's study, and the OCA study.

Distribution Base Revenue Increase (000s)					
	RESID	GC	L	MVF	
As Filed	83,980	23,402	(82)	61	
OCA Study	70,226	22,375	(71)	638	
Difference	(13,754)	(1,027)	10	577	
	MVI	IS	TEMP	TSF	TSI
As Filed	(2)	(59)	(553)	4,214	(679)
OCA Study	(0)	(37)	(390)	11,109	6,432
Difference	1	22	163	6,895	7,112

Q. DO YOU PROVIDE A SCHEDULE WHICH PROVIDES THE RESULTS OF OCA'S RECOMMENDED CCOSS?

A. Yes. Exhibit CJ-3 sets forth the summary of the class base revenue results for OCA's recommended CCOSS.

IV. CLASS REVENUE DISTRIBUTION

Q. PLEASE DISCUSS SOME GENERAL LIMITATIONS OF THE CCOSS AS IT APPLIES TO CLASS REVENUE DISTRIBUTION.

A. If major changes in class relationships occur in the CCOSS, revenue impacts can be considered and moderated in the revenue distribution process. Therefore, cost of service study results should be tempered by gradualism considerations. In addition, the class cost of service results should be viewed as a snapshot of cost conditions that can change over time. Since the rate case sets rates for the future, potential shifting of cost conditions over time may affect the reliability ascribed to the CCOSS. Moreover, because the CCOSS may be quite sensitive to changes in allocation or classification choices, "cost based rates" are best viewed as representing a reasonable band around the CCOS results, rather than exact price points.

Q. HOW DID YOU DEVELOP A CLASS REVENUE DISTRIBUTION?

A. My recommendation uses my proposed Peak & Average CCOSS set out in Exhibit CJ-3 and adjusts the class results for rate moderation. Gradualism is a subjective consideration, and I realize that the Commission could favor different degrees of moderation. If the Commission substantially reduces the overall revenue increase, as proposed by other OCA

witnesses, the appeal of gradualism could diminish for the spread across customer classes. My revenue proposal applies 150% as the percent of system average constraint applied to classes with the largest percentage deficiencies. Furthermore, for classes which would otherwise receive a revenue reduction, 50% of system average is applied as the floor for the class percent increase. In my view, under circumstances in which most customers will face a substantial rate increase, the most equitable approach is to spread the increase across all classes and apply a 50% of system average floor as the minimum class percent increase. Schedule CJ-4 sets out the OCA revenue distribution proposal. A summary of the recommended class percent increases (base without gas) is shown below. The system ratio is the ratio of recommended class percent increase to system percent increase.

OCA Revenue Allocation Percent Increase

	Total	RESID	GC	LARGE	MVF
OCA Pct. Incr.	22.88%	22.13%	22.13%	11.44%	34.32%
System Ratio	100.00%	96.71%	96.71%	50.00%	150.00%

	MVI	IS	TEMP	TSF	TSI
OCA Pct. Incr.	11.44%	11.44%	11.44%	34.32%	34.32%
System Ratio	50.00%	50.00%	50.00%	150.00%	150.00%

Q. DO YOU EXPECT THE OVERALL PROPOSED DISTRIBUTION REVENUE INCREASE TO BE LESS THAN THE COMPANY'S FILED REQUEST?

A. Yes. OCA presents revenue requirement testimony which proposes downward adjustments to the system revenue requirement. In the event a lower revenue requirement is authorized than is proposed by PECO, I recommend a proportionate scale back of the

class revenue distribution recommendation in order to reflect the adopted revenue requirement.

V. RESIDENTIAL CUSTOMER CHARGE

Q. WHAT IS THE COMPANY'S PROPOSAL REGARDING THE RESIDENTIAL CUSTOMER CHARGE?

A. PECO proposes to increase the residential monthly customer charge from the current level of $14.25 to $19.38.[34] This is a 36% increase in the monthly fixed charge.

Q. HOW DOES PECO'S PROPOSED CUSTOMER CHARGE COMPARE TO OTHER NGDCS' CUSTOMER CHARGES IN PENNSYLVANIA?

A. PECO would have the highest customer charge for residential customers of any NGDC in Pennsylvania, as can be seen in the following table:

[34] PECO Statement 7, Table 2.

Pennsylvania NGDC Residential Customer Charges		
NGDC	Customer Charge	Difference From PECO Proposed
PECO Proposed	$19.38	---------
Columbia[35]	$16.75	($2.63)
PGW[36]	$16.25	($3.13)
Peoples Gas[37]	$15.75	($3.63)
UGI[38]	$15.00	($4.38)
Peoples Natural[39]	$14.50	($4.88)
PECO Current	$14.25	($5.13)
NFG[40]	$14.00	($5.38)

While customer charges are set on a case-by-case basis, and may reasonably differ across utilities, it is instructive to compare PECO's request to the customer charges currently in effect in the Commonwealth. As PECO is requesting the highest customer charge in Pennsylvania, the Commission should be highly skeptical as to the necessity of PECO's request, whether it is justified, and whether the customer charge satisfies fundamental ratemaking principles.

Q. DO YOU AGREE WITH PECO'S RECOMMENDED INCREASE IN THE RESIDENTIAL CUSTOME CHARGE?

A. No. As a matter of regulatory principles and policy, the absolute level of the fixed customer charge should be limited so that it provides the customer with more control over the size of the monthly bill. The customer charge is the least informative part of a utility's rate

35 Supp. No. 378 to GAS - Pa. P.U.C. No. 9 at p. 16.
36 Supp. No. 172 to GAS – Pa P.U.C. No. 2 at p. 83
37 Supp. No. 101 to GAS - Pa. P.U.C. No. 8 at p. 12
38 Supp. No. 37 to GAS - Pa. P.U.C. No. 7 at p. 85
39 Supp. No. 36 to GAS - Pa. P.U.C. No. 47 at p. 3
40 Supp. No. 272 to GAS - Pa. P.U.C. No. 9 at p. 36

design, and an excessive customer charge is inconsistent with energy conservation objectives because it diminishes the price signal provided by usage rates.

Q. WHAT ARE THE POLICY REASONS FOR ENSURING THE RESIDENTIAL CUSTOMER CHARGE IS NOT EXCESSIVE?

A. An excessive customer charge can distort appropriate price signals for residential customers. The dominant economic function of a customer charge is to ration access to the utility system. That objective conflicts with the policy basis for regulating monopolies and is counter to the concept of the essential service character of gas for home heating and cooking. Public policy encourages universal service, rather than limiting public access to regulated monopoly service. Except for its role in rationing access to the system, the customer charge provides no meaningful price signal that is relevant to resource allocation. This contrasts with volumetric charges which are controlled by the consumer's usage decisions. A tenet of rate design is that lowering the customer charge will increase the proportion of costs recovered through a usage-sensitive rate (i.e., price per Mcf). That result is more consistent with energy conservation goals and provides pricing policies appropriate for consumption of finite natural resources. By allowing customers to control their utility bill with conservation, minimizing the customer charge is aligned with the Company's stated interest in more efficient energy use.[41] In addition, a policy that

[41] PECO included $2.73 million for residential energy efficiency & conservation in cost of service. OCA 11-1.

minimizes the customer charge is more equitable to low usage and low income residential customers.[42]

Q. WHAT IS MR. BISTI'S RATIONALE FOR INCREASING THE CUSTOMER CHARGE 36%, WHICH IS MUCH HIGHER THAN THE COMPANY'S PROPOSED 24% BASE REVENUE INCREASE FOR THE RESIDENTIAL CLASS?

A. Mr. Bisti states that he proposes to reduce the disparity between the allocated cost of service study's claimed $33.00 of residential customer costs and the current $14.25 customer charge. While PECO's customer costs are quite high, I do not agree that the disparity is that large. I disagree that all of the costs categorized as customer-related by the CCOSS are appropriate for inclusion in the customer charge. In my view, the customer charge should only recover costs which *directly* vary with the number of customers. This perspective is consistent with the NARUC Gas Distribution Utility Rate Design Manual, which states that customer costs should vary directly with the number of customers.[43] For instance, the CCOSS $33.00 target fixed charge would include administrative & general expense in the customer charge, even though those expenses, by definition, are not directly related to any particular category of cost. When new residential customers initiate service or existing customers leave the system, the primary increase or decrease in cost pertains to billing, collection, and metering. Given that the disparity with a cost-based customer charge is

[42] See also, OCA St. 4, OCA witness Colton.

[43] NARUC Gas Distribution Rate Design Manual (1968) at 22.

overstated, I contend that Mr. Bisti could have proposed a more gradual increase in the customer charge.

Q. MR. BISTI CLAIMS THAT PRICING THE CUSTOMER CHARGE TOO LOW HAS ADVERSE CONSEQUENCES AND THAT INCREASING THE CUSTOMER CHARGE WILL IMPROVE THE ACCURACY OF PRICE SIGNALS. IS THIS A REASONABLE JUSTIFICATION FOR INCREASING THE CUSTOMER CHARGE BY 36%?

A. No. PECO's proposal places a greater reliance on fixed charges and reduces the percentage of cost recovered through variable rates. Thus, the implication of Mr. Bisti's argument is that the current customer charge provides too great a price signal for energy efficiency. Increasing the customer charge provides no direct price signal related to electricity consumption, but it indirectly reduces the price signal for energy conservation by shifting costs from the usage rate to the fixed charge. His claim that the higher customer charge will provide a "more accurate price signal" implies that PECO's customers would otherwise undertake energy efficiency measures which are not cost-justified. I doubt that the current customer charge has driven customers to undertake excessive conservation measures. The barriers which inhibit cost-effective energy efficiency are a more significant problem than excessive proliferation of energy efficiency actions. Given household budget limitations, customers may require unrealistic payback periods in order to undertake cost-effective energy efficiency measures. All else equal, a lower customer charge will increase the price signal for energy efficiency and reduce the payback period for such measures, thereby increasing the penetration of cost-effective energy efficiency in the marketplace.

Q. MR. BISTI ARGUES THAT PLACING TOO MUCH COST IN THE VARIABLE CHARGE WILL RESULT IN COLLECTING TOO LITTLE OR TOO MUCH REVENUE DUE TO VARIABILITY OF THE CUSTOMER'S USAGE. PLEASE RESPOND TO THIS CONTENTION.

A. From the customer's perspective, the ability to vary usage is beneficial because it enhances consumers' control over their bills. Mr. Bisti has raised the familiar "revenue stability" argument. Public utilities like PECO have an incentive to propose higher monthly fixed charges because they contend the fixed charges produce less financial risk; however, they do not propose to compensate customers for the lower risk through a reduction in the allowable return on equity. Without such explicit compensation to ratepayers, the utilities' frequent argument in favor of the "revenue stability" aspect of fixed charges is not a reasonable policy basis for substantial percentage increases in the customer charge.

Q. CAN YOU PROVIDE AN ILLUSTRATION OF THE IMPACT OF CUSTOMER CHARGE METHODS ON ENERGY CONSERVATION?

A. Yes. For a 2,200 square foot home with gas heating, PECO states that installing a smart thermostat will produce an annual bill savings of $237.[44] If PECO had requested the same residential revenue requirement but maintained the current $14.25 customer charge, the proposed delivery rate would have increased 11%.[45] This also would have the effect of increasing the smart thermostat bill savings by at least $25 per year relative to what it would

[44] PECO energy savings calculator: https://www.peco.com/ways-to-save/tools-resources/tools-calculators/thermostat-settings/thermostat-heating

[45] The proposed delivery charge is $6.34 which would increase to $7.56 if the customer charge is maintained at $14.25.

be with the actual proposed delivery rate. The Company's customer charge choice has tangible impacts on the incentive for consumers to undertake energy savings measures.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE RESIDENTIAL CUSTOMER CHARGE?

A. If the Company's proposal is adopted, the customer charge will increase as a percent of the total bill from 14.54% currently to 16.97% with the proposed rate.[46] My recommendation is to set the customer charge percent increase at a level that recognizes both OCA's class revenue allocation recommendation and the increase in the residential total bill under the Company's proposed revenue requirement. Therefore, I adjusted the Company's average residential bill at proposed rates to reflect OCA's class revenue allocation.[47] The resulting percentage increase in the average residential bill increase is 10.2% at the Company's requested base revenue requirement. My recommendation is to limit the residential customer charge increase to 10.2% or $15.70. The recommended $15.70 customer charge would be subject to scale back based on the Commission's reduction to the proposed revenue requirement.

Q. ARE THERE GRADUALISM CONCERNS REGARDING PECO'S REQUESTED CUSTOMER CHARGE INCREASE?

A. Yes. Because the portion of a customer's bill comprised of the customer charge will increase substantially under PECO's proposal, customers will be hindered in their ability

[46] Company's response to OCA 4-25 and 4-26.

[47] Based on the Attachment to OCA 4-26, the proposed bill is $114. My class revenue allocation (Exhibit CJ-4) reduces the Company's residential base revenue allocation by 92%, resulting in a $6 decrease to $108. $108 - $98 (current bill) = $10 increase. $10/$98 = 10.2%.

to respond to higher bills. For an 8 MCF bill, 31.7% of the $16.17 bill increase will be due to the customer charge.[48] No matter what PECO's residential customers do, they must pay this customer charge increase or they will no longer have access to natural gas service, regardless of efforts to conserve. This proposed disproportionate increase will have greater impact on low usage and low-income customers, as such customers have less ability to adjust usage to decrease their monthly bills, as described above. Placing a cap on the customer charge increase which maintains – or decreases – the customer charge's portion of the overall bill mitigates gradualism concerns regarding the impact of the customer charge on residential customers. Therefore, I propose limiting the customer charge increase to the overall residential bill increase, as adjusted for my class revenue allocation.

Q. IS YOUR RECOMMENDED $15.70 CUSTOMER CHARGE REASONABLE?

A. Yes. The Company's proposed increase in the customer charge to $19.38 represents excessive movement toward the claimed ultimate cost target of $33.00. My recommended increase is more moderate and is consistent with the average total bill increase with OCA's class revenue allocation. In my opinion, the customer charge increase should be moderated in order to maintain incentives for energy conservation and equitable rates for low income and low usage residential customers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes.

[48] The proposed customer charge is a $5.13 increase, from $14.25 to $19.38.
[114.19 proposed bill at 8 MCF – 98.02 current bill at 8 MCF=16.17] 5.13 / 16.17) = 31.7%.

SUMMARY OF QUALIFICATIONS

CLARENCE JOHNSON

EDUCATION

Bachelor of Science, Political Science, University of Houston.

Master of Arts, College of Social Science (Interdisciplinary/Urban Studies), University of Houston.

EXPERIENCE

Mr. Johnson has more than 35 years' experience as an expert witness and analyst related to electric and telecommunications utility issues.

CURRENT EMPLOYMENT

Mr. Johnson currently provides professional consulting and analytical analyses regarding regulatory and public policies related to public utilities and the energy industry.

PREVIOUS EMPLOYMENT 1983-2008

From September 1983 to June 2008, Mr. Johnson was a Regulatory Analyst for the Office of Public Utility Counsel. He was the professional staff person with primary responsibility for advising the Public Counsel on economic and regulatory policy issues. His responsibilities included: presenting expert testimony on regulatory matters; research related to rate filings of regulated public utilities; acting as a non-testifying expert and advising attorneys in cross-examination of witnesses and development of trial exhibits for utility regulatory proceedings; analyzing policies and practices for regulating public utilities; and preparing comments on proposed Public Utility Commission rules; assisting financial and economic staff in the development and preparation of testimony; providing expert testimony on selected issues; preparation of reports to the Legislature regarding the utility regulatory process.

EMPLOYMENT BEFORE 1983

During the period 1977 to 1983, Mr. Johnson extensively engaged in analysis and supervision of public interest advocacy programs. He directed two non-profit corporations involved in public policy research from 1978 to 1980 and 1982 to 1983, respectively; responsibilities included overall management of the corporations, negotiation and management of grants and contracts, supervision of research activities, and presentations of research findings to legislative and administrative governmental entities. From 1980 to 1982, he also performed policy analysis and substantive research on the impact of governmental policies for two publicly-funded entities. His responsibilities for the statewide support center for legal services programs in Texas assessed the effect of federal and state regulatory changes upon indigent clients. As an analyst for the Texas State Senate's Natural Resources

Committee, Mr. Johnson was responsible for research related to low-level radioactive waste disposal and low-head hydropower, and the committee's staff's interim report on energy conservation.

AWARDS Mr. Johnson was the recipient of the first annual Texas Outstanding Public Service Award in 1988.

MEMBERSHIP American Economic Association.

TESTIMONY ON BEHALF OF TEXAS OFFICE OF PUBLIC UTILITY COUNSEL

Docket No. 6588, Re Southwestern Bell Telephone Company,
Subject: Declassification of Documents.

Docket Nos. 7195 and 6755, Re Gulf States Utilities Company,
Subject: Rate Design/Cost Allocation.

Docket No. 7510, Re West Texas Utilities Company,
Subject: Rate Design/Cost Allocation.

Docket No. 8095, Re Texas-New Mexico Power Company,
Subject: Rate Design/Cost Allocation.

Docket No. 8363, Re El Paso Electric Company,
Subject: Rate Design/Cost Allocation.

Docket No. 8425, Re Houston Lighting & Power Company,
Subject: Revenue Requirements.

Docket No. 8425, Re Houston Lighting & Power Company,
Subject: Rate Design/Cost Allocation.

Docket No. 8646, Re Central Power and Light Company,
Subject: Revenue Requirements.

Docket No. 8646, Re Central Power and Light Company,
Subject: Rate Design/Cost Allocation.

Docket No. 8646, Re Central Power and Light Company,
Subject: Interim Rate Relief.

Docket No. 8555, Proceedings Concerning Houston Lighting & Power Company on Remand From Cause No. C-5705 and Cause No. 352,044,
Subject: Determination of Remand Amount.

Docket No. 8928, Re Texas-New Mexico Power Company,
Subject: Rate Design/Cost Allocation.

Docket No. 8585, Re Southwestern Bell Telephone Company,
Subject: Revenue Requirements/Affiliates.

Docket No. 8585, Re Southwestern Bell Telephone Company,
Subject: Reply, Revenue Requirements/Affiliates.

Docket No. 8585, Re Southwestern Bell Telephone Company,
Subject: Reply, Rate Design.

Docket No. 8585, Southwestern Bell Telephone Company,
Subject: Proposed Non-Unanimous Stipulation.

Docket No. 9300, Texas Utilities Electric Company,
Subject: Revenue Requirement.

Docket No. 9300, Texas Utilities Electric Company,
Subject: Cost Allocation and Rate Design.

Docket No. 9300, Texas Utilities Electric Company,
Subject: Prudence of Plant Acquisition.

Docket No. 9561, Central Power and Light Company,
Subject: Revenue Requirement.

Docket No. 9561, Central Power and Light Company,
Subject: Cost Allocation and Rate Design.

Docket No. 9578, Sugar Land Telephone Company,
Subject: Inquiry into Sale.

Docket No. 9850, Houston Lighting & Power Company,
Subject: Revenue Requirement.

Docket No. 9850, Houston Lighting & Power Company,
Subject: Cost Allocation and Rate Design.

Docket No. 9850, Houston Lighting & Power Company,
Subject: Settlement Testimony: Revenue Requirement and Rate Design.

Docket No. 9981, Central Telephone Company,
Subject: Revenue Requirement/Affiliates.

Docket No. 10894, Gulf States Utilities Company,
Subject: Affiliate Transactions/Power Purchases.

Docket No. 11735, Texas Utilities Electric Company,
Subject: Revenue Requirement and Rate Design.

Docket No. 11892, General Counsel's Original Petition for Generic Proceeding Regarding Purchased Power,
Subject: Impact of Purchased Power on Cost of Capital.

Docket No. 12700, El Paso Electric Company,
Subject: Acquisition, Revenue Requirement and Rate Design.

Docket No. 12957, Houston Lighting & Power Company,
Subject: Contract Pricing Tariff.

Docket No. 13100, Texas Utilities Electric Company,
Subject: Competitive Pricing Tariffs.

Docket No. 13575, Texas Utilities Electric Company,
Subject: Demand Side Management and Purchase Power Recovery.

Docket No. 12065, Houston Lighting & Power Company,
Subject: Revenue Requirement/Plant Cancellation/Prudence.

Docket No. 12065, Houston Lighting & Power Company,
Subject: Cost Allocation and Rate Design.

Docket No. 13943, Gulf Coast Power Connect,
Subject: Transmission Line CCN.

Docket No. 13575, TUEC Application for Relief Regarding Recovery Solicitations,
Subject: DSM and Purchase Power Cost Recovery.

Docket No. 13369, West Texas Utilities Company,
Subject: Cost Allocation and Rate Design.

Docket No. 14435, Southwestern Electric Power Co.,
Subject: Rate Design.

Docket No. 14716, Texas Utilities Electric Company,
Subject: Wholesale Competitive Rate.

Docket No. 14965, Central Power and Light Company,
Subject: Cost Allocation, Rate Design and Competitive Issues.

Docket No. 14965, Central Power and Light Company,
Subject: Reply, Cost Allocation, Rate Design and Competitive Issues.

Docket No. 15560, Texas-New Mexico Power Company,
Subject: Competitive Issues.

Docket No. 16705, Entergy Gulf States, Inc.,
Subject: Cost Allocation, Rate Design and Competitive Issues.

Docket No. 16705, Entergy Gulf States, Inc.,
Subject: Reply, Cost Allocation, Rate Design and Competitive Issues.

Docket No. 16995, Central Southwest Corp.,
Subject: Integrated Resource Planning.

Docket No. 17751, Texas-New Mexico Power Company,
Subject: Rate Design and Competitive Issues.

Docket No. 18845, CPL, WTU, and SWEPCO,
Subject: Integrated Resource Planning.

Docket No. 21527, TXU Financing Order,
Subject: Cost Allocation.

Docket No. 21528, CPL Financing Order,
Subject: Cost Allocation.

Docket No. 21591, Sharyland Utilities Initial Rates & Tariffs,
Subject: Deferrals.

Docket No. 21956, Reliant Business Separation Plan,
Subject: Price to Beat and Capacity Auction.

Docket No. 22344, Generic Rate Design and Customer Classification for TDUs,
Subject: Rate Design.

Docket No. 22349, TNMP Unbundling,
Subject: Competitive Transition Charge and Revenue Requirements/Cost Allocation/Rate Design.

Docket No. 22350, TXU Unbundling,
Subject: Competitive Transition Charge.

Docket No. 22351, Southwestern Public Service Company Unbundling,
Subject: Cost Allocation/Rate Design.

Docket No. 22352, Central Power & Light Company,
Subject: Competitive Transition Charge.

Docket No. 22355, Reliant Unbundling,
Subject: Non-Bypassable Charges and Competitive Transition Charge/Cost Allocation/Rate Design.

Docket No.22356, Entergy Gulf States Utilities Unbundling,
Subject: Revenue Requirements/Cost Allocation/Competitive Transition Charge/Settlement Rate Design.

Docket No. 24194, Application of TNMP to Establish Price to Beat Fuel Factor,
Subject: Fuel and purchased power costs.

Docket No. 25230, Joint Application for Approval of Stipulation Regarding TXU Electric Company Transition to Competition Issues,
Subject: Retail Clawback Provisions of Non-Unanimous Agreement.

Docket No. 25314, Application of West Texas Utilities Company and Mutual Energy WTU to Establish a Fuel Reconciliation Methodology for Southwest Power Pool (SPP) Customers,
Subject: Fuel Cost Method.

Docket No. 24336, Application of Entergy Gulf States, Inc. for Approval of Price to Beat Factor,
Subject: Unaccounted for Energy.

Docket No. 23320, Petition of ERCOT for Approval of the ERCOT Administrative Fee,
Subject: ERCOT Fee Structure.

Docket No. 26194, El Paso Electric Company Fuel Reconciliation,
Subject: Purchased Power and Off-System Sales.

Docket No. 27576,	Application of Texas-New Mexico Power Company for Reconciliation of Fuel Costs,
Subject:	Fuel Reconciliation.
Docket No. 28813,	Inquiry Into Rates of Cap Rock Energy,
Subject:	Revenue Requirements/Cost Allocation/Rate Design.
Docket No. 28840,	Application of AEP Texas Central Company for Change in Rates,
Subject:	Cost Allocation/Rate Design/Affiliate Transactions.
Docket No. 30485,	Application of CenterPoint Energy Houston Electric, LLC For A Financing Order,
Subject:	Transition Charge Recovery.
Docket No. 30143,	Petition of El Paso Electric Company to Reconcile Fuel Costs (Initial and Rebuttal Testimonies),
Subject:	Fuel Reconciliation.
Docket No. 30706,	Application of CenterPoint Energy Houston Electric, LLC for A Competition Transition Charge,
Subject:	Competitive Transition Charge Structure.
Docket No. 31315,	Application of Entergy Gulf States, Inc. for Approval of Incremental Purchased Capacity Recovery Rider,
Subject:	Purchase Power Capacity Rates.
Docket No. 31544,	Application of Entergy Gulf States, Inc. for Recovery of Transition to Competition Costs,
Subject:	Allocation of Transition Costs.
Docket No. 31994,	Application of Texas-New Mexico Power Company's to Establish a Competition Transition Charge Pursuant to P.U.C. Subst. R. 25.263(N),
Subject:	Competition Transition Charge.
Docket No. 32475,	Application of AEP Texas Central Company for a Financing Order,
Subject:	Securitization of Stranded Costs.

Docket No. 32758,	Application of AEP Texas Central Company for a Competition Transition Charge Pursuant to P.U.C. Subst. R. 25.263(n),
Subject:	Competitive Transition Charge.
Docket No. 32795,	Staff's Petition to Initiate Generic Proceeding to Re-Allocate Stranded Costs Pursuant to PURA § 39.253(f),
Subject:	Stranded Costs Allocation.
Docket No. 32907,	Application of Entergy Gulf States, Inc. for Determination of Hurricane Reconstruction Costs,
Subject:	Cost Allocation.
Docket No. 32766,	Application of Southwestern Public Service Company for: (1) Authority to Change Rates; (2) Reconciliation of its Fuel Costs for 2004 and 2005; (3) Authority to Revise the Semi-Annual Formulae Originally Approved in Docket No. 27751 Used to Adjust its Fuel Factors; and (4) Related Relief,
Subject:	Cost Allocation/Rate Design.
Docket No. 33586,	Application of Entergy Gulf States, Inc. for a Financing Order,
Subject:	Financing Order Allocation.
Docket No. 32710,	Application of Entergy Gulf States, Inc. for Authority to Reconcile Fuel and Purchased Power Costs,
Subject:	Capacity Rider Allocation.
Docket No. 31461,	Application of AEP Texas North Company for a Competition Transition Charge Under to Subst. R. §25.263(N),
Subject:	Competition Transition Charge.
Docket No. 32795,	Staff's Petition to Initiate a Generic Proceeding to Re-Allocate Stranded Costs Pursuant to PURA § 39.253(f),
Subject:	Stranded Cost Allocation.
Docket No. 33309,	Application of AEP Texas Central Company for Authority to Change Rates,
Subject:	Rate Design and Energy Efficiency Costs.

Docket No. 33310,	Application of AEP Texas North Company for Authority to Change Rates,
Subject	Energy Efficiency Costs and Riders.
Docket No. 32902,	CenterPoint Energy Houston Electric, LLC Compliance Tariff,
Subject:	Allocation of Stranded Costs.
Docket No. 34077,	Joint Report and Application of Oncor and EFH Pursuant to § 14.101,
Subject:	Leveraged buyout of utility.
Docket No. 35105,	Compliance Tariff Filing of AEP Texas,
Subject:	Allocation of Stranded Costs.
Docket No. 35038,	Texas-New Mexico Power Company Tariff Filing in Compliance with the Final Order in Docket No. 33106,
Subject:	Allocation of Stranded Costs.
Docket No. 34800,	Application of Entergy Gulf States, Inc. for Authority to Change Rates and to Reconcile Fuel Costs,
Subject:	Cost Allocation & Rate Design.
*Docket No. 37482,	Application of Entergy Texas for a PCRF,
Subject:	Purchase Power.
*Docket No. 37744,	Application of Entergy Texas, Inc. for Authority to Change Rates,
Subject:	Cost allocation, rate design, proposed riders, & storm damage expense.
*Docket No. 38951,	Application of Entergy Texas, Inc. for Approval of CGS Tariff,
Subject:	Rate Design, Competitive Tariffs.
*Docket No. 46454,	Application of SPS for Revision of EECRF[1],
Subject:	Recovery of energy efficiency costs.

[1] Asterick (*) denotes testimony for Texas OPC as a consultant.

TESTIMONY ON BEHALF OF STEERING COMMITTEE OF ONCOR CITIES	Docket No. 35634, Subject:	Re Oncor Electric Delivery's Request for an Energy Efficiency Cost Recovery Factor, Energy Efficiency Cost Recovery.
	Docket No. 36958, Subject:	Application of Oncor Electric Delivery Company LLC for 2010 Energy Efficiency Cost Recovery Factor, Energy Efficiency Cost Recovery.
	Docket No. 39375, Subject:	Application of Oncor Electric Delivery Company LLC for 2012 EECRF, Energy Efficiency Cost Recovery.
TESTIMONY ON BEHALF OF ALLIANCE OF XCEL MUNICI-PALITIES	Docket No. 35664, Subject:	Application of SPS to Revise Interruptible Credit Option Tariff, Interruptible Rate Avoided Costs.
	Docket No. 35763, Subject:	Application of SPS to Change Rates and Reconcile Fuel and Purchased Power Costs, Energy Efficiency, Renewable Energy Credits, Power Cost Credits, and Interruptible Credits.
	Docket No. 37173, Subject:	Petition for Declaratory Order of Southwestern Public Service Company Regarding the Generation Demand Charge as a Cap on Compensation for Interruptible Resources Interruptible Curtailable Option ("ICO").
	Docket No. 43695, Subject:	Application of SPS to Change Base Rates, Cost Allocation / Rate Design/ Jurisdictional.
	Docket No. 47527, Subject:	Application of SPS to Change Base Rates, Cost Allocation / Rate Design/ Jurisdictional
TESTIMONY ON BEHALF OF CERTAIN TNMP CITIES	Docket No. 36025, Subject:	Application of TNMP for Authority to Change Rates, Cost Allocation and Rate Design.
	Docket No. 39362, Subject:	Application of TNMP for 2012 EECRF, Energy Efficiency Cost Recovery.

TESTIMONY ON BEHALF OF ST.LAWRENCE COTTON GROWERS	Docket No. 41474, Subject:	Application of Sharyland Utilities for Unbundled Delivery Rates, Cost Allocation, Rate Design, Unbundling.
TESTIMONY ON BEHALF OF LIVE OAK TENANTS	Docket No.41987, Subject:	Complaint Against Live Oak Resort, Sub Metering Complaint Case.
TESTIMONY ON BEHALF OF GULF COAST COALITION OF CITIES	Docket No. 38339, Subject:	Application of CenterPoint Energy Houston Electric, LLC for Authority to Change Rates, Cost Allocation, Rate Design, Riders.
TESTIMONY ON BEHALF OF PENNYSLVANIA OFFICE OF CONSUMER ADVOCATE	Docket No. R-2010-2161575, et. al., Subject:	PECO Energy Co.-Electric Division Base Rate Case, Cost Allocation and Rate Design.
	Docket No. R-2010-2179522, Subject:	Duquesne Light Company Base Rate Case, Cost Allocation and Rate Design.
	Docket No. R-2014-248745, Subject:	Met Edison General Base Rate Case, Cost Allocation and Rate Design.
	Docket No. R-2014-2478743, Subject:	Penelec Power General Base Rate Case, Cost Allocation and Rate Design.
	Docket No. R-2014-2478744, Subject:	Penn Power General Base Rate Case, Cost Allocation and Rate Design.
	Docket No. R-2014-248752,	West Penn Power General Base Rate Case,

Subject:	Cost Allocation and Rate Design.
Docket No. R-2016-2537349	Met Edison General Base Rate Case,
Subject:	Cost Allocation and Rate Design.
Docket No. R-2016-2537352	Penelec Power General Base Rate Case,
Subject:	Cost Allocation and Rate Design.
Docket No. R-2016-2537355,	Penn Power General Base Rates,
Subject:	Cost Allocation and Rate Design.
Docket No. R-2016-2537359	West Penn Power General Base Rate Case,
Subject:	Cost Allocation and Rate Design.
Docket No. R-2018-3000164	PECO General Rate Case
Subject:	Cost Allocation and Rate Design
Docket No. R-2021-3024601	PECO General Rate Case
Subject:	Cost Allocation and Rate Design
Docket No. R-2023-3044549	Peoples Gas Base Rate Case
Subject:	Cost Allocation and Rate Design

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TESTIMONY ON BEHALF OF SWEPCO CITIES	Docket No. 40443, Subject:	Application of SWEPCO for Rate Change, Cost Allocation, Rate Design, Fuel Rule, Revs.
TESTIMONY ON BEHALF OF SWEPCO CITIES (CARD)	Docket No. 46449, Subject:	Application of SWEPCO for Rate Change, Cost Allocation, Rate Design, Transmission.

*Gas Utility (*Railroad *Commission):*

TESTIMONY FOR CITY OF EL PASO	Docket No.10506 Subject:	Texas Gas Services Co.-West Texas Cost Allocation, Rate Design

TESTIMONY FOR CITY OF EL PASO	Case No OS22-9896 Subject:	Texas Gas Services Co.-Gas One Cost Allocation, Rate Design

Additional Electric Cases

TESTIMONY FOR CONNECTICUT CONSUMER COUNSEL	Docket No.14-05-06, Subject:	CL&P Rate Increase Application, Cost Allocation, Rate Design, Decoupling.
TESTIMONY FOR TEXAS COAST UTILITIES COALITION	Docket No.44572, Subject: Docket No. 47320, Subject:	CenterPoint Application for DCRF, Distribution Cost Recovery Factor. CenterPoint Application for DCRF, Distribution Cost Recovery Factor.
TESTIMONY FOR CITY OF EL PASO	Docket No.44941, Subject: Docket No. 46831 Subject: Docket No. 48181 Subject: Docket No. 52195 Subject:	El Paso Electric Co. Rate Request, Cost Allocation, Rate Design. EPEC Rate Case Cost Allocation/Rate Design EPEC Community Solar Waiver Regulatory Policy EPEC Rate Case Cost Allocation/Rate Design
TESTIMONY FOR TEXAS OPUC (2014 or later)	Docket No.44620, Subject: Docket No. 45414, (base rate) Subject: Docket No. 46025, (fuel)	Sharyland Utilities Good Cause Request, Transmission Cost Recovery. Sharyland Utilities Rate Inquiry, Rev Req/Allocation/Rate Design. Southwestern Public Service Co.,

Subject: Fuel and Purchased Power.

Docket No. 48371, Entergy Texas Rate Application

Class Allocation/Rate Design/Riders

Docket No. 49616, Southwestern Public Service Co.
Subject: Fuel Factor Methodology

Docket No. 50058, El Paso Electric Co. Fuel Reconciliation
Subject: Off System Sales Margin in Fuel

Docket No. 51625, Southwestern Public Service Co.
Subject: Fuel Factor Methodology; Gas Prices

TESTIMONY FOR CITIES SERVED BY AEP Docket No.49494, Application of AEP Texas to Adjust Rates
Subject: Cost Allocation/Rate Design

TESTIMONY FOR MD. OFFICE OF PEOPLE COUNSEL Case No.9610, Application of Baltimore Gas & Electric Co.
Subject: Gas/Electric Cost Allocation/Rate Design

Illustration of Equivalence of Basic A&E Formula and Peak Demand

Classes	Max Demand	Percent	Average Demand	Percent	AD X LF
Class A	60	37.5%	25	50%	15.63%
Class B	100	62.5%	25	50%	15.63%
Total	160	100%	50	100%	
Load Factor	System MD / AD	31%			
[1-LF]		69%			

MD-AD	Excess Demand	Percent	ED X (1-LF)
Class A	35	32%	21.88%
Class B	75	68%	46.88%
Total	110.00		

A&E Factor =(class AD % * LF) + [class ED % * (1-LF)]			
	AD X LF	ED X (1-LF)	Total Factor
Class A	15.63%	21.88%	37.5%
Class B	15.63%	46.88%	62.5%

A&E Excess Factors (37.5% and 62.5%) Equal Max Demand Percent (37.5% and 62.5%)

OCA CCOSS with 50% Average & Excess Method

(PECO Requested Rev Requirement)

	TOTAL GAS DIVISION	RESID	GC	LARGE	MOTOR VEHICLE FIRM	MOTOR VEHICLE INTER	INTER SERV	TEMP CONTROL	TRANSP SERV FIRM	TRANSP SERV INTER
Present Base Revenues	$ 481,982	$ 327,766	$ 122,676	$ 184	$ 611	$ 4	$ 75	$ 697	$ 19,121	$ 10,848
Current ROR	5.81%	5.53%	6.25%	18.59%	7.03%	17.52%	50.89%	48.30%	5.99%	8.88%
Present Relative ROR	1.00	0.95	1.07	3.20	1.21	3.01	8.75	8.31	1.03	1.53
Proposed excl. Gas:										
Base Revs (equalized ROR)	592,264	401,765	144,434	111	1,027	3	30	245	27,556	17,094
Base Rev Increase	110,283	73,999	21,758	(73)	416	(1)	(45)	(452)	8,436	6,246
Percent Increase	22.88%	22.58%	17.74%	-39.84%	68.03%	-22.14%	-60.17%	-64.88%	44.12%	57.58%
Percent System Average	100.00%	98.67%	77.51%	-174.11%	297.31%	-96.78%	-262.99%	-283.54%	192.82%	251.65%

OCA Recommended Class Cost of Service Study

Based on PECO Requested Base Revs

	TOTAL GAS DIVISION	RESID	GC	LARGE	MOTOR VEHICLE FIRM	MOTOR VEHICLE INTER	INTER SERV	TEMP CONTROL	TRANSP SERV FIRM	TRANSP SERV INTER
Present Base Revenues	$ 481,982	$ 327,766	$ 122,676	$ 184	$ 611	$ 4	$ 75	$ 697	$ 19,121	$ 10,848
Current ROR	5.81%	5.87%	6.31%	16.83%	2.33%	9.04%	19.27%	21.63%	3.84%	3.90%
Present Relative ROR	1.00	1.01	1.08	2.90	0.40	1.56	3.31	3.72	0.66	0.67
Proposed excl. Gas:										
Base Revs (equalized ROR)	$ 592,264	$ 397,992	$ 145,052	$ 113	$ 1,249	$ 3	$ 38	$ 307	$ 30,230	$ 17,280
Base Rev Increase	110,283	70,226	22,375	(71)	638	(0)	(37)	(390)	11,109	6,432
Percent Increase	22.88%	21.426%	18.239%	-38.800%	104.460%	-7.933%	-49.547%	-55.935%	58.102%	59.294%
Percent System Average	100.00%	93.64%	79.71%	-169.57%	456.54%	-34.67%	-216.54%	-244.46%	253.93%	259.14%

OCA Recommended Class Revenue Distribution

(PECO Requested Rev Requirement)

	TOTAL GAS DIVISION	RESID	GC	LARGE	MOTOR VEHICLE FIRM	MOTOR VEHICLE INTER	INTER SERV	TEMP CONTROL	TRANSP SERV FIRM	TRANSP SERV INTER
Present Base Revenues	$ 481,982	$ 327,766	$ 122,676	$ 184	$ 611	$ 4	$ 75	$ 697	$ 19,121	$ 10,848
Current ROR	5.81%	5.87%	6.31%	16.83%	2.33%	9.04%	19.27%	21.63%	3.84%	3.90%
Present Relative ROR	1.00	1.01	1.08	2.90	0.40	1.56	3.31	3.72	0.66	0.67
Proposed excl. Gas:										
Base Revs (equalized ROR)	$ 592,264	$ 397,992	$ 145,052	$ 113	$ 1,249	$ 3	$ 38	$ 307	$ 30,230	$ 17,280
Base Rev Increase	110,283	70,226	22,375	(71)	638	(0)	(37)	(390)	11,109	6,432
Percent Increase	**22.88%**	**21.43%**	**18.24%**	**-38.80%**	**104.46%**	**-7.93%**	**-49.55%**	**-55.94%**	**58.10%**	**59.29%**
Percent System Average	100.00%	93.64%	79.71%	-169.57%	456.54%	-34.67%	-216.54%	-244.46%	253.93%	259.14%
Limit Increases					$ 209.70				$ 6,562.52	$ 3,723.22
Floor Increase				$ 21.05		$ 0.41	$ 8.54	$ 79.77		
Total for Limited Classes	10,605	70,226	22,375	$ 21.05	$ 209.70	$ 0.41	$ 8.54	$ 79.77	$ 6,562.52	$ 3,723.22
Revenue Incr. Allocation	**$ 110,283**	**72,531**	**27,147**	**$ 21**	**$ 210**	**$ 0.4**	**$ 9**	**$ 80**	**$ 6,563**	**$ 3,723**
Percent Increase	**22.88%**	**22.13%**	**22.13%**	**11.44%**	**34.32%**	**11.44%**	**11.44%**	**11.44%**	**34.32%**	**34.32%**
Percent System Average	**100.00%**	**96.71%**	**96.71%**	**50.00%**	**150.00%**	**50.00%**	**50.00%**	**50.00%**	**150.00%**	**150.00%**
Compare to PECO JAB-1										
Company Rev Incr. %		24%	23%	0%	14%	0%	0%	0%	22%	0%

Gradualism Limits	
System Average Increase	**Increase Limit**
150%	34.3%
50%	11%

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Clarence L. Johnson, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 3 (corrected), are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 8, 2024 Signature: _____

Clarence L. Johnson

Address: CJ Energy Consulting
3707 Robinson Avenue
Austin, TX 78722

OCA STATEMENT 3R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
	:	
PECO Energy Co. (Gas Division)	:	

REBUTTAL TESTIMONY
OF
CLARENCE L. JOHNSON

ON BEHALF OF
OFFICE OF CONSUMER ADVOCATE

July 16, 2024

REBUTTAL TESTIMONY OF CLARENCE L. JOHNSON

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Clarence L. Johnson. My business address is 3707 Robinson Ave, Austin, Texas 78722.

Q. ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS PROCEEDING?

A. I am presenting testimony on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes. My direct testimony was submitted as OCA Statement 3.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS CASE?

A. I will rebut the testimony of Ms. LaConte on behalf of Philadelphia Area Industrial Users Group (PAIEUG) in PAIEUG Statement No. 1 and Mr. Ewen on behalf of the Office of Small Business Advocate (OSBA) in OSBA Statement No. 1. I have focused on certain areas of disagreement, and the scope of this testimony does not indicate agreement with other statements by the witnesses which I did not rebut.

II. SUMMARY

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. My recommendations are: (1) reject PAIEUG's proposal to reduce the peak demand allocation for the TS-F class; and (2) deny OSBA's proposal to add $4.3 million to the residential class revenue increase.

III. PAIEUG WITNESS LACONTE

Q. DOES PAIEUG WITNESS LACONTE DISAGREE WITH THE COMPANY'S CCOSS?

A. Yes. Ms. LaConte says she agrees with the Company's CCOSS methodology but disagrees with the Company's peak demand allocation to the TS-F class. She claims that the Company's peak day demand utilized to allocate mains cost to the TS-F class is flawed. Ms. LaConte proposes a lower demand allocation factor for that class and presents a revised CCOSS based on that change.

Q. DO YOU AGREE WITH HER REVISION TO THE CCOSS?

A. No. Ms. LaConte argues that the demand allocation is flawed because TS-F demands are not consistent with the design day demands used for other classes. However, based on the exhibits in her testimony, the revised demand allocation for TS-F which she recommends is not consistent with the peak demand used for other classes.

Q. PLEASE EXPLAIN WHY MS. LACONTE'S PROPOSED TS-F PEAK DEMAND IS INCONSISTENT WITH THE DEMANDS OF OTHER CLASSES?

A. The Company's CCOSS uses projected 2025 design day demands for the GR and GC classes, which is based on the expected class usage at 0 degrees Fahrenheit over a 24-hour period.[1] The sales classes' peak day demand is based on the projected design day and not actual historical peak days. However, the revised TS-F peak day demand utilized in Ms. LaConte's CCOSS is based on the actual historical TS-F peak day demand on Jan. 29, 2022.[2] Furthermore, the Company's 2022 interrogatory response attached to Ms.

[1] PECO Response to OCA Interrogatory OCA 4-1.
[2] Exhibit BSL-9, page 2 of 4. PAIEUG Statement 1 at 8.

LaConte's testimony in Exhibit BSL-9, page 3, states: "PECO did not experience design day demand during the years 2017 – 2022." Given that design day weather did not affect those years, Ms. LaConte's actual 2022 peak day usage for the TS-F class does not reflect design day demand. Her testimony observes that actual historical TS-F peak day usage is lower than the demand used in PECO's CCOSS.[3] However, given that PECO never experienced design day demand during the years 2017 – 2022, I would expect the historical peak demand for TS-F to be less than the design day demand for the TS-F class.

Q. WHAT DOES PECO SHOW AS DESIGN DAY DEMAND FOR TS-F?

A. The Company interrogatory response at Exhibit BSL-9 page 3, states that 69,000 is the design day demand for TS-F projected for 2022, which is 15,000 higher than the actual TS-F peak demand experienced in 2022. The projected design day demand for TS-F used in the Company's CCOSS in this case is 75,000.[4] I do not discern any reason to reject the Company's use of this value as the design day demand.

Q. DO YOU RELY UPON ANY OTHER REASONS TO REJECT MS. LACONTE'S REVISED CCOSS?

A. Yes. As discussed on pages 11 to 15 of my direct testimony, the load factor used in the Average & Excess formula is too low, giving insufficient weight to average demand and excessive weight to peak demand. At a minimum, the actual system load factor of 33% should be used instead of the 24% value proposed by the Company. And the more reasonable approach is to weight average demand and excess demand equally at 50%. For the reasons discussed in my direct testimony, the 50% equal weighting produces a more

[3] PAIEUG Statement 1 at 7.
[4] PECO Exhibit JD-6 at 2 (External Allocator Factors), line 30 "Design Day Demand."

balanced result and recognizes the impact of economies of scale on sizing mains for excess capacity.

IV. OSBA WITNESS EWEN

Q. DO YOU AGREE WITH MR. EWEN'S RECOMMENDATION REGARDING CLASS REVENUE ALLOCATION?

A. No. Mr. Ewen recommends transferring $4.36 million of the Company's proposed class revenue increase from the GC class to the GR class. I disagree with Mr. Ewen's proposal to add $4.36 million to the residential class increase so that the general commercial class revenue increase can be decreased by that amount.

Q. WHY DO YOU OPPOSE MR. EWEN'S RECOMMENDATION?

A. Mr. Ewen's proposal is entirely based on the relative rates of return produced by PECO's CCOSS. As discussed in my direct testimony, the results of the Company's Average & Excess (A&E) method give virtually no weight to average demand. This is inconsistent with the rationale for utilizing the A&E method—namely, to recognize both average demand and design day demand. If the Company intended to allocate mains cost only on the basis of peak demand, it could have simply used a peak demand allocator instead of applying a complex series of calculations to arrive at the same point. The A&E method should have applied weights for average demand and excess demand which effectively recognize average demand in the resulting allocation factors. As noted above and described in my direct testimony, the A&E method should have used a 33% average system load factor or preferably a 50% equal weighting of excess demand and average demand. For the reasons explained in my direct testimony, the 50% equal weighting is preferable because lower weighting factors do not adequately reflect economies of scale. Therefore,

I do not agree with the reasonableness of the relative rates of return which guided Mr. Ewen's recommendation.

Q. DOES MR. EWEN'S TESTIMONY DISCUSS SOME OF THE SAME FLAWS YOU DISCUSSED ABOVE?

A. Yes. First, Mr. Ewen agrees with my conclusion that the Company's A&E method in this case "produces results which are nearly identical to those that would result from a peak demand allocator."[5] Second, Mr. Ewen views the Company's CCOSS "as the least favorable approach" because it does not recognize "the economies of scale of serving large customers."[6] If Mr. Ewen had considered the results of a CCOSS which corrects these flaws, both the GR and GC classes would have relative rates of return above system average and, to be consistent with that, his recommended percentage increase for both classes should be less than the system average percent increase.

Q. WHAT IS YOUR CONCLUSION?

A. My recommendation is to deny Mr. Ewen's proposed increase in the residential class revenue allocation.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY AT THIS TIME?

A. Yes.

[5] OSBA Statement 1 at 10.
[6] OSBA Statement 1 at 11.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Clarence L. Johnson, hereby state that the facts above set forth in my Rebuttal Testimony, OCA Statement 3R, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 16, 2024

Signature: 

Clarence L. Johnson

Address: CJ Energy Consulting
3707 Robinson Avenue
Austin, TX 78722

OCA STATEMENT 3SR

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
	:	
PECO Energy Co. (Gas Division)	:	

SURREBUTTAL TESTIMONY
OF
CLARENCE L. JOHNSON

ON BEHALF OF
OFFICE OF CONSUMER ADVOCATE

August 2, 2024

SURREBUTTAL TESTIMONY OF CLARENCE L. JOHNSON

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Clarence L. Johnson. My business address is 3707 Robinson Ave, Austin, Texas 78722.

Q. ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS PROCEEDING?

A. I am presenting testimony on behalf of the Pennsylvania Office of Consumer Advocate (OCA).

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes. My direct and rebuttal testimony was submitted as OCA Statements 3 and 3R.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS CASE?

A. I will respond to the rebuttal testimony of Ms. LaConte on behalf of Philadelphia Area Industrial Energy Users Group (PAIEUG) in PAIEUG Statement 1R, Ms. Ding and Mr. Bisti on behalf of PECO in PECO Statements 6R and 7R, and Mr. Ewen on behalf of the Office of Small Business Advocate (OSBA) in OSBA Statement 1R. My surrebuttal testimony will focus on certain areas of disagreement, and the scope of this testimony does not indicate agreement with other statements by the witnesses.

II. SUMMARY

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. My recommendations are: (1) The Commission should reject Mr. Ewen's, Ms. Ding's and Ms. LaConte's objections to the Peak & Average method of allocating mains costs; (2) If the Commission adopts the Average & Excess method for allocating mains, modification

to the method's weightings should be adopted, contrary to the objections of PAIEUG and PECO; and (3) Despite Mr. Bisti's and Ms. Ding's rebuttal testimony, the Company's proposed increase in the residential customer charge should be limited to no more than 10%.

III. RESPONSE TO REBUTTAL OF PEAK & AVERAGE (P&A)

Q. DID WITNESSES LACONTE AND DING FILE REBUTTAL TESTIMONY OPPOSING THE P&A METHOD RECOMMENDED IN YOUR TESTIMONY?

A. Yes. PAIEUG witness LaConte and PECO witness Ding disagree with the P&A method. My direct testimony contends the purpose of either the P&A method or the Average & Excess (A&E) method is to recognize both average energy use and peak day demand in the allocation of mains cost. However, PECO's Average & Excess method does not effectively take into account both average demand and peak demand. As stated in my direct testimony, PECO's version of the A&E method produces less than 1% weighting to average demand and more than 99% weighting to class peak demand. I prepared Exhibit CJ-1 in OCA Statement 3 which utilizes a simplified hypothetical example to demonstrate that the PECO version of the A&E formula will produce mathematical results equivalent to a pure peak demand allocation.

1. PAIEUG Witness LaConte's Table 2R

Q. DOES MS. LACONTE REBUT YOUR CONTENTION THAT THE A&E FORMULA PRODUCES THE SAME RESULT AS A PURE PEAK DEMAND ALLOCATION?

A. Yes, Table 2R in her rebuttal testimony addresses Exhibit CJ-1 of my direct testimony.

Q. DO YOU AGREE WITH PAIEUG WITNESS LACONTE'S TABLE 2R?

A. No. LaConte's Table 2R purports to modify Exhibit CJ-1, which is my hypothetical that demonstrates the equivalence of the Average & Excess formula to peak demand. The purpose of my hypothetical is to illustrate that the method utilized by PECO will produce the same result as class peak demand allocators. The Company's A&E approach calculates a load factor by dividing the sum of class non-coincident peak (NCP) demands by class average energy use. Exhibit CJ-1 applies that same load factor calculation to two hypothetical classes' average and excess demands, proving that the result will be the same as the class NCP maximum demand percentages. Ms. LaConte attempts to disprove this conclusion by inserting PECO's 24% load factor into the hypothetical calculation—even though the 24% value has no mathematical relationship to the underlying average demand and maximum demands used in the hypothetical example. This is nonsensical because the load factor for the hypothetical two customer classes is not 24%, and Ms. LaConte's modification of the hypothetical obscures the mathematics of the methodology.[1] Her attempt to create an illogical "mismatch" in the hypothetical in no way disproves the point that the A&E formula, as used by the Company, is equivalent to a peak demand allocation.

[1] If the load factor matches the underlying demands and average energy use of the classes, the A&E method will produce the same allocation factors as pure peak demand allocation.

Q. DO YOU HAVE ANY OTHER OBSERVATIONS ABOUT MS. LACONTE'S TABLE 2R?

A. Yes. If the purpose of her Table 2R is to demonstrate the reasonableness of PECO's calculation of the 24% load factor, the resulting allocation factors do not accomplish her objective because they are clearly unreasonable and illogical. Based on LaConte's Table 2R, using the A&E method Class A pays less than either its maximum demand or average demand allocation factor and Class B pays more than either its maximum demand or average demand allocation factor. The A&E method in this illustration gives negative weighting to average demand.[2] If A&E is intended as a compromise between peak demand and average demand, then Table 2R proves that it provides no such middle ground if the load factor is set too low in the formula.

2. Alleged double counting by the P&A Method

Q. WHY DO PECO WITNESS DING AND PAIEUG WITNESS LACONTE OPPOSE USING THE PEAK AND AVERAGE METHOD RECOMMENDED IN YOUR TESTIMONY?

A. Both witnesses assert that the P&A method double counts demands.[3] To the extent that this is a genuine issue, the supposed double counting is caused by the fact that the design day demand is included in the average annual demand. Since the annual demand is composed of use during every day of the year, the peak day demand is included in annual demand.

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[2] Based on the values in LaConte Table 2R, the Class A allocation factor equals (-10.4% X Average Demand) + (110.4% X Maximum Demand).

[3] PECO Statement 6R at page 4; PAIEUG Statement 1R at page 6.

Q. DO YOU AGREE THAT DOUBLE COUNTING SHOULD PRECLUDE THE USE OF THE PEAK & AVERAGE METHOD?

A. No. First, I am unconvinced that supposed double counting is a genuine objection to P&A. In my view, P&A is recognizing two separate and distinguishable facets of cost causation: average demand and peak demand. The cost causation basis for average demand as an allocator for mains is discussed in my direct testimony.[4] The P&A method reflects both the annual demand allocation and peak demand allocation as distinct dimensions of causation and averages the class allocation percentages for both allocators. The averaging of two distinct allocation methods is essentially combining two allocation factors. Simply averaging two methods does not create a double counting problem. Second, even if double counting is a valid concern, there is no evidence that the impact is material. If the P&A method was adjusted to eliminate this concern, the resulting impact on allocation factors would be immaterial and can reasonably be ignored.

Q. CAN YOU DEMONSTRATE THAT THE P&A DOUBLE COUNTING CLAIM IS IMMATERIAL?

A. Yes. This alleged flaw arises because peak day demand is a component of annual demand. Average demand is calculated from total annual demand. If design day class peak demands are deducted from annual demand before determining average daily demand, then the double counting claim disappears and can be dismissed. To test this issue, I deducted GR and GC design day demand from annual demand in order to adjust the P&A allocation percentages. As shown below, this adjustment causes a change in P&A allocation factors

[4] For instance, the business plan of the gas distribution utility is based on delivering gas during every day of the year, and it is commercially impracticable to construct mains in order to serve only one day per year.

that is essentially immaterial. Furthermore, the adjustment reduces the allocation responsibilities for both the GR and GC classes. In other words, "correcting" the double counting in this way reduces the residential class share of mains, thereby demonstrating that the supposed flaw is not inherently biased toward the residential class.

Deduct Design Day Demand from Annual Average Demand		
	GR	GC
Peak & Average	58.90%	30.02%
Adjusted Peak & Average	58.84%	30.01%

Q. WHAT IS YOUR CONCLUSION REGARDING THE CLAIM THAT P&A DOUBLE COUNTS DEMANDS?

A. The double counting argument set out by Ms. LaConte and Ms. Ding should be rejected. The P&A method has been adopted on many occasions by the Pennsylvania PUC, which is further evidence that this claimed flaw in the method is not a disqualifying matter.

3. Reference to the Columbia Gas decision

Q. DO PECO WITNESS DING AND OSBA WITNESS EWEN CRITICIZE YOUR REFERENCES TO THE 2020 COLUMBIA GAS DECISION WHICH ADOPTED P&A?

A. Yes. As I understand the criticism, they would ignore this Commission opinion because A&E was adopted in PECO's 2020 rate case and PECO used the same A&E method in its more recent 2022 rate case. However, they do not mention that the class revenue allocation issue was settled in the 2022 PECO rate case.[5] The approval of the settlement states that

[5] *Pennsylvania PUC v. PECO Energy Gas Division*, R-2022-3031113, Recommended Decision at 14-15.

"the Commission's approval of the Settlement will not be construed as approval of any Joint Petitioner's position on any issue" and "this Settlement may not be cited as legal precedent in any future proceeding…"[6]

Q. DOES MS. DING'S CRITICISM REFLECT THE RELEVANCE OF THE COLUMBIA GAS CASE TO YOUR TESTIMONY?

A. No. Ms. Ding emphasizes the Commission's statement that the P&A method is appropriate to use "in this proceeding." However, the Commission's order in that proceeding provides insight into the Commission's observations about cost causation of gas mains and prior precedent regarding cost of service methodology. The Commission stated: "Based on our review of the record, and as noted by the ALJ, we have consistently used the Peak & Average methodology for the allocation costs for NGDCs."[7] The opinion notes that "it is the throughput that determines the type of main investment because it is the load that determines the main investment…distribution mains exist and are related to both annual demands and peak demands." And, further, "[B]oth annual and peak demands must be recognized in the allocation of distribution mains cost if the allocation is to be in accord with the principle of cost-causality." Ms. Ding's A&E method gives essentially no recognition of average demand in its allocation, which contrasts with the Commission's observations regarding cost causality stated in the Columbia Gas order and opinion.

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6 Ibidem.

7 *Pennsylvania PUC v. Columbia Gas of Pennsylvania,* R-2020-3018835, Opinion and Order at 214-218, Feb. 18, 2021.

Q. IS THE PEAK & AVERAGE METHODOLOGY RECOGNIZED IN THE NARUC GAS DISTRIBUTION RATE DESIGN MANUAL?

A. Yes. This is a long-accepted methodology among regulatory commissions that review the reasonableness of gas utility rates.

IV. RECOGNIZING ECONOMIES OF SCALE IN DISTRIBUTION MAINS

Q. DOES YOUR DIRECT TESTIMONY CONTEND THAT ECONOMIES OF SCALE JUSTIFY A 50% WEIGHTING OF AVERAGE DEMAND AND EXCESS DEMAND IN THE A&E METHOD?

A. Yes. My testimony utilized economy of scale factors to estimate the incremental increase in cost for sizing mains to meet higher capacity. Applying the scale factors to the A&E load factor justifies a 50-50 weighting of the average demand and excess demand components in the formula.

Q. DOES MS. LACONTE DISAGREE WITH YOUR ADJUSTMENT FOR ECONOMIES OF SCALE?

A. Yes. Ms. LaConte's testimony states, "Economies of scale are recognized when sizing the distribution main, but not in allocating their costs."[8] This objection is illogical. The goal of cost allocation is to reflect cost causation, and she admits that economies of scale affect the sizing of distribution mains. Therefore, the allocation of main costs should recognize that costs do not increase proportionately when the mains are sized for higher capacity. Due to scale economies, the cost per unit of capacity is lower for enlarging the mains to

[8] PAIEUG Statement 1R at page 5.

meet excess demands. Consequently, the weighting of the A&E method should incorporate the impact of scale economies in order to more accurately reflect cost causation.

Q. DOES PECO WITNESS DING ALSO DISAGREE WITH RECOGNIZING ECONOMIES OF SCALE?

A. Yes. She claims that my analysis focuses too much on the material cost of mains. Ms. Ding argues that my testimony has not considered other factors which affect the cost of mains, such as the composition of the pipe (steel or plastic), different methods of configuring the construction of mains, and labor costs required to install the mains.[9]

Q. ARE THESE VALID OBJECTIONS TO RECOGNIZING THE EXISTENCE OF ECONOMIES OF SCALE?

A. No. Scale economies constitute one of the most important principles of economics, and ignoring the existence of such economies results in an incomplete analysis of cost causation. My direct testimony refers to declining costs per unit, *holding all other factors constant*. Economies of scale are properly measured by comparing mains comprised of the same material, installed in the same type of soil or rock, and configured in a similar manner. Furthermore, the labor and equipment cost required to install the main is likely to increase the scale economies associated with the pipes. For instance, a minimum amount of labor and equipment cost is required to dig trenches, regardless of the size of the pipe. This relatively fixed installation cost will result in declining unit costs as the capacity of the main increases. Ms. Ding can refer to a panoply of factors which can affect the design and construction of mains, but this does not justify ignoring the basic principle of scale

[9] PECO Statement 6R at page 5.

economies. Ms. Ding's assumption that the sizing of mains vary directly with excess demand, thereby ignoring the impact of declining unit costs for increasing capacity, is not an accurate reflection of cost causation.

V. APPROPRIATE WEIGHTING IN THE A&E METHOD

Q. WHAT IS LOAD FACTOR AND HOW IS IT USED IN THE CONVENTIONAL A&E METHOD?

A. Load factor is defined as the ratio of average demand to system peak day demand, where average demand is calculated as total system annual energy deliveries divided by 365 days. In the A&E allocation method, load factor is used to weight the average demand and excess demand components of the A&E method. The Company computed a 24% load factor based on the sum of class design day demands divided by average daily deliveries. My direct testimony contends that the actual average system load factor is more appropriate. The 2019-2023 average actual system load factor is 33%. This load factor is computed from the average actual maximum day demand and average day demand on the system.

Q. DO WITNESSES DING AND LACONTE CRITICIZE USING THE 33% LOAD FACTOR IN THE A&E FORMULA?

A. Yes. Ms. LaConte asserts that Design Day Demand is appropriate for measuring load factor because it is used in system planning.[10] Ms. Ding states that maximum day demand for 2019 – 2023 does not reflect the total capacity because PECO did not experience a design day demand during that period.[11]

[10] PAIEUG Statement 1R at page 4.
[11] PECO Statement 6R at page 8.

Q. DO YOU AGREE WITH THEIR CRITICISM?

A. No. The load factor is only used to provide an appropriate weighting of average demand and class design day demand in the A&E method. A higher load factor generally produces greater recognition of average demand. PECO's design day demand is a theoretical demand which would be experienced under extreme weather conditions (zero degrees over 24 hours). Since the annual design day demand will be experienced infrequently, the actual peak demand usually is lower than design day demand. In my view, the Company's calculation of load factor reflects a bias toward minimizing the load factor value. The Company's approach is the ratio of a theoretical maximum demand with projected actual average demand. This mismatching of peak and average demands does not reflect the Company's actual load factor. Design day demand is sometimes expressed as a probability of 1 day in *Nth* years. For instance, if the design day demand is 1 day in 10 years, the load factor will not be consistent with the projected average demand used by PECO. In that example, the average demand would have to be based on a 1 in 10 years volume of annual deliveries to produce a consistent load factor. Logically, annual deliveries are likely to be higher than normal if extreme weather occurred during the year. In order to avoid a biased load factor calculation, the most reasonable approach is to match actual maximum demand with actual average annual demand.

Q. DO YOU HAVE ADDITIONAL REASONS FOR REJECTING THE COMPANY'S CALCULATION OF 24% FOR LOAD FACTOR?

A. Yes. The A&E formula's load factor should be based on system coincident peak demand. The Company's calculation is based on the sum of class maximum demands, which is the

same as NCP demand. In this case, the sum of class NCP demands is 7% higher than the system peak send out (coincident demand).[12] This further produces a bias toward a lower load factor.

Q. DO YOU RECOMMEND USING AN EQUAL 50% WEIGHTING OF AVERAGE DEMAND AND EXCESS DEMAND IN THE A&E FORMULA?

A. Yes. The 50-50 weighted A&E method is my alternative recommendation for mains allocation. This approach is balanced and recognizes additional cost causal factors, such as scale economies, as discussed in my direct testimony.

Q. DOES MS. DING DISAGREE WITH THIS ALTERNATIVE RECOMMENDATION?

A. Yes. She references a 2007 PPL Gas case and a 2021 UGI case as evidence that "industry practice" uses load factor in the A&E method.[13] However, her testimony does not include PGW as another example of industry practice.[14] The Commission approved PGW's 50-50 weighted A&E method.[15] PGW's A&E method is similar to the alternative A&E cost of service study recommended in Exhibit CJ-2.

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12 Exhibit JD-6, "Demand" tab. Column B vs. Column A (912,000 vs. 975,347).

13 PECO Statement 6R at 7.

14 She references the PGW case to support her assertion that the Commission has approved the A&E method. PECO Statement 6R at 3. But she does not reference the case in the discussion of load factors on page 7.

15 *PA. PUC v. Philadelphia Gas Works* R-2023-3037933 (Nov. 9, 2023), Order at 138.

VI. REVENUE ALLOCATION AND OTHER CCOSS ISSUES

Q. DOES MS. DING DISAGREE WITH YOUR RECOMMENDATION TO INCREASE THE COSTS WHICH ARE DIRECTLY ASSIGNED TO LARGE CUSTOMERS IN THE CCOSS?

A. Yes. As discussed in my direct testimony, PECO identified the cost of customer representatives and executives who are dedicated to serving large commercial and industrial customers, but chose to directly assign only $561,000 of the $800,000 quantified in the discovery response. My recommendation is to directly assign the remaining $240,000 to classes with large commercial and industrial customers. Ms. Ding argues against the adjustment because it is so small as to be immaterial.[16] In my view, there is no reason *not* to reassign this additional revenue to the proper class if it can be determined to be allocable to that class. In addition, the classes involved in the direct assignment have only a few customer whom produce significantly less total revenues than the GR and GC classes (such as Rate L, Rate TS-F, Rate TS-I), and the allocation is not necessarily immaterial to the impact on the relative rates of return for those industrial classes. Ms. Ding is correct that I developed the direct assignment factors based on OCA's CCOSS, and those factors would change if a different CCOSS is adopted. Ms. Ding quantifies an alternative adjustment if the Company's CCOSS is adopted, and if – against my recommendation, the Company's CCOSS is adopted – I do not oppose her alternative calculation.[17]

[16] PECO Statement 6R at page 9.
[17] PECO Statement 6R at page 9, footnote 4.

Q. DOES MS. DING DISAGREE WITH YOUR RECOMMENDATION TO ALLOCATE THE "OTHER EXPENSES" CATEGORY OF COSTS IN ACCOUNTS 908-914 ON AN AVERAGE DEMAND BASIS?

A. Yes. Accounts 908-914 involve economic development and marketing activities. For most of the amounts in these accounts, PECO chooses an allocator related to the types of customers who participate in the programs. However, 20% of the costs were "other," and PECO allocated them on a customer basis. My recommendation is to allocate these costs on an average demand basis. Ms. Ding says that the customer allocation is appropriate because the "other expenses" are costs which support economic development and marketing, such as IT, research and information, and business planning.[18] It is apparent that these are indirect costs which provide assistance to economic development and marketing. From a costing perspective, indirect costs can be allocated on a number of different allocation bases. Average demand, peak demand, labor expense, or total plant would be typical general allocators for indirect costs. However, the customer allocation is a narrow allocation basis, because it allocates approximately 90% of the cost to one class (residential). This is the opposite of a broad allocator applicable to general costs. Economic development and marketing is aimed at attracting commercial and industrial customers and promoting high load factor gas appliances and technology. Average demand (which is daily average delivery of gas) is an appropriate allocator for costs undertaken to improve the load characteristics of the system. And other general allocators (like total

[18] PECO Statement 6R at page 10.

plant) are defensible. However, a customer allocation is not appropriate because it dumps the costs primarily on residential customers.

Q. DID PECO'S MR. BISTI AND OSBA'S EWEN DISAGREE WITH YOUR REVENUE ALLOCATION?

A. Yes. In large part, their disagreement is based on their objection to my CCOSS. My revenue allocation is based on the results of my CCOSS. Therefore, it is expected that they will object to my proposed revenue allocation.

Q. PLEASE RESPOND TO MR. EWEN'S SUGGESTION[19] YOUR REVENUE ALLOCATION DOES NOT MAKE SUFFICIENT MOVEMENT WITH RESPECT TO THE REVENUE/COST RATIO?

A. First, my testimony reviewed the relative rates of return (RROR) produced by each customer class based on my CCOSS to determine if the class should receive Percent of System Average revenue increases above or below unity. I utilized RROR, because that is customary in the industry, as evidenced by the fact that it is the principal metric presented in the Company's CCOS model. Second, I applied gradualism constraints to the revenue allocation so that no class receives an excessive increase and all classes share in the responsibility for paying part of the total revenue increase. This is a reasonable and systematic approach. Third, Mr. Ewen's insistence that revenue allocation should produce cost movement consistent with his chosen metric presumes a precision in the CCOSS that does not exist. So many factors affect class load characteristics during the period that rates will be in effect that we cannot predict the extent that classes will move toward cost. Class

[19] OSBA Statement 1R at page 7.

revenue allocation should consider both gradualism and class relative rates of return in order to produce an equitable and systematic approach to setting class percentage increases relative to the system average increase. I believe my proposal meets this objective.

Q. MR. BISTI SAYS HE AGREES WITH GRADUALISM BUT DISAGREES WITH THE GRADUALISM CONSTRAINTS IN YOUR REVENUE ALLOCATION. HOW DO YOU RESPOND?

A. The implementation of gradualism is a subjective process and could involve any number of defensible limitations on class increases. Mr. Bisti favors a 200% (2x) limit, but admits that my 150% (1.5x) limit falls within the range of Commission practice.[20] My approach recognizes that several of the classes have a small number of customers, and it is possible for a 200% limit to provide an excessive impact on a per customer basis. Mr. Bisti also contends that my limitation on class revenue decreases rests on equitable rather than cost grounds.[21] Obviously any gradualism constraint—whether PECO's or mine—is a departure from setting rates purely at cost. My limitation on revenue increases recognizes cost of service because classes which otherwise would receive a revenue decrease still receive a increase that is one-half of system average. Rate design is sometimes referred to as an "art as well as science." My recommended approach to gradualism is consistent with Professor Bonbright's criteria for a sound rate design, which is widely cited by rate design experts and regulatory commissions. [22]

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[20] PECO Statement 7R at page 7.
[21] PECO Statement 7R at page 8.
[22] *Principles of Public Utility Rates*, James Bonbright, Columbia Press (1960) at 191.

VII. RESIDENTIAL CUSTOMER CHARGE

Q. DOES PECO WITNESS DING'S REBUTTAL TESTIMONY DISPUTE YOUR TESTIMONY'S DISCUSSION OF THE RESIDENTIAL CUSTOMER CHARGE?

A. Yes. PECO claims that the cost-based customer charge is $33.00 per month. My direct testimony does not agree that the gap between the current fixed charge and an appropriate cost-based customer charge is as large as PECO asserts. In particular, PECO's computation includes many indirect costs, such as administrative and general expense, which by definition are not directly related to any category of cost. In my view, the residential customer charge should reflect only costs that directly vary with customer count. When new residential customers initiate service or existing customers leave the system, the primary increase or decrease in cost pertains to billing, collection, and metering. Ms. Ding disagrees with this cost standard and asserts that her inclusion of indirect costs in the cost-based customer charge is supported by Commission precedent.

Q. DOES THE COMMISSION REQUIRE PECO TO INCLUDE NUMEROUS INDIRECT COSTS IN ITS COST-BASED CUSTOMER CHARGE?

A. No. Contrary to Ms. Ding's position and consistent with my critique of her cost-based customer charge, the 2023 Columbia Water Company decision rejected a customer charge which is comprised of components which do not vary directly with the number of customers:

> We agree with the OCA that the Company's analysis includes numerous overhead costs that cannot reasonably be considered "direct costs" required to connect and maintain a customer's account. Rather, they are simply overhead costs that Columbia Water incurs in rendering service to its customers. The fact that some of these costs may be fixed, does not in and of itself make them direct costs that should be collected from a customer

charge. Rather, the appropriate test is "whether the costs would increase with the addition of a customer and decrease with the subtraction of a customer."[23]

Q. DOES PECO WITNESS MR. BISTI DISAGREE WITH YOUR RECOMMENDATION TO LIMIT THE INCREASE IN THE RESIDENTIAL CUSTOMER CHARGE TO 10%?

A. Yes. Part of his rebuttal testimony[24] addresses the impact on low income customers, and OCA witness Mr. Colton will respond to Mr. Bisti's claims regarding the effect of customer charge increases on low income households. Since neither Mr. Bisti nor I contend that PECO's customer charge should be set at the cost claimed in the CCOSS, the issue really comes down to the reasonable level for moderating any increase in the charge. Mr. Bisti has not shown that his proposed 36% increase in the customer charge is either necessary or moderate. The 10% increase in the customer charge recommended in my testimony is reasonably consistent with my proposed residential total revenue allocation percentage and maintains the customer's ability to control energy costs. The policy considerations associated with energy efficiency justify a more gradual approach to increasing the monthly fixed charge.

[23] Columbia Water Company Docket No. R-2023-3040258, Order at 155, Jan. 18, 2024.
[24] PECO Statement 7R at page 12.

Q. DOES MR. BISTI ARGUE THAT HIS PROPOSED CUSTOMER CHARGE INCREASE IS PREFERABLE BECAUSE IT MOVES CLOSER TO THE $33.00 COST-BASED CUSTOMER CHARGE?

A. Yes. But as stated in my response to Ms. Ding's rebuttal testimony, the $33.00 cost-based monthly charge is inflated by the inclusion of indirect costs unrelated to changes in the number of customers. Therefore, the cost basis for Mr. Bisti's aggressive approach to increasing the customer charge is significantly weaker than PECO claims. As shown on page 17 of my direct testimony, PECO would have the highest residential customer charge of any NGDC in Pennsylvania if Mr. Bisti's proposal is adopted. Furthermore, as shown there, Ms. Ding's claimed $33 cost-based customer charge is far outside the range of current customer charges ($14.00 – $16.75) in Pennsylvania.

Q. DOES MR. BISTI'S REBUTTAL TESTIMONY INDICATE THAT THE COMPANY HAS CONSIDERED THE IMPACT OF THE CUSTOMER CHARGE INCREASE ON ENERGY EFFICIENCY?

A. No. Mr. Bisti's only discussion of energy efficiency is a passing reference to Mr. Colton's testimony.[25] Mr. Bisti claims there is no support for asserting that the customer charge increase will impair energy efficiency efforts. My direct testimony provides an illustration of the manner in which the customer charge decision affects the cost-effectiveness of energy efficiency measures. Using the smart thermostat as an example, if PECO had chosen to maintain its current customer charge level in this rate request, the annual bill

[25] Ibidem.

savings from installing a smart thermostat would increase by $25.[26] These are tangible energy efficiency incentives associated with pricing the customer charge.

Q. DOES THS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes.

[26] OCA Statement No. 3 at 33.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Clarence L. Johnson, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement 3SR, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: August 2, 2024

Signature: _____

Clarence L. Johnson

Address: CJ Energy Consulting
3707 Robinson Avenue
Austin, TX 78722

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R- 2024-3046932
	:	
PECO Energy Company – Gas Division	:	

Direct Testimony of Roger Colton

on behalf of

Pennsylvania Office of Consumer Advocate

OCA Statement 4

Date Served: June 17, 2024

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Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Roger Colton. My address is 34 Warwick Road, Belmont, Massachusetts.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?

A. I am owner of the firm of Fisher Sheehan & Colton, Public Finance and General Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to a variety of federal and state agencies, consumer organizations and public utilities on rate and customer service issues involving water/sewer, natural gas and electric utilities.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of the Office of Consumer Advocate.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.

A. I work primarily on low-income utility issues. This involves regulatory work on rate and customer service issues, as well as research into low-income usage, payment patterns, and affordability programs. At present, I am working on various projects in the states of New Hampshire, Massachusetts, Connecticut, Maryland, Pennsylvania, Ohio, Michigan, Wisconsin, Missouri, Illinois, Oregon and Washington, as well as in the Canadian provinces of Nova Scotia and British Columbia. My clients include state agencies (e.g., Pennsylvania Office of Consumer Advocate, Maryland Office of People's Counsel, Connecticut Office of Consumers Counsel), federal agencies (e.g., the U.S. Department of Health and Human Services), community-based organizations (e.g., Cleveland Legal Aid Society, Legal Action of Chicago, Sierra Club), and public and private utilities (e.g., Toledo Water, BC Hydro). Examples of my work include my current projects to assist the Connecticut Office of Consumers Counsel (OCC) in the annual generic review of the

low-income affordability initiatives of that state's utilities by the Public Utilities Regulatory Authority. I am also assisting the Massachusetts Attorney General's Office (AGO) in the generic investigation by the Department of Public Utilities (DPU) into the design of low-income affordability programs. I am currently under contract to develop a universal service plan for Nova Scotia. In addition to state-specific and utility-specific work, I engage in national work throughout the United States. For example, I have recently completed a project with the Natural Resources Defense Council to develop a tool by which to assess the financial impact of differing types of low-income bill assistance. A brief description of my professional background is provided in Exhibit RDC-1.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. After receiving my undergraduate degree in 1975 (Iowa State University), I obtained further training in both law and economics. I received my law degree in 1981 (University of Florida). I received my Master's Degree (Regulatory Economics) from the MacGregor School in 1993.

Q. HAVE YOU EVER PUBLISHED ON PUBLIC UTILITY REGULATORY ISSUES?

A. Yes. I have published three books and more than 80 articles in scholarly and trade journals, primarily on low-income utility and housing issues. I have published an equal number of technical reports for various clients on energy, water, telecommunications and other associated low-income utility issues. A summary of my publications is included in Exhibit RDC-1.

Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY COMMISSIONS?

A. Yes. I have testified before the Pennsylvania Public Utility Commission ("PUC" or "Commission") on numerous occasions regarding utility issues affecting low-income customers and customer service. My testimony has specifically included testimony in various proceedings involving low-income program design and operation, along with various rate design issues as they affect low-income customers. I have also testified in regulatory proceedings in 43 states (other than Pennsylvania) and various Canadian provinces on a wide range of utility issues. A list of the jurisdictions in which I have testified is listed in Exhibit RDC-1.

Q. PLEASE EXPLAIN THE PURPOSE OF YOUR DIRECT TESTIMONY.

A. The purpose of my Direct Testimony is to review the impact of PECO Energy Company's (Gas Division) ("PECO (Gas)" or "Company") rates on low-income customers. More specifically, I will examine:

- The overall affordability of PECO (Gas) rates;
- The impact that the unaffordability of bills has on collections by PECO (Gas);
- A series of recommendations regarding the appropriate PECO (Gas) response to the unaffordability of its bills to low-income customers;
- The necessity to revise certain PECO (Gas) tariffs and practices to comply with PUC regulations;
- The reasonableness of the residential customer charge proposed by PECO (Gas);
- The reasonableness of the Weather Normalization Mechanism proposed by PECO (Gas);

- The reasonableness of the PECO (Gas) request to increase its return on equity due to claims of "superior" management.

Q. PLEASE SUMMARIZE THE RECOMMENDATIONS YOU MAKE THROUGHOUT YOUR TESTIMONY WHICH FOLLOWS.

A. Based on the data and analysis I present throughout my testimony below, I recommend that:

- PECO (Gas) should modify its policies and procedures regarding the identification of "confirmed low-income" customers to conform with the PUC's regulations. PECO (Gas) should include these modified policies and procedures in its residential tariff. The modified policies and tariff should explicitly state that: (1) PECO (Gas) will recognize a customer as a "confirmed low-income" customer when the Company is provided information that would "reasonably place" the customer in a low-income designation; (2) the information can be provided by the customer through self-certification and need not be accompanied by "proof of income documentation"; (3) the information can include income information or other information attesting to his or her eligibility for state benefits; and (4) the information would be used to establish the customer's eligibility for a payment arrangement of up to five years in length (i.e., income at or below 150% FPL) pursuant to Section 1405(b) of Chapter 14 of the Public Utility Code.

- Prior to the disconnection of a Confirmed Low-Income customer, PECO (Gas) should adopt a procedure, developed in collaboration with its Universal Service Advisory Group (USAG), under which it will seek to make personal contact with the customer subject to disconnection. In that personal contact, the Company shall offer the Confirmed Low-Income customer the opportunity to apply for the Company's CAP and arrearage forgiveness program. If the customer expresses a desire to apply, PECO (Gas) shall postpone the disconnection for a reasonable period of time to allow the application process to be completed. Once disconnected, prior to being reconnected, and being required to pay either a fee or a portion of the arrears which gave rise to the disconnection, customers who are Confirmed Low-Income customers at the time of disconnection should be required to affirmatively acknowledge that they do not wish to participate in CAP (along with its arrearage forgiveness program) prior to being reconnected and required to pay either a portion of their outstanding arrears or any reconnection fee.

- Confirmed Low-Income customers who are negotiating a deferred payment agreement (DPA) with the Company, as well as customers from whom the Company receives information placing them in an income tier of 0% to 150% FPL, should be provided a stand-alone written Plain English notice informing those customers of their right, in the alternative, to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions). Through that opportunity, rather than needing to agree to retire their arrears over an extended period of time, the Confirmed Low-Income customer would be allowed to enroll in CAP and, upon making appropriate payments, receive forgiveness of their underlying arrearages. This written communication would be provided to Confirmed Low-Income customers, those customers from whom PECO (Gas) had either previously, or during the process of discussing a payment arrangement, received sufficient information to reasonably establish their low-income status.

- Before PECO (Gas) enters into a payment arrangement with a customer which the Company either: (1) knows to be a Confirmed Low-Income customer; or (2) has generated information through the payment arrangement process documenting that the customer is in the Tier 1 income range (at or below 150% FPL), it should be required to provide the customer a stand-alone Plain English notice to that customer of the customer's right to enter into CAP and an explanation of the advantages of CAP's arrearage forgiveness benefits. PECO (Gas) should develop this Plain English notice in collaboration with its USAG. Moreover, before entering in a payment arrangement with such low-income customers, PECO (Gas) should obtain written acknowledgement from the customer evidencing an informed consent that the customer is choosing to enter into the payment arrangement rather than enrolling in CAP (with its arrearage forgiveness provisions).

- PECO (Gas) should adopt a procedure under which it will provide a stand-alone Plain English notice to customers found to be without heating service at the time of the Company's Cold Weather Survey of the customer's right to enter into CAP and an explanation of CAP's arrearage forgiveness benefits. PECO (Gas) should develop the Plain English notice in collaboration with its Universal Service Advisory Group.

- When Confirmed Low-Income customers accrue an unpaid balance of $300, and at each additional $300 increment in arrears, PECO (Gas) should provide a stand-alone written Plain English notice informing those customers of their right to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions).

- In those instances where PECO (Gas) would otherwise request a cash security deposit from a Confirmed Low-Income customer, the Company should, as an alternative to that deposit demand, provide a stand-alone written Plain English notice informing these customers of their right to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions).

- PECO (Gas) should extend any future use of speech analytics software to assist with the quality monitoring of phone calls involving, or potentially involving, universal service programs and other low-income customer issues. The Company should be directed to involve its USAG in the identification and selection of Low-Income and Universal Service Terms to be detected by the system in order to confirm that phone calls are properly being identified and handled. Regular six-month reports on the results of the Speech Analytics reviews should be provided to the Company's USAG.

- The PECO (Gas) Tariff should be modified to add the following language: "The Company uses a commercially recognized credit scoring methodology that is within the range of generally accepted industry practice, *provided that the methodology does not directly, or have the effect of, discriminating based on a protected class as set forth in the federal Equal Credit Opportunity Act.*" (new language emphasized).

- That PECO (Gas) conduct a root cause analysis to determine what is driving this disproportionate level of utility disconnections within the zip codes with the highest penetration of Black households. Once this root cause analysis is conducted, PECO (Gas) should commit to taking steps to address the cause with the commitment of reducing disproportionate disconnections within these zip codes. The extent to which PECO (Gas) mitigates the disproportionate disconnection of service for nonpayment in zip codes with high penetrations of Black households should be reviewed in the next PECO (Gas) base rate case.

- The PECO (Gas) risk analysis methodology, both that which underlies its disconnection of service and that which underlies its cash security deposits, be subject to a public review by BCS with an opportunity provided to stakeholders to assess whether those risk assessment methodologies directly discriminate, or have the effect of discriminating, based on prohibited classes (of which race is only one).

- PECO (Gas) should amend its tariff Rule 16.7, Application of Payment, to permit combined customers to designate all or part of their combined PECO bill payment be applied to natural gas service – including past due balances and current charges – before being applied to electric service. Permitting such prioritization would bring PECO (Gas) into line with other NGDCs, which are not permitted to terminate customers for non-payment of electric bills.

- The residential customer charge determined by OCA witness Clarence Johnson should be approved, as set forth in OCA Statement 3.

- The recommendations of OCA witness Ron Nelson regarding the Company's proposed WNA be adopted.

- The recommendation of OCA witness David Garrett (OCA Statement 2) regarding an appropriate return on equity should be adopted.

- The PECO (Gas) proposed modification to the CAP offset be denied. However, in the event that the PECO (Gas) bad debt modification is adopted, the corresponding modification to the working capital offset should be adopted as well. If that is done, there would be no net change in the CAP offset from that which currently exists.

Part 1. The Affordability of PECO (Gas) Rates.

Q. PLEASE DESCRIBE THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. This section of my testimony examines the affordability of bills to the residential customers of PECO (Gas). I begin with an examination of the affordability of PECO (Gas) bills over time. I next consider the affordability to low-income residential customers generally. I consider the disproportionately adverse impact that inflation has on low-income customers. I finally examine the impact of PECO (Gas) bills on residential customers in general.

A. PECO (Gas) Rates Over Time.

Q. PLEASE DESCRIBE THE FIRST PART OF YOUR AFFORDABILITY ANALYSIS.

A. I begin my review using the utility-specific data presented in the Pennsylvania PUC's annual "Rate Comparison Reports" [1] for 2016 through 2024. To calculate the "heating" bills, I multiplied the PUC's heating bills[2] times four months and added eight months of non-heating bills. Table 1 below shows that the affordability of PECO (Gas) bills has degraded over time. The Table shows that:

- At the lowest range of Federal Poverty Level (FPL) (0 – 50%), while heating burdens were 6.7% in 2016, those burdens had increased to 9.5% in 2023, before declining to 7.2% in 2024. In 2023, in other words, heating burdens for the lowest income customers of PECO (Gas) were two times higher than the affordable burden defined by the PUC, while in 2024, they remained nearly two times higher than the affordable burden.

- In contrast, at the highest FPL range (100 – 150% FPL), while heating burdens were 2.7% in 2016, they had increased to 3.8% of income by 2023, before somewhat declining in 2024.

- In the mid-range (50 – 100% FPL), heating burdens for the Company's customers exceeded the affordable burden beginning in 2023, before declining somewhat to 4.8% in 2024.

The PUC's CAP Policy Statement defines an affordable burden to be 4% of income for natural gas heating customers at 0 – 50% of FPL, and 6% for customers at 50 – 150% of FPL.

[1] Pennsylvania PUC (annual). Rate Comparison Report (Electric Utilities Comparison), available at https://www.puc.pa.gov/filing-resources/reports/rate-comparison-reports/

[2] The PUC uses a standard consumption of 2 MCF per month to represent non-heating consumption and 15 MCF per month to represent heating consumption.

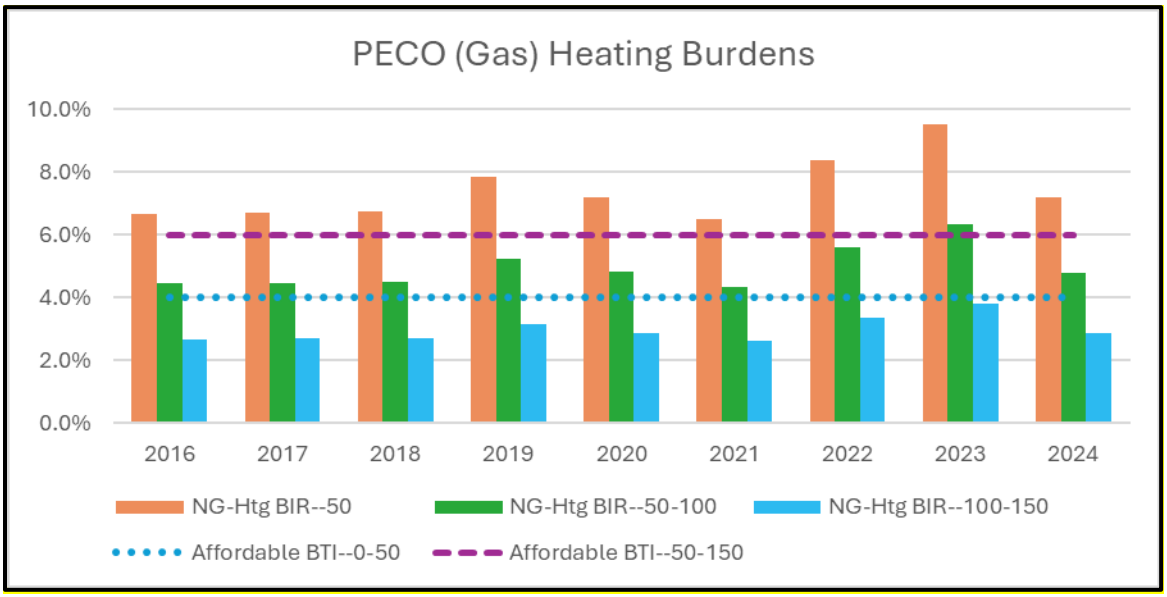
The improved affordability for these households at the higher ranges (100-150% FPL) may be somewhat misleading. Net household resources will not necessarily increase as household income increases. As household income becomes higher and higher, for example, households increasingly lose access to income supplements. While non-cash benefits (e.g., Food Stamps, housing and medical assistance) are not counted as "income" in determining program eligibility for other assistance programs, the loss of such benefits reduces the ability of a household to pay its home energy bills.

Table 1. PECO (Gas) Bills and Burdens
(2016 – 2024) (shading simply to improve readability)

		Affordable Gas Heating Burden		Gas Heating Burden by FPL Range		
	Heating Bills (PUC Bill Comparison)	0 – 50% FPL	50 – 150% FPL	0 - 50% FPL	50 - 100% FPL	100 - 150% FPL
2016	$673	4% (2019 CAP Policy Statement)	6% (2019 CAP Policy Statement)	6.7%	4.4%	2.7%
2017	$685			6.7%	4.5%	2.7%
2018	$703			6.8%	4.5%	2.7%
2019	$837			7.9%	5.2%	3.1%
2020	$783			7.2%	4.8%	2.9%
2021	$714			6.5%	4.3%	2.6%
2022	$966			8.4%	5.6%	3.4%
2023	$1,182			9.5%	6.3%	3.8%
2024	$927			7.2%	4.8%	2.9%

Chart 1 below graphically portrays the same basic information as Table 1. Chart 1 is important in that it shows how, after a dip in the Company's natural gas heating bills in

2020 and 2021, gas prices again began to increase, with a sharp fly-up in 2022. The increased rates proposed in this proceeding will drive bills even higher. During the most recent three-year period shown in the graph, heating burdens even at the mid-range definition of "low-income" (100 – 150% FPL) were above, or nearly above, the burden defined as affordable by the PUC. At the lowest end of the FPL ranges, baseload burdens in these three recent years were substantially higher than the level defined by the PUC to be affordable.



All-in-all, the data above demonstrates that the Company's heating bills (using a constant consumption over time) were higher in 2024 than they were in 2016 through 2018. The low-income customers of PECO (Gas) will face increasingly unaffordable burdens given the Company's ongoing rate increases.

B. The Affordability of Bills to Low-Income Customers.

Q. HAVE YOU ASSESSED THE AFFORDABILITY OF PECO (GAS) RATES TO LOW-INCOME CUSTOMERS IN PARTICULAR?

A. Yes. In Table 2 below, I examine the home energy bills imposed by PECO (Gas) heating bills at different levels of Federal Poverty Level (FPL). I have used the median monthly bills which the Company provided for the 24 months February 2022 through January 2024 (OCA-II-15) for residential customers. The Company provided the median monthly bills for those 24 months at both existing and proposed rates. As can be seen in the Table, I divided that 24-month period into two 12-month periods and calculated the annual bills for each period by summing the monthly bills. I note, again, that the PUC has established affordable natural gas heating burdens of 4% for income at 0% to 50% of FPL, and at 6% for customers with income at 50% to 150% FPL.

Table 2. Heating Burdens at Existing and Proposed Rates
(monthly bills at mean over two 12-month periods) (OCA-II-15)

		Existing Rates	Proposed Rates
February 2022 – January 2023	0 – 50% FPL	9.8%	12.2%
	50 – 100% FPL	6.5%	8.1%
	100 – 125% FPL	4.3%	5.4%
	125 – 150% FPL	3.5%	4.4%
February 2023 – January 2024	0 – 50% FPL	8.0%	9.4%
	50 – 100% FPL	5.3%	6.2%
	100 – 125% FPL	3.6%	4.2%
	125 – 150% FPL	2.9%	3.4%

Table 2 shows that the Company's natural gas bills are unaffordable for customers with income in the two lowest ranges of FPL studied (0 – 50% FPL; 50 - 100% FPL). In

Period 1 (February 2022 –January 2023), PECO (Gas) burdens at the highest range of FPL examined were more affordable (at both existing and proposed rates). In contrast, the bills are significantly unaffordable for all households with income at or below 100% of FPL. When incomes increase, bills become more affordable. The Table further shows the degree to which the rates proposed by PECO (Gas) in this proceeding will have a particularly increased adverse impact on the lowest income customers. For customers with income at or below 100% FPL, the amount of the proposed increase in rates, standing alone, would have increased burdens by between 1.5% and 2%.

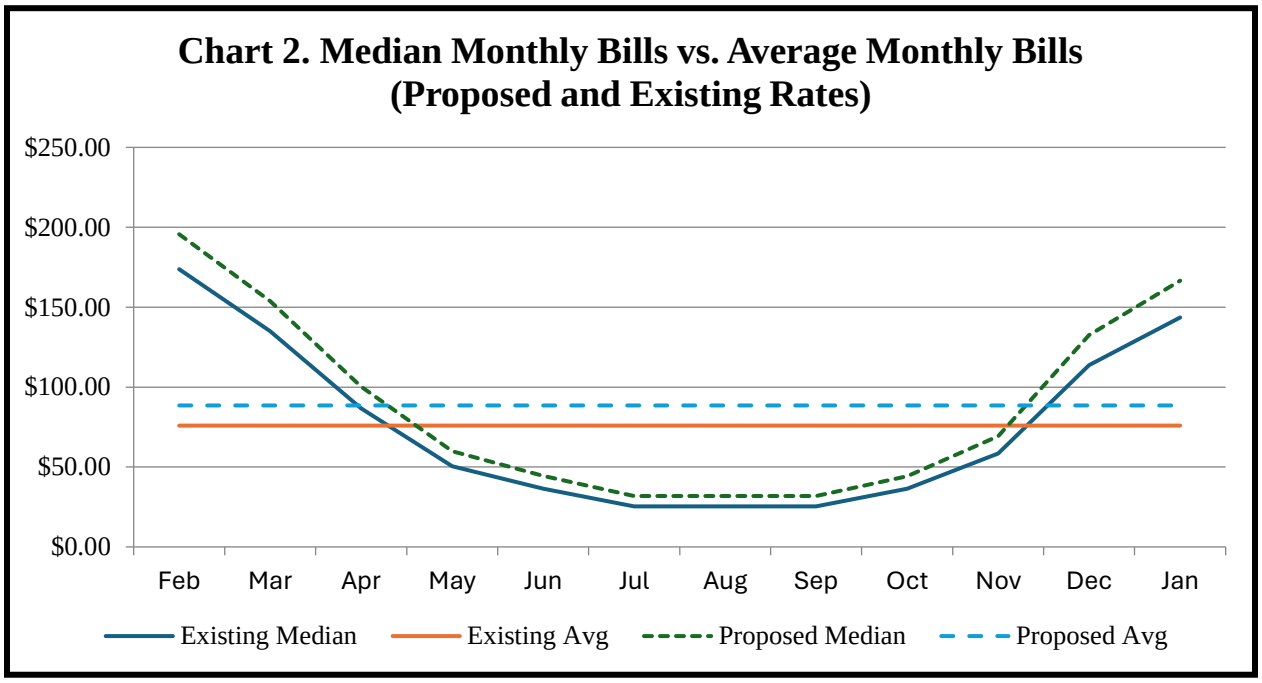
It is important to remember, however, that Table 2 is based on bills *at the middle* (i.e., median bills). Median bills are those bills where half of all customers have bills that are higher and half have bills that are lower. In contrast, Table 3 sets out annual bills at differing ranges of median usage. Each 25% increase in usage (e.g., from median to 125% of median) costs customers more than $200 at existing rates.

Table 3. PECO (Gas) Annual Bills at Existing and Proposed Rates
And at Different Levels of Median Usage (OCA-II-44, OCA-II-45)

	Existing Rates	Proposed Rates
Median usage	$910.84	$1,062.27
50% median usage	$568.78	$678.72
75% median usage	$719.78	$870.46
125% median usage	$1,115.42	$1,291.20
150% median usage	$1,285.96	$1,483.00

Moreover, it is important to avoid focusing exclusively on *annual* bills and *annual* burdens. Even if annual bills represent an affordable percentage of income, the seasonal variation in PECO (Gas) bills can present an unaffordable payment obligation in any given month. Chart 2 below shows, for the most recent 12 month period, the median

monthly bills for residential customers at existing rates as well as at the rates proposed by PECO (Gas) compared to the average monthly bills.



As can be seen, even if monthly *average* bills might be affordable (as calculated based on an annual energy burden), the actual monthly bills can push payment obligations far beyond a low-income customer's ability-to-pay.

Q. DOES THE COMPANY'S CUSTOMER ASSISTANCE PROGRAM (CAP) AS A PERCENTAGE OF INCOME PAYMENT PLAN (PIPP) INSULATE CUSTOMERS FROM UNAFFORDABLE BURDENS?

A. While the PECO (Gas) Customer Assistance Program (CAP) operates as a Percentage of Income Payment Plan (PIPP), which will largely protect CAP participants from the harms of increasing rates, CAP is only helpful for those low-income customers who, indeed, are program participants. The data, however, shows that the Company serves a relatively small proportion of its low-income customer base. While I make specific

recommendations below with respect to how the Company might increase that participation, my observation here is limited to the fact that even given the Company's CAP, there is a significant low-income customer population that is ***not*** participating in CAP that will be adversely affected by the Company's proposed rate increase. According to the Company, for example, it has identified 31,839 Confirmed Low-Income customers on its system.[3] Of those Confirmed Low-Income customers, however, only 23,543 (74%) are CAP participants.[4] In absolute terms, in other words, PECO (Gas) has nearly 8,300 customers from whom the Company has received information to reasonably identify them as "low-income" but who do not participate in CAP (31,839 – 23,543 = 8,296).

This number, however, understates the problems facing low-income customers on the Company's system. According to the Company's most recent annual report to the PUC's Bureau of Consumer Services (BCS).[5] PECO (Gas) has an estimated 78,627 low-income customers on its system. While PECO (Gas), in other words, has confirmed the low-income status of 40% of its estimated low-income customer base (31,839 / 78,627 = 0.404), the Company has then enrolled only 74% of that sub-population of Confirmed Low-Income customers into CAP. Overall, PECO (Gas) has enrolled less than 30% (29.9%) of its estimated low-income customer population into CAP (23,543 / 78,627 = 0.299).

[3] OCA-II-03.

[4] OCA-II-03.

[5] OCA-II-01. BCS (Sept. 2023). Universal Service Programs and Collections Performance, 2022 Report, available at https://www.puc.pa.gov/media/2573/2022-universal-service-report-final.pdf

Q. IS YOUR OBSERVATION THAT PECO (GAS) ENROLLS LESS THAN ONE-IN-THREE OF ITS LOW-INCOME CUSTOMERS IN CAP A CRITIQUE OF THE COMPANY'S CAP OUTREACH?

A. While I will make specific recommendations regarding CAP enrollment later in my testimony, my purpose here is *not* to critique or criticize the Company's CAP outreach. Instead, my purpose here is to observe that when CAP misses 70% of the low-income population, the existence of CAP cannot be used as a reason to ignore the broader implication of proposed rates of PECO (Gas) on the low-income population as a whole.

Q. WHAT DO YOU CONCLUDE?

A. A consideration of affordability is a critical task to undertake within the structure of any utility rate case. As bills become increasingly unaffordable, the payment difficulties of those customers who face unaffordability become increasingly substantial as well. As I will demonstrate later in this testimony, this conclusion can be well-documented for PECO (Gas). One impact of the unaffordability I discuss, in other words, is its impact on the operating costs (e.g., collection costs, working capital, uncollectible expenses) that are then normalized and passed on to other ratepayers. Also, the PECO (Gas) proposals such as increasing the residential customer charge and implementing a Weather Normalization Adjustment, and seeking an increased return on equity for management performance, have disproportionate adverse effects on low-income customers who already are facing substantial unaffordability.

Moreover, establishing a return on equity is fundamentally predicated on balancing customer and investor interests. It is necessary for the Pennsylvania PUC to understand the customer interests in order to appropriately balance them against the competing

investor interests. The obligation of the Commission in deciding on the appropriate return on equity (ROE) and the reasonable mix of debt and equity securities should balance consumer and investor interests. (*FPC v. Natural Gas Pipeline Co.*, 315 U.S. 575, 606-607 - 608) (1942). Indeed, of the consumer issues that are important drivers of the just and reasonable ROE determination, one of the most significant is the concern about affordability. If a sizable portion of customers cannot afford to pay the rates imposed by the PUC, the PUC can hardly be said to have approved just and reasonable rates. Such concerns should bear directly on the determination of the fair ROE. In addition, as a utility such as PECO (Gas) adds more and more expensive plant, this increases rates, which may in turn put downward pressure on the just and reasonable ROE not for financial reasons, but because of affordability concerns.

In sum, the concerns I identify with respect to the unaffordability of the rates of PECO (Gas) can (and should) be considered even outside the consideration of the specific proposals I advance with respect to specific low-income initiatives.

C. The Disproportionate Impact of Inflation on Low-Income Customers.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I respond to the testimony of PECO (Gas) witnesses regarding the impacts of inflation on the Company and its investors. In its Statement of Reasons for the rate increase, for example, PECO (Gas) argues that "Continued investment in PECO's natural gas distribution system is needed to serve customers, but the cost of doing so has increased significantly. Inflation and interest rates have also risen at a historic pace. . ." (PECO Gas Statement of Reasons, at 3-4). The Company continues

to assert that "the Company faces significant increases in a variety of areas that are not within PECO's control. These include inflation and other financial costs. . ." (Id., at 4). PECO (Gas) witness Humphrey argues that "inflation and interest rates have risen at a historic pace, which has raised the cost of investment and continues to increase the Company's labor, contracting, and materials expense,"[6] while PECO (Gas) rate of return witness Moul states that "my cost of equity analysis reflects the impact of high levels of inflation, which have not been seen for four decades."[7]

Despite this testimony, PECO (Gas) has *not* considered the impact of inflation on its customers.[8] No balancing has thus occurred.

Q. SHOULD THE PUC CONSIDER THE IMPACT OF INFLATION ON RATEPAYERS WHEN SETTING RATES?

A. Yes. As I testified above, the process of setting reasonable rates, however, does not exclusively consider the interests of investors. Instead, for example, the courts have noted that setting a reasonable return on equity must involve a balancing of the interests of investors and ratepayers. To the extent that the impacts of inflation on investor interests are considered, therefore, the impacts of inflation on ratepayer interests must be considered as well. Moreover, decisions on issues such as the appropriate level of the residential customer charge, as well as the propriety of adopting certain rate riders such as the Weather Normalization Adjustment, involve the PUC making explicit policy choices

[6] PECO (Gas) St. 2, at 3.

[7] PECO (Gas) St. 5, at 6.

[8] OCA-VIII-4.

about how to allocate risks between ratepayers and the Company. The adverse impacts of inflation on ratepayers should be one component of those considerations.

In summary, as I will explain below, the testimony of PECO's (Gas) witnesses does not present a complete story about the stress which inflation has placed on utility ratepayers, especially low-income customers. Inflation is disproportionately affecting lower-income households. The higher return on equity sought by PECO (Gas) in this proceeding, which would have the impact of driving up rates, will exacerbate this problem. Given the PUC's obligation to balance the interests of investors and ratepayers in setting a reasonable return on equity, the PUC should consider the greater adverse impacts that inflation has imposed on low-income ratepayers when setting rates.

Q. DOES INFLATION HAVE A PARTICULARLY ADVERSE IMPACT ON LOWER INCOME HOUSEHOLDS?

A. The impact of inflation is felt most severely by low-income households. Research by the U.S. Department of Labor's Bureau of Labor Statistics, the agency that calculates and reports the "rate of inflation" (i.e., the Consumer Price Index [CPI]) each month, reports that "consumers with different incomes experience inflation quite differently."[9] According to this research, households earning the lower incomes spend a higher share of their household budget on household necessities such as rent, food and medical care.

[9] Klick and Stockburger (December 2022). Spotlight on Statistics: Inflation Experiences for Lower and Higher Income Households, U.S. Department of Labor, Bureau of Labor Statistics, available at https://www.bls.gov/spotlight/2022/inflation-experiences-for-lower-and-higher-income-households/home.htm

Table 4. Household budget shares of expenditure items for lowest and highest income quartiles, 2017–2018[10]

Expenditure	Lowest Income Quartile	Highest Income Quartile
Rent (including owner's equivalent rent	34.93%	27.93%
Food at home	9.44%	6.58%
Medical care	8.36%	8.09%
Household utilities	4.36%	2.73%
Motor fuels	3.46%	3.42%
Motor vehicle operation	3.44%	3.40%
Telephone service	2.32%	2.00%

While low income households pay more of their budgeted income for this basket of essential goods, it is also important to note that the prices of goods and services that had larger budget shares for lower income households have risen faster than all other items. In particular, the BLS researchers found, "prices for motor fuel, medical care, fuel and utilities, and shelter rose faster than the overall average. . ."[11] Thus, "[b]ecause the lowest income households dedicate more of their spending on these categories," the BLS researchers found, "their overall inflation rates grew faster than highest income households."

[10] Id.

[11] Id.

Table 5. Average price change by item, 2005–2020
(starred items defined by BLS to be household necessities)

Item	2005–2020 average 12-month change
Tuition, other school fees, and childcare	4.03%
Motor Fuel*	3.45
Medical Care*	3.28
Rent*	3.06
Food away from home	2.86
Fuel and utilities*	2.71
All items	2.00
Food at home*	1.89
Lodging away from home	1.16
Recreation	0.74
New and used motor vehicles	0.43
Apparel	-0.10
Telephone services*	-0.20

Researchers at the Federal Reserve Bank of Dallas similarly found that:

> Families have grappled with surging prices over the past 18 months, as the cost of meeting basic needs rose. Consumer prices were 7.1 percent higher in November 2022 than one year earlier.
>
> Although inflation may have peaked, prices remain elevated, with food costs up 10.6 percent, gasoline rising 10.1 percent, rent increasing 7.9 percent and medical care services up 4.4 percent.

> Drawing upon recent household survey data, we show that high inflation is disproportionately hurting low-income households, including Black and Hispanic households and renters.[12]

DO LOW-INCOME HOUSEHOLDS HAVE THE SAME TOOLS TO ADAPT TO HIGHER PRICES, RESULTING FROM INFLATION, AS NON-LOW-INCOME HOUSEHOLDS?

A. No. The Federal Reserve researchers found that the "stress" being placed on households by high inflation is much greater for low-income households. They explained:

> Prior research suggests that inflation hits low-income households hardest for several reasons. They spend more of their income on necessities such as food, gas and rent—categories with greater-than-average inflation rates—leaving few ways to reduce spending. When prices rise, middle-income households may react by consuming cheaper goods and buying more generic brands. Low-income households do not have the same flexibility; in many cases, they are already consuming the cheapest products.
>
> Additionally, many low-income households lack the ability of higher-income households to stock up when prices are discounted, buy in bulk and save, delay purchases if there is an opportunity to save in the future or buy more cheaply online. Low-income households are also likely to have smaller cash buffers to tide them over a period of high inflation.
>
> The recent Household Pulse Survey data confirm these tendencies. Households with incomes ranging from $25,000 to $35,000 in 2021 were about 19.3 percentage points more likely to be very stressed by inflation than households with incomes in the $75,000 to $100,000 range.

The data is clear and it is consistent. Lower income families expend a greater share of their income on necessities (which tend to have higher inflation rates); have smaller financial cushions to mitigate the impact of inflation; and may have less of an ability to switch to lower-priced alternatives. As Lael Brainard, a member of the Board of

[12] Id.

Governors of the Federal Reserve System, concluded, "All Americans are confronting higher prices, but the burden is particularly great for households with more limited resources."[13]

Q. WHAT DO YOU CONCLUDE?

A. The testimony of the witnesses for PECO (Gas) presents an incomplete story about the stress which inflation has placed on utility stakeholders. Just as inflation may have placed stress on the utility, it has also placed stress on utility ratepayers. Indeed, the inflation experienced in recent years has placed far more stress on lower income ratepayers than it has placed on others. Given that inflation is disproportionately affecting lower-income households, the Commission must consider the fact that the higher return on equity sought by PECO (Gas) in this proceeding will only exacerbate the problem by unnecessarily driving up rates. The PUC is obligated to balance the interests of investors and ratepayers in setting a reasonable return on equity. In so doing, the PUC should consider the greater adverse impacts that inflation has imposed on low-income ratepayers.

[13] Brainard (April 2022). Variations in the inflation experiences of households, available at https://www.federalreserve.gov/newsevents/speech/brainard20220405a.htm

D. The Affordability of Bills to Residential Customers Generally.

Q. DO YOU HAVE CONCERNS ABOUT THE IMPACT OF THIS PECO (GAS) RATE REQUEST OUTSIDE OF THE LOW-INCOME CONTEXT?

A. Yes. The PUC is not simply to consider the impacts of rate changes on low-income customers, but also to consider the impacts of consumer interests generally. To consider the impacts of the PECO (Gas) rate case on consumers generally, I use county-wide data provided by United for ALICE[14] through the ALICE (Asset Limited, Income Constrained, Employed) Report for Pennsylvania. ALICE data signals the ability of households to afford the basics required for self-sufficiency.

Q. WHAT DOES THE ALICE DATA SHOW A FAMILY OF FOUR WOULD NEED TO EARN TO COVER ESSENTIAL EXPENSES?

A. In the 2023 report, using data from 2021, in Pennsylvania, a family of four would need an annual income of $65,796 to cover essentials needed to live and work, pay rent, and pay utilities.[15]

Q. WHAT ALICE DATA HAVE YOU EXAMINED?

A. I have reviewed the 2022 ALICE survival budgets for a four-person household for the five counties which PECO (Gas) serves (Bucks, Chester, Delaware, Lancaster, Montgomery). Those budgets are $73,404 (Bucks County), $79,335 (Chester County), $65,082 (Delaware County), $66,286 (Lancaster County), and $74,565 (Montgomery County). I next separately considered median household incomes (MHIs) for the total

[14] An overview of United for Alice is available at https://unitedforalice.org/overview.

[15] https://unitedforalice.org/state-reports-mobile

population (MHI-All) and for the total Black population (MHI-Black). Of these PECO (Gas) counties, while the MHI-All is above the ALICE survival budget in all five counties, the MHI-Black is *below* the ALICE survival income in four of the five PECO (Gas) counties (Bucks, Chester, Delaware, Lancaster). The four counties where the MHI-Black is below the ALICE survival budget have a total population of 883,778 *households*. Those counties have a poverty rate of 7.9%, but have an ALICE rate of 26.1%. Clearly, in other words, the households in PECO (Gas) service territory that would struggle to pay increased PECO (Gas) bills associated with this rate case is nearly four times higher than the Poverty rate.

In addition, I compared the ALICE survival budget to the average income for households in the Second Quintile of income.[16] In all five counties, households in the Second Quintile had average incomes less than the ALICE survival budget. In all PECO (Gas) counties, in other words, unaffordability as measured by the ALICE survival budget reaches up to 40% of the households.

Q. DO YOU HAVE OTHER CONCERNS ABOUT THE IMPACTS OF THE PECO (GAS) RATE REQUEST ON CONSUMERS GENERALLY?

A. Yes. The adverse impacts to consumers arise not exclusively because of what burdens the PECO (Gas) rates are imposing, but also because of the cumulative impacts of the group of utilities serving the same customers. In 2024, it is not merely PECO (Gas) that

[16] The Census Bureau rank orders households by income from lowest to highest. It then divides that ordering into five equal parts, each part of which is called a "quintile." The one-fifth of households with the lowest income are the First Quintile. The one-fifth of households falling into the Second Quintile fall between the 20th and 40th percentile.

is seeking higher rates. Multiple utilities serving overlapping service territories are seeking substantial rate hikes. In 2024:

- Aqua Pennsylvania (Aqua PA) has filed a rate case that would increase typical residential water bills from $78.21 to $97.61 per month ($20.50), $246 per year, or by 26.2%. Additional rate hikes were sought for sewer bills.
- PECO (Electric) has filed a rate case that will increase residential bills by $16.67 per month or $200.04 per year.

These electric, water and wastewater (sewer) rate increases, on top of the PECO (Gas) requested rate increase of $16.15 per month ($193.80 per year), would, in total, increase *total* utility bills for the customers by $640 per year to customers in overlapping service territories.

Q. HAVE YOU IDENTIFIED THE EXTENT OF THE OVERLAP?

A. Yes. Each utility has provided a list of the zip codes which comprise its respective service territory. By matching those lists, I identified the zip codes that are served by all three utilities. Of the 169 zip codes in which PECO (Gas) has matching Census data, 160 are also served by PECO (Electric). Of the 169 PECO (Gas) zip code, 116 are served also by both PECO (Electric) and Aqua (PA). These zip codes in which all three utilities overlap have 429,774 households.

Q. HAVE YOU BEEN ABLE TO ASSESS WHAT THE IMPACT ON RESIDENTIAL CUSTOMERS WILL BE FROM THIS CUMULATIVE SET OF RATE INCREASES?

A. Yes. Given the utility rate increases sought in 2024, in other words, residents seeking rental units in Chester, Delaware and Lancaster Counties would need an additional income of $2,133 each year simply to pay their utility bill hikes.

Q. HOW DID YOU REACH THIS CONCLUSION?

A. The National Low-Income Housing Coalition (NLIHC) publishes an annual reported titled "Out of Reach: The High Cost of Housing" (OOR).[17] I examine the results of the most recent OOR (2024) for Chester, Delaware and Lancaster counties, a geographic area where the overlap of the three utilities is substantial and the MHI-Black is lower than the ALICE income. The mean renter wage in these areas is $24.70 for Chester County, $20.13 for Delaware County, and $18.77 for Lancaster County. The annual Area Median Income (AMI) is $114,000 for Chester County and Delaware County, and $98,000 for Lancaster County. The rent affordable at 30% AMI is $858 for Chester and Delaware Counties and $735 for Lancaster County. The rent affordable at the mean renter wage (given a full-time job) is $1,285 for Chester County, $1,047 for Delaware County, and $976 for Lancaster County. Given this information, ***without*** considering the cumulative impacts of the three utility rate increases sought in 2024, OOR reports that the income needed to afford housing in Chester, Delaware, and Lancaster Counties is:

[17] https://reports.nlihc.org/oor/pennsylvania

- $48,720 for a one-bedroom unit in Chester and Delaware Counties, and $41,000 in Lancaster County;
- $58,800 for a two-bedroom unit in Chester and Delaware Counties, and $51,440 for Lancaster County ;
- $71,500 for a three-bedroom unit in Chester and Delaware Counties, and $65,420 in Lancaster County.

Given the requested utility rate increases, however, the income that would be needed to afford housing in these three areas served by PECO (Gas), would be:

- $50,853 for a one-bedroom unit in Chester and Delaware Counties, and $43,133 in Lancaster County;
- $60,933 for a two-bedroom unit in Chester and Delaware Counties, and $53,573 in Lancaster County; and
- $73,693 for a three-bedroom unit in Chester and Delaware Counties, and $67,373 in Lancaster County.

At the mean renter wage, just to pay the increased utility bills being sought, renters would need to work an ***additional*** 86 hours a year (2.2 work weeks) in Chester County above and beyond their current job (40 hours/week x 52 weeks per year), an additional 106 hours each year (2.6 work weeks above and beyond their current job) in Delaware County, and an additional 114 hours each year above and beyond their current job (2.8 work weeks) just to pay the ***increase*** in their utility bills. Any other increase in the cost of living would be in addition to this need to increase the renter work week.

Part 2. Affordability and the PECO (Gas) Ability-to-Collect.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I expand upon my discussion of the impact which an increase in PECO (Gas) rates would have on low-income customers. In particular, I examine the collections performance of PECO (Gas) with respect to the Company's Confirmed Low-Income customers.

Q. PLEASE EXPLAIN THE FIRST COLLECTIONS METRIC YOU EXAMINE.

A. The first metric I examine involves the average arrears. Table 6 presents data for the average arrears of residential customers and the average arrears of Confirmed Low-Income customers by year for the three years 2020 through 2022.[18] As can be seen, in 2020, the average arrearage for a Confirmed Low-Income customer was nearly one-quarter larger than for a residential customer generally. From 2020 through 2022, the average arrears for a Confirmed Low-Income customer was from 24% to more than 180% higher. Accompanying the unaffordability of PECO (Gas) bills to its low-income population, in other words, is the increased nonpayment of those bills.

[18] 2022 is the last year of data reported.

Table 6. Average Arrears: Residential vs. Confirmed Low-Income (2020 – 2022) (BCS 2021 & 2022 Report on Universal Service Programs and Collections Performance)[19]

	Residential	Confirmed Low-Income	Ratio (Conf'd LI to Residential)
2020	$680.41	$844.71	1.24
2021	$962.02	$2,099.11	2.18
2022	$759.34	$2,158.61	2.84

Higher arrears impose costs on the utility, costs which must be paid by remaining ratepayers. Even setting aside any collection efforts that PECO (Gas) would direct toward customers in arrears, the higher arrears would impose a higher working capital cost. For each week/month that a bill remains unpaid, PECO (Gas) would incur either an out-of-pocket expense for borrowing replacement money, or would incur the corresponding opportunity cost for not having those funds to invest.

Q. PLEASE EXPLAIN THE SECOND COLLECTIONS METRIC YOU EXAMINE.

The second metric I examine involves not the size of the arrearage that is being carried, but rather the percentage of customers who are in arrears. Data from the annual BCS reports documents that Confirmed Low-Income customers are not only deeper in arrears on an average basis, but a higher percentage of revenues billed to Confirmed Low-Income customers is in arrears as well. The BCS data shows that from 2020 through 2022. From 3-times to nearly 3.3 times as much Confirmed Low-Income billed revenue was in arrears than the percentage of revenue for residential customer as a whole. In 2020, for example, while 5.9% of all residential revenue was in arrears 17.9% of

[19] Available at https://www.puc.pa.gov/filing-resources/reports/universal-service-programs-and-collections-performance-reports/

Confirmed Low-Income customer revenue was (a ratio of 3.03-to-1). In 2021, while 7.5% of residential customer revenue was in arrears, 22.1% of Confirmed Low-Income revenue was (remaining a ratio of close to 3-to-1). In 2022, the ratio increased to 3.28-to-1 (4.7% for residential revenue as a whole compared to 15.4% of Confirmed Low-Income revenues).

Table 7. Percent of Revenue in Arrears: Residential vs. Confirmed Low-Income (2020 – 2022) (BCS 2022 Report)

	Residential	Confirmed Low-Income	Ratio (Conf'd LI to Residential)
2020	5.9%	17.9%	3.03
2021	7.5%	22.1%	2.95
2022	4.7%	15.4%	3.28

What the data shows is that the higher average arrears of Confirmed Low-Income customers is not offset by a lower total percentage of revenue in arrears (driven perhaps by fewer customers in arrears. Instead, exactly the opposite occurs. Not only are more Confirmed Low-Income customers in arrears, but in addition, the total low-income revenue is in arrears as well.

The third metric I examine involves service disconnections for non-payment (DNPs). According to the BCS 2022 Report on universal service programs and collections performance, "Termination of public utility service is the most serious consequence of customer nonpayment and is viewed as a last resort when customers fail to meet their payment obligations."[20] As with the level of arrears, the unaffordability of Company bills

[20] According to the annual BCS report: "The **termination rate** is calculated by dividing the number of service terminations by the number of residential customers, allowing for a comparison of termination activities regardless

has a particular adverse impact on the Company's low-income customers. In the past two year, Confirmed Low-Income customers of PECO (Gas) have had service disconnected for nonpayment at a rate between five and seven times higher than the rate of service disconnections for residential customers as a whole.

Table 8. Termination Rate: Residential vs. Confirmed Low-Income (2020 – 2022) (BCS 2022 Report)

	Residential	Confirmed Low-Income	Ratio (Conf'd LI to Residential)
2020*	<0.1%	0.0%	---
2021	2.4%	12.1%	5.04
2022	2.8%	19.2%	6.82

* Disconnection rates were nearly non-existent due to COVID-related disconnection restrictions imposed by the PUC.

As with carrying arrears, nonpayment service disconnections have a rate impact on remaining customers. Not only is there an out-of-pocket cost associated with the process of disconnection, but there is the likelihood of lost future revenue as well.

Q. HAVE YOU EXAMINED ANY FINAL METRIC?

A. Yes. The fourth metric I have examined involves the gross write-off ratio for residential customers and Confirmed Low-Income customers. The data is set forth in the Table below. The PECO (Gas) data clearly shows that Confirmed Low-Income customers impose dollars of gross write-offs on the utility at a rate that is substantially higher than the rate at which residential customers impose gross write-offs. From 2020 through 2022, the gross write-off ratio for Confirmed Low-Income customers was from nearly five to nearly eleven times higher than the ratio for residential customers.

of the number of residential consumers. Any significant increase in a termination rate could indicate a trend or pattern that the Commission may need to investigate."

Table 9. Gross Write-Off Ratios: Residential vs. Confirmed Low-Income (2020 – 2022) (BCS 2022 Report)

	Residential	Confirmed Low-Income	Ratio (Conf'd LI to Residential)
2020	0.3%	3.2%	10.67
2021	0.5%	2.5%	5.00
2022	0.4%	2.6%	6.50

Q. BASED ON YOUR EXAMINATION OF THESE METRICS, WHAT DO YOU CONCLUDE?

A. The data from the four metrics examined above is not presented to criticize the credit and collection efforts of PECO (Gas). Instead, the lessons to be learned are two-fold. First, there is considerable opportunity for PECO (Gas) to use its universal service programs to address the nonpayment problems of Confirmed Low-Income customers on its system. Second, in a related, although not identical line, the use of universal service programs to address collections problems does not exclusively benefit the low-income customers participating in these programs. The use of universal service programs can also operate to help PECO (Gas) manage the costs of payment difficulties which are passed on to all other ratepayers. In the next section, I turn my attention to how PECO (Gas) could, and should, do precisely that.

Part 3. Specific Recommendations to Respond to Low-Income Unaffordability.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF OUR TESTIMONY.

A. In this section of my testimony, I consider a series of recommendations that PECO (Gas) should adopt to respond to the unaffordability of natural gas bills that I have identified above. In my discussion below, I do not recommend changes to the structure or operation

of the PECO (Gas) universal service program as filed in its most recent Universal Service and Energy Conservation Plan (USECP). Instead, I have reviewed the procedures and operations outside of the PECO (Gas) USECP to assess the ways in which such procedures and operations can be improved to integrate total Company operations more fully with the Company's USECP.

Q. PLEASE EXPLAIN THE ROLE WHICH SUCH RECOMMENDATIONS PLAY IN A BASE RATE PROCEEDING.

A. The role of providing affordable service in a base rate proceeding has been identified throughout my discussion above. When rates are unaffordable to low-income customers, that unaffordability affects the rates charged to other customers. I have documented, for example, how the unaffordability of bills leads to higher levels of arrears by low-income customers. Those higher levels of arrears not only lead to PECO (Gas) incurring out-of-pocket expenses devoted to the collection of those arrears, they lead to higher levels of expenses such as the higher levels of working capital associated with the revenue that has been billed but not collected. Since working capital is a capital expense, there is also an equity return associated with it, with a corresponding additional tax impact. The rate impact, in other words, is greater than the impact on the initial level of working capital expense. I have also documented above how the unaffordability of the rates of PECO (Gas) leads to a stream of lost revenue. This lost revenue occurs as low-income customers have service disconnected with no reconnection. This process not only causes PECO (Gas) to lose the revenue that is comprised of the unpaid bills at the time of disconnection, but also causes the Company to lose any revenue associated with the bills that would have been associated with future bills. Moreover, even when service is

reconnected, each day that a low-income customer remains off-system prior to the reconnection represents a lost sale (and thus lost revenue).

My recommendations below recognize these impacts which low-income unaffordability have on rates. Without needing to propose modifications to the structure of the PECO (Gas) USECP, the recommendations explain how PECO (Gas) can improve the service it offers to low-income customers to mitigate the adverse rate impacts of unaffordable bills.

A. Identifying Confirmed Low-Income Customers.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I identify how the Company fails to comply with PUC regulations regarding the identification of "confirmed low-income" customers. I recommend changes that would bring PECO (Gas) into compliance with the PUC's regulations.

Q. HOW DOES PECO (GAS) CURRENTLY IDENTIFY "CONFIRMED LOW-INCOME" CUSTOMERS?

A. When asked to "please provide a detailed written description of how the Company 'confirms' the low-income status of the Company's customers, including a detailed list of the information accepted to confirm low-income status, PECO (Gas) responded by stating that:

> Household income – which is used by the Company to calculate a customer's Federal Poverty Level (FPL) pursuant to Section 1405 of Title 66 – can be provided by the customer verbally to a Company representative. The Company "confirms" low-income status when the customer provides supporting Proof of Income documentation.

(OCA-II-18). This procedure by PECO (Gas) is too limited. It fails to comply with the PUC's regulations regarding how to define a "confirmed low-income" customer. The PUC's regulations explicitly define a "confirmed low-income" customer for Natural Gas Distribution Companies. The PUC regulations state:

> *Confirmed low-income residential account*—Accounts where the NGDC has obtained information that would reasonably place the customer in a low-income designation. This information may include receipt of LIHEAP funds (Low-Income Home Energy Assistance Program), self-certification by the customer, *income source* or information obtained in § 56.97(b) (relating to procedures upon rate-payer or occupant contact prior to termination).[21]

(emphasis added). As can be seen, under the regulation, the PECO (Gas) procedure for identifying a "Confirmed Low-Income" customer falls short in several ways. First, "self-certification" may include not merely self-certification of the actual *level* of income, but certification of the *source* of income as well. For example, customers who receive SNAP (Supplemental Nutrition Assistance Program, formerly known as Food Stamps) assistance, Medicaid, Temporary Aid to Needy Families (TANF), free School Lunch, and other similar benefits will, by the very receipt of those benefits, be "reasonably place[d]. . .in a low-income designation." Moreover, the regulation does not require a customer to provide "proof of income documentation." Instead, "self-certification" is adequate.

A customer's self-attestation of the receipt of public assistance (e.g., Supplemental Nutrition Assistance Program [SNAP], welfare, Supplemental Security Income [SSI], Medicaid), for example, would all place a customer in a "low-income designation." For

[21] 52 Pa. Code § 62.2.

purposes of establishing the customer's "Confirmed Low-Income" status, it would not matter what specific dollar level of income allows the customer to receive such assistance. The mere fact of receiving such assistance would be sufficient to meet the PUC's definition. A customer need not provide actual dollars of income (i.e., under the stated procedure of PECO (Gas), "household income. . .can be provided by the customer verbally to a Company representative. . .")

Appropriately and accurately identifying the Company's "confirmed low-income" customers is not only important from the perspective of CAP outreach, but also qualifies such customers for various fee waivers. Moreover, the PUC's regulations provide that a customer is exempt from a cash security deposit "when the customer provides *income documents or other information* that he or she is eligible for state benefits based upon household income eligibility requirements that are consistent with those of the public utility's customer assistance program."[22] (emphasis added).

[22] 56 Pa. Code § 56.41(4).

Q. WHAT DO YOU RECOMMEND?

A. PECO (Gas) should modify its policies and procedures regarding the identification of "confirmed low-income" customers to conform with the PUC's regulations. PECO (Gas) should include these modified policies and procedures in its residential tariff. The modified policies and tariff should explicitly state that: (1) PECO (Gas) will recognize a customer as a "confirmed low-income" customer when the Company is provided information that would "reasonably place" the customer in a low-income designation; (2) the information can be provided by the customer through self-certification and need not be accompanied by "proof of income documentation"; (3) the information can include income information or other information attesting to his or her eligibility for state benefits; and (4) the information would be used to establish the customer's eligibility for a payment arrangement of up to five years in length (i.e., income at or below 150% FPL) pursuant to Section 1405(b) of Chapter 14 of the Public Utility Code.

B. Nonpayment Disconnections of Confirmed Low-Income Customers.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I address the need of PECO (Gas) to take more effective actions to use its universal service program to prevent the disconnection of service for nonpayment to Confirmed Low-Income customers. This discussion addresses not the structure of the PECO (Gas) USECP, but rather addresses how PECO (Gas) interacts with customers who do ***not*** participate in the programs.

Q. WHY DO YOU ADDRESS THE DISCONNECTION OF SERVICE IN PARTICULAR?

A. There are several reasons why the disconnection of service should be considered in particular. First, in all the ways I have discussed in detail above, the disconnection of service has rate implications for all customers. Minimizing disconnections would also minimize these adverse rate impacts. Second, as BCS notes in its most recent annual report on universal service programs and collection performance that "Termination of public utility service is the most serious consequence of customer nonpayment and is viewed as a last resort when customers fail to meet their payment obligations."[23] It is thus appropriate to assess whether service terminations are, in fact, being used by PECO (Gas) as a "last resort." Third, as BCS states: "Universal Service is a collective name applied to the policies, protections and services that *help low-income customers maintain electric and natural gas service*. . ." (emphasis added).[24] Given that "universal service" is intended to "help low-income customers maintain electric. . .service," it is appropriate to assess whether that objective is being achieved.

Q. IS THE PECO (GAS) UNIVERSAL SERVICE PROGRAM SUCCESSFUL IN "HELPING LOW-INCOME CUSTOMERS MAINTAIN ELECTRIC SERVICE"?

A. Not entirely. There is significant information documenting the extent to which the Company's universal service program is not helping low-income customers to maintain electric service. For example, I consider the extent to which PECO (Gas) is

[23] 2022 BCS Report, at 15.

[24] Id., at 3, citing Electricity Generation Customer Choice and Competition Act, 66 Pa. C.S. § 2803 and Natural Gas Choice Competition Act, 66 Pa. C.S. § 2202.

disconnecting service to Confirmed Low-Income customers. The data shows not only that the Company is continuing to disconnect service to a substantial number of Confirmed Low-Income customers, but also that the average arrears at the time of disconnection remains substantial as well. After those disconnections, a substantial portion of the Confirmed Low-Income customers that have been disconnected are not reconnected. The data below shows that from January 2021 through the end of that year, PECO (Gas) disconnected 1,731 Confirmed Low-Income customers, while in 2022, 2,588 Confirmed Low-Income accounts experienced a service disconnection. In 2023, PECO (Gas) disconnected 2,427 Confirmed Low-Income customers. (OCA-II-16). These disconnected customers were not always subsequently reconnected. In 2022, only 2,344 accounts were reconnected (after 2,588 had been disconnected). In 2023, only 2,152 Confirmed Low-Income accounts were reconnected (after 2,427 had been reconnected). PECO (Gas), in other words, reconnects service to most, but not all, of the Confirmed Low-Income customers it disconnects service to. In the instances where reconnection does not occur, not only will PECO (Gas) lose the dollars owed at the time of disconnection, it will also lose any future sales as well.

The dollars lost at the time of disconnection can be considerable. For Confirmed Low-Income customers who had service disconnected, the average arrears at the time of disconnection ranged from a low of $1,500 (July) to a high of $3,149 (April) in 2021; from a low and $1,572 (October) to high of $2,452 (May) in 2022; and from a low of $1,213 (October) to a high of $2,293 (April) in 2023. Typical arrearage balances ranged from $1,500 to $3,000.

Table 10. Confirmed Low-Income Customers Average Arrears at Time of Disconnection (OCA-II-23)			
	2021	2022	2023
Jan*	$0	$0	$0
Feb*	$0	$0	$0
Mar*	$0	$0	$0
Apr	$3,149	$2,409	$2,293
May	$3,040	$2,452	$2,050
Jun	$1,864	$1,807	$1,416
Jul	$1,493	$1,922	$1,497
Aug	$1,691	$2,221	$1,433
Sep	$1,942	$1,945	$1,447
Oct	$1,889	$1,572	$1,213
Nov	$1,754	$1,584	$1,302
Dec*	$0	$0	$0
NOTE: *PECO (Gas) does not disconnect service to Confirmed Low-Income customers during cold weather months.			

To assume that PECO (Gas) has effectively communicated the possibility of enrolling in CAP, and making pre-program arrears subject to forgiveness, to Confirmed Low-Income customers, one would need to assume that more than 6,700 Confirmed Low-Income customers –remember a "Confirmed Low-Income" customer is a customer from whom the Company has already received information that would reasonably identify that customer as "low-income"—would *choose* to have their service disconnected rather than to enroll in the Company's CAP. One would further need to assume that these nearly 6,700 customers would choose to pay all or part of their arrears in order to reconnect their service, and to retain those pre-disconnection arrears on their accounts to be paid in the future rather than subjecting those arrears to forgiveness.

This data is consistent with the data presented in Table 8 above. That Table shows that the termination rate (i.e., number of nonpayment disconnections divided by the number

of customers) remains considerably higher for Confirmed Low-Income customers than it is for residential customers in general.

Despite the number of Confirmed Low-Income customers who are disconnected *without* subsequently being reconnected, the data shows that more than 90% of all Confirmed Low-Income customers experiencing a disconnection are reconnected. These reconnections demonstrate that the Company can and does make contact with these Confirmed Low-Income customers throughout the disconnection process.

Q. WHAT DO YOU FIND?

A. The data above demonstrates that current procedures PECO (Gas) uses to enroll Confirmed Low-Income customers –i.e., those customers that PECO (Gas) *knows* to be low-income-- are not effectively working to help these customers enroll in CAP to retain utility service (i.e., in the words of the Natural Gas Competition statute, to "help low-income customers maintain natural gas. . .service"). Notwithstanding the statutory goal for the PECO (Gas) universal service program, thousands of Confirmed Low-Income customers are having their service disconnected for nonpayment, and a proportion of those disconnected customers do not have their service reconnected.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that, prior to the disconnection of a Confirmed Low-Income customer, PECO (Gas) adopt a procedure, developed in collaboration with its Universal Service Advisory Group (USAG), under which it will seek to make personal contact with the customer subject to disconnection. In that personal contact, the Company shall offer the Confirmed Low-Income customer the opportunity to apply for the Company's CAP and

arrearage forgiveness program. If the customer expresses a desire to apply, PECO (Gas) shall postpone the disconnection for a reasonable period of time to allow the application process to be completed. Once disconnected, prior to being reconnected, and being required to pay either a fee or a portion of the arrears which gave rise to the disconnection, customers who are Confirmed Low-Income customers at the time of disconnection should be required to affirmatively acknowledge that they do not wish to participate in CAP (along with its arrearage forgiveness program) prior to being reconnected and required to pay either a portion of their outstanding arrears or any reconnection fee.

C. Deferred Payment Agreements for Confirmed Low-Income Customers.

Q. PLEASE EXPLAIN YOUR THIRD RECOMMENDATION.

A. My third recommendation is that Confirmed Low-Income customers who are negotiating a deferred payment agreement (DPA) with the Company, as well as customers from whom the Company receives information placing them in an income tier of 0% to 150% FPL, should be provided a stand-alone written Plain English notice informing those customers of their right, in the alternative, to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions). Through that opportunity, rather than needing to agree to retire their arrears over an extended period of time, the Confirmed Low-Income customer would be allowed to enroll in CAP and, upon making appropriate payments, receive forgiveness of their underlying arrearages. This written communication would be provided to Confirmed Low-Income customers, those customers from whom PECO (Gas) had either previously, or during the process of

discussing a payment arrangement, received sufficient information to reasonably establish their low-income status.

Q. IS THERE A STATUTORY BASIS FOR IMPOSING THIS REQUIREMENT?

A. Yes. Pennsylvania statutes provide that:

> No public utility shall, directly or indirectly, by any device whatsoever, or in anywise, demand or receive from any person, corporation, or municipal corporation a greater or less rate for any service rendered or to be rendered by such public utility than that specified in the tariffs of such public utility applicable thereto. The rates specified in such tariffs shall be the lawful rates of such public utility until changed, as provided in this part. *Any public utility, having more than one rate applicable to service rendered to a patron, shall, after notice of service conditions, compute bills under the rate most advantageous to the patron*.[25]

(emphasis added). PECO (Gas) should not, in other words, require a customer, known to be a Confirmed Low-Income customer, to pay off arrears through a payment arrangement when such arrears would be subject to forgiveness under the Company's CAP.

Q. PLEASE EXPLAIN THE SUBSTANTIVE NEED FOR SUCH COMMUNICATION.

A. PECO (Gas) reports that it enrolls significant numbers of Confirmed Low-Income customers in deferred payment arrangements through which customers agree to retire arrearages over an extended period of time. The data shows that PECO (Gas) entered into 6,478 newly-initiated payment arrangements with Confirmed Low-Income customers in from February 2021 – January 2022; 4,304 newly-initiated payment arrangements with Confirmed Low-Income customers from February 2022 – January

[25] 66 Pa. Stat. and Cons. Stat. Ann. § 1303 (West).

2023, and 4,675 newly-initiated payment arrangements with Confirmed Low-Income customers from February 2023 – January 2024.[26]

These payment arrangements, however, are not often successful. PECO (Gas) reports that in the years 2021 through 2023, while the Company entered into 41,829 payment arrangements with customers with income at or below 150% FPL, only 19,138 payment arrangements with these low-income customers were successful. Fewer than half of the PECO (Gas) payment arrangements with customers with income at or below 150% FPL, in other words, succeeded.

Table 11. Confirmed Low-Income Payment Arrangements and Successful Payment Arrangements (2021 – 2023) (OCA-II-22)

	2021	2022	2023
Payment Arrangements	10,331	11,293	20,205
Successful Payment Arrangements	8,534	7,498	3,106

Additional insights can be gained into the number of Confirmed Low-Income customers that default on their payment plans by examining the number of "payment-troubled customers." According to BCS, "A payment troubled customer is a customer who has failed to maintain one or more payment arrangements in a 1-year period." The PECO (Gas) data reported to BCS on and payment-troubled Confirmed Low-Income customers is set forth in Table 12 below.

[26] OCA-II-017. The time period represents the most recent 36 months at the time discovery was propounded. The 36-month period was divided into three periods of 12 months each. The 12-month periods did not precisely coincide with calendar years.

Table 12. Number of Confirmed Low-Income Customers Newly Entering Payment Arrangement and Number of Payment-Troubled Customers (Confirmed Low-Income Customers) (PECO (Gas)) (2021 – 2023) (OCA-II-17)

Feb. 2021 – Jan 2022[27]		Feb 2022 –Jan 2023		Feb 2023 – Jan 2024	
On Arrangement	Payment Troubled	On Arrangement	Payment Troubled	On Arrangement	Payment Troubled
6,478	1,301	4,304	1,934	4,675	2,682

As can be seen, for the most recent three years for which data is available (February 2021 – January 2024), the number of Confirmed Low-Income customers who are "payment-troubled" (i.e., had defaulted on one or more payment plans in a 12-month period) is one half or more of the number of Confirmed Low-Income customers who newly entered into payment plans.

Q. HOW SHOULD PECO (GAS) USE THIS DATA?

Company customer service representatives should generate information through the DPA process that would demonstrate whether a customer would be eligible for CAP. As I noted above, PECO (Gas) stated that its procedure is:

> Household income – which is used by the Company to calculate a customer's Federal Poverty Level (FPL) pursuant to Section 1405 of Title 66 – can be provided by the customer verbally to a Company representative. The Company "confirms" low-income status when the customer provides supporting Proof of Income documentation.

(OCA-II-18). Pursuant to Section 1405, a customer's income level determines the length of the payment arrangement the Company would offer. (OCA-II-21). If, however, customer service representatives know that a household's income and household size would place the customer in Income Tier 1 (at or below 150% FPL) for purposes of

[27] Customers were not being defaulted from payment arrangements during a set of emergency COVID protections through most of 2021.

negotiating a DPA, they would also know that the customer's income and household size would qualify that customer for CAP (and the corresponding arrearage forgiveness).

Q. WHAT DO YOU FIND?

A. Offering a low-income customer a deferred payment arrangement, even a long-term deferred payment arrangement, is not a recipe for success if the reason the customer is in arrears in the first instance is that bills for current service are unaffordable. In those situations, all a deferred payment arrangement does is to begin with the unaffordable bill and *add* an additional installment payment through which to retire the arrears. In those instances, it should not be surprising that far fewer Confirmed Low-Income payment arrangements succeed in any given year than do not. It is no surprise that there are significant numbers of Confirmed Low-Income customers that are "payment-troubled," thus indicating their failure to complete the payment arrangements they entered into with PECO (Gas). The remedy for unpaid bills by low-income customers is not to place those customers on a deferred payment arrangement, but rather to enroll those customers in CAP (with its arrearage forgiveness provisions). Through that remedy, PECO (Gas) would not merely address the unpaid bill, but would also address the underlying cause of the unpaid bill. Doing so would not only benefit the low-income customer, but would also benefit the Company and its remaining customers as well.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that before PECO (Gas) enters into a payment arrangement with a customer which the Company either: (1) knows to be a Confirmed Low-Income customer; or (2) has generated information through the payment arrangement process documenting that the customer is in the Tier 1 income range (at or below 150% FPL), it should be required

to provide the customer a stand-alone Plain English notice to that customer of the customer's right to enter into CAP and an explanation of the advantages of CAP's arrearage forgiveness benefits. PECO (Gas) should develop this Plain English notice in collaboration with its USAG. Moreover, before entering in a payment arrangement with such low-income customers, PECO (Gas) should obtain written acknowledgement from the customer evidencing an informed consent that the customer is choosing to enter into the payment arrangement rather than enrolling in CAP (with its arrearage forgiveness provisions).

D. Cold Weather Survey CAP Enrollment.

Q. PLEASE EXPLAIN YOUR FOURTH RECOMMENDATION.

A. My fourth recommendation is that customers who have had service disconnected for nonpayment, and who remain disconnected at the time of the Company's Cold Weather Survey (CWS) undertaken for the PUC, should be provided a written, stand-alone, Plain English notice of their right to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions).

Q. UPON WHAT DO YOU BASE THIS RECOMMENDATION?

A. I have reviewed the results of the PUC's Cold Weather Survey performed at the beginning of the winter heating season each year.[28] I examined data from the three years 2021 through 2023. The data in Table 13 below shows the extent to which residential customers which the Company has disconnected during the non-cold weather months

[28] Electric, Gas and Water Cold Weather Survey Results, available at https://www.puc.pa.gov/filing-resources/reports/electric-gas-water-cold-weather-survey-results/

remain without service at the beginning of the next cold weather heating season. Over the past three years, between 4,200 (2022) and 4,400 (2023) customers who had service terminated for nonpayment remained without heating service at the beginning of the cold weather season. While the percentage of customers remaining without heating service was relatively stable in 2022 relative to 2021 (from 32.6% to 33.8%), the percentage of customers that had service disconnected, and who remained disconnected, increased again in 2023 (from 32.6% to 41.0%). Between roughly one-third (33.8%, 32.6%) and nearly 2-in-5 (41.0%) PECO (Gas) customers surveyed remained without heating at the start of the cold weather months each year for the past three years.

Table 13. Cold Weather Survey Results (2021 – 2023) (PECO-Gas)[29]

	2021	2022	2023
Number surveyed	11,258	12,311	10,808
Vacant	1,622	976	710
Reconnected (DPA or other)	3,934	5,024	3,722
Not contacted	3,469	4,120	4,274
Occupied with service off	286	176	152
Using alternative source of heating	206	47	56
No heating	3,675	4,167	4,426
Percent without heat	32.6%	33.8%	41.0%

It would seem unreasonable to assume that, if given a meaningful choice either to enter the cold weather season without heating service or to enroll in a program that would not only limit their future bills to an affordable percentage of income, along with providing a

[29] The Cold Weather Survey for PECO does not distinguish between gas and electric customers.

forgiveness of their pre-existing arrears, customers would choose to enter the winter months without heating service.

Q. WHY SHOULD PECO (GAS) FIND IT IMPORTANT TO OFFER CAP ENROLLMENT AS AN OPTION TO CUSTOMERS WHO WOULD OTHERWISE ENTER THE COLD WINTER MONTHS WITHOUT HEATING SERVICE?

A. As I note above, the statutory purpose of Pennsylvania's universal service programs is to "help low-income customers maintain electric and natural gas service. . ."[30] This purpose would be furthered by helping to identify customers who have had their heating service disconnected by PECO (Gas), and who remain without heat, as low-income and then facilitating their enrollment in CAP (along with its arrearage forgiveness).

Q. WHAT DO YOU RECOMMEND?

A. I recommend that PECO (Gas) adopt a procedure under which it will provide a stand-alone Plain English notice to customers found to be without heating service at the time of the Company's Cold Weather Survey of the customer's right to enter into CAP and an explanation of CAP's arrearage forgiveness benefits. PECO (Gas) should develop the Plain English notice in collaboration with its Universal Service Advisory Group.

[30] BCS 2022 Report, at 3, citing Electricity Generation Customer Choice and Competition Act, 66 Pa. C.S. § 2803 and Natural Gas Choice Competition Act, 66 Pa. C.S. § 2202.

E. Confirmed Low-Income Customers with Substantial Arrears.

Q. PLEASE EXPLAIN YOUR FOURTH RECOMMENDATION.

A. My fourth recommendation is that Confirmed Low-Income customers achieving a minimum arrears should receive a stand-alone written Plain English notice of their right to enter into CAP along with an explanation of CAP's arrearage forgiveness benefits.

There is no question that PECO (Gas) has substantial numbers of Confirmed Low-Income customers that have high arrears. According to the Company's own data, in the 25 months ending January 2023, as set forth in Table 14 below, PECO (Gas) had between 3,000 (July 2022) and nearly 7,100 (February 2022) Confirmed Low-Income customers with arrears exceeding $300 in any given month. The Company had an average of nearly 5,000 (4,947) Confirmed Low-Income customers with more than $300 in arrears in that 25-month period. (OCA-II-014).

Table 14. Number and Percent of Confirmed Low-Income Customers with Arrears >$300 by Month for Most Recent 24 Months (OCA-II-014)

Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22
6,547	6,841	5,485	4,997	4,518	5,459	4,317	3,943	4,032	4,482	5,624	6,568
66%	62%	52%	45%	39%	45%	44%	39%	40%	38%	47%	57%
Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
7,073	6,619	5,499	4,632	3,102	2,967	3,508	3,246	3,213	3,873	5,426	6,195
61%	57%	52%	41%	30%	30%	30%	28%	29%	32%	41%	50%

I choose $300 as the lower threshold to examine because 14 of the 36 months between January 2021 and December 2023 had a median Confirmed Low-Income arrears of

between $250 and $350 for PECO (Gas).[31] As I noted above, the PUC has previously observed how enrollment of low-income customers into CAP can be expected to help low-income customers improve their payment patterns. I cited above where the Commission reasoned that "enrolling low-income customers into CAPs as early as possible generally puts them in the best position to maintain good payment habits and avoid accruing utility debt."

Consistently through their annual reporting on CAP programs to BCS, Pennsylvania utilities have found that enrollment in CAP will improve the percentage of bills paid. The data for PECO (Gas), for example, shows that CAP participants over the past five years have, with the exception of the COVID year of 2020, paid between 87% and 93% of the total CAP bills they have received.

Table 15. Percentage of CAP Bills Paid by Year (2019 – 2023)
(OCA-II-1)

	2019	2020	2021	2022	2023
CAP Bills	$14,936,360	$12,317,197	$13,119,017	$16,789,572	$12,758,938
CAP Pyts	$13,890,814	$9,484,226	$11,544,735	$14,606,928	$11,100,276
Pct Paid	93.0%	77.0%	88.0%	87.0%	87.0%

This payment pattern is precisely what the PUC was referencing when it observed that CAP "would generally put [low-income customers] in the best position to maintain good payment habits and avoid accruing utility debt." My recommendation below is designed to place the Confirmed Low-Income customers of PECO (Gas) in the best position to maintain good payment habits and avoid accruing *additional* utility debt.

[31] OCA-II-011.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that when Confirmed Low-Income customers accrue an unpaid balance of $300, and at each additional $300 increment in arrears, PECO (Gas) provide a stand-alone written Plain English notice informing those customers of their right to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions).

F. Request for Deposits from Existing Customers.

Q. PLEASE EXPLAIN YOUR SIXTH RECOMMENDATION.

A. My sixth recommendation is tied to the Company's Tariff setting forth provisions regarding deposits for residential customers. The current PECO (Gas) tariff reads:

> The Company may charge a security deposit before it will render service to an applicant or before the Company will continue to render service to a customer for whom the Company provides Consolidated EDC Billing or Separate EDC Billing. The Company may charge deposits to applicants and customers if they have bad credit, lack creditworthiness or as otherwise permitted by Commission statutes, rules, regulations, and as required by Federal Bankruptcy Law.

The PECO (Gas) tariff further provides that:

> The Company's credit and application procedures for applicants are as follows: (1) positive identification of applicant obtained from previous customer record or through one of the major credit reporting bureaus or through in-person identification; (2) determination of liability for a past due balance; (3) determination if a deposit is required based upon applicant's previous account history if available or through third party credit scoring of applicant. The Company's credit scoring methodology and standards are as follows: The Company uses a commercially recognized credit scoring methodology that is within the range of generally accepted industry practice. The applicant's or customer's utility payment history determines the credit score. The Company uses this customer-specific credit score to either request or waive a security deposit.

(PECO (Gas) Rule 5.7, Tariff page no. 12, 13).

My testimony above establishes, in detail, that PECO (Gas) has thousands of Confirmed Low-Income customers who are substantially in arrears; who have negotiated, but defaulted on, a deferred payment arrangement (i.e., are "payment-troubled"); or who have had service terminated and seek reconnection. Having been identified as a "Confirmed Low-Income customer" means that, by definition, the customer has provided the Company with sufficient information to reasonably lead PECO (Gas) to conclude that the customer is low-income.

By PUC regulation, these customers should be exempt from having a cash security deposit imposed. (52 Pa. Code § 56.41(B)(4)). PECO (Gas), however, should also take the opportunity to solicit the enrollment of such Confirmed Low-Income customers into CAP. I recommend that, in those instances where PECO (Gas) would otherwise request a cash security deposit from a Confirmed Low-Income customer, the Company should, as an alternative to that deposit demand, provide a stand-alone written Plain English notice informing these customers of their right to enroll in the Company's CAP (along with an explanation of the advantages of CAP's arrearage forgiveness provisions).

Q. PLEASE EXPLAIN WHY YOUR RECOMMENDATIONS ABOVE ARE NOT DUPLICATIVE OF EACH OTHER?

A. My recommendations above *are*, in fact, duplicative of each other. Indeed, they are intentionally duplicative. Experience in multiple programs documents that more effective program outreach is associated with making multiple "touches" with the potential participant population. Through adoption of the recommendations I advance above,

PECO (Gas) increases the number of touches with its Confirmed Low-Income customers, and does so in different, yet interdependent, circumstances. The recommendations involve PECO (Gas) telling its Confirmed Low-Income customers: (1) enrollment in CAP is an alternative to having your service disconnected for nonpayment; (2) enrollment in CAP is an alternative to entering into an unaffordable deferred payment arrangement; (3) enrollment in CAP is an alternative to entering the winter heating season without heating service; and (4) enrollment in CAP is an alternative to continuing to carry arrears (with the costs and stresses that those arrears impose). The multiple touches through adoption of these four recommendations can reasonably be expected to increase CAP enrollment without need to adopt modifications to the Company's underlying universal service program. As I have discussed throughout my testimony, this improved enrollment not only benefits the low-income customers who choose to enroll in CAP, but will also benefit the Company and all remaining ratepayers by reducing costs and enhancing revenues.

G. Utilizing Speech Analytics to Identify Potential CAP Enrollees.

Q. PLEASE EXPLAIN YOUR FINAL FIFTH RECOMMENDATION.

A. My final recommendation involves the use of technology by PECO (Gas) to help the Company's customer service representatives to identify low-income customers who might be eligible for enrollment in CAP. In particular, this technology could be used in particular to help identify customers who are low-income and facing payment difficulties.

Q. PLEASE EXPLAIN YOUR FOCUS ON IDENTIFYING LOW-INCOME CUSTOMERS HAVING PAYMENT DIFFICULTIES.

A. In its 2019 Order revising the CAP Policy Statement, the PUC discussed the role of payment-troubled status in enrolling low-income customers in CAP.[32] While the general consensus of the parties providing comments to the PUC was that payment-troubled status should not be an eligibility requirement for CAP,[33] the Commission was encouraged to use payment-troubled status as a ***targeting*** criterion. Available technology can assist PECO (Gas) in fulfilling the goal of CAP to "maintain good payment habits" by identifying customers potentially eligible for CAP early in the process of responding to payment difficulties. By identifying these customers early in the process, not only will PECO (Gas) best serve its low-income customer base, but it will also maximize the use of CAP to help control the costs of nonpayment that I have discussed throughout my testimony (e.g., collection costs, uncollectibles, working capital, and the like).

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[32] 2019 Amendments to Policy Statement on Customer Assistance Program, 52 Pa. Code § 69.261–69.267, M-2019-3012599 , Final Policy Statement and Order, Docket M-2019-3012599 (September 19, 2019).

[33] Id., at 42, 43 – 45 (Most EDCs and NGDCs do not currently require income-eligible households to be payment-troubled to qualify for their CAPs.)

discussed throughout my testimony (e.g., collection costs, uncollectibles, working capital, and the like).

Q. WHAT "TECHNOLOGY" WOULD ASSIST PECO (GAS) TO IDENTIFY LOW-INCOME CUSTOMERS HAVING PAYMENT DIFFICULTIES?

A. One important technology which Pennsylvania utilities are adopting is the use of software using speech and linguistics analysis to identify the extent to which either in-house customer service representatives, or contracted call center personnel, are identifying customers contacting the companies with particular attributes or problems. The use of such speech and linguistic analytics can, in particular, assist the Company identify customers who are having payment difficulties and who are potentially low-income.

PECO (Gas) states that it currently uses speech analytics to improve its call center operations. It states: "The PECO Call Center employs a natural language processing analytics solution. The analytics solution allows us to better understand reasons for calls, identify opportunities to improve processes and identify customer service representative performance improvement opportunities. . .Both in-house and third-party contractor Care Center staff utilize the same analytics tool."[34] This software, however, is not currently used to identify customers having payment difficulties or customers who can reasonably be expected to be low-income. When PECO (Gas) was asked for the terms it searches for through use of its software, the Company responded: "See below for the terms searched for by PECO's third-party analytics software."

- "Newspaper", "News Channel", "News" and "Paper" – Evaluating if call volume has increased based on news publications;

[34] OCA-III-025.

- "Rate Change" and "Price Change" – Evaluating if changes in the price of the electrical service have negatively or positively impacted customer sentiment;
- "Can't Hear" – Evaluating potential audio and technical issues during a call;
- "System Upgrade", "System Change", "System Error" – Evaluating if changes or upgrades to PECO's Customer Information System is driving call volume changes.[35]

In addition, while not generating written reports based on such reviews, PECO (Gas) stated that its "Care Center analysts do review call samples with negative sentiment scores as measured by the third-party software."[36]

Q. WOULD IT BE DIFFICULT FOR PECO (GAS) TO ADD OR MODIFY SEARCH TERMS IN ITS USE OF SPEECH ANALYTICS SOFTWARE?

A. No. According to the Company, the terms which it will search for through its speech analytics software are within the discretion of the Company's call center personnel. PECO (Gas) stated: "PECO's Call Center determines which terms and phrases to utilize in its ad-hoc searches by identifying and reviewing internal and external trends, including but not limited to, changes in practices, in service, in system functionality, and socioeconomic impacts within PECO's service territory."[37] Moreover, employing additional or modified terms would result in no cost to the Company. "Phrases, terms, or other speech patterns are not and have not been modified. The use of the software search

[35] OCA-III-026.

[36] OCA-III-027.

[37] OCA-III-028.

engine is employed on an ad-hoc search basis only. . .Ad-hoc searches result in no additional costs or modification to the software."[38]

Q. HOW COULD SPEECH ANALYTICS SOFTWARE BE USED TO FACILITATE CAP ENROLLMENT AND THE IDENTIFICATION OF CONFIRMED LOW-INCOME CUSTOMERS?

A. PECO (Gas) currently uses its speech analytics software only "to improve customer satisfaction." It does so "by leveraging the built in AI sentiment analysis where each call ingested into the platform is assigned a sentiment score ranging from -20 to 20. On a weekly and monthly basis PECO reviews samples of calls with negative sentiment scores. These reviews are relayed to the PECO Call Center Customer Service Representatives via coaching to reinforce current procedures and best practices while encouraging improvements, such as soft skills, to provide a better customer experience."[39]

Speech pattern analytics, however, could also be used by the Company to determine whether calls to the Company's call center are handled properly for purposes of identifying Confirmed Low-Income customers and customers who would benefit from enrollment in the Company's universal service programs. Terms, phrases and speech patterns associated with low-income status, payment difficulties, unaffordability, or seeking low-income assistance for energy or other life necessities (e.g., food, housing, medical care) could be identified such that the linguistics analysis software would search

[38] OCA-III-029.

[39] OCA-III-030.

for them to identify universal service calls. Proper handling would include approving delays in collection activities pending applications for and approval of program enrollment; identification in the Company's information technology of Confirmed Low-Income customers; and extending available low-income protections.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that PECO (Gas) be directed to extend any future use of speech analytics software to assist with the quality monitoring of phone calls involving, or potentially involving, universal service programs and other low-income customer issues. The Company should be directed to involve its USAG in the identification and selection of Low-Income and Universal Service Terms to be detected by the system in order to confirm that phone calls are properly being identified and handled. Regular six-month reports on the results of the Speech Analytics reviews should be provided to the Company's USAG.

Part 4. Modifications to the Residential Tariff and Practices of PECO (Gas).

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I identify certain aspects of PECO (Gas) residential tariffs and practices which need to be modified to bring them into compliance with PUC regulations. These modifications are not part of the Company's Universal Service and Energy Conservation Plan (USECP) and, even if they are, incorporation of these practices into the USECP would not ameliorate the need bring the tariff and practices into regulatory compliance.

Q. WHAT PROBLEM HAVE YOU IDENTIFIED?

A. The residential tariff of PECO (Gas) addresses from which customers the Company will require cash security deposits. The tariff (page 12) provides: "The Company may charge a security deposit before it will render service to an applicant or before the Company will continue to render service to a customer for whom the Company provides Consolidated EDC Billing or Separate EDC Billing. The Company may charge deposits to applicants and customers if they have bad credit, lack creditworthiness or as otherwise permitted by Commission statutes, rules, regulations, and as required by Federal Bankruptcy Law." PECO (Gas) goes on to state in its tariff that "The Company retains the right to charge customers additional deposits based upon continued bad credit or lack of creditworthiness and increased usage." (Id.) PECO (Gas) finally states with respect to "applicants" that:

> The Company's credit and application procedures for applicants are as follows: (1) positive identification of applicant obtained from previous customer record or through one of the major credit reporting bureaus or through in-person identification; (2) determination of liability for a past due balance; (3) determination if a deposit is required based upon applicant's previous account history if available or through third party credit scoring of applicant. The Company's credit scoring methodology and standards are as follows: The Company uses a commercially recognized credit scoring methodology that is within the range of generally accepted industry practice. The applicant's or customer's utility payment history determines the credit score. The Company uses this customer-specific credit score to either request or waive a security deposit.

(Id.). In explaining when a deposit will be returned or refunded to a customer, PECO (Gas) states:

> Deposits secured from a residential Customer shall be returned with accrued interest, in accordance with 66 Pa. C.S.§1404(C) and applicable Pennsylvania Public Utility Commission regulations In cases of discontinuance of service, deposits will be returned with accrued interest upon payment of all service charges and guarantees or with deduction of unpaid accounts. . .The first

> annual review of the customer's payment status will occur 24 months after the initial deposit date. Any residential or commercial customer having secured the return of a deposit may be required to make another deposit, in accordance with Commission statutes, regulations, or Federal Bankruptcy Law, if the Customer demonstrates bad credit or lacks creditworthiness subsequent to the return of the initial deposit.

(Id.). These tariff provisions, standing alone, carry with them an elevated risk of discriminatory results, even if unintentionally so. Under federal equal credit opportunity law, for example, it is unlawful to discriminate against a person in a credit transaction – the Equal Credit Opportunity Act (ECOA) makes clear a utility transaction is a "credit transaction" under the statute – based on the consumer's receipt of public assistance. To the extent that the PECO (Gas) "credit scoring methodology" considers whether a consumer is employed and, if so, for how long, that reliance on the lack of employment (or the lack of long-term employment) may have the effect of discriminating against consumers who lack employment because they receive public assistance (one of the protected classes under ECOA).

In addition, any consideration of whether a consumer is a homeowner, as well as about whether a consumer is banked or unbanked, has a high probability of having racially disparate impacts. It will come as no surprise, for example, that the National Association of Realtors found that the homeownership gap for Blacks and Hispanics has grown even

bigger in recent years.[40] So, does the question of whether a consumer has a bank account (credit card, loan or other credit reference) have distinct racial implications.[41]

Q. WHAT DO YOU RECOMMEND?

A. I recommend that the PECO (Gas) Tariff be modified to add the following language: "The Company uses a commercially recognized credit scoring methodology that is within the range of generally accepted industry practice, *provided that the methodology does not directly, or have the effect of, discriminating based on a protected class as set forth in the federal Equal Credit Opportunity Act.*" (new language emphasized).

Q. IS THERE A SECOND PROBLEM YOU HAVE IDENTIFIED?

A. Yes. PECO (Gas) was to "provide a detailed description of all factors taken into consideration in deciding how, when or whether to schedule crews to perform service disconnections for nonpayment in a particular geographic area (however defined). Separately provide all procedures manuals or other written guidance discussing the extent to which, and the order in which, those factors are taken into account in scheduling crews performing nonpayment disconnections." The Company replied:

[40] Meredith Dunn, et al. 2023). 2023 Snapshot of Race and Home Buying in America, National Association of Realtors.

[41] Fairness in Financial Service: Racism and Discrimination in Banking, Testimony of Lisa Rice, President and CEO of National Fair Housing Alliance, Before the Committee on Banking, Housing and Urban Affairs, U.S. Senate, December 1, 2022.

Work is scheduled for crews performing service disconnections in the following manner:

- Identify termination goal for shift date in question. (Termination targets are set annually to achieve certain levels of bad debt reduction so as to reduce the amount of money that other customers have to pay for those customers that do not pay.)

- Identify how many terminations per Field Technician will be needed to achieve termination goal.

- Consult the eligible job list developed by the Market Switch system, as described in the response to OCA-II-36, which consists of the accounts that have been reviewed and approved for termination:

- Review eligible job list to assign work in most efficient manner, reducing drive time for each technician.

- Review those routes to determine if there are accounts near the routes that are eligible for 72hr/48hr notifications; the Field Technicians will pivot to providing these required notices if/when the shift goal for terminations is reached

- Assign the routes to the Field Technicians; terminations are assigned first and then 72hr/48hr notifications.

The number of jobs assigned per Field Technician varies based on the individual technician's abilities.[42]

PECO concedes that two of the factors it considers in deciding whether to accelerate the disconnection of service include: (1) the level of arrears; and (2) the age of arrears.[43] The

[42] OCA-II-42 (attached as Exhibit RDC-2).

[43] OCA-II-38 (attached as Exhibit RDC-3). See also, OCA-II-36 (attached as Exhibit RDC-4). ("Cut out non-payment orders are generated in the customer billing system after all regulatory noticing is satisfied. The MarketSwitch system then uses the factors listed below to build a cut list, with the goal of optimizing the collection of accounts receivable (A/R) greater than 60 days past due. Optimization using A/R greater than 60 days past due is done because the likelihood of collection decreases as the A/R ages. The Field Collections vendor uses the MarketSwitch cut list to schedule disconnects.").

risk assessment tool used by PECO has never been presented to BCS for review, let alone to the Commission for review and approval. (OCA-II-041).

PECO places its customers into one of four risk classifications. The Company explains: "Residential customers are placed into one of four risk classifications depending on the presence of a combination of risk factors."[44] Risk Classifications include: (1) High Risk; (2) Medium/High Risk; (3) Medium/Low Risk; and (4) Low Risk.[45] While PECO (Gas) asserts a confidentiality protection for the "number of days difference in timing that a notice of disconnection of service for nonpayment is accelerated for customers deemed to be higher risk through application of various factors," the Company does publicly state that there *is* a difference.[46] As can be seen, PECO (Gas) states that the timing of a notice of disconnection "is accelerated for customers deemed to be higher risk. . ."

Finally, while PECO (Gas) states that: "Geographic location is not considered when creating a list of eligible customers for collections, nor is geography a factor in the customer notice phase of collections," that is not entirely accurate. The Company goes on to state that "However, when scheduling disconnections, work is assigned to field crews based on the area they support each day, across all five counties. Work is then scheduled in each county based upon the number of accounts that are eligible to be

[44] OCA-II-39 (attached as Exhibit RDC-5).

[45] Id.

[46] OCA-II-40 (attached as Exhibit RDC-6).

disconnected for nonpayment as well as proximity to available technicians. See response to OCA-II-42.[47]

Q. SUMMARIZE WHAT THE ABOVE DISCUSSION DOCUMENTS WITH RESPECT TO PECO (GAS) NONPAYMENT SERVICE DISCONNECTIONS.

A. Let me review the impacts of the PECO (Gas) process when the process is viewed as an interconnected whole, rather than as a series of independent decisions. First, PECO (Gas) establishes a "termination goal" for each shift. To meet this goal, PECO (Gas) then identifies "how many terminations per Field Technician will be needed to achieve termination goal." One of the factors that is then explicitly considered in deciding how to reach this "termination goal" is the size of arrears. Another factor that is explicitly considered in deciding how to reach this "termination goal" is the "proximity" of potential disconnections to available technicians. That proximity is "based upon the number of accounts that are eligible to be disconnected for nonpayment. . ." The "number of accounts that are eligible to be disconnected" is based on the size and age of arrears.

PECO (Gas) states that it has undertaken no study or survey that examines the demographic characteristics (e.g., race, ethnicity, income, age) of the Company's disconnections for nonpayment, payment-troubled customers, incidence of arrears, or level of arrears (amongst other things).[48] Nor has it considered the effectiveness of, disaggregated by race or ethnicity, the Company's notices or an impending disconnection

[47] OCA-II-43 (attached as Exhibit RDC-7).

[48] OCA-III-32 (attached as Exhibit RDC-8).

for nonpayment, promotion of CPA enrollment, LIHEAP outreach, or the promotion of the negotiation of deferred payment arrangements as a response to arrears.[49]

Q. WHAT PROBLEM HAVE YOU IDENTIFIED?

A. The PECO (Gas) focus on the dollar and age of arrears will, by its very nature, tend to focus collection efforts on low-income customers. Consider that, as documented in Table 20, the average arrears of Confirmed Low-Income customers in 2021 was $2,099 as compared to the average arrears of residential customers as a whole ($962). In 2022, the average arrears of Confirmed Low-Income customers was $2,159 as compared to the average arrears of residential customers as a whole ($759). Moreover, PECO (Gas) data shows that while over the most recent 37 months for which data is available, an average of 51.8% of residential arrears were 60+ days old,[50] 73.7% of the arrears of Confirmed Low-Income customers were.[51] In 20 of the 37 months, more than 50% of the residential arrears were 60+ days old, with no month exceeding 63.4%.[52] In contrast, in 33 of the 37 months, more than 70% of Confirmed Low-Income arrears were 60+ days old, with no month being *less* than 67.4%.[53] Given the "termination goals" identified by PECO (Gas) each year, and the fact that those goals are set in part by the size and age of arrears, and by the "proximity" of potential disconnections to available technicians. . .based upon the

[49] OCA-III-33 (attached as Exhibit RDC-9).

[50] OCA-II-32.

[51] OCA-II-33.

[52] OCA-II-32.

[53] OCA-II-33.

number of accounts that are eligible to be disconnected for nonpayment. . .," it thus comes as no surprise that, again as set forth in Table 20, that the nonpayment disconnection rate for residential customers in 2021 was 2.1% (compared to the nonpayment disconnection rate for Confirmed Low-Income customers of 12.1%), while the nonpayment disconnection rate for residential customers in 2022 was 2.4% (compared to the nonpayment disconnection rate for Confirmed Low-Income customers was 19.2%.

Q. ARE THERE RACIAL IMPLICATIONS TO YOUR FINDINGS ABOVE?

A. Yes. On average, 15.5% of householders in the zip codes served by PECO (Gas) are Black or African-American alone. Of the 169 PECO (Gas) zip codes with matching Census data, 27 have a percentage of Black householders that equals or exceeds this 15.5% number. These 27 zip codes have 10.0% of the total number of householders in the PECO (Gas) service territory and 20.2% of the total number of PECO (Gas) customers (102,728 of 508,358). (OCA-II-4). In contrast, of the 48,639 residential nonpayment disconnections that PECO (Gas) performed in the months of January 2021 through January 2024 (37 months), 29,496 (61%) occurred in these 27 zip codes. At the same time, 199,672 of the 421,211 nonpayment disconnection notices (47.4%) were issued in these 27 zip codes. Not only were these disproportionately Black zip codes receiving a disproportionate share of the disconnection notices, in other words, they were experiencing a disproportionate rate of disconnections. While residential customers generally experienced roughly 12 disconnections for each 100 disconnection notices issued, the disconnection rate of residential customers in the disproportionately Black zip

codes who received disconnection notices was nearly 30% higher (15 disconnections for each 100 disconnection notices issued).

Q. PLEASE EXPLAIN WHY THIS DATA AND INFORMATION IS RELEVANT IN THIS CASE?

A. This information is relevant to quality-of-service concerns and the provision of service on fair and equitable terms within the PECO (Gas) service territory. PECO (Gas) may not even be aware of this correlation, and I think it is important to shed light onto it to ensure that it can be remedied in the near term.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that PECO (Gas) conduct a root cause analysis[54] to determine what is driving this disproportionate level of utility disconnections within the zip codes with the highest penetration of Black households. Once this root cause analysis is conducted, PECO (Gas) should commit to taking steps to address the cause with the commitment of reducing disproportionate disconnections within these zip codes. The extent to which PECO (Gas) mitigates the disproportionate disconnection of service for nonpayment in zip codes with high penetrations of Black households should be reviewed in the next PECO (Gas) base rate case.

I finally recommend that the PECO (Gas) risk analysis methodology, both that which underlies its disconnection of service and that which underlies its cash security deposits, be subject to a public review by BCS with an opportunity provided to stakeholders to

[54] The proper conduct of a root cause analysis is further explained in the testimony of OCA witness DeMarco, OCA Statement 5.

assess whether those risk assessment methodologies have a direct or indirect discriminatory effect.

Q. HAVE YOU IDENTIFIED A FOURTH PROBLEM REGARDING PECO'S (GAS) TARIFF?

A. Yes. Specifically, the manner in which Rule 16.7, Payment Terms, of PECO's (Gas) tariff interacts with Rule 17.4, Billing and Payment Options, of PECO's (Electric) tariff – which pertain to how PECO prioritizes partial payments – creates significant issues for customers who receive both electric and gas service.

Q. PLEASE EXPLAIN WHY THIS POLICY CAN BE PROBLEMATIC.

A. In short, both PECO and PECO's customers benefit from the ease of having a single bill for combined gas and electric service, if the customer receives both. However, PECO (Gas) does not state in its tariff that customers may designate a partial payment towards their monthly PECO bill as being for gas or electric service if that payment would not cover the total amount of their bill. Instead, partial payments are applied first to past-due amounts, second to current charges, and third to non-basic services. [55] Ultimately, this means that dual service customers can pay more than the full amount of their PECO (Gas) bill – including past-due amounts – and still have their gas service terminated if they are unable to pay their PECO (Electric) bill in full each month.[56]

[55] OCA-I-41.

[56] OCA-I-40.

Q. IF PECO DID NOT ADMINISTER A SINGLE BILL FOR COMBINED CUSTOMERS, WOULD THIS ISSUE EXIST?

A. No. For example, some PECO (Electric) customers receive gas service from Philadelphia Gas Works and not PECO (Gas). Customers who pay their PGW bill in full each month would not have their PGW service terminated if the customer fell behind in making their PECO (Electric) payments. It is primarily PECO customers who receive combined gas and electric service who are threatened with termination of both gas *and* electric service for nonpayment of gas *or* electric bills.

Q. WHAT IS YOUR RECOMMENDATION?

A. I recommend that PECO (Gas) amend its tariff Rule 16.7, Application of Payment, to permit combined customers to designate all or part of their combined PECO bill payment be applied to natural gas service – including past due balances and current charges – before being applied to electric service, or vice versa. Permitting such prioritization would bring PECO (Gas) into line with other NGDCs, which are not permitted to terminate customers for non-payment of electric bills.

This recommended tariff change would primarily benefit low-income customers and those at or below the ALICE threshold who need the month-to-month flexibility to make partial payments on the service they believe takes priority until they are able to pay their past-due balance. Due to the significant seasonal volatility of natural gas bills, a customer remitting a partial payment may need to apply that payment to the utility service which they believe is more essential in a given month. For example, if a combined customer uses PECO (Electric) service to heat their home and PECO (Gas) service for household appliances, that customer may wish to prioritize their PECO (Electric) payments during

winter months to ensure that they are able to continue to heat their home, even if it means falling behind in their PECO (Gas) bill. PECO (Gas) customers may need to choose between continued gas or electric service if they cannot afford to make full payments for both; such a difficult choice should not come at the cost of both services, a cost faced only by PECO customers who receive both services.

Part 5. Proposed Residential Customer Charge.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. This section of my testimony addresses the PECO (Gas) proposed increase to its residential customer charge by 36%, from $14.25 to $19.38 per month. The PECO (Gas) proposal will have a disproportionate adverse impact on low-income customers. Particularly given the affordability issues I have discussed in detail above relating to the Company's low-income customers, this additional burden on these customers should not be approved.

As I discuss above with respect to the overall increase in rates, the offer of a percentage of income-based CAP by PECO (Gas) does not adequately protect low-income customers. Only a small fraction of the Company's low-income customers participates in the Company's CAP. As I explained above, seven-of-ten of the Company's estimated number of low-income customers are not enrolled in CAP.

Q. DOES THE IMPACT ON CAP CUSTOMERS AFFECT LOW-INCOME CUSTOMERS NOT PARTICIPATING IN CAP?

A. Yes. Even though the percentage of low-income customers participating in CAP is small, increasing the customer charge to these customers has an adverse impact on other low-income customers. When the residential customer charge is increased, the total cost of the CAP program increases as well. This occurs because the increased bills to the CAP customers participating in the percentage of income program component of CAP will be passed through to other ratepayers on a dollar-for-dollar basis. While individual (percentage of income) CAP participants may be protected from the increased fixed customer charge, in other words, the CAP program as a whole is not. Other ratepayers, including non-participating low-income ratepayers, will pay this increase. Even with LIURP and other conservation activities by CAP customers, these increased costs will remain.

Q. DOES THE PECO (GAS) PROPOSAL TO INCREASE ITS RESIDENTIAL CUSTOMER CHARGE IMPOSE PARTICULAR HARMS ON LOW-INCOME CUSTOMERS?

A. Yes. The proposed 36% increase in its fixed monthly charge will have serious implications for the low-income customers of PECO (Gas). Increasing the fixed monthly customer charge increases the portion of a bill that a low-income customer cannot avoid by adjusting the customer's usage. The dollars of annual residential bills that are comprised of unavoidable fixed charges clearly increase with the Company's proposed increase in the residential customer charge. As Table 16 documents below, the

percentage of revenues derived from fixed charges increases from roughly one-fifth of residential revenues to substantially more than one-quarter.

Table 16. Percentage of Residential Revenue from Fixed and Volumetric Rates (Existing Rates and Proposed Rates) (OCA-II-048, OCA-II-049)

	Existing Rates		Proposed Rates	
	% Residential Revenue from Fixed Charges	% Residential Revenue from Volumetric Charges	% Residential Revenue from Fixed Charges	% Residential Revenue from Volumetric Charges
2023	31.5%	68.5%	34.0%	66.0%
2024	27.4%	72.6%	28.3%	71.7%
2025	26.8%	73.2%	28.4%	71.6%
2026	26.8%	73.2%	28.5%	71.5%

This increase in the part of the total bill that is comprised of fixed charges impedes the ability of low-income customers to control their bills through a reduction in their usage.

Q. WHAT DO YOU MEAN WHEN YOU DISCUSS LOW-INCOME EFFORTS TO "REDUCE CONSUMPTION?

A. "Reducing consumption" is not merely associated with energy efficiency improvements. Low-income households, particularly vulnerable low-income households (e.g., elderly, disabled, families with children), will take actions to try to reduce their bills to more affordable levels, frequently involving substantial household deprivation or the undertaking of substantial risks. Available research documents that low-income households also seek to reduce bills by reducing consumption, through actions such as closing parts of their home; reducing heating temperatures (even if to unsafe or unhealthy levels); or substituting the use of ovens or stoves to heat limited areas of their homes rather than using their heating systems to heat the entire home. The National Energy Assistance Directors Association (NEADA) performs a periodic Congressionally-funded

survey of the impacts of unaffordable home energy bills. The most recent survey, known as the National Energy Assistance (NEA) Survey, was performed in 2018 (published in December 2018).[57] Data on three actions which low-income households take to reduce their energy consumption when they do not have sufficient money to pay their utility bills is presented in the Table below.

Two observations are readily apparent from this data. First, taking dramatic actions to reduce home energy consumption is not at all uncommon within the low-income population when those customers do not have sufficient money to pay their home energy bills. From one-in-five (21%: 100 – 150% of Poverty) to one-in-three (34%: 0 – 50% of Poverty) customers close off parts of their home in almost every month, or in "some months," when they cannot afford to heat their homes. From one-in-four customers (26%: 0 – 50% of Poverty) reduce the temperature in their homes to unsafe or unhealthy levels in almost every month or in some months. One-in-ten (or more) low-income customers use their kitchen stove or oven to heat their homes when they have insufficient money to pay their utility bills. Second, the extent to which these actions occur increases as incomes decrease in nearly every instance. Households with incomes less than 50% of the FPL more frequently take these actions in almost every month or some months than do households with income at 100% to 150% of FPL.

[57] Apprise, Inc., 2018 National Energy Assistance Survey, Final Report, available at RESOURCE LIBRARY – Selected Reports – Energy Survey Research and Policy Analysis – APPRISE – Applied Public Policy Research Institute for Study and Evaluation

Table 17. Energy Reduction Actions in Response to Inability-to-Pay
by Range of Federal Poverty Level
(each attributed to "not having enough money to pay energy bill")[58]

	Closed Off Part of Home			Kept Temp at Unsafe or Unhealthy Level			Used Kitchen Stove or Oven to Heat		
	0-50%	51-100%	100-150%	0-50%	51-100%	100-150%	0-50%	51-100%	100-150%
Almost every month	10%	14%	7%	8%	3%	3%	1%	1%	1%
Some months	24%	13%	14%	18%	12%	10%	14%	11%	8%
1 – 2 months	12%	10%	11%	7%	8%	9%	22%	19%	14%
Never / No	54%	63%	67%	67%	76%	76%	63%	69%	77%
Don't know/refused	0%	0%	<1%	0%	1%	2%	0%	0%	1%

As this Table exemplifies, in their efforts to reduce bills to more affordable levels, low-income customers frequently take unsafe and unhealthy actions. It is unreasonable for PECO (Gas) to make it even more difficult for low-income households to reduce their bills when those households are already forced to resort to heating their homes (or only a portion of their homes) using their kitchen stove or oven. It is unreasonable to make it even more difficult for low-income households to reduce their bills when they are already being forced to keep their homes at unsafe or unhealthy temperatures because they cannot afford to pay their bills.

These households who are forced into engaging in these unsafe and unhealthy activities in their struggle to keep their home energy bills affordable are impeded in their efforts by the Company's proposal to increase its fixed monthly customer charge by 36%. The PECO (Gas) proposal makes a higher part of the customer's monthly bill unavoidable

[58] Apprise, Inc., 2018 National Energy Assistance Survey, Final Report, available at RESOURCE LIBRARY – Selected Reports – Energy Survey Research and Policy Analysis – APPRISE – Applied Public Policy Research Institute for Study and Evaluation

through reduced consumption. Those low-income customers taking such actions, in other words, will face a smaller bill reduction as a result of their action should the PECO (Gas) proposed increase in the fixed monthly customer charge be approved, potentially incentivizing more dangerous usage-reduction measures.

Q. TO WHAT EXTENT DO LOW-INCOME CUSTOMERS AND THOSE AT OR BELOW THE ALICE THRESHOLDS FACE AN INABILITY-TO-PAY?

A. In addition to my examination of energy burdens discussed above, I have also considered inability-to-pay by reference to Pennsylvania data report in the Census Bureau's most recent PULSE Household Survey. As of the time I write this testimony, the most recent PULSE Household Survey was for the time period ending April 1, 2024.[59] While the Census Bureau does not report data for specific utility service territories, it does provide state-specific information or Pennsylvania.

The Pennsylvania PULSE Survey data shows that one-of-three households (33.7%) with annual income less than $25,000 had a "very difficult" time paying for their usual household expenses "in the past seven days" (as of the time of the Survey). Three-of-five households (59.6%) at that income level had either a "very difficult" time or a "somewhat difficult" time paying their usual household expenses. As incomes increased, the difficulty in paying usual household expenses decreased, but nonetheless remained high. For households with annual income between $25,000 and $35,000, one-quarter (23.7%) had a "very difficult" time, but 55.6% had either a "very difficult" or a "somewhat difficult" time in paying their usual household expenses. It was not until annual incomes exceeded

[59] Available at https://www.census.gov/data/tables/2024/demo/hhp/cycle03.html

$35,000 that the percentage of households finding it "not at all difficult" or just "a little difficult" exceeded the percentage of households finding it "somewhat difficult" or "very difficult" to pay their usual household expenses.

Table 18. Difficulty Paying for Usual Household Expenses in Last 7 Days (Pennsylvania) (period ending April 1, 2024)

	Difficulty paying for usual household expenses in the last 7 days				
	Not at all difficult	A little difficult	Somewhat difficult	Very difficult	Total
Less than $25,000	21.1%	19.3%	25.9%	33.7%	100.0%
$25,000 - $34,999	14.7%	29.8%	31.7%	23.8%	100.0%
$35,000 - $49,999	25.6%	36.1%	21.5%	16.8%	100.0%
$50,000 - $74,999	37.1%	30.3%	20.0%	12.5%	100.0%
$75,000 - $99,999	39.7%	28.6%	14.5%	17.2%	100.0%
$100,000 - $149,999	45.1%	36.7%	12.0%	6.2%	100.0%
$150,000 - $199,999	68.8%	21.2%	4.1%	5.9%	100.0%
$200,000 and above	74.0%	14.6%	6.8%	1.7%	97.2%[60]

Given this PULSE Household Survey data, it is unreasonable to make it even more difficult for the residential customers of PECO (Gas) to be able to reduce their monthly utility bills by reducing their consumption.

Q. CAN YOU PLACE THE PROPOSED INCREASE IN THE PECO (GAS) RESIDENTIAL CUSTOMER CHARGE INTO SOME CONTEXT RELATING TO ITS IMPACT ON LOW-INCOME CUSTOMERS?

A. Yes. PECO (Gas) serves an estimated 78,627 low-income customers in its customer base. An increase in the residential monthly customer charge from $14.25 to $19.38

[60] Total does not equal 100% because some respondents did not report.

($5.13 per month), therefore, imposes an increased financial burden on these customers of $61.56 per year. The low-income customer base, therefore would be charged an additional $4.840 million each year in unavoidable charges (78,627 * 61.56 = $4,840,278). Remember, this is *not* the total customer charge, but rather is *only* the *increase* in the customer charge. To place this dollar figure in context, PECO (Gas) customers received $11.2 million in LIHEAP cash grants in the 2020-2021 program year, $16.3 million in the 2022-2023 program year, and $12.4 million in LIHEAP cash grants in the 2023 – 2024 program year to date (through April).[61]

Table 19. LIHEAP Cash Grants
Received by PECO (Gas) Customers (OCA-II-034)

Program Year	Cash
2020-2021	$11,198,032
2021-2022	$25,217,217
2022-2023	$16,267,734
2023-2024 (YTD)	$12,430,763

[61] OCA-II-034. Comparisons should not be made to the 2021 – 2022 LIHEAP program years. In those years, federal LIHEAP appropriations were significantly increased in response to the economic crisis associated with the COVID-19 health pandemic. For example, one White House announcement stated:

> Pennsylvania has received a record $480.5 million for the Low Income Home Energy Assistance Program (LIHEAP) available this fiscal year (October 2021 to September 2022). As part of a state-by-state breakdown of funding, the Administration reported that in addition to an annual appropriation of $182.8 million for Pennsylvania, the state received an additional $297.7 million in funds from the American Rescue Plan – *more than double the state's typical annual funding*. The total of $480.5 million *is the highest amount Pennsylvania has ever received in LIHEAP* to help families struggling with the costs of home heating.

(emphasis added), available at LIHEAP-pennsylvania.pdf (whitehouse.gov) According to a White House announcement, the American Rescue Plan more than doubled LIHEAP funding nationally. It noted that "This is the largest appropriation in a single year since the program was established in 1981." (Id.)

The increase in the unavoidable charges that would be imposed on low-income PECO (Gas) customers due to the proposed increase in the residential customer charge, in other words, would have represented 43% of the *total* LIHEAP cash funding available for basic cash grants in 2020-2021, and 29.8% of the total LIHEAP cash grants in 2022-2023. The increase in the unavoidable charges would represent 38.9% of the LIHEAP cash grants received by low-income customers of PECO (Gas) thus far in Program Year 2024 (through April 2024).[62] In the 2023 – 2024 program year, in other words, for every $1 in LIHEAP funding that is being provided to the low-income customers of PECO (Gas), the Company proposes to take nearly $0.40 away from those low-income customers in the form of an increased unavoidable fixed monthly customer charge.

Q. DO YOU HAVE REASON TO BELIEVE THE IMPACT WOULD BE EVEN GREATER THAN YOU DISCUSS ABOVE?

A. Yes. PECO (Gas) and PECO (Electric) provided identical dollar figures for the amount of LIHEAP benefits received by their customers. This leads me to believe that these LIHEAP benefits were not devoted exclusively to natural gas accounts. The percentage of LIHEAP benefits effectively taken from natural gas accounts would thus be substantially higher. If the PECO (Gas) and PECO (Electric) customer charge increases are summed, PECO is taking from 135% to nearly 200% of the LIHEAP benefits over the last four years simply through the increase in the customer charges.

[62] Low-income customers would have received additional LIHEAP Crisis and Supplemental funding. This funding, however, is not generally used to pay bills for current service, but rather used to help retire arrears which lead to the loss, or threatened loss, of service due to nonpayment disconnections.

Q. WHY ISN'T THIS PROBLEM ASSOCIATED WITH THE RATE INCREASE AS A WHOLE RATHER THAN ASSOCIATED WITH THE INCREASED CUSTOMER CHARGE IN PARTICULAR?

A. In part, the problem *is* associated with the rate increase when viewed as a whole. In large part, however, the problem is associated with the increased customer charge because there is nothing that a household can do to avoid this monthly fee. Even if low-income customers could reduce their usage, they would not be able to avoid any part of the proposed increase associated with the fixed monthly customer charge.

Q. DOES INCREASE TO THE FIXED MONTHLY CUSTOMER CHARGE PROPOSED BY PECO (GAS) ALSO IMPEDE USING LOW-INCOME ENERGY EFFICIENCY TO REDUCE OVERALL BILL INCREASES?

A. Yes. The types of barriers to low-income investments in energy efficiency are precisely the types of barriers that are made even more problematic by an increase in the fixed monthly customer charge. In assessing these barriers to low-income energy efficiency investments, I matched the zip codes which PECO (Gas) listed as comprising its service territory (OCA-II-03) to Census data for the same zip codes. This data analysis demonstrates that:

- The PECO (Gas) zip codes have high penetrations of low-income and very low-income households.[63] At these income levels, PECO (Gas) customers have insufficient discretionary funds to invest in energy efficiency, even if such investments would be cost-effective in the short- or medium-term. The extent of low-income households in the PECO (Gas) service territory was discussed in detail above. The increase in fixed monthly customer charges

[63] The number of households by income are provided in Table B19001 of the American Community Survey (5-year data). The population by Poverty Level is provided in ACS Table C17002 (5-year).

makes it more difficult for investments to be cost-effective, making the lack of discretionary investment income an even greater impediment.

- The PECO (Gas) zip codes reveal high mobility within the low-income population. Mobility is primarily measured by the percentage of households that have changed residences within the past year.[64] Frequent mobility makes it more difficult for low-income households to invest in energy efficiency. A low-income household will not make an energy efficiency investment that has a three-year payback if that household does not expect to live in its home for three years.

- PECO (Gas) zip codes have an extremely high prevalence of low-income households with high and extremely high shelter burdens.[65] High burdens are shelter burdens that exceed 30% of income. Extremely high burdens are shelter burdens that exceed 50% of income. Data for the PECO (Gas) service territory demonstrates that as household incomes decrease, the prevalence of high shelter burdens, and extremely high shelter burdens, dramatically increase. High shelter burdens make it difficult for low-income households to invest in energy efficiency. A low-income household that is struggling to pay its underlying housing costs does not have the discretionary income to invest in usage reduction measures, even if that investment might be cost-effective. Since, by definition, fixed monthly customer charges cannot be reduced by reducing consumption, increasing the fixed monthly customer charge by 36% makes it less likely that energy efficiency investments would be cost-effective in a time period that would allow low-income households to recover their investment in a resource-constrained environment.

Q. HAVE YOU BEEN ABLE TO REVIEW THE HARMS THAT ARISE FOR LOW-INCOME CUSTOMERS AS A RESULT OF THEIR INABILITY TO RESPOND TO BILL UNAFFORDABILITY BY REDUCING BILLS THROUGH REDUCED USAGE?

A. Yes. I have examined various indicators of bill payment difficulties for low-income customers as compared to residential customers as a whole. The data is presented in the

[64] American Community Survey, 5-year, 2020, Table B07010.

[65] American Community Survey, 5-year, 2020, Table B25074.

Table below. Overall, the payment patterns of PECO (Gas) Confirmed Low-Income customers are consistently worse than the payment patterns of the Company's residential customers as a whole. The percentage of accounts in arrears is consistently two or more times higher for Confirmed Low-Income customers than for residential customers. The average arrearage level for Confirmed Low-Income customers is consistently substantially higher than the average arrearage level for residential customers as a whole. As can be seen, the very customers for whom the Company is making it more difficult to respond to an inability-to-pay are those customers that have the greatest payment difficulties.

Table 20. PECO (Gas) Collections: Residential vs. Confirmed Low-Income (2021 – 2022)

	Residential		Confirmed Low-Income	
	2021	2022	2021	2022
Pct dollars in debt	7.5%	4.7%	22.1%	15.4%
Average arrears	$962	$759	$2,099	$2,159
Nonpayment disconnection rate	2.1%	2.4%	12.1%	19.2%
Write-off ratio	0.5%	0.4%	2.5%	2.6%

As I have previously noted, not only are more low-income customers (than residential customers) behind on their bills, but those that are behind, are further behind than residential customers generally.

Q. DO THESE PAYMENT DIFFICULTIES COST LOW-INCOME CUSTOMERS ADDITIONAL MONEY IN INCREASED BILLS?

A. Yes. When low-income customers have an inability to pay their bills in a full and timely fashion, as is documented above, the Company's response is to increase those unpaid

bills even further. The Company imposes a late payment charge of 1.5% a month on the full, unpaid balance. This monthly fee is an annualized fee of 19.56% per year.

Q. WHAT DO YOU CONCLUDE?

A. I recommend that the residential customer charge determined by OCA witness Clarence Johnson should be approved, as set forth in OCA Statement 3.

Part 6. The PECO (Gas) Weather Normalization Adjustment Mechanism.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I address the adverse impacts which the Weather Normalization Adjustment mechanism (WNA) proposed by PECO (Gas) has on low-income customers. According to PECO (Gas) witness Trzaska,

> The Company is proposing the WNA mechanism for two primary reasons: (i) to provide customers with more predictability in billing, which will better enable customers to budget and pay their bills and mitigate the impact of higher bills during severely cold months; and (ii) to provide PECO with a greater certainty in its ability to earn the distribution revenues authorized by the Commission when setting rates.[66]

Q. DO YOU BELIEVE THAT THE WNA CAN BENEFIT LOW-INCOME CUSTOMERS?

A. No. The WNA disproportionately impacts low-income customers. The WNA does not support PECO's (Gas) CAP; is, more likely than not, going to increase customers' bills; will harm customers' ability to reduce consumption to increase bill affordability; and

[66] PECO (Gas) St. 3, at 66.

makes monthly bills less predictable – not more predictable, as claimed by Mr. Trzaska – to the detriment of customers' ability to budget their anticipated billing. On net, the WNA is not an effective mechanism for protecting customers from variability in bills as a result of weather. Instead, PECO (Gas) should do a better job promoting its budget billing program, as budget billing is an existing program which offers the benefits PECO (Gas) claims the WNA provides to consumers, without the possibility of significant harm the WNA entails.

Q. DOES THE WNA SUPPORT PECO'S (GAS) CAP?

A. No. WNA charges and credits are still assessed against a CAP customer's bill as if they were not enrolled in CAP and then the CAP discount is applied.[67] This means that, while CAP customers will not see WNA adjustments to their monthly bills in response to weather, WNA charges and credits will still be reflected in the rates collected from residential customers to recover the cost of CAP discounts. Effectively, non-CAP customers who are subject to the WNA will have to pay not only their own WNA adjustments, but also those of CAP customers, increasing bill impact concerns associated with WNA charges during warmer-than-normal weather. If PECO (Gas) excluded CAP customers from the customer classes to whom or to which the WNA would apply, then there would be no double-recovery of WNA charges from non-CAP customers.

Q. WHAT IS THE HARM OF THE WNA TO LOW-INCOME CUSTOMERS?

A. While PECO (Gas) asserts that its WNA can adjust rates either up or down in response to weather, the reality is that WNAs implemented in Pennsylvania have largely resulted in

[67] OCA-VIII-26(d).

higher charges for residential consumers. In Fiscal Year 2023, for example, the PGW WNA imposed additional charges of $32,396,102 on customers.[68] In FY 2022, the PGW WNA imposed additional charges of $23,159,935,[69] while in FY 2021, the added PGW charges were $ 11,761,938.[70] Data provided by PECO (Gas) shows that, if the WNA had been in effect for the past 10 years, PECO (Gas) would have collected an average of $11 million per year in WNA charges from residential customers, with only two years where residential customers would have received credits under the WNA.[71]

Q. HOW DOES THE WNA IMPACT BILL AFFORDABILITY FOR LOW-INCOME CUSTOMERS?

A. As I have discussed throughout my testimony, the low-income customers of PECO (Gas) already face substantial difficulties paying their unaffordable bills. Chart 6 below shows the substantial dollars of arrears carried by the Company's Confirmed Low-Income customers.[72]

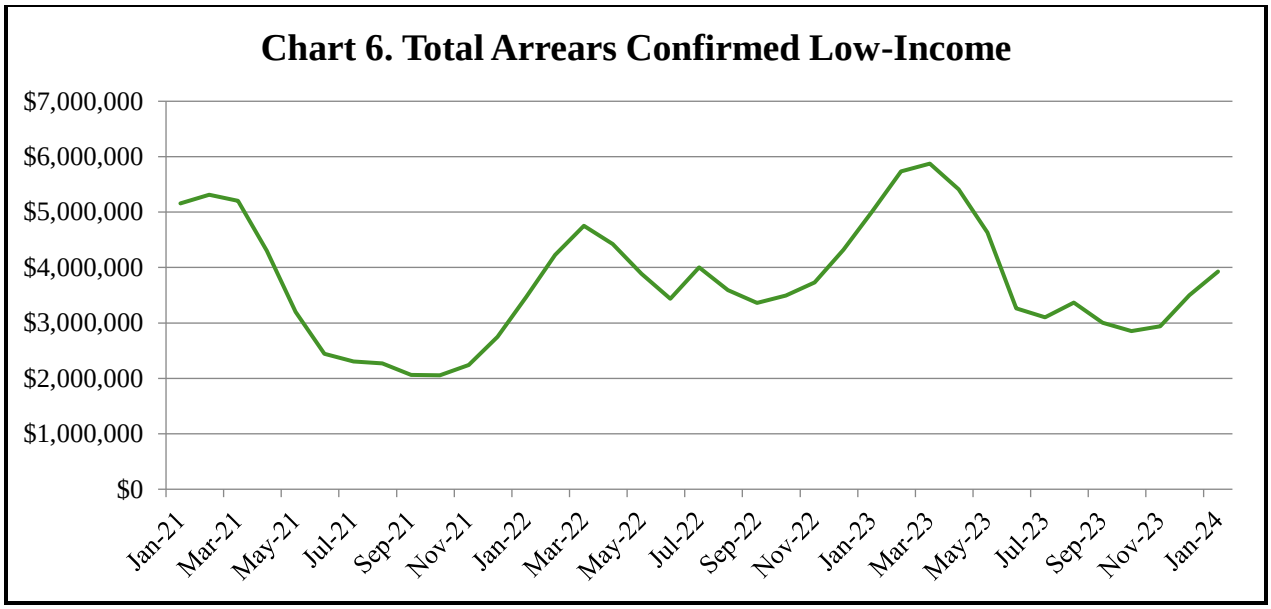
[68] R-2017-2586783, PGW Weather Normalization Adjustment Annual Report, January 2, 2024.

[69] R-2017-2586783, PGW Weather Normalization Adjustment Annual Report, January 10, 2023.

[70] R-2017-2586783, PGW Weather Normalization Adjustment Annual Report, January 4, 2022.

[71] OCA-10-4(a).

[72] OCA-II-33. PECO notes that the arrears of dual fuel (electric and gas) PECO customers are not isolated.



The PECO (Gas) WNA proposal, which is more likely than not to increase bills even further, will exacerbate these difficulties. In addition, as I note above, to the extent that customers increase their arrears, the Company will impose ever-increasing dollars of late payment charges to exacerbate the unaffordability even further.

Q. DOES THE WNA IMPROVE CUSTOMERS' ABILITY TO BUDGET FOR THEIR MONTHLY BILLS?

A. No. The WNA adds an additional layer of volatility to predicting monthly bills because the WNA charge or credit is based on 30 years of weather data. When budgeting for a given month's natural gas bills, customers are not likely to be considering how warm it was, on average, for that month in the past 30 years. Instead, customers are more likely to consider the actual weather experienced, recent weather and bills, and their natural gas usage. Because so many variables go into calculating a WNA charge or credit, it will be difficult for customers to track them all simultaneously and predict how they will affect this month's bill, or next month's.

As stated above, it is essential to avoid the pitfall of thinking about bills and energy burdens on an annual basis. Bills are paid monthly. While, in theory, the WNA may appear to create less volatility year-over-year, it creates substantially more volatility month-to-month. This consideration is especially important for those customers who struggle to meet their monthly payments and rely on budgeting and planning to stay on top of their living expenses.

Q. IS THERE A BETTER WAY TO PROTECT RESIDENTIAL CUSTOMERS GENERALLY AND LOW-INCOME CUSTOMERS IN PARTICULAR FROM BILL VOLATILITY DUE TO WEATHER VOLATILITY?

A. Yes. Enrolling residential customers on budget billing would provide more transparent and consistent protections to residential customers from the volatility in home heating bills. Budget billing allows a customer to spread annual bills in equal installments over an 11-month period (with Month 12 being a reconciliation month). By enrolling in budget billing, a customer will know from month-to-month what their natural gas bill will be. The bills become more predictable, and thus more payable.

Q. DO YOU HAVE REASON TO BELIEVE THAT PECO (GAS) UNDERSERVES ITS LOW-INCOME CUSTOMER BASE WITH BUDGET BILLING?

A. Yes. The data set forth in Table 21 below shows the participation in the PECO (Gas) budget billing program by residential customers generally compared to Confirmed Low-Income customers in particular. As can be seen, the percentage of budget billing participants who are comprised of low-income customers is small compared to the percentage of low-income customers in the population as a whole. From February 2022 through January 2024, between 3.1% and 4.2% of all budget billing participants were

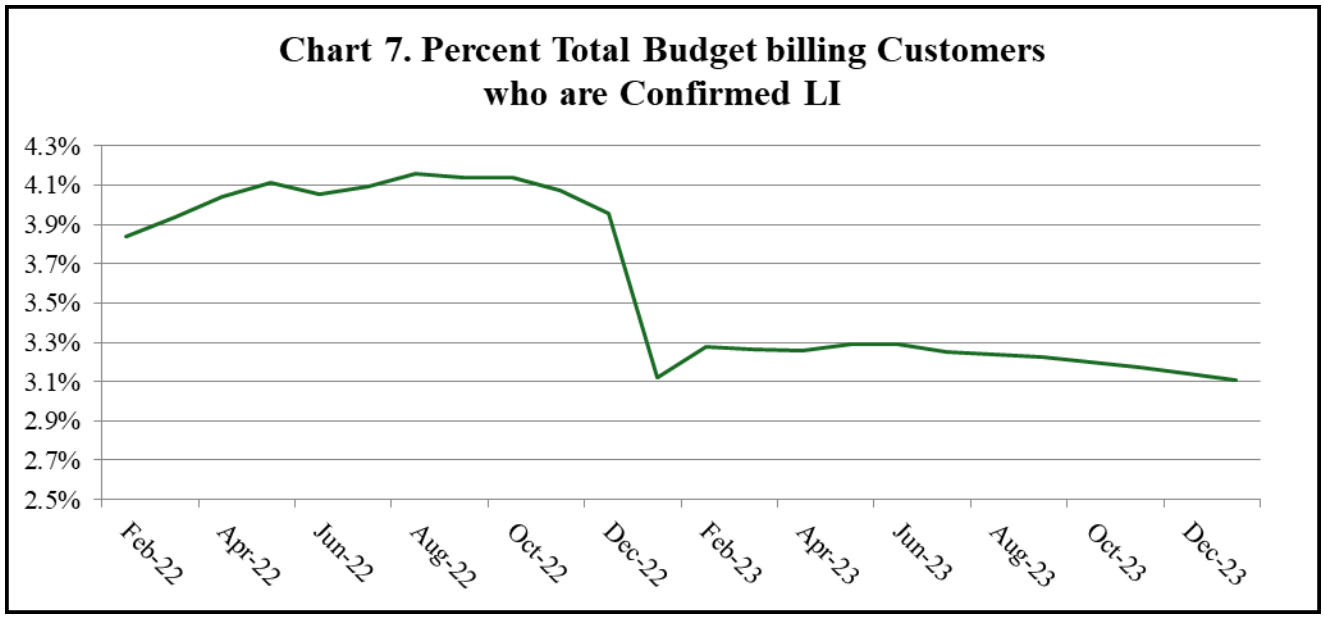
low-income. This low participation rate stands in contrast to the fact that in its most recent filing with BCS (2023) providing data on universal service programs, as well as credit and collection performance, PECO (Gas) reported that it had an average of 504,918 residential customers and 31,018 Confirmed Low-Income customers (6.1% of customer identified as Confirmed Low-Income).

Table 21. Budget Billing Participants (PECO (Gas))
Residential compared to Confirmed Low-Income

	Residential	Confirmed Low-Income	Pct Confirmed LI
Feb-22	74,700	2,867	3.8%
Mar-22	75,451	2,968	3.9%
Apr-22	75,759	3,062	4.0%
May-22	75,888	3,120	4.1%
Jun-22	75,620	3,065	4.1%
Jul-22	75,293	3,080	4.1%
Aug-22	75,149	3,126	4.2%
Sep-22	75,105	3,110	4.1%
Oct-22	74,971	3,103	4.1%
Nov-22	74,557	3,039	4.1%
Dec-22	74,082	2,930	4.0%
Jan-23	70,716	2,207	3.1%
Feb-23	67,617	2,218	3.3%
Mar-23	67,633	2,206	3.3%
Apr-23	67,557	2,203	3.3%
May-23	67,542	2,222	3.3%
Jun-23	67,242	2,214	3.3%
Jul-23	66,617	2,166	3.3%
Aug-23	66,059	2,137	3.2%
Sep-23	65,732	2,118	3.2%
Oct-23	65,411	2,093	3.2%
Nov-23	64,984	2,062	3.2%
Dec-23	64,433	2,022	3.1%
Jan-24	64,229	1,995	3.1%

Q. ASIDE FROM THEIR DISPROPORTIONATE LACK OF PARTICIPATION, DO YOU HAVE REASON TO BELIEVE THAT PECO (GAS) CONFIRMED LOW-INCOME CUSTOMERS DO NOT ROUTINELY ENROLL IN BUDGET BILLING?

A. Yes. Chart 7 below graphically presents the data on the percentage of Budget Billing customers who are Confirmed Low-Income by month for the time period February 2022 through January 2024. As can be seen, in early 2023, the percentage of total Budget Billing customers who are Confirmed Low-Income experienced a dramatic decline. The percentage has been declining even more ever since.

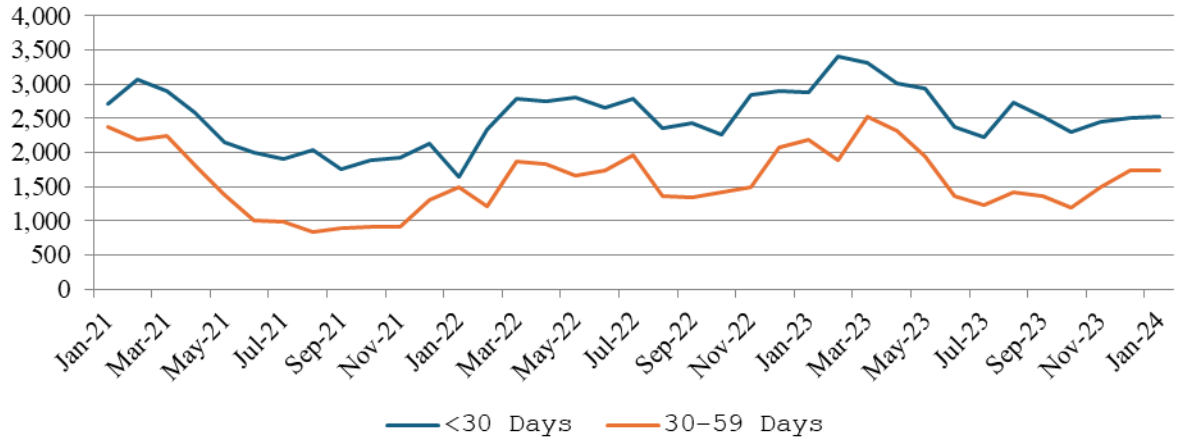


Q. DO YOU HAVE REASON TO BELIEVE THAT LOW-INCOME CUSTOMERS WOULD BENEFIT FROM LEVELIZING THEIR MONTHLY BILLS THROUGH BUDGET BILLING?

A. Yes. Chart 8 below shows the variability in the aging of arrears for low-income residential accounts from February 2021 through January 2024 (nearly three complete

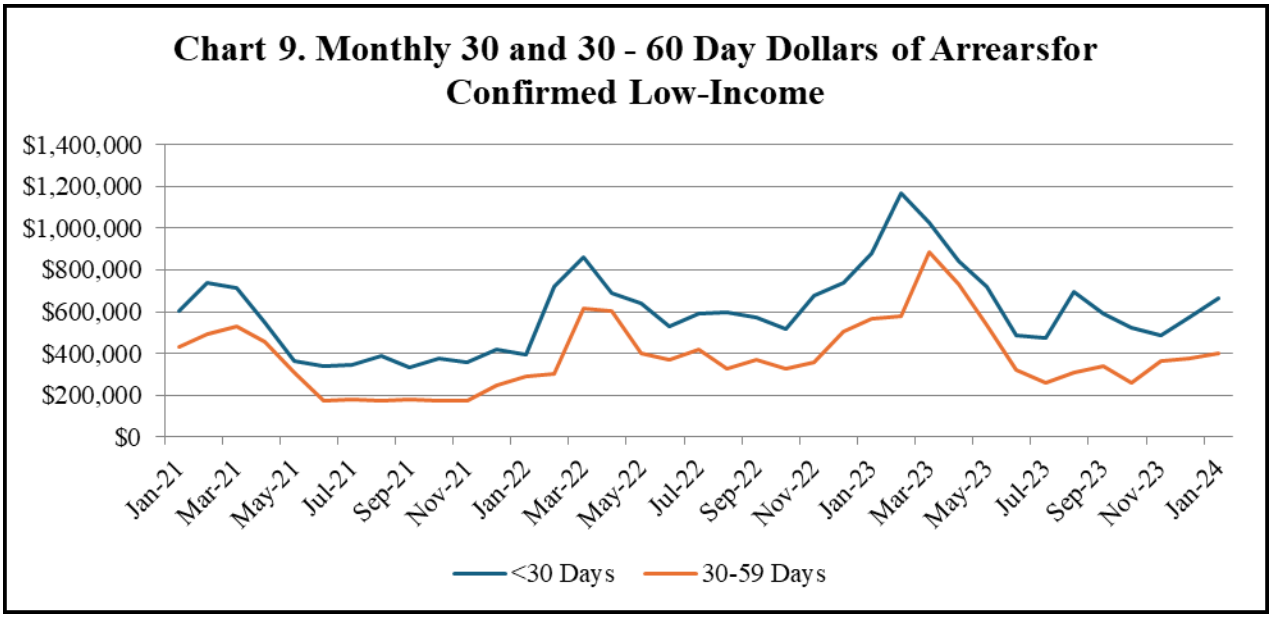
heating seasons). (OCA-II-31). In each complete cold weather season, the number of low-income accounts experiencing short-term nonpayment (30 days arrears) increases, only to decline in the subsequent warm weather months. While the 2023 – 2024 heating seasons is not yet complete (data available only through January 2024), the same pattern appears to again exist. The number of accounts in arrears from 30 – 60 days, while showing some seasonable variation, show substantially less volatility than the 30-day arrears.

Chart 8. Monthly Variation in 30-day and 30-60 Day Confirmed Low-Income Accounts in Arrears



The fact that this variation in payment patterns can be attributed to volatility in the level of cold weather bills can be seen in Chart 9 below. This Chart, too, shows the aging of arrears over the same time period. It shows, however, that the variability in dollars of arrears is even higher than the numbers of accounts in arrears. Moreover, while the *number of accounts* in arrears 30 - 60-days remains relatively constant throughout the winter heating seasons, the number of *dollars* 30 to 60 days in arrears shows considerable seasonal volatility. While implementation of the proposed PECO (Gas) WNA would not

address these problems, emphasized focus on enrolling low-income residential customers in budget billing would be much more likely to do so.



Q. DOES THE WNA CREATE AN ADDITIONAL BILL DETERMINANT WHICH CUSTOMERS CANNOT CONTROL?

A. Yes. As explained above in my above discussion of the residential customer charge, maximizing affordability for low-income customers requires providing those customers as much control over their bills as possible to allow for savings through reducing consumption. Under PECO's (Gas) proposed WNA, customers will be subject to another part of their bill that they cannot control. In warmer-than-normal months between October and May, customers will receive a WNA charge, regardless of their usage. In essence, PECO (Gas) reclaims a portion of customers' savings from reduced consumption during any month in which the WNA charges that customer. Low-income customers are more likely to rely on reduced consumption to afford their monthly gas bill and are more likely to need the portion of their bill savings which they do not see because it is

collected by PECO (Gas), showing that low-income customers are disproportionately likely to be negatively impacted by a WNA mechanism. As I discuss elsewhere, low-income efforts to reduce their bills do not exclusively involve energy efficiency investments. The low-income population frequently takes unsafe, and unhealthy, actions in their effort to reduce bills. The WNA frustrates those efforts.

Q. WHAT DO YOU CONCLUDE?

A. Based on the data above, I conclude that PECO (Gas) does not need to implement its proposed WNA to increase the "stability" of natural gas heating bills. The existing Budget Billing program provides a more than satisfactory opportunity to customers who seek to use it without posing substantial risk of bill spikes during warmer-than-normal weather to customers who cannot choose to opt-out. Moreover, Budget Billing has the effect of being able to address the volatility in bill payment that arises as a result of variations in cold weather monthly heating bills. The Budget Billing program would play that role in a much more efficient and effective fashion than would the WNA. Finally, I conclude that PECO (Gas) is devoting insufficient attention to promoting its Budget Billing program, particularly to Confirmed Low-Income customers.

More generally, I conclude first that the recommendations of OCA witness Ron Nelson regarding the Company's proposed WNA be adopted. In addition, the disproportionate adverse impact on low-income customers I have identified provides an additional basis for the recommendations I make below regarding an increased effort to enroll low-income customers in the Company's CAP.

Part 7. The PECO (Gas) Request to Increase to its Equity Return for "Exemplary" Management.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I review the PECO (Gas) claim that it exhibits sufficiently superior management to justify an increased equity return. Company witness Moul states that his return on equity includes a provision of 0.15% in recognition of "exemplary" performance. That is to say that Mr. Moul's recommended 11.15% return on equity is composed of an 11.00% cost of equity determined from the results of his proxy group analysis and 0.15% in recognition of the "exemplary performance of the Company's management."[73] Mr. Moul states that he adds his fifteen basis points or 0.15% "for recognition of the Company's strong management performance"[74] and that that increase to the equity return it to allow PECO (Gas) to "receive recognition of the significant accomplishments that management has achieved."[75]

Based on my review of the PECO (Gas) management actions below, and their impacts, I conclude that no increase in the Company's equity return is warranted. I focus my attention on the universal service and credit and collection attributes of PECO (Gas) operations.

[73] PECO (Gas) St. 5, at 2.

[74] Id., at 54.

[75] Id., at 55.

Q. DOES PECO (GAS) EXERCISE SUPERIOR MANAGEMENT WITH RESPECT TO ITS UNIVERSAL SERVICE PROGRAMS?

A. No. I have explained above, in detail, many of the management problems that PECO (Gas) exhibits with respect to its universal service programs:

1. PECO (Gas) has enrolled fewer than 30% of its estimated low-income customers in its CAP (29.9%).

2. In 2021, PECO (Gas) disconnected service for nonpayment to one out of every eight (12.1%) Confirmed Low-Income customers, while in 2022, it disconnected nearly one-of-five Confirmed Low-Income customers (19.2%).

3. In the most recent 36 months for which data is available, PECO (Gas) entered into 41,829 payment arrangements with non-CAP Confirmed Low-Income customers, but had less than one-half of those arrangements (19,138 or 45.8%) successfully completed.

Based on this data, I find that rather than enrolling its customers which the Company has a reasonable basis to believe to be low-income, PECO (Gas) continues to resort to collection efforts directed toward its non-CAP Confirmed Low-Income customers even when those collection efforts have been proven to be ineffective. I find that these collection efforts are ineffective based on the collections outcomes set forth in Table 6, Table 7, Table 9, Table 14 and Table 20.

Q. HAS PECO (GAS) TAKEN EFFORTS TO DETERMINE CUSTOMER SATISFACTION WITH HOW IT OFFERS ITS UNIVERSAL SERVICE PROGRAMS AND PROVIDES FOR ENROLLMENT?

A. No. Given the statutory mandate that universal service programs are to be designed to be programs that "help low-income customers maintain natural gas. . .service," the failure of PECO (Gas) to enroll seven-of-ten of its estimated low-income customers into its CAP, its primary universal service program, while continuing to pursue ineffective collection

activities, would seem to call-out for PECO (Gas) to determine how it might engage in more extensive, more effective, activities to identify its Confirmed Low-Income customers and to enroll those customers into the Company's CAP. However, it does not.

Q. DOES PECO (GAS) UNDERTAKE EFFORTS TO DETERMINE CUSTOMER SATISFACTION WITH ASSISTANCE THE COMPANY PROVIDES TO CUSTOMERS WHO WOULD BENEFIT FROM ENROLLMENT IN CAP OR OTHER UNIVERSAL SERVICE PROGRAMS?

A. No. Despite the low enrollment of its estimated low-income population in CAP, and the extent to which PECO (Gas) directs its ineffective collection actions toward customers it has a reasonable belief to be low-income, PECO (Gas) takes no action to understand how its customers view the actions of the Company with respect to enrolling in CAP. When asked to provide all point-of-contact surveys with customers who had contact with the Company to negotiate a payment plan, respond to a shutoff notice, or to attempt to enroll in CAP, the Company indicated that pursued no such surveys. The Company was asked which of its customer satisfaction surveys were directed specifically to customers who contacted PECO (Gas): (1) to negotiate a deferred payment arrangement; (2) in response to a notice of a nonpayment service disconnection; (3) regarding an inability-to-pay an outstanding bill; (4) to enroll in CAP; (5) seeking usage reduction assistance; or (6) seeking assistance in identifying and/or applying for assistance to help pay a bill. The Company could provide no such information. In response to this question, PECO (Gas) explicitly stated that: "PECO does not perform 'point of contact' surveys directed

specifically to customers as identified in" the list of situations above.[76] PECO continued to state that its "point of contact" surveys are directed to broad-based groups of customers including: "groups which include Credit and Collections, Billing, Trouble/Reliability and Safety and Customer Choice, Connect/Disconnect and Miscellaneous. Additionally, PECO collects responses for PECO Call Center Transaction Survey, by groups which include Power Outage, Billing, Turn on/Turn off, Credit and Other."[77]

Despite the ineffectiveness of its actions, both to enroll customers in CAP and to pursue collection activities directed toward low-income customers, PECO (Gas) does not know where, or how, it is falling short because it does not seek out such knowledge.

Q. HOW DO YOU RESPOND TO THE TESTIMONY OF PECO (GAS) REGARDING THE USE OF TECHNOLOGY TO IMPROVE THE CUSTOMER EXPERIENCE?

A. PECO (Gas) witness Hamilton argues in her Direct Testimony that:

> A primary area of our capital investment relating to customer operations covers the design, development, implementation, lifecycle upgrades and replacements, and security of customer facing systems, as well as the development and implementation of web tools, such as outage tools and mobile app technologies, so customers can easily access PECO customer systems and information through multiple channels. These are individual projects that help the Company create and improve the technology PECO customers use to. . .enroll in assistance programs. . .[78]

[76] OCA-III-014.

[77] OCA-III-015.

[78] PECO (Gas) St. 1, at 12.

This testimony overstates the extent to which the "capital investment relating to customer operations" in fact includes "individual projects that help the Company create and improve the technology PECO customers use to enroll in assistance programs." When asked what "improved technology" was now available that was not available on or before January 1, 2020, PECO (Gas) could provide no examples.[79] The "assistance programs" referenced by Ms. Hamilton include CAP, LIHEAP and the Company's Low-Income Usage Reduction Program (LIURP).[80] Even if such "improved technology" had, in fact existed, however, PECO (Gas) has not increased its LIURP budget. Accordingly, improving access to LIURP would not increase the number of customers who can be served through that program. With none of the three programs identified by PECO (Gas), could the Company identify improved enrollments. Even though Ms. Hamilton references "the technology PECO customers use to. . .enroll in assistance programs," she conceded that "The Assistance Finder Tool. . .does not enable enrollment into the 'assistance programs.''[81] None of the "improved technology" referenced by Ms. Hamilton is used to help identify "Confirmed Low-Income" customers, PECO (Gas) states, since "being identified as 'Confirmed Low-Income" does not automatically enroll customers in assistance programs."[82] This failure to identify a customer as a Confirmed Low-Income customer occurs despite the fact that being such a customer entitles the customer to a

[79] OCA-VIII-5.

[80] OCA-VIII-6.

[81] OCA-VIII-8.

[82] OCA-VIII-7.

variety of benefits limited to low-income customers (e.g., longer payment arrangements, waived deposits, cold weather shutoff protections).

Q. PLEASE RESPOND TO MS. HAMILTON'S RELIANCE ON THE "CUSTOMER FLIGHT PATH" AS A MECHANISM TO HELP PROMOTE AND IMPROVE AFFORDABILITY."

A. PECO (Gas) witness Hamilton further asserts in her testimony that the Company is "also investing in Customer Flight Path (CFP) projects. . .The projects consist of enhancing digital self-service options and offering personalized solutions that. . .help promote and maintain affordability."[83] When asked for each individual CFP project that has been implemented to date, and each CFP project proposed for the next three years, that will "help promote and improve affordability," PECO Gas could not provide any. The most PECO (Gas) could say is that it "continues to look for and incorporate opportunities to help promote and improve affordability through technological enhancements and will incorporate such enhancements into the future CFP as appropriate."[84] Moreover, as with the Assistance Finder, PECO (Gas) concedes that "the CFP projects do not include a mechanism that would facilitate a customer providing sufficient information to be identified as confirmed low-income."[85]

In particular, PECO (Gas) has made no "customer orientated enhancements to its mobile application and its website" to make it easier for a PECO (Gas) customer to enroll in

[83] PECO (Gas) St. 1, at 12.

[84] OCA-VIII-9.

[85] OCA-VIII-10.

CAP; enroll in cold weather protections; be identified as a Confirmed Low-Income customer; or to obtain a refund of a cash security deposit by demonstrating the customers low-income status.[86]

The scope of the "Assistance Finder" referenced by Ms. Hamilton has similar limitations. Ms. Hamilton stated that the "Assistance Finder" will "aid customers with determining their eligibility to participate in energy assistance, financial, or energy efficiency programs."[87] She later concedes, however, that "the use of the phrase 'determining their eligibility to participate' does not incorporate actual enrollment."[88] PECO (Gas) further conceded that the Assistance Finder "connects customers with program options but does not facilitate actual enrollment."[89]

Not even the PECO (Gas) "customer orientated enhancements to its mobile application and its website helps low-income customers enroll in any of the Company's low-income programs and protections, including enrolling in CAP, being identified as Confirmed Low-Income, obtaining cold weather protections, or demonstrating low-income status to merit the return of, or exemption from, cash security deposits.[90]

[86] OCA-VIII-13, see also, OCA-VIII-15.

[87] OCA-VIII-25.

[88] OCA-VIII-16.

[89] OCA-VIII-18.

[90] OCA-VIII-15.

Q. OUTSIDE OF THE TECHNOLOGICAL SHORTCOMINGS, DOES PECO (GAS) PROVIDE OTHER EXPLICIT NOTICE OF LOW-INCOME PROGRAMS?

A. No. PECO (Gas) was asked to provide a copy of all "stand-alone written communications informing Confirmed Low-Income customers of their right to enroll in the Company's Customer Assistance Program, including an explanation of the program's arrearage forgiveness provisions: (1) subsequent to the issuance of a nonpayment disconnection notice but prior to the disconnection of service; (2) subsequent to a customer's request to negotiate a payment arrangement for arrears but prior to entering into a payment arrangement; or (3) subsequent to the contact with the customer for purposes of completing the Commission's Cold Weather Survey but prior to the beginning of the winter heating season. The Company responded that "PECO does not provide stand-alone written communications informing Confirmed Low-Income customers of their right to enroll in the Company's Customer Assistance Program (CAP) within the timeframes identified. . ."[91]

At the same time this inaction is occurring on the part of PECO (Gas), as I document above, the Company continues to enroll fewer than 3-of-10 of its estimated low-income customers in CAP.

Q. DOES PECO (GAS) EXERCISE SUPERIOR MANAGEMENT WITH RESPECT TO ITS CREDIT AND COLLECTION ACTIVITIES?

A. No. In addition to its less-than-superior performance on universal service issues, PECO (Gas) does not exhibit superior performance with respect to credit and collection aspects

[91] OCA-VIII-1.

of the Company's operations either. Since 2017, for example, the average residential arrears for PECO (Gas) has nearly doubled, from $440.58 (2016) to $859.88 (95% increase). The Company's average arrears for its Confirmed Low-Income customers has followed a similar pattern, increasing by 160%, from $828.50 in 2016 to $2,158.61 in 2022.

Q. WHAT DO YOU CONCLUDE BASED ON THE ABOVE DATA?

A. For all of the reasons I discuss above, I find that PECO (Gas) does not exhibit a level of "superior management" that would justify an increase in the Company's allowed return on equity. I conclude that the recommendation of OCA witness David Garrett (OCA Statement 2) regarding an appropriate return on equity should be adopted.

Part 8. Changes in the CAP Cost Offset.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY.

A. In this section of my testimony, I respond to the proposal of PECO (Gas) to reduce the CAP adjustment reflecting a bad debt and working capital offset. Company witness Golden asserts that the 27% offset should be modified to 10.5%.[92] This maintains the offset of 5.0% which she asserts is to reflect working capital changes and reduces the bad debt offset of 22% to 5.5% which she asserts is to reflect bad debt.[93] Ms. Golden explicitly states that "The Company is not proposing to change the 5% USFC offset

[92] PECO (Gas) St. 10, at 6.

[93] Id., at 6 – 7.

factor applied to working capital requirements in this case."[94] The Company's proposed modification to the offset should be rejected.

Q. PLEASE EXPLAIN WHY THE PROPOSED MODIFICATION TO THE CAP OFFSET SHOULD BE REJECTED?

A. The proposed modification to the CAP offset is unreasonable for the following reasons. First, the modification which PECO (Gas) proposes does not reasonably reflect historic experience (and, accordingly, would not reasonably reflect future performance). According to Ms. Golden, her recommended modification is based on a three-year average (using the years 2021-2022-2023) as her base.[95] In that three-year average, however, is the atypical year of 2021. Several factors in 2021 would artificially reduce the CAP uncollectibles which would, in turn, artificially reduce the CAP offset on a forward-looking basis. Even Ms. Golden's data shows that the 2021 CAP net write-off rate was only 3.0% in 2021, bringing the 3-year average dramatically downward (the 2022 and 2023 ratios were 8.7% and 8.2% respectively). On the one hand, due to restrictions imposed by the PUC, the disconnection rate for Confirmed Low-Income customers in 2021 was nearly 60% lower than it was in 2022. The disconnection rate, where PECO (Gas) terminates service to customers substantially in arrears, would exact a downward impact on write-offs.

Second, aside from terminations, the PUC's Bureau of Consumer Services, in its most recent annual report on Universal Service Programs and Collections Performance,

[94] Id., at fn.7, page 6.

[95] Id., at 7.

devoted considerable space to why readers should not consider 2021 to be typical in any sense. The BCS stated in relevant part:

> The EDC and NGDC data presented in this report cannot be adequately analyzed without first acknowledging the impact of the COVID-19 pandemic in 2020 and 2021. The unprecedented challenges presented by the global pandemic resulted in operational adjustments at the public utilities, which may have influenced collections and universal service metrics reported by utilities from 2020 through 2022 compared to previous years. It is recommended that readers of this report also refer to the 2019 and 2021 Universal Service Programs & Collections Reports as a companion to this report for additional context. Please see Appendix 4 for instructions on accessing previous reports.
>
> To address public health and safety concerns, on March 6, 2020, Governor Tom Wolf issued a Proclamation of Disaster Emergency in response to the COVID-19 pandemic (*Emergency Proclamation*). The *Emergency Order* also encouraged utilities to reconnect previously terminated service if such action could be done safely. On March 13, 2020, Chairman Gladys Brown Dutrieuille issued an *Emergency Order* which prohibited jurisdictional utilities from terminating service for the duration of the *Emergency Proclamation* unless termination of service was necessary to ameliorate a safety emergency or unless otherwise determined by the PUC.
>
> * * *
>
> Collections and universal service metrics were impacted in 2020 and 2021 due to the direct and indirect effects of the COVID-19 pandemic and efforts to address the public health crisis. This includes EDCs and NGDCs conducting fewer terminations and reconnections in 2020 compared to previous years. EDCs and NGDCs also helped customers obtain or maintain assistance during the pandemic by temporarily waiving documentation requirements and expanding income eligibility for some universal service programs, which may have increased program participation compared to prior years. The COVID-19 pandemic may have impacted other 2020 and 2021 collections and universal service programs performance metrics as well, such as payment arrangements, customer arrears and jobs performed in LIURP. Finally, additional assistance monies made available through direct stimulus payments and new funding for existing and temporary programs (*e.g.*, LIHEAP, the *Emergency Rental Assistance Program*, and the *Homeowners Assistance Fund*) via the *American Rescue Plan Act of 2021*

> may have increased the amount of payment assistance and decreased the number of payment arrangements and arrears of confirmed low-income customers for public utilities in 2021 and 2022.

The length of this discussion by BCS is important unto itself. The BCS warning not to use 2021 as a basis for decision-making was not a passing comment. Particularly given this extensive discussion of how and why 2021 was not typical, it would be inappropriate for PECO (Gas) to base its future rates using the very year about which BCS was talking.

Third, as alluded to by BCS, and discussed in more detail above, 2021 was atypical in the degree of federal financial assistance that was available to PECO's low-income customers. As I discussed above, PECO customers received $11.2 million in LIHEAP assistance in the 2020-2021 program year, $25.2 million in the 2021-2022 program year, and $16.3 million in the 2022-2023 program year. As I noted above, Pennsylvania received historically high amounts of LIHEAP funding in the 2021-2022 LIHEAP program year.[96] To base future rates on a year where the customer population for which uncollectibles are being calculated received historically high amounts of federal assistance is unreasonable.

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[96] In those years, federal LIHEAP appropriations were significantly increased in response to the economic crisis associated with the COVID-19 health pandemic. For example, one White House announcement stated:

> Pennsylvania has received a record $480.5 million for the Low Income Home Energy Assistance Program (LIHEAP) available this fiscal year (October 2021 to September 2022). As part of a state-by-state breakdown of funding, the Administration reported that in addition to an annual appropriation of $182.8 million for Pennsylvania, the state received an additional $297.7 million in funds from the American Rescue Plan – ***more than double the state's typical annual funding***. The total of $480.5 million ***is the highest amount Pennsylvania has ever received in LIHEAP*** to help families struggling with the costs of home heating.

(emphasis added), available at LIHEAP-pennsylvania.pdf (whitehouse.gov) According to a White House announcement, the American Rescue Plan more than doubled LIHEAP funding nationally. It noted that "This is the largest appropriation in a single year since the program was established in 1981." (Id.)

Q. DO YOU HAVE ANY FINAL OBSERVATION ABOUT WHY THE PECO (GAS) MODIFICATION TO THE CAP OFFSET SHOULD BE REJECTED?

A. Yes. As I noted above, Ms. Golden concedes in her testimony that her proposed modification would reduce the bad debt component of the offset while leaving the working capital component of the offset untouched. It would be unreasonable for PECO (Gas) to be allowed to change one component of the offset in isolation. PECO (Gas) offers no justification for splitting the offset into two parts and addressing only one of the parts. As witness Bolden observed, the CAP offset, when originally adopted, was part of a settlement agreement. As such, it was the result of a series of negotiated compromises. Just as the settlement agreement, on its face, said it was an indivisible whole, the CAP offset was also an indivisible whole. PECO (Gas) has offered absolutely no basis to take that individual whole, divide it, and modify only one aspect of it.

Q. IS THERE ADDITIONAL REASON TO BELIEVE THAT LEAVING THE WORKING CAPITAL OFFSET CONSTANT WHILE CHANGING ONLY THE BAD DEBT COMPONENT IS INAPPROPRIATE?

A. Yes. The working capital needs created by Confirmed Low-Income customers, as with any working capital, are driven by two factors: (1) the level of arrears, and (2) the age of arrears. The three-year arrears used to establish the original working capital offset – based on residential arrears since Confirmed Low-Income arrears were not tracked at the time the settlement was negotiated—should be compared to the three-year arrears for the same three years which PECO (Gas) used in its bad debt discussion (2021 – 2023). As can be seen in making that comparison, the level of Confirmed Low-Income arrears, which would underlie the total offset, has nearly doubled since the original settlement

was adopted. If PECO's bad debt modification is adopted, therefore, it should also adopt the corresponding change in the working capital adjustment. Even this, however, would *under*state what the offset should become. When the *level* of arrears doubles over the course of time, the *age* of arrears will have increased as well. As I indicated above, the level of working capital is driven by both the level of arrears and the age of arrears. Doubling the age of arrears to correspond to the doubling of the level of arrears would yield a working capital offset of 20%. Adding PECO's calculation of a 5.5% bad debt offset would yield a total offset of 25.5%, nearly identical to the existing 27.0%.

Q. DO YOU FIND ANY FINAL FUNDAMENTAL FLAW IN THE PECO (GAS) REASONING TO ADJUST ITS CAP OFFSET?

A. Yes. PECO witness Golden offers a flawed justification for adjusting the CAP offset with which to begin. Ms. Golden testified that "In light of the increase in value of CAP bill credits provided under the Company's PIPP, PECO has evaluated its recent uncollectible trends for CAP and all residential non-CAP customers to assess the remaining potential improvement in charge-offs."[97] This argument, however, turns the offset on its head. As CAP participation increases, and bills are made more affordable, it should be *expected* that overall write-offs would decline. To assert that the savings must be smaller because the overall write-offs are smaller does not acknowledge that result.

Indeed, if anything, PECO (Gas) data shows that the savings being generated to PECO (Gas) have been *increasing*. From 2020 to 2022 (the last year for which data has been reported), the average Confirmed Low-Income arrears increased from $1,418 to $2,159.

[97] PECO St. 10, at 6.

The nonpayment disconnection rate for Confirmed Low-Income customers increased from 12.1% in 2021[98] to 19.1% in 2022 (the last year for which data has been reported). However, the CAP payment percentage *for those same years* remained constant (87% in 2021 and 88% in 2022).[99] PECO (Gas) has certainly not established that the savings being generated through CAP have been declining.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that the PECO (Gas) proposed modification to the CAP offset be denied. However, in the event that the PECO (Gas) bad debt modification is adopted, the corresponding modification to the working capital offset should be adopted as well. If that is done, there would be no net change in the CAP offset from that which currently exists.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes, it does.

[98] Nonpayment disconnections did not occur in the COVID year of 2020.

[99] 2022 BCS Report, at 66.

Exhibit RDC-1: Summary Vitae

Roger Colton
Fisher, Sheehan & Colton
Public Finance and General Economics
Belmont, MA

* *

Education:

J.D. (Phi Kappa Phi, Order of the Coif) University of Florida (1981)

M.A. (Regulatory Economics), McGregor School, Antioch University (1993)

B.A. Iowa State University (1975) (journalism, political science, speech)

Professional Experience:

Fisher, Sheehan and Colton, Public Finance and General Economics: 1985 – present.

As a co-founder of this economics consulting partnership, Colton provides services in a variety of areas, including regulatory economics, poverty law and economics, public benefits, fair housing, community development, energy efficiency, utility law and economics (energy, telecommunications, water/sewer), government budgeting, and planning and zoning.

Colton has testified in state and federal courts in the United States and Canada, as well as before regulatory and legislative bodies in more than forty (40) states. He is particularly noted for creative program design and implementation within tight budget constraints.

Professional Affiliations:

Past Chair:	Belmont Zoning By-law Review Working Committee (climate change)
Member:	Board of Directors, Massachusetts Rivers Alliance
Columnist:	Belmont Citizen-Herald
Producer:	Belmont Media Center: BMC Podcast Network
Host:	Belmont Media Center: Belmont Journal
Member:	Belmont Town Meeting
Vice-chair:	Belmont Light General Manager Screening Committee
Past Chair:	Belmont Goes Solar
Coordinator:	BelmontBudget.org (Belmont's Community Budget Forum)
Coordinator:	Belmont Affordable Shelter Fund (BASF)

Past Chair: Belmont Solar Initiative Oversight Committee
Past Member: City of Detroit Blue Ribbon Panel on Water Affordability
Past Chair: Belmont Energy Committee
Member: Massachusetts Municipal Energy Group (Mass Municipal Association)
Past Chair: Housing Work Group, Belmont (MA) Comprehensive Planning Process
Past Chair: Board of Directors, Belmont Housing Trust, Inc.
Past Chair: Waverley Square Fire Station Re-use Study Committee (Belmont MA)
Past Member: Belmont (MA) Energy and Facilities Work Group
Past Member: Belmont (MA) Uplands Advisory Committee
Past Member: Advisory Board: Fair Housing Center of Greater Boston.
Past Chair: Fair Housing Committee, Town of Belmont (MA)
Past Member: Aggregation Advisory Committee, New York State Energy Research and Development Authority.
Past Member: Board of Directors, Vermont Energy Investment Corporation.
Past Member: Board of Directors, National Fuel Funds Network
Past Member: Board of Directors, Affordable Comfort, Inc.
Past Member: National Advisory Committee, U.S. Department of Health and Human Services, Administration for Children and Families, Performance Goals for Low-Income Home Energy Assistance.
Past Member: Editorial Advisory Board, International Library, *Public Utility Law Anthology*.
Past Member: ASHRAE Guidelines Committee, GPC-8, *Energy Cost Allocation of Comfort HVAC Systems for Multiple Occupancy Buildings*
Past Member: National Advisory Committee, U.S. Department of Housing and Urban Development, Calculation of Utility Allowances for Public Housing.
Past Member: National Advisory Board: Energy Financing Alternatives for Subsidized Housing, New York State Energy Research and Development Authority.

Professional Associations:

National Association of Housing and Redevelopment Officials (NAHRO)
National Society of Newspaper Columnists (NSNC)
Association for Enterprise Opportunity (AEO)
Iowa State Bar Association
Energy Bar Association
Association for Institutional Thought (AFIT)
Association for Evolutionary Economics (AEE)
Society for the Study of Social Problems (SSSO)
Association for Social Economics

Books

Colton, *et al.,* ***Access to Utility Service***, National Consumer Law Center: Boston (4th edition 2008).

Colton, *et al.*, ***Tenants' Rights to Utility Service***, National Consumer Law Center: Boston (1994).

Colton, ***The Regulation of Rural Electric Cooperatives***, National Consumer Law Center: Boston (1992).

Book Chapters

Colton (2018). The equities of efficiency: distributing energy usage reduction dollars, Chapter in Energy Justice: US and International Perspectives (Edited by Raya Salter, Carmen Gonzalez and Elizabeth Ann Kronk Warner), Edward Elgar Publishing (London, England).

Journal Publications

65 publications in industry and academic journals, primarily involving utility regulation and affordable housing. (list available upon request)

Technical Reports

200 technical reports for public-sector and private-sector clients (list available upon request)

Jurisdictions in which Expert Witness Provided

1. Maine	17. Tennessee	33. Montana
2. New Hampshire	18. Kentucky	34. Colorado
3. Vermont	19. Ohio	35. New Mexico
4. Massachusetts	20. Indiana	36. Arizona
5. Rhode Island	21. Michigan	37. Utah
6. Connecticut	22. Wisconsin	38. Idaho
7. New Jersey	23. Illinois	39. Nevada
8. Maryland	24. Minnesota	40. Washington
9. Pennsylvania	25. Iowa	41. Oregon
10. Washington D.C.	26. Missouri	42. California
11. Virginia	27. Kansas	43. Hawaii
12. North Carolina	28. Louisiana	**Canadian Provinces**
13. South Carolina	29. Arkansas	1. Nova Scotia
14. Florida (Federal Court)	30. Texas (Federal Court)	2. Ontario
15. Alabama	31. South Dakota	3. Manitoba
16. Mississippi	32. North Dakota	4. British Columbia

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: May 02, 2024

OCA-II-42

Please provide a detailed description of all factors taken into consideration in deciding how, when or whether to schedule crews to perform service disconnections for nonpayment in a particular geographic area (however defined). Separately provide all procedures manuals or other written guidance discussing the extent to which, and the order in which, those factors are taken into account in scheduling crews performing nonpayment disconnections.

RESPONSE:

Work is scheduled for crews performing service disconnections in the following manner:

- Identify termination goal for shift date in question. (Termination targets are set annually to achieve certain levels of bad debt reduction so as to reduce the amount of money that other customers have to pay for those customers that do not pay.)

- Identify how many terminations per Field Technician will be needed to achieve termination goal.

- Consult the eligible job list developed by the Market Switch system, as described in the response to OCA-II-36, which consists of the accounts that have been reviewed and approved for termination:

- Review eligible job list to assign work in most efficient manner, reducing drive time for each technician.

- Review those routes to determine if there are accounts near the routes that are eligible for 72hr/48hr notifications; the Field Technicians will pivot to providing these required notices if/when the shift goal for terminations is reached

- Assign the routes to the Field Technicians; terminations are assigned first and then 72hr/48hr notifications.

The number of jobs assigned per Field Technician varies based on the individual technician's abilities.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: May 02, 2024

OCA-II-38

Please confirm or deny whether the following factors are taken into account in any fashion in deciding whether and/or when to schedule a disconnection of service to a residential customer for nonpayment:

a. The homeowner/renter status of the customer;
b. Whether a customer is employed;
c. Whether a customer receives public assistance income;
d. The level of arrears (in dollars);
e. The length of time a balance has been unpaid;
f. The length of time a customer has been a customer;
g. The length of time a customer has lived at his or her current address;
h. The level of income of a customer;
i. The source of income of a customer;
j. Whether a customer has incurred late payment fees within a prescribed prior period (e.g., prior 12 months, prior 6 months);
k. Whether the Company has held, or newly imposed, a cash security deposit within a prescribed prior period (e.g., prior 12 months, prior 6 months);
l. Whether a customer has received a disconnection notice one or more times within a prescribed prior period (e.g., prior 12 months, prior 6 months);
m. Whether a customer has had service disconnected for nonpayment one or more times within a prescribed prior period (e.g., prior 12 months, prior 6 months);
n. The number of disconnection notices issued to the customer within a prescribed prior period (e.g., more than two notices within prior 12 months);
o. Whether a customer is a Confirmed Low-Income customer;

p. Whether a customer is a CAP participant;
q. Any other (please specify).

RESPONSE:

a. Deny
b. Deny
c. Deny
d. Confirm
e. Confirm
f. Deny
g. Deny
h. Confirm
i. Deny
j. Deny
k. Deny
l. Deny
m. Deny
n. Deny
o. Only for winter moratorium
p. Only for winter moratorium
q. See response to OCA-II-36

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: May 02, 2024

OCA-II-36

Please provide a complete description of all risk assessment procedures that are used to determine whether and/or when to schedule a disconnection of service to a residential customer for nonpayment.

RESPONSE:

Cut out non-payment orders are generated in the customer billing system after all regulatory noticing is satisfied. The MarketSwitch system then uses the factors listed below to build a cut list, with the goal of optimizing the collection of accounts receivable (A/R) greater than 60 days past due. Optimization using A/R greater than 60 days past due is done because the likelihood of collection decreases as the A/R ages. The Field Collections vendor uses the MarketSwitch cut list to schedule disconnects.

MarketSwitch uses the following factors for risk assessment:

Account Balance
Monthly Bill Amount
Probability of Cut Success
Percentage of Balance Paid (if cut)

Percentage of Balance Paid (if not cut)
Probability of Account Finaling (if cut)
Probability of Account Finaling (if not cut)

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: May 02, 2024

OCA-II-39

Please identify whether there is more than one risk classification (e.g., high, moderate, low) into which a residential customer may be placed depending on the presence of, or combination of, risk factors identified above.

RESPONSE:

Residential customers are placed into one of four risk classifications depending on the presence of a combination of risk factors.

Risk Classifications:

- High Risk
- Medium/High Risk
- Medium/Low Risk
- Low Risk

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: May 02, 2024

OCA-II-40

For the high-risk classification, or for each risk classification if more than one, please identify the difference in timing (measured in days or other units of time) that an involuntary disconnection of service for nonpayment is scheduled if a customer is deemed to be of higher risk through application of one or more of the factors identified above.

RESPONSE:

Eight different factors, identified in Confidential Attachment OCA-II-40(a.2), are used in calculating a risk score, and each factor has a range of impact and weighting on the risk score.

The table in Confidential Attachment OCA-II-40(a.1) shows the number of days difference in timing that a notice of disconnection of service for nonpayment is accelerated for customers deemed to be higher risk through application of various factors.

THE CONFIDENTIAL ATTACHMENTS TO THIS RESPONSE ARE BEING PROVIDED ONLY SUBJECT TO THE EXECUTION OF A SUITABLE STIPULATED PROTECTIVE AGREEMENT WITH THE RECIPIENT PENDING THE ISSUANCE OF A PROTECTIVE ORDER IN THIS CASE. PECO WILL PROVIDE A STIPULATED

PROTECTIVE AGREEMENT DEEMED SUITABLE TO THE COMPANY FOR EXECUTION, WHICH IS SIMILAR TO THE STIPULATED PROTECTIVE AGREEMENT EMPLOYED IN PECO'S PRIOR BASE RATE CASE.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: May 02, 2024

OCA-II-43

Please provide a detailed explanation of the extent to which efficiencies in performing service disconnections for nonpayment are considered in scheduling nonpayment disconnections when concentrations of disconnections can be treated, or when the proximity of one disconnection to another exists.

RESPONSE:

Geographic location is not considered when creating a list of eligible customers for collections, nor is geography a factor in the customer notice phase of collections. However, when scheduling disconnections, work is assigned to field crews based on the area they support each day, across all five counties. Work is then scheduled in each county based upon the number of accounts that are eligible to be disconnected for nonpayment as well as proximity to available technicians. See response to OCA-II-42.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set III

Response Date: May 02, 2024

OCA-III-32

Please provide a copy of the most recent study or survey, if any, undertaken by the Company examining the demographic characteristics (e.g., race, ethnicity, income, age) of the Company's:

a. Disconnections for nonpayment;
b. Payment-troubled customers;
c. Enrollment in Customer Assistance Program (CAPs);
d. Confirmed Low-Income customers;
e. Incidence of arrears;
f. Level of arrears;
g. Customers with and without cash security deposits;
h. Customers with and without deferred payment arrangements;
i. Customers contacted by the Cold Weather Survey.

If no such studies or surveys exist, please so indicate.

RESPONSE:

PECO has not undertaken any studies or surveys that examine the demographic characteristics in subparts a-i.

Responsible Witness: Jacqueline F. Golden

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set III

Response Date: May 02, 2024

OCA-III-33

Please provide a copy of the most recent study or survey, if any, of the impacts on, or effectiveness of, disaggregated by race and/or ethnicity, of the Company's residential:

a. Notices of an impending disconnections for nonpayment;
b. CAP outreach;
c. Promotion of budget billing enrollment;
d. LIHEAP outreach;
e. Response to the annual Cold Weather Survey;
f. Promotion of negotiation of deferred payment arrangement in response to arrears.

RESPONSE:

PECO has not conducted any studies or surveys that examine the impacts on, or effectiveness of, disaggregated by race and/or ethnicity, the Company's actions as described in subparts a-f.

Responsible Witness: Jacqueline F. Golden

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Roger D. Colton, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 4, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: June 17, 2024

Signature: _____
Roger D. Colton

Address: Fisher Sheehan & Colton
34 Warwick Road
Belmont, MA 02478

THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R- 2024-3046932
	:	
PECO Energy Company – Gas Division	:	

Surrebuttal Testimony of Roger Colton

on behalf of

Pennsylvania Office of Consumer Advocate

OCA Statement 4SR

Date Served: August 2, 2024

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Roger Colton. My address is 34 Warwick Road, Belmont, Massachusetts.

Q. ARE YOU THE SAME ROGER COLTON WHO PREVIOUSLY PREPARED DIRECT TESITMONY ON BEHALF OF THE OFFICE OF CONSUMER ADVOCATE IN THIS PROCEEDING?

A. Yes, I am.

Q. PLEASE EXPLAIN THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY.

A, In my surrebuttal testimony, I will respond to the Rebuttal Testimony of PECO (Gas) rebuttal witnesses Michael Trzaska (PECO Gas St. 3-R), Joseph Bisti (PECO Gas St. 7-R), and Jacqueline Golden (PECO Gas St. 10-R). My responses to the Rebuttal Testimony of Amy Hamilton (PECO Gas St. 1-R) is contained within my response to these three other witnesses. My failure to respond to any specific testimony of witness Hamilton is not an agreement with that testimony, but rather an indication that it would be duplicative of my response to the other two witnesses.

Part 1. Response to PECO Gas Rebuttal Witness Michael Trzaska.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR SURREBUTTAL TESTIMONY.

A. In this part of my Surrebuttal Testimony, I respond to the Rebuttal Testimony of PECO Gas rebuttal witness Michael Trzaska. First, I will respond to his rebuttal testimony regarding the adverse impacts of the Company's proposed Weather Normalization Adjustment (WNA). Second, I respond to his rebuttal testimony regarding the CAP "offset" used to prevent the double recovery of CAP costs.

Q. PLEASE EXPLAIN YOUR RESPONSE TO WITNESS TRZASKA'S REBUTTAL TESTIMONY REGARDING THE IMAPCT OF PECO'S PROPOSED WEATHER NORMALIZATION ADJUSTMENT ON LOW-INCOME CUSTOMERS.

A. Witness Trzaska argues that Budget Billing is not an alternative to the WNA, but rather is a billing option that complements the WNA. He asserts that "the best option for smoothing predictability would be a combination of the WNA and budget billing."[1] He further asserts that since budget billing is updated quarterly, "along with a 'catch-up' reconciliation," budget billing will be affected by variations in weather.[2]

Witness Trzaska's rebuttal testimony overstates the extent of adjustments made to budget billing accounts and understates the additional dollars added to accounts due to the operation of the WNA. Moreover, he misstates the process for adjusting bills at year-end for either an over-payment or under-payment. According to the Company, "there are two mechanisms by which the amount of a year-end underpayment or overpayment are charged or refunded to a budget billing customer. In each instance the customer can elect to either rollover or settle the charged or refunded amount."[3] Two things are noteworthy. On the one hand, whether the customer addresses an over-payment or under-payment immediately or spreads that over- or under-payment over the next year's budget bill is at the *customer's* election. In addition, the reconciliation does not contribute to month-to-month variation in a customer's bill. At most, any under- or over-payment will be spread in twelve equal installments over the customer's bill for the coming year. On the other

[1] PECO Gas St. 3-R, at 19.

[2] Id.

[3] OCA-III-07.

hand, Mr. Trzaska over-states the extent to which these adjustments are made. In the 24 months ending January 2024 (the most recent 24 months available), an average of only 3,784 had year-end overpayments. That was out of an average number of budget billing customers of 70,514 in that same time period.[4] Only 5.3% of all budget billing customers had a year end balance to be addressed one way or the other.

Q. IS THE COMBINATION OF THE WNA AND BUDGET BILLING LIKELY TO PROVIDE "GREATER STABILITY THAN EITHER THE WNA OR BUDGET BILLING ON ITS OWN?"[5]

A. No. Witness Trzaska over-states the extent of intra-year changes that are needed for budget billing customers. According to the Company, in the same 24-month period I discuss above, an average of 7,067 had *any* degree of bill balance. That, however, is not the number of customers with a bill balance requiring an adjustment. It was a bill balance of any amount. Data on the number of customers with a bill balance, and the average balance, by month, is set forth in the Table below. Remember, the "bill balance" reported in this Table is *not* the amount of a necessary bill adjustment, it is the total amount due on the budget billing bill. Moreover, remember that the entire purpose of budget billing is to levelize the bill over the course of a year to avoid the seasonal swings in bills. The fact that there are large numbers of participants with bill balances in the cold weather months for a gas utility simply indicates that budget billing is working the way it is intended to work, without the need for a "complementing" WNA. Third, with PECO Gas, at no point do the budget bill balances becomes particularly burdensome. Finally,

[4] OCA-III-4, OCA-III-8.

[5] PECO Gas St. 3-R, at 20.

again remembering that PECO Gas had an average participation rate of 70,514 in its budget billing program, it is noteworthy that for more than half of the year, the number of participants with bill balances of any amount numbered in the ***hundreds*** of accounts.

Table 1. Number of Budget Billing Customers with Monthly Bill Balance And Average Balance (OCA-III-5)

	No. Budget Billing Participants with Bill Balance			Average Bill Balance of Those with Bill Balance		
Month	2024	2023	2022	2024	2023	2022
January	14,062	28,423		$59	$73	
February		20,144	45,205		$60	$84
March		8,535	17,617		$52	$50
April		2,163	4,489		$55	$39
May		266	1,096		$194	$74
June		329	587		$150	$98
July		308	555		$184	$116
August		305	478		$151	$127
September		366	536		$166	$158
October		500	691		$152	$173
November		936	1,208		$132	$127
December		6,432	14,379		$60	$59

Q. DOES THE WNA, AS STATED BY MR. TRZASKA, PROVIDE CUSTOMERS WITH GREATER BILL STABILITY?

A. No. While I maintain that customer bills are more effectively insulated from the effects of seasonal weather under a budget billing program, it is incorrect to claim that WNAs provide customers with greater bill stability. As I stated in my direct testimony, the WNA charge is an unpredictable element of customers' bills which makes bills more difficult to budget for on a month-over-month basis. Mr. Trzaska did not provide evidence to support the idea that a WNA would result in improved bill predictability on a month-to-month basis, or to rebut the idea that the addition of a charge to customers' bills – which is more likely than a credit, as addressed below and in my direct testimony – would reduce bill predictability.

Q. IS THERE ANY OTHER RESPONSE WHICH YOU WISH TO MAKE TO THE REBUTTAL TESTIMONY OF WITNESS TRZASKA REGARDING PECO PROPOSED WNA?

A. Yes. The Rebuttal Testimony of witness Trzaska mis-characterizes my Direct Testimony regarding how and why the WNA will disproportionately harm low-income customers. He argues that the WNA will not reduce a low-income customer's ability to decrease their bills by reducing their usage.[6] My testimony, however, was more nuanced than he portrays. My argument, which Mr. Trzaska does not attempt to respond to, observes that the population of customers which is most likely to be harmed by the WNA is that population of customers which does not have the ability to control their bills by reducing their consumption. The population of customers, for a whole host of reasons (e.g., insufficient funds to invest in energy efficiency, lack of authority – as tenants – to make decisions about major energy consuming systems, frequent mobility), most likely to be unable to invest in energy efficiency will be low-income households. Mr. Trzaska further argues that low-income customers will not be harmed because they will be protected by PECO's CAP. However, as I testify in my Direct Testimony, which testimony remains unchallenged, PECO Gas enrolls a fraction of its estimated low-income customer population in CAP. Being "low-income" and being a "CAP participant" are not synonymous with each other. Irrespective of what protections may be offered by CAP, there remains a substantial portion of the low-income population served by PECO Gas not served by CAP.

[6] Id., at 20.

Q. IS THERE A SECOND ISSUE RAISED IN THE REBUTTAL TESTIMONY OF WITNESS TRZASKA TO WHICH YOU WISH TO RESPOND?

A. Yes. Witness Trzaska argues that the WNA will not result in increased arrears to low-income customers. He argues that "the WNA is a reciprocal mechanism. Customers will benefit from credits when the actual weather is colder than normal."[7] That "benefit," however, is more theoretical than real. Mr. Trzaska does not dispute that the information which PECO Gas, itself, provided demonstrated that, if the WNA had been in effect for the past 10 years, PECO (Gas) would have collected an average of $11 million per year in WNA charges from residential customers, with only two years where residential customers would have received credits under the WNA. (See Response to OCA-10-4(a)). Hence Mr. Trzaska's skepticism about how or why the WNA will likely increase low-income arrears is not supported by the record. To the extent that low-income bills increase, it is reasonable to expect low-income arrears to increase as well. And with the increase in those arrears will come even further bill increases as customers bear the burden of late payment charges, reconnection charges (after nonpayment disconnections), cash security deposits, and the like. Again, contrary to the Rebuttal Testimony of witness Trzaska, CAP will not protect all low-income customers since PECO (Gas) enrolls only a fraction of its low-income customers into CAP.

[77] Id., at 22.

Q. DO YOU HAVE ANY FINAL RESPONSE WHICH YOU WISH TO MAKE TO THE REBUTTAL TESTIMONY OF PECO GAS WITNESS TRZASKA?

A. Yes. Witness Trzaska offers additional argument about why he believes that the CAP offset amount should be adjusted to a lesser amount.[8] In reviewing his proposed reduction, it should be remembered that the issue is whether PECO has supported a different offset, specifically keeping the Cash Working Capital (CWC) component at 5% and reducing the bad debt component from 22% to 5.5%. PECO has not supported that proposal, for all the reasons discussed in OCA Statement 4. Further, Trzaska's claim that he is using the OCA's method is wrong.

Witness Trzaska argues that the proposed adjustment recommended by PECO Gas is based on the methodology used by the OCA in the 2008 PECO Gas rate case.[9] The result of the 2008 PECO Gas rate proceeding, however, was achieved by Settlement. As PECO Gas, itself, said in its Statement of Support of that Settlement, "a settlement is the result of compromises by all parties. PECO believes that a fair and reasonable compromise has been achieved in this case."[10] The OCA's position on the appropriate CAP offset was one of the elements of that proceeding which was subject to compromise. OCA's recommended offset was not adopted in full in that proceeding.

[8] Id., at 26.

[9] Id.

[10] PECO Statement in Support of Settlement, at 11 – 12.

Q. IS MR. TRZASKA'S REPRESENTATION THAT HE USES THE SAME METHODOLOGY EMPLOYED BY OCA IN 2008 CORRECT?

A. No. Setting aside for the moment the fact that the ultimate resolution of the 2008 rate proceeding was a result of a series of compromises leading to a Settlement, the representation by Mr. Trzaska that he proposes to use the same methodology in this proceeding that was used by the OCA in the 2008 proceeding is in error. For example, Mr. Trzaska concedes in his Rebuttal Testimony that "it is true that the dollar amount of PECO's residential arrears have increased by 49% since 2008. . ."[11] While conceding that the level of arrears have increased by *49%*, Mr. Trzaska then asserts in this proceeding, without explanation, that the *age* of arrears in his calculation in this proceeding is *lower* than that used by OCA in 2008. Moreover, Witness Trzaska makes a host of changes to the OCA methodology which he does not even identify, let alone justify, as being appropriate. For example:

- He changes the use of gross write-offs to net write-offs;
- He changes the use of Confirmed Low-Income arrears to CAP arrears;
- He changes the "days remaining until charge-off";
- He changes the weighted return;
- He changes the rate at which the return is grossed up for taxes.

In addition to changes in the methodology, Mr. Trzaska changes the sources of data he uses in ways that he did not identify, let alone explain or justify. The 2008 OCA methodology was based on data publicly reported by the PUC's Bureau of Consumer Services. Mr. Trzaska does not use the corresponding BCS data for his calculation. In short, simply

[11] PECO St. 3-R at 26.

because Mr. Trzaska says he uses the same methodology as employed by OCA in 2008 does not make that so. Instead, Mr. Trzaska uses a methodology that does not reflect that which was used in 2008. And even if it were the same, the ultimate resolution of that case was a Settlement involving compromises in each party's position, including the number that was ultimately adopted as a CAP offset.

Q. HAS PECO SUBMITTED EVIDENCE SUFFICIENT TO CONVINCE YOU THAT PECO'S PROPOSED CHANGE TO THE CAP OFFSET FACTOR IS WARRANTED?

A. No. My recommendation remains the same as in my Direct Testimony, that the proposed change to the CAP offset factor is unreasonable and unsupported.

Part 2. Response to PECO Gas Rebuttal Witness Joseph Bisti.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR SURREBUTTAL TESTIMONY.

A. In this section of my Surrebuttal Testimony, I respond to the Rebuttal Testimony of Joseph Bisti as it relates to low-income customers.

Q. WHAT IS THE FIRST ISSUE MR. BISTI ADDRESSES TO WHICH YOU WISH TO RESPOND?

A. Mr. Bisti claims that an increased customer charge will not have a material adverse impact on low-income customers.[12] In support of this claim, Mr. Bisti included a table which compares residential bills at 2023 monthly average usage under PECO and OCA's proposed residential rates. However, on its face, the table is misleading for several reasons. First, "average" monthly usage is not particularly informative when examining

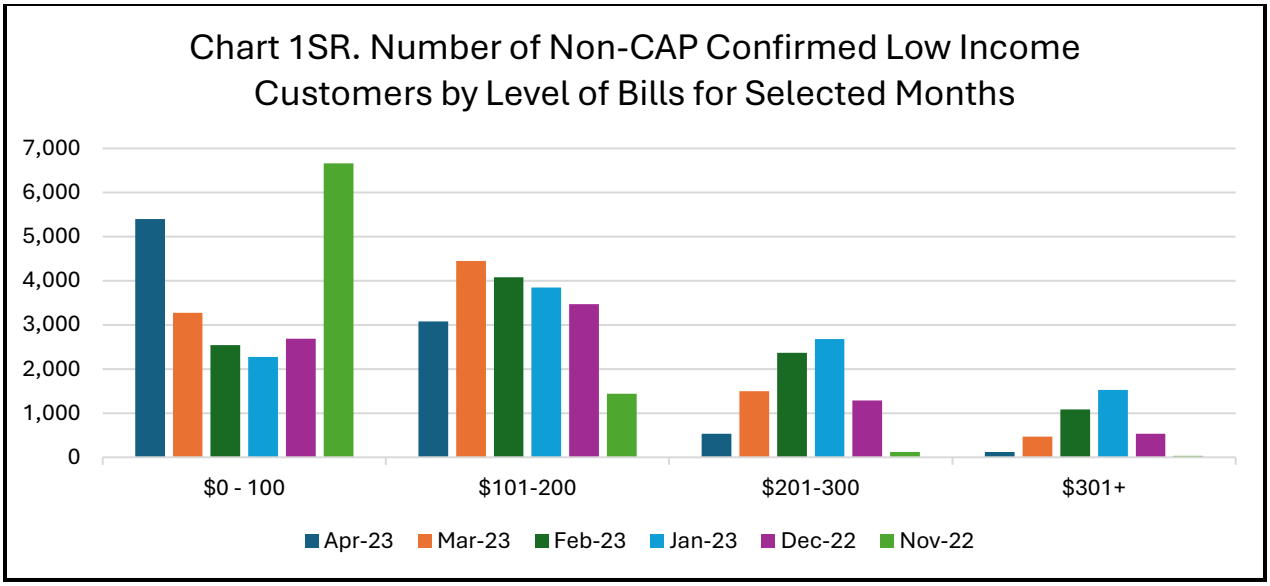
[12] PECO Gas St. 7-R at 12.

natural gas distribution rates due to the significant seasonal impact of weather on rates. While at "average" usage there may be little impact from a decreased customer charge, during shoulder and summer months, or six to eight months of the year, the increased customer charge will have a much greater impact on customers – especially those who rely on lower natural gas bills during warmer months to afford their monthly bills, including their PECO electric bills that are likely higher in the summer because of summer cooling load. The "average" used by Mr. Bisti, in other words, masks the adverse impacts on low-income customers in two ways. First, it masks the seasonal differences. The Table below presents the mean (i.e., average) bill for non-CAP Confirmed Low-Income customers by month. The adverse impact of an increased customer charge in the months where bills are $30 to $60 are much higher than the adverse impacts in higher usage months.

Table 2. Mean Bill by Month: Confirmed low-income (w/o CAP)

Month	**2024**	**2023**	**2022**	**2021**
January	$146	$191	$161	
February		$173	$185	$134
March		$141	$128	$115
April		$97	$96	$66
May		$55	$61	$43
June		$37	$37	$31
July		$31	$34	$24
August		$29	$31	$25
September		$30	$32	$26
October		$36	$46	$28
November		$65	$71	$49
December		$133	$149	$111

In addition, using the "average" masks the particular adverse impacts on these low-usage low-income customers even in the higher usage months. The Chart below shows the number of customers for the months of December 2022 through March 2023 at different billing levels.[13] The data shows the number of customers, even during the winter heating season, that depend on lower usage levels to achieve an affordable bill.



Finally, the table provided by Mr. Bisti does not show the portion of a customer's bill which is comprised of the customer charge. Table 16 of my Direct Testimony shows that the portion of PECO Gas's revenue which will come from fixed charges will increase as proposed. It demonstrates that customers will be able to control a lower portion of their bill.

[13] OCA-II-13. PECO (gas) provided data for February 2022 through January 2024. The months of December 2022 through March 2023, therefore, is the one complete heating season of data available.

Q. PLEASE RESPOND TO WITNESS BISTI'S TESTIMONY REGARDING YOUR FINDING THAT AN INCREASED CUSTOMER CHARGE IMPAIRS CUSTOMERS' ENERGY EFFICIENCY EFFORTS?

A. Due to the substantial barriers low-income customers face to energy efficiency measures, as described above and in my Direct Testimony,[14] it is important to clarify that an increased customer charge reduces incentives and rewards for pursuing energy efficiency measures. It is axiomatic that lessening the control a customer has over their bill impairs the effectiveness of usage reduction measures because the proportion of a customer's bill decreased through reduced usage is smaller. In other words, an increased customer charge represents an unavoidable increase, whereas increased volumetric charges are, to a certain extent, reducible. For customers already struggling to invest in energy efficiency measures, the increased, unavoidable portion of a customer's bill may make the difference between whether an investment is cost-effective or not, particularly given the unique factors affecting a low-income customer's cost-effectiveness calculus.

In addition, I presented evidence in my Direct Testimony which supports that low-income customers, when struggling to afford their heating bills, will turn to unsafe measures in order to reduce their energy consumption, such as keeping their home at unsafe or unhealthy temperatures or heating their home using an oven or stove.[15] Under PECO Gas's proposal, those customers who need the ability to control their bills the most, will face a smaller bill reduction than at present rates, which could incentivize more dangerous usage-reduction measures.

[14] OCA St. 4 at 81-82.

[15] OCA St. 4 at 76.

I would also note that OCA witness Johnson's testimony, both Direct and Surrebuttal, provides a discussion regarding the impact of the customer charge on efficiency efforts.

Q. PLEASE RESPOND TO WITNESS BISTI'S TESTIMONY REGARDING YOUR COMPARISON OF LIHEAP FUNDING TO THE INCREASED CUSTOMER CHARGE?

A. Despite Mr. Bisti's contention that the comparison of the increase in unavoidable customer charges to Low-Income Home Energy Assistance Program (LIHEAP) grant funding is irrelevant, it was included in my Direct Testimony to contextualize the significant impact increased customer charges have on low-income customers and the resources that they bring to bear to allow them to pay their bills.[16] While I agree that PECO is not involved in the establishment of LIHEAP funding levels, it is still necessary to consider the impact that an increase in an unavoidable, fixed monthly charge has on the ability of customers to afford their monthly bills. As I stated on page 80 of my Direct Testimony "for every $1 in LIHEAP funding that is being provided to the low-income customers of PECO (Gas), the Company proposes to take nearly $0.40 away from those low-income customers in the form of an increased unavoidable fixed monthly customer charge." This example is not an observation about PECO's ability (or inability) to influence the amount of LIHEAP funding, but a demonstration of the impact increased customer charges have on the financial impacts of customer bills – something about which PECO does have control – given LIHEAP funding availability.

[16] PECO Gas St. 7-R at 12.

Part 3. Response to PECO Gas Rebuttal Witness Jaqueline Golden.

Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR SURREBUTTAL TESTIMONY.

A. In this section of my Surrebuttal Testimony, I respond to the Rebuttal Testimony of Jaqueline Golden as it relates to low-income customers.

Q. WHAT IS THE FIRST ISSUE MS. GOLDEN ADDRESSES TO WHICH YOU WISH TO RESPOND?

A. PECO Gas rebuttal witness Golden makes the conclusory statement that PECO Gas has "provided extensive support for PECO's exemplary management performance."[17] She substantially overstates the impacts of PECO Gas management:

- She argues that "PECO incorporated the updated energy burdens in the CAP Policy Statement and then converted the structure of its CAP to a PIPP in December 2022."[18] But, utilities were ***directed*** to adopt the "updated energy burdens." The Commission order stated, "each utility CAP payment plan should be designed to ensure a household's total CAP bill – including any add-ons such as PPA co-payments or CAP Plus charges – will not exceed the Commission's energy burden threshold." Even the footnote directed that "For utilities that do not have a PIP-based payment plan, system safeguards should be established to ensure the customer's calculated payment does not exceed the maximum energy burden."[19]

- She argues that "PECO is focused on outreach to customers who are in need of financial support. . ."[20] Nonetheless, PECO Gas has enrolled less than 30% (29.9%) of its estimated low-income customer population into CAP.

[17] PECO Gas St. 10-R, at 20.

[18] Id.

[19] Amendments to Policy Statement on Customer Assistance Program, 52 Pa. Code § 69.261–69.26, Docket M-2019-3012599, Fi31.nal Policy Statement and Order, at

[20] PECO Gas St. 10-R, at 21.

- She argues that "it is not our objective to terminate customers for nonpayment."[21] Nonetheless, the termination rate for PECO Gas customers is seven times higher for Confirmed Low-Income customers than it is for residential customers.

- She argued that "PECO provided 78,000 payment agreements in 2023."[22] Nonetheless, the number of Confirmed Low-Income customers who are "payment-troubled" (i.e., had defaulted on one or more payment plans in a 12-month period) is one half or more of the number of Confirmed Low-Income customers who entered into payment plans in 2023.

- She argues that "PECO's credit and collection activities are focused on reducing arrears."[23] Nonetheless, the average Confirmed Low-Income arrears had ballooned to $2,159 in 2022. Even PECO Gas witness Trzaska concedes that the average residential arrears has increased by 49% since 2008.

- She argues that PECO Gas "is succeeding at ensuring that our low-income customers have sufficient assistance. . ."[24] Nonetheless, PECO Gas disconnected service for nonpayment to 2,427 Confirmed Low-Income customers in 2023. The average 2023 arrears at the time of disconnection ranged from a low of $1,213 (October) to a high of $2,293 (April) in 2023.

- Finally, she argues that "the Company is utilizing technology to assist customers in connecting with assistance programs."[25] Yet, as I explained, and Ms. Golden does not seek to rebut, the Company's claims that it is using technology to help customers "connect" with assistance programs is grossly exaggerated at best.[26]

[21] Id., at 21.

[22] Id.

[23] Id.

[24] Id., at 22.

[25] Id.

[26] OCA St. 4, at 98 – 101.

Q. PLEASE RESPOND TO WITNESS GOLDEN'S TESTIMONY RESPONDING TO YOUR FINDING THAT PECO'S NONPAYMENT SERVICE DSICONNECTIONS DISPROPORTIONATELY AFFECT HOUSEHOLDS OF COLOR?

A. Ms. Golden does not seek to rebut the fact that the nonpayment service disconnections of PECO Gas disproportionately affect neighborhoods of color. The most she says is to advance the conclusory claims that "PECO does not target specific zip codes of classes of customers,"[27] that "PECO does not target specific zip codes or classes of individuals," and that "PECO does not know, nor does it track, customers by demographics such as race or ethnicity for purposes of disconnection."[28] She states that "PECO's termination procedures, credit scoring, and other processes are applied equally to all customers. . ."[29] Her protestations are eerily similar to the observation of the philosopher Anatole France, who once observed: "The law, in its majestic equality, forbids the rich as well as the poor to sleep under bridges, to beg in the streets, and to steal bread."

Ms. Golden's assertions are simply immaterial to the data provided in Direct and it appears, based on this response, that PECO simply does not come to grips with the impacts of the policies and practices of PECO Gas. She does not dispute the fact that 27 zip codes have a higher-than-average percentage of Black residents. Moreover, she does not dispute my findings that:

> These 27 zip codes have 10.0% of the total number of householders in the PECO (Gas) service territory and 20.2% of the total number of PECO (Gas) customers (102,728 of 508,358). (OCA-II-4). In contrast, of the 48,639 residential nonpayment disconnections that PECO (Gas) performed in the

[27] PECO Gas St. 10R, at 21.

[28] Id., at 25.

[29] Id.

> months of January 2021 through January 2024 (37 months), 29,496 (61%) occurred in these 27 zip codes. At the same time, 199,672 of the 421,211 nonpayment disconnection notices (47.4%) were issued in these 27 zip codes. Not only were these disproportionately Black zip codes receiving a disproportionate share of the disconnection notices, in other words, they were experiencing a disproportionate rate of disconnections.[30]

It is one thing for PECO Gas to assert that it did not know or realize that its credit and collection policies and practices are having a disproportionate, adverse effect on persons of color. It is, however, quite another thing to learn of the impact and then choose to ignore it, as Mr. Golden suggests. Ms. Golden does not explain why PECO Gas is unwilling to undertake a "root cause" analysis of *why* the Company undertakes such a disproportionately higher number and greater rate of nonpayment disconnections within the zip codes with the highest proportion of Black household. It should be directed to do so, to address how to remedy the causes, and to allow a review of its analysis and response in the Company's next base rate proceeding.

Q. PLEASE RESPOND TO MS. GOLDEN'S REBUTTAL TESTIMONY REGARDING THE ABILITY OF CUSTOMERS TO PRIORITIZE THEIR PAYMENTS BETWEEN NATURAL GAS AND ELECTRIC SERVICE.

A. Ms. Golden's rebuttal testimony does not directly respond to my Direct Testimony saying that residential customers should be permitted to avoid the disconnection of either electricity or natural gas service by allocating their payment to pay the bill for that service in its entirety even if the bill for the other service is not paid in full. All that Ms. Golden says in response is that "PECO provides customers who receive electric and gas

[3030] OCA St. 4, at 68 – 69.

service with a total bill for their utility service, not one for gas and one for electric. There is no basis for permitting customers to 'prefer' one service over another, and a customer in arrears is at risk for termination of both services."[31] There is, however, substantial basis to allow a customer to retain one service even if the customer is unable to pay for both services. Nonpayment disconnections are intended to be a response of last resort. Particularly for low-income customers, Pennsylvania statutes have adopted the principle that utilities have an obligation to adopt programs and practices that help customers retain their service. Allowing PECO to disconnect service for ***both*** electricity ***and*** natural gas even though the customer has made a payment sufficient to fully cover one of those services is inconsistent with both of these principles. The choices which are presented would be of particular benefit to low-income customers, who might be unable to pay seasonally high bills for either natural gas or for electricity.

Moreover, PECO's refusal to allow payments to be allocated to preserve at least one service takes decision-making authority away from providers of crisis funding. A LIHEAP crisis agency may well want to provide a crisis grant, which are available year-round, to retire an unpaid electric bill before the summer months in order to allow a low-income customer to access life-saving cooling service, even if the natural gas bill remains unpaid. PECO's practice of requiring both services to be paid would force that crisis agency to pay for past-due winter heating bills in order to obtain electricity. In the alternative, PECO's practices of refusing to allow for the allocation of payments would have the effect of taking a portion of a crisis (or some other type of hardship grant) that is

[31] PECO Electric St. 10-R, at 29.

intended to help a customer gain access to critical cooling needs to be used for another purpose entirely.

PECO should not be allowed to rely on its own use of the word "prefer" when the issue really addresses ability-to-pay. I reiterate that PECO (Gas's) Tariff Rule 16.7 should be modified to permit customers of both PECO (electric) and PECO (gas) to prioritize their payments between natural gas and electric distribution services, so customers may determine how much of their PECO payment will be allocated to PECO (electric) or PECO (gas). All other payment prioritization policies of PECO remain unaffected. However, if a customer affirmatively indicates an intent to allocate sufficient payment that would satisfy the full amount of either bill, PECO will not terminate the utility service that has been paid in full notwithstanding any amount that is owed for the other service.

Q. DO YOU HAVE ANY RESPONSE TO THE REBUTTAL TESTIMONY OF PECO GAS REBUTTAL TESTIMONY OF WITNESS GOLDEN WHICH ADDRESSES CUSTOMER OUTREACH?

A. Yes. Despite enrolling less than 30% of its estimated low-income customers in CAP, while disconnecting service for nonpayment to nearly 20% of all Confirmed Low-Income customers (with an average arrears at the time of disconnection exceeding $2,000), enrolling Confirmed Low-Income customers in payment arrangements more than half of which result in defaults, and see average Confirmed Low-Income arrears at the time of disconnection balloon to nearly $2,300, Ms. Golden opposes any further outreach tied into the Company's credit and collection processes. She argues that:

- There is no need to make personal contact with Confirmed Low-Income customers prior to a nonpayment disconnection to offer the opportunity to apply for CAP and the associated arrearage forgiveness. She states that "PECO's existing termination noticing process already provides customers with appropriate information about the availability of assistance programs. . ."[32] Aside from the thousands of Confirmed Low-Income customers which PECO Gas disconnects each year, as I discuss above, Ms. Golden's response is at odds with the Commission's July decision in the Pennsylvania American Water Company rate proceeding, in which the Commission said: "PAWC should make personal contact with any confirmed low-income customer facing termination of service for nonpayment, and these customers should be informed of and given the opportunity to enroll in the BDP and the AMP as an alternative to disconnection."[33]

- There is no need to provide a stand-alone notice to Confirmed Low-Income customers when they are offered a payment arrangement for arrears. She argues that confirmed low-income customers "routinely receive information about CAP, regardless of their unpaid balances. . ." She cites ***annual*** phone calls in May and U.S. mailings in October to confirmed and unconfirmed low-income non-CAP customers regardless of whether they have an unpaid balance. . ."[34] These non-transaction-based notices do not serve the function that a stand-alone notice at the time a payment arrangement is being offered. Again, its PAWC rate decision, the Commission agreed. "[W]e believe PAWC should develop call scripting and checklists for its CSRs to assist in screening customers for eligibility and refer low-income customers to available assistance programs, including BDP and the Hardship Fund, before placing customers on a payment arrangement."[35] In reaching this decision, the Commission specifically cited, amongst other statutory sections, Section 1303 of the Pennsylvania Utility Code.[36]

[32] PECO Gas St. 10-R, at 10.

[33] Pennsylvania Public Utility Commission v. Pennsylvania American Water Company., Docket R-2023-3043189, Opinion and Order, at 353 (July 11, 2024).

[34] PECO Gas St. 10-R, at 13.

[35] PAWC Opinion and order, supra, at 353.

[36] Id., citing 66 Pa.C.S. §§ 1303.

Q. DOES WITNESS GOLDEN OPPOSE ANY REVISION IN THE COMPANY'S TARIFF REGARDING WHEN A CUSTOMER IS EXEMPT FROM BEING REQUIRED TO POST A CASH SECURITY DEPOSIT?

A. Yes. PECO Gas witness Golden opposes any change to the practices and procedures as well as the tariff language, of when PECO Gas will exempt customers from posting a cash security deposit. She does not address the ways in which the PECO Gas practices and procedures are in conflict with the statute and corresponding PUC regulation. Instead, she states simply that "customers who are *verified* LMI ≤ 250% of FPL are excluded from being assessed a deposit."[37] For all the reasons I outlined in my Direct Testimony, the Company's insistence that *only* customers who have had their incomes "verified" in the manner required by PECO Gas is in noncompliance with the statute and regulation which provides that a customer is exempt from cash security deposit requirements "when *the customer provides income documents or other information* that he or she is eligible for state benefits based upon household income eligibility requirements that are consistent with those of the public utility's customer assistance program."[38] (emphasis added). There is no requirement in the regulation requiring customer information to be "verified" by a third party and requiring such "verification" places unauthorized limits on the exemption. PECO Gas should be directed to modify its practices and procedures, and to modify its tariff, so as to be in compliance with the clear language of the regulation.

[37] PECO Gas St. 10-R, at 14 (emphasis added).

[38] 56 Pa. Code § 56.41(4).

Q. DO YOU HAVE ANY RESPONSE TO MS. GOLDEN'S REBUTTAL TESTIMONY WHICH OPPOSES UPDATING PECO'S DEFINITION OF "CONFIRMED LOW-INCOME CUSTOMER" TO CONFORM TO PUC REGULATIONS?

A. Yes. Ms. Golden testifies that PECO Gas disagrees that its definition of "confirmed low-income" is inconsistent with the PUC's definition of "confirmed low-income" in the Commission's regulation. She states that "PECO defines 'confirmed low-income' as customers who, in the last two years, have provided verified financial information (i.e., proof of income documentation) at or below 150% of FPL, and/or enrolled in CAP, and/or received a LIHEAP grant."[39] She asserts that "utilities are not required to accept self-certification without additional documentation."[40] She offers no further explanation of that conclusory statement. It would seem, however, that Ms. Golden's statement is in clear and unambiguous conflict with the PUC regulation providing that the information establishing "confirmed low-income" status "may include receipt of LIHEAP funds (Low-Income Home Energy Assistance Program), *self-certification by the customer*, income source or information obtained in § 56.97(b) (relating to procedures upon rate-payer or occupant contact prior to termination)."[41] The use of the term "or" at the end of that regulation would indicate that each element in the regulation is preceded by an "or." The information establishing "confirmed low-income" status includes receipt of LIHEAP funds, *or* self-certification by the customer, *or* income source, *or* information obtained in § 56.97(b) (relating to procedures upon ratepayer or occupant contact prior to

[39] PECO Gas St. 10-R, at 4.

[40] Id., at 4 – 5.

[41] 52 Pa. Code § 62.2.

termination). It is not within the discretion of PECO Gas to limit the list provided articulated by the PUC. If PECO Gas believes that any element of that list is not reasonable, its remedy is to ask the Commission to amend the regulation, not to ignore the clear terms of the regulation.

Q. DO YOU HAVE ANY FINAL RESPONSE TO MS. GOLDEN'S REBUTTAL TESTIMONY?

A. Yes. In response to my Direct Testimony regarding the affordability of PECO's rates at present and under the proposed rate increase, Ms. Golden provided Rebuttal Testimony stating that PECO's Consumer Education and Outreach Plan is robust. First, Ms. Golden's testimony is not responsive to the concerns raised in my Direct Testimony. Second, while education and outreach is an important part of a utility's support for its CAP and other assistance programs, it does little to actually address the issue of bill affordability. As I stated above, only a small portion of the estimated number of low-income customers participate in CAP; an assistance program is not a substitute for affordable rates because more than just CAP-qualifying customers are affected when rates are increased without consideration of the impact on ratepayers' energy burdens. Therefore, I reiterate and emphasize the recommendation raised in my Direct Testimony that, when the PUC determines its decisions in this rate proceeding, including but not limited to a just and reasonable rate of return and an appropriate customer charge, in this proceeding, it does so considering the affordability of PECO's rates and the impact of inflation on low-income customers.

Q. DOES THIS COMPLETE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Roger D. Colton, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement 4SR, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: August 2, 2024

Signature: _____
Roger D. Colton

Address: Fisher Sheehan & Colton
34 Warwick Road
Belmont, MA 02478

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No. R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

PUBLIC

DIRECT TESTIMONY

OF

Nicholas A. DeMarco

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

Date Served: June 17, 2024

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Introduction

Q. Please state your name and business address.

A. My name is Nicholas Anthony DeMarco. My business address is 555 Walnut Street, Forum Place, 5th Floor, Harrisburg, Pennsylvania 17101. I am currently employed as a Regulatory Analyst by the Pennsylvania Office of Consumer Advocate (OCA).

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the OCA.

Q. Please describe your educational background and qualifications to provide testimony in this case.

A. I have a Master's Degree in Political Science from Lehigh University and a Bachelor of Arts in Political Science, with a concentration in Constitutional Law from Bloomsburg University of Pennsylvania. I also attended Michigan State University's Institute of Public Utilities online rate school program. I have attached my CV as Exhibit NAD-1.

Q. Have you previously provided testimony before the Pennsylvania Public Utility Commission?

A. Yes, I have testified as a policy witness in cases in front of the Public Utility Commission. A list of these cases can be found in Exhibit NAD-1

Q. Have you prepared Exhibits to accompany your testimony?

A. Yes. Exhibits NAD-1 and NAD-2 are attached to this testimony.

Q. What is the purpose of your testimony in this case?

A. I am filing Direct Testimony in response to the application filed on March 28, 2024 by PECO Energy Company-Gas Decision (PECO Gas) to increase its base rate for natural gas distribution service. My testimony will address customer service and consumer

protection concerns for the increase in rates for residential customers if PECO's request is approved. I will also address, along with other witnesses, whether or not the Company's requested 15-basis point management performance adder[1] should be approved.

Summary

Q. Please describe the proposal for rate increase filed by PECO Gas.

A. PECO Gas proposes to increase its distribution rates by about $111 million. On the same date that PECO Gas filed its rate case, PECO Energy Company-Electric Division (PECO Electric) filed to increase its rates by about $464 million. The total request for both PECO utilities is about a half a billion-dollar increase, effective in January 2025.[2] PECO Gas last filed for an increase in base rates in 2022.

Q. What is the connection between your discussion of service quality and performance and the rate increase proposed by PECO Gas?

A. A Commission-regulated public utility in Pennsylvania is statutorily obligated to provide adequate and reasonable service to its customers. A public utility must justify its rates based on, among other things, its ability to perform its essential quality of service and customer service functions at an adequate and reasonable performance level. Accordingly, where a public utility is seeking a rate increase – especially a significant one, and, where, as in this case, the utility is asking for a reward in the form of a higher rate of return based on its performance, it is appropriate to review the performance of that utility and to compare such performance to other Pennsylvania utilities. Therefore, my

[1] PECO Gas St. 5 pg. 51 ln. 9-16

[2] https://www.puc.pa.gov/press-release/2024/puc-to-investigate-peco-s-rate-increase-requests-for-electric-and-natural-gas-distribution-services-04-25-24; https://www.puc.pa.gov/pcdocs/1831273.pdf (electric); https://www.puc.pa.gov/pcdocs/1831293.pdf (gas)

evaluation of PECO Gas's customer service and consumer protection policies is directly related to the Commission's consideration of Company's general rate increase. My analysis and findings should inform the Commission about the reasonableness of PECO Gas's significant rate increase request. Where I identify deficiencies in PECO Gas's customer service performance, I recommend that the Commission require improvements in specific areas as a condition of any rate increase, and consider and reflect the inadequate customer service I have documented in the amount of any rate increase and rate of return that it adopts. This approach is mandated by the statutory guidelines of Section 523 governing public utility rate cases in which the Commission must evaluate the "efficiency, effectiveness, and adequacy of service".[3]

Q. What support does Ms. Amy E. Hamilton provide PECO Gas provide in PECO Electric Statement 1 for PECO Electric's request for an upward adjustment to return on equity for management performance regarding customer service and consumer protection?

A. PECO Gas was asked to identify the specific customer service and consumer protection criteria that it recommends that the Commission consider when evaluating its request for a management performance adder, including the specific performance area and performance results that should be considered. PECO Gas stated that pages 24-27 of Mrs. Hamilton's direct testimony be considered for this discussion of the management adder.[4]

Q. Please summarize your conclusions and recommendations.

A. Based on the testimony of Company witnesses Hamilton, Trzaska, and McDevitt and the discovery responses issued by the Company it is my opinion that PECO Gas should not

[3] 66 Pa. C.S. 523.
[4] PECO Gas response to OCA-1-38

receive a management performance adder for the customer service it provides. According to reports published by the PUC for the last several years,[5] PECO Gas generally meets the PUC's basic metrics for customer service. However, that shows the Company is providing basic customer service. The Company has not shown that it provides more than the adequate and reasonable service it is obligated to provide as a regulated public utility:

- The upgrades to its website and mobile app described by Ms. Hamilton are standard service that should be expected from any company of PECO's size and the Company has not supported its claim that the upgrades reduced customer operation costs. PECO has provided inconsistent discovery responses about whether these form part of the basis of its claim for a management performance adder.[6]

- PECO Gas has goals to improve customer satisfaction and customer operations, without specific plans, cost-benefit analysis or metrics to assess results.

- Regarding its call center performance, PECO is on par with the PUC's Customer Service Report metrics but in discovery the Company acknowledges that [redacted] also show need for PECO to improve performance.

It should also be noted that, in PECO Electric's pending base rate case, the Company also asked for a 15-basis point management performance adder. PECO Energy provides customer service and billing service for both the Electric and Gas Divisions. While the OCA opposes any management performance adder, if any amount of adder is awarded, PECO should not be permitted get to double-dip for performance of the very same services that it provides using the same resources. In my view, PECO should receive no upward adjustment based on management performance, but if the Commission awards an adder, it should award it once not twice.

[5] 2022 Utility Consumer Activities Report and Evaluation (UCARES) reports https://www.puc.pa.gov/filing-resources/reports/consumer-activities-report-evaluation/; Customer Service Performance Reports https://www.puc.pa.gov/filing-resources/reports/customer-service-performance-reports/

[6] PECO Gas response to OCA-1-38, OCA-16-1, OCA-16-3

Based on my review of the Company's call abandonment and average calls answered goals, I recommend the Company should take steps to implement a specific and tailored plan with actionable metrics for how it is going to meet its call abandonment and average calls answered goals.

I recommend PECO should address any ongoing issues with call handling that have not been resolved by the Company completing its implementation plan for the Bureau of Audits' 2022 PECO Energy Company Management and Operations Audit Report.

Regarding PECO's informal complaints and Verified Infractions, I recommend that the Company create a specific and tailored plan with metrics for how PECO will reduce the informal complaints and Verified Infractions. Also, the Company should use data from its existing 2021 root cause analysis or conduct a new root cause analysis and use that data to create metrics for reducing informal complaints and Verified Infractions.

PECO should eliminate any payment processing fees associated with paying a PECO bill when not using "MyAccounts", e.g., online "pay as guest" or phone payments.

The OCA recommends that PECO reduce the use and retention of PII and develop both workflow and cyber-security measures to reduce the threat of disclosure or theft of PII.

Customer Service

Q. What improvements is PECO claiming have helped improve the overall customer service experience?

A. In her direct testimony PECO Gas witness Hamilton states that the following improvements have been made in recent years:[7]

[7] PECO Gas St. 1 pg. 24-26

- Website and Mobile App
  - Sign up and move service improvements
  - Credit card and e-check payment enhancements
  - Usage monitoring
  - Ability to enroll in electronic billing, auto pay, and budget billing
  - "Overall look and feel"
  - Two-step identification
  - "welcome back" feature

- Policy Initiatives
  - "First Contact Resolutions"
  - Integrating management of outsourced call center into PECO's Customer Care Center
  - "Universal Agent" strategy
  - "Assistance Finder"

Q. Does PECO claim any measurable impacts from these website and mobile app upgrades?

A. Yes. Ms. Hamilton states "As of the end of 2023, PECO now has 373,000 gas customers enrolled in "MyAccounts" which is a 10% increase from 335,000 in 2022 and directly reduces our customer operations costs."[8] PECO Electric has acknowledged that Ms. Hamilton's discussion of "PECO" website upgrades, features, and capabilities refer to PECO Energy as a whole and are shared benefits to both PECO Electric and PECO Gas customers.[9,10,11,12]

Q. Has PECO Gas witness Hamilton identified a total reduction in customer operations cost related to the website and mobile app upgrades?

A. No. Ms. Hamilton's direct testimony does not identify a total reduction in operating cost, either for PECO Energy or the Gas Division in particular. Also, the Company does not

[8] PECO Gas St. 1 pg. 25 ln. 2-4
[9] PECO Gas response to OCA-16-1
[10] PECO Gas response to OCA-16-2
[11] PECO Gas response to OCA-16-3
[12] PECO Gas response to OCA-16-4

provide a comparison of what was spent for the upgrades and what was saved in operating costs. So, while Ms. Hamilton's claims there is a reduction in costs, the Company has not supported that claim.

Q. What is your position on the relationship between cost savings and the Company's request for an award for management performance?

A. As I noted above, the Company's claim of reduced customer operations costs is not documented. However, I disagree with the Company's premise that operational cost savings justify charging ratepayers higher rates. Cost saving measures should ultimately benefit ratepayers.

Q. Do you have any comments regarding improvements to PECO's website?

A. Yes. It has become standard practice for businesses of all sizes to operate a functional and accessible website to help customers interact and conduct business with the company. For example, the "two-step identification" improvement would be a reasonable and necessary improvement, to protect consumer account information exchanged with the Company electronically. The incremental website upgrades do not support awarding the Company a management adder.

Q. Do you have any comments regarding improvements to PECO's mobile app?

A. Yes. As with improving its website, it has become common practice for businesses to operate a functional and accessible mobile application to help customers interact and conduct business with the Company. The mobile application upgrades do not support awarding the Company a management adder.

Q. Are these electronic channels for communication between PECO Gas and consumers novel?

A. No. In the Bureau of Audit's July 2022 "PECO Energy Company Management and Operations Audit Report,"[13] the Bureau took note of PECO Energy Company's "e-channels" as "web-based services that provide online accessibility for customers to manage their accounts, make payments, request service appointments, obtain energy usage information, report outages, and establish preferences for receipt of reports and alerts." Effectively, Ms. Hamilton proposes that PECO GAs be allowed a management performance increase for recent, incremental changes made by PECO Energy to these web-based electronic channels for communication. I disagree. These activities by PECO Energy for the benefit of PECO Gas operations and PECO Gas customers reflect the Company's obligation to provide reasonable and adequate service.

Q. Has PECO made inconsistent statements about whether these services form the basis of its request for a management performance adder?

A. Yes. PECO has made inconsistent claims in discovery concerning whether the purported savings and enhancements to PECO's website and applications forms a basis for its request for a management performance adder.[14] PECO should clarify this in its Rebuttal Testimony.

[13] Bureau of Audits, "PECO Energy Company Management and Operations Audit Report," Docket No. D-2021-3023906, pg. 90 (July 2022) ("2022 Audit Report")
[14] PECO Gas response to OCA-1-38, OCA-16-1, OCA-16-3

Customer Satisfaction

Q. How does the Company plan to improve its customer satisfaction?

A. According to PECO witness Hamilton, "PECO recognizes its responsibilities to customers and seeks to invest in maintaining and improving how the Company provides premier customer service and how it interfaces with customers. Customer Operations has focused on improving the customer service component of this score through continuous improvement training of PECO's Customer Service Representatives, as well as incorporating more customer requested needs into the Company's interactive voice response system, web portal, My Account, and mobile apps."[15]

Q. Does PECO elaborate, expand, or provide any detailed plans for improving customer satisfaction?

A. No. Despite the Company's stated goals above, PECO Gas provides no specific support for how it plans to reach its objectives or even what those objectives are. It does not appear to have performed any cost-benefit analysis or identified any goal metrics to assess results. Therefore, I do not believe that PECO Gas has provided adequate support for the awarding of a management performance adder on the basis of its goals to improve customer satisfaction. If and when those improvements are in place, it would be appropriate to consider whether the company has demonstrated excellence in its customer service such that it merits any upward adjustment to its return on equity.

[15] PECO Gas St. 1 pg. 26 ln. 8-16

Q. What direct customer benefits does PECO Gas claim will come from additional investments in its customer operations?

A. PECO Gas witness Hamilton believes that its Customer Flight Path (CFP) projects and continuing to expand its digital products and services will help to meet customer expectations for reliable and personalized experiences.[16]

Q. Does PECO Gas elaborate, expand, or provide any detailed plans for improving its customer operations?

A. No. As with customer service, despite the Company's stated goals above, PECO Gas provides no specific support for how it plans to reach its objectives or even what those objectives are. It does not appear to have performed any cost-benefit analysis or identified any goal metrics to assess results. Therefore, I do not believe that the Company has provided adequate support for the awarding of a management performance adder on the basis of its goals to improve customer operations. If and when those improvements are in place, it would be appropriate to consider whether the company has demonstrated excellence in its operations such that it merits any upward adjustment to its return on equity.

Call Center Performance

Q. What categories will you provide analysis for in your testimony?

A. In this section of my testimony, I will be analyzing PECO's call center performance and training. Later in my testimony I will cover disputes and customer satisfaction regarding customer complaints.

[16] PECO Gas St. 1 pg. 26 ln. 17-23

Q. What statistics does the PUC use to measure PECO for call center performance?

A. The PUC uses three metrics to measure a utility's call center performance: Busy out rate, call abandonment rate, percent of call answered in 30 seconds. Below, I will be using statistics from the Commission's 2022 Customer Service Performance Report.[17] The Commission evaluates both PECO Gas and PECO Electric together in these reports.

Q. What was PECO's average busy out rate?

A. PECO's busy out rate was 0% between the years 2019-2022 except for 2021 where they had a busy out rate of 0.1%.[18] It is important to note that this statistic is so low for many utilities because of their use of interactive voice response (IVR), as when this automated tool is "answers" a customer's call, it counts as answered.

Q. What was PECO's call abandonment rate?

A. Between the years 2019-2022 PECO's average call abandonment rate was 1% each year.[19] [redacted]

Q. What is PECO's target goal for 2024 and 2025?

A. [redacted]

Q. Do you have any comments?

A. Yes. [redacted] The Company provides little to no

[17] 2022 Customer Service Performance Report - https://www.puc.pa.gov/filing-resources/reports/customer-service-performance-reports/
[18] 2022 Customer Service Performance Report pg. 5
[19] 2022 Customer Service Performance Report pg. 7
[20] PECO Gas response OCA-1-5 (attachments a-n) Confidential
[21] PECO Gas response to OCA-1-5 (attachments a-n) Confidential

specific steps to meet the Company's own goal for 2024 or 2025 and going forward. I recommend that the Company create a more specific and tailored plan with actionable metrics for how it is going to decrease its call abandonment and meet its goals. The Company should also show that it can continuously meet these metrics over the course of a few years before any amount of management performance adder should be considered. Currently, PECO's existing metrics do not warrant an increase in its return on equity.

Q. What percentage of calls did PECO answer within 30 seconds?

○ [redacted]

Q. What is PECO's target goal for 2024 and 2025?

A. [redacted]

Q. Do you have any comments on these specific statistics?

A. Yes. [redacted] The Company provides little to no specific steps to meet the Company's own goal for 2024 or 2025 and going forward. As with call abandonment, I recommend that the Company create a specific and tailored plan with actionable metrics for how it is going to meet its average calls answered goals. PECO should also show that it can continuously meet these metrics, over the course of a few years before any amount of management performance adder should be considered.

[22] PECO Gas response to OCA-1-5 (attachments a-n) Confidential
[23] PECO Gas response to OCA-1-5 (attachments a-n) Confidential

Q. Did PECO Gas provide testimony on where the Company seeks to improve its call center performance?

A. Yes, with regard to call handling. Witness Hamilton states that PECO has switched to a "First Contact Resolution" approach. This means that the Company is attempting to assist a customer with all of their needs upon their first contact with the Company. The Company's other initiatives include better integration and management of its outsourced call center into PECO's internal "Customer Care" call center. The Company is also implementing a "Universal Agent" strategy whereby the Company aims to have as many of its Customer Service Representatives (CSRs) trained in as many skills as possible to address any customer issue that a customer may have.[24]

Q. Does the Company have specific training materials related to this "First Contact Resolution Policy"?

A. No PECO witness Jacqueline F. Golden states that "PECO does not provide First Contact Resolution (FCR) specific training." She notes that it is "reinforced" in other trainings provided by the Company.[25]

Q. What are the parameters by which the program was measured?

A. According to the Company FCR is measured as a percentage of unique customer calls from the same phone number that have called more than one time and were transferred from the IVR to a CSR within a rolling 3 business day window. The measurement of FCR excludes the following types of calls:[26]

- Outage and Emergency Calls

[24] PECO Gas St. 1 pg. 25-26
[25] PECO Gas response to OCA-1-49
[26] PECO Gas response to OCA-1-50

- Weekend Calls
- Agency Assistant Numbers
- Non-CSR Handled Calls
- Internal Company Numbers

Q. What results does the Company claim?

A. The Company states that it reviews and analyzes FCR consistently to identify improvement opportunities. According to PECO Gas, implementation of improvements in the following areas would result in an increased level of FCR:[27]

- Optimize staffing levels to increase support during high volume intervals.
- Implement a larger team support structure i.e., Product Oriented Delivery (POD) structure, in the CARE Center whereby the POD includes additional levels of support, such as a quality coach and a quality control analyst.
- Implement PECO's Universal Agent model
- Increase the number of quality of service evaluations per CSR.

Q. Was PECO Gas's FCR plan addressed in the Bureau of Audit's Management & Operations Audit of PECO Energy Company?

A. Yes. As stated in the July 2022 Audit Report, the FCR process "call handling expediency may degrade customer satisfaction and increase customer call backs."[28] The Bureau of Audit's Report further states that:

> "Best in class customer service performance requires a balancing of all aspects of call handling from handling time to first call resolution. However, the primary focus of the call center should be on service quality and the customer experience over call quantity/speed to answer. PECO has established a call efficiency task force to evaluate longer and shorter than average calls to identify ways to streamline calls or improve performance. However, PECO's focus on average handle time may cause customer concerns to go unresolved, questions to be unanswered, etc. Therefore, PECO should continue to shift focus to First Call

[27] PECO Gas response to OCA-1-50
[28] 2022 Audit Report pg. 90

Resolution and service quality while balancing the business needs of call handling time, etc."[29]

Q. Do you have any comments?

A. Yes. The OCA agrees with the conclusions in the 2022 Audit Report. However, the OCA recommends PECO conduct further analysis on how to improve its FCR program. Specifically, the OCA recommends the Company investigate any persistent issues with call handling that have not been resolved by the actions PECO agreed to take in its implementation plan for its 2022 Audit Report. The completion date agreed to in the management audit implementation plan was estimated to be Q4 2023.[30]

Q. As a general matter, does PECO have a system to ensure a PA qualified CSR answers PA customer calls?

A. Yes, PECO conducts training for both its internal employees and external contractors which covers PA specific laws and regulations.[31]

UCARE Report

Q. What is the UCARE Report[32]

A. The UCARE Report mentioned earlier in my testimony is a report and evaluation prepared annually by the Public Utility Commission's Bureau of Consumer Services (BCS) in accordance with 66 Pa. C.S. §308.1 (a). The report details a utility's compliance with the statutes and regulations concerning residential customer service and billing maters as reflected in the Public Utility Code, 52 Pa. Code and a Utility's Tariff.[33]

[29] 2022 Audit Report pg. 91-92
[30] 2022 Audit Report 2021 Management Implementation Plan Recommendation XI-2
[31] Responses to OCA-1-10,12,13
[32] https://www.puc.pa.gov/filing-resources/reports/consumer-activities-report-evaluation/
[33] 2022 Utility Consumer Activities Report and Evaluation (UCARE) pg. 1

Q. What does the UCARE Report measure?

A. The UCARE report measures Total Complaint Rate, Consumer Complaints, Payment Arrangement Requests, Termination of Service and Reconnection of Service, Compliance.[34]

Q. What are PECO's UCARE statistics?

A. Table 1 – PECO Gas UCARE Statistics.[35]

BCS Category	2021	2022	2023	OCA Comments
Residential Customer Complaints[36]	1,148	1,614	1,532	overall increase
Residential Payment Arrangement Requests (PARs)[37]	2,126	6,071	6,777	increase
Inquiries	1,065	1,807	1,647	overall increase
% Justified Residential Customer Complaints	7%	11%	8%	fluctuation
% Justified PARs	16%	1%	2%	lower
Response Time to Complaints and PARs (Days)	16.2/7.6	16.0/4.8	16.1/4.9	steady
Verified Infractions (Chapter 56)[38]	127[39]	154[40]	not provided	increase

[34] 2022 UCARE pg. 39-51
[35] Data obtained from UCARE reports for 2021, 2022 and 2023 1st-4th quarter, available at https://www.puc.pa.gov/filing-resources/reports/consumer-activities-report-evaluation/
[36] In their UCARE Report the BCS defines a Justified Consumer Complaint as "A consumer complaint where, prior to BCS intervention, the company did not comply with Commission Orders, policies, regulations, reports, Secretarial Letters, tariffs or guidelines when the consumer brought the complaint to the company's attention. The justified consumer complaint rate equals the number of justified consumer complaints for each 1,000 residential customers."
[37] In their UCARE Report the BCS defines a Justified PAR as, "A Payment Arrangement Request where, prior to BCS intervention, the company did not comply with Commission regulations, reports, Secretarial Letters, tariffs or guidelines. The justified payment arrangement request rate equals the number of justified payment arrangement requests for each 1,000 residential customers."
[38] In their UCARE Report the BCS defines an Infraction as "A misapplication or infringement of a Commission regulation, particularly the standards and billing practices for residential utility service."
[39] 2020-2021 UCARE Report pg. 44 (includes electric and gas)
[40] 2022 UCARE Report pg. 39

Q. Did PECO provide its internal numbers regarding informal complaints?

A. Yes. [redacted]

Q. What trends are apparent from 2021 through most recently available data?

A. As we come out of the pandemic years, the Company's overall statistics remain relatively steady with overall increases in many categories. According to public data in the chart above, the most apparent categories that are seeing an overall increase are the number of informal complaints levied against the Company ("Residential Customer Complaints") and Verified Infractions.

Q. Do you have any recommendations?

A. I recommend that the Company create a specific and measurable plan with actionable metrics for how PECO will reduce informal complaints and Verified Infractions. The Company should also show that it can continuously meet these metrics over the course of a few years before any sort of management performance adder should be considered.

For the reasons discussed above, I also recommend that the Company conduct a root cause analysis to address informal complaints and Verified Infractions. The metrics that the Company calculates to be its goals should be created using data from the root cause analysis.

Q. Has PECO conducted a recent root cause analysis of customer complaints?

A. PECO conducted a root cause analysis in 2021.[42] However, [redacted]

[41] PECO Gas response to OCA 1-5 (attachment k) Confidential
[42] PECO Gas response to OCA-1-20

[redacted] The Company should either conduct a new root cause analysis or create a detailed plan with metrics on how it plans to fix any of the issues discovered during its 2021 root cause analysis to reduce informal complaints and Verified Infractions.

Q. What is a root cause analysis?

A. A root cause analysis is a fact-based exercise in which the underlying cause or causes of an undesirable outcome are identified and specific remedial steps are identified and determined to result in correcting or improving the previously identified undesirable result. To be clear, a list of customer complaints by category is not a root cause analysis.

A root cause is defined as a factor that caused a nonconformance and should be permanently eliminated through process improvement. The root cause is the core issue—the highest-level cause—that sets in motion the entire cause-and-effect reaction that ultimately leads to the problem(s).

Root cause analysis (RCA) is defined as a collective term that describes a wide range of approaches, tools, and techniques used to uncover causes of problems. Some RCA approaches are geared more toward identifying true root causes than others, some are more general problem-solving techniques, and others simply offer support for the core activity of root cause analysis.

There are many methodologies, approaches, and techniques for conducting root cause analysis, including:

1. **Events and causal factor analysis:** Widely used for major, single-event problems, such as a refinery explosion, this process uses evidence gathered quickly and methodically to establish a timeline for the activities leading up to the accident. Once the timeline has been established, the causal and contributing factors can be identified.

2. **Change analysis:** This approach is applicable to situations where a system's performance has shifted significantly. It explores changes made in people, equipment, information, and more that may have contributed to the change in performance.
3. **Barrier analysis:** This technique focuses on what controls are in place in the process to either prevent or detect a problem, and which might have failed.
4. **Management oversight and risk tree analysis:** One aspect of this approach is the use of a tree diagram to look at what occurred and why it might have occurred.
5. **Kepner-Tregoe Problem Solving and Decision Making:** This model provides four distinct phases for resolving problems:
    1. Situation analysis
    2. Problem analysis
    3. Solution analysis
    4. Potential problem analysis[43]

According to the publications developed by the American Society for Quality, and other comparable publications[44], a proper analysis of any "root cause" requires the identification of "symptoms," which are not actual causes but signs of existing problems, and "first level causes," which are the causes that directly lead to a problem; and "higher level causes," which are links in the chain of cause-and-effect relationships that ultimately create the problem.

[43] https://asq.org/quality-resources/root-cause-analysis

[44] There is an extensive body of literature used in the medical community to conduct root cause analysis and develop plans to prevent adverse events. See, e.g., https://www.cms.gov/medicare/provider-enrollment-and-certification/qapi/downloads/guidanceforrca.pdf

Billing/Consumer Protection/Tenant Protections

Q. What bill payment options are offered by PECO and with what fees or charges?

A. Table 2 – Payment Fees by payment method[45]

Payment Method	**Fee Schedule**
Mail a Paper Check through the United States Postal Service (USPS)	No Fee (postage costs do apply and are set by the USPS)
Residential eCheck via PECO MyAccount	No Fee
Commercial eCheck via PECO MyAccount and Pay As Guest	No Fee
Residential eCheck pay as guest / Debit & Credit	$1.75
Commercial Credit Card	$5.95
Walk-in Payment - authorized bill payment locations or service centers (e.g. large retail store, drug store) • Fee is collected by the vendor and is later applied as a $1.75 credit on the customer's next bill.	$1.75

* All Fees are charged and collected by the vendor.

Q. Do you have any comments?

A: Only customers enrolled and logged in to PECO's MyAccount can pay by checking account or credit/debit card without additional fees per transaction. Also, PECO's bills state that fees also apply for phone payments.[46] The OCA has asked PECO to provide the fee revenues from these transactions (pay as guest and by phone) from customers. That discovery has not been received as of the time this testimony was finalized.

[45] PECO Gas response to OCA-1-16
[46] PECO Gas response to OCA-1-23 (a.1) attachment

Q. Do you have any recommendations concerning these fees for customer bill payment options?

A. Yes. While the OCA is waiting for PECO's responses to discovery, based on the information available, the OCA is concerned about the barrier that these fees pose to households paying on time and in full. The OCA is also concerned about whether the fees are reasonable or cost-based; regardless, these fees result in a significant cost to customers to avoid late fees and collection action. Furthermore, they reflect a discriminatory practice in terms of payments options in that customers who use specific methods for payment are not charged a fee for the processing of their payments while those who are not enrolled in or logged into MyAccount or pay by phone are charged. Customers should be encouraged to pay with all of these alternative methods without incurring significant fees that only add to the cost of regulated gas service. This is particularly true if these fees are set by a third party. PECO has the ability to negotiate these fees and include reasonable payment processing fees in the overall contract that it would pay as a part of the cost of service rather than imposing these fees directly on customers who make use of these payment options. PECO should eliminate these fees as a direct cost to consumers. My recommendation reflects my understanding that PECO's revenue requirement should include reasonable costs for processing customer payments, whether incurred by PECO or its agents. My concern is imposing fees without proper justification on individual customers. Furthermore, encouraging customers to pay in a variety of payment methods will benefit customers who do not have checking accounts or seek to pay at the last minute due to their financial circumstances.

PII

Q. Do you have any comments regarding Personal Identification Information (PII)?

A. Yes, while the OCA is waiting for discovery responses, which may support additional recommendations for PECO, the OCA is recommending that all utilities reduce the use and retention of PII, and develop both workflow and cyber-security measures to reduce the threat of disclosure or theft of PII.

Conclusion

Q. Should PECO Gas's request for a management performance adder be granted?

A. No. My analysis shows that PECO Gas should not receive a management performance adder for "premier" customer service. The Company has not shown that it provides more than the adequate and reasonable service it is obligated to provide as a regulated public utility:

- The upgrades to its website and mobile app described by Ms. Hamilton are standard service that should be expected from any company of PECO's size and the Company has not supported its claim that the upgrades reduced customer operation costs.
- PECO Gas has goals to improve customer satisfaction and customer operations, without specific plans, cost-benefit analysis or metrics to assess results.
- Regarding its call center performance, PECO is on par with the PUC's Customer Service Report metrics but in discovery the Company acknowledges that [redacted] also show need for PECO to improve performance.

PECO Energy provides customer service and billing service for both the Gas and Gas Divisions. While the OCA opposes any management performance adder, if any amount of adder is awarded, PECO should not get to double-dip for performance of the very same services that it provides using the same resources.

Q. Please summarize your other recommendations.

I recommend the Company should take steps to implement a specific and tailored plan with actionable metrics for how it is going to meet its call abandonment and average calls answered goals.

The Company should investigate any persistent issues with call handling that have not been resolved by the actions PECO agreed to take in its implementation plan for its 2022 Audit Report.

Regarding PECO's informal complaints and Verified Infractions, I recommend that the Company create a specific and tailored plan with actionable metrics for how PECO will reduce the informal complaints and Verified Infractions. Also, the Company should use data from its existing 2021 root cause analysis or conduct a new root cause analysis and use that data to create metrics for reducing informal complaints and Verified Infractions.

PECO should eliminate any payment processing fees associated with paying a PECO bill when not using "MyAccounts", e.g., online "pay as guest" or phone payments.

The OCA recommends that PECO reduce the use and retention of PII and develop both workflow and cyber-security measures to reduce the threat of disclosure or theft of PII.

Q. Does this conclude your testimony.

A. Yes, however, subject to receiving additional information in discovery.

NAD-1

Qualifications of

Nicholas A. DeMarco

Education:

2021 Master's of Political Science, Lehigh University

2016 B.A. Political Science with concentration in Constitutional Law, Bloomsburg University of Pennsylvania

2016 B.A. Eastern European Languages and Cultures, Russian, Bloomsburg University of Pennsylvania

Relevant Positions:

January 2023 Regulatory Analyst, Pennsylvania Office of Consumer Advocate

Role Description:

I am currently employed by the Pennsylvania Office of Attorney General, Office of Consumer Advocate (OCA) as a Regulatory Analyst. In this position, my responsibilities include reviewing utility company filings with the Pennsylvania Public Utility Commission (Commission) and analyzing the financial, economic, rate of return, and policy issues that are relevant to the filings. Additionally, I am tasked with preparing recommendations for the OCA's involvement in utility filings with the PA PUC, writing testimony and presenting oral testimony on behalf of the OCA. As part of my role, I also assist in the policy matters regarding low-income issues and PJM.

Submitted Testimony:

PAWC's proposed acquisition of the Brentwood Borough wastewater system, at
Docket No. A-2021-3024058

Pennsylvania Public Utility Commission, Office of Consumer Advocate, v. Community Utilities of Pennsylvania, Inc.

Docket Nos. R-2023-3042804 (water), R-2023-3042805 (wastewater), C-2023-3044737 (water), C-2023-3044738 (wastewater)

Pennsylvania Public Utility Commission, Office of Consumer Advocate, v. Veolia Water Pennsylvania, INC
Docket Nos. R-2024-3045192 (Water), R-2024-3045193 (Wastewater)

Pennsylvania Public Utility Commission, Office of Consumer Advocate, v. Duquesne Light Co
Docket No. R-2024-3046523

Pennsylvania Public Utility Commission, Office of Consumer Advocate, v. Columbia Gas of Pennsylvania Inc.
Docket Nos. R-2024-3046519, C-2024-3047905, C-2024-3047675, C-2024-3048339

Relevant Training:

IPU Michigan State University, IPU Accounting and Ratemaking Course 2023

NAD-2

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set I

Response Date: May 02, 2024

OCA-I-38

Identify the specific customer service and consumer protection criteria that PECO Gas recommends that the Commission consider in evaluating PECO Gas's request for a management performance adder. In your response, identify the specific performance area and performance results that should be considered.

RESPONSE:

Please refer to Mrs. Hamilton's direct testimony (pp. 24-27) for a discussion of the customer service and consumer protection criteria that the Commission should consider in evaluating PECO's request for a management performance adder.

Responsible Witness: Amy Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 16

Response Date: June 03, 2024

OCA-16-1

Reference Ms. Hamilton's Direct at PECO St. 1, page 25, line 5 through 10. Ms. Hamilton states that "PECO upgraded the overall look and feel of its website…."

a. Does "PECO" as used here refer to PECO Energy or exclusively to PECO Energy - Gas Division?
b. Is the 'PECO website' referenced used solely by PECO Gas Division customers? Or is the 'PECO website' used by PECO Gas and/or PECO Electric customers?
c. Is this discussion of the 'PECO website' offered as support for PECO Gas's request for an addition of 15 basis points to the allowed return on equity for management performance?

RESPONSE:

a. "PECO" as used in the quote above refers to PECO Energy.
b. The "PECO Website" referenced is used by PECO Gas and/or PECO Electric Customers.
c. No.

Responsible Witness: Amy E. Hamilton

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 16

Response Date: June 03, 2024

OCA-16-3

Reference Ms. Hamilton's Direct at PECO St. 1, page 25, lines 11-18. Ms. Hamilton states "We also added…other features and capabilities" to the PECO website. "In the seven months since the launch of the Assistance Finder in May 2023, nearly 1,000 customers have enrolled online in payment arrangements, budget billing, and due date extensions."

a. Does "We" as used here refer to PECO Energy or refer exclusively to PECO Energy - Gas Division?
b. Are the added website features available to PECO Gas Division customers and PECO Electric Division customers?
c. Are the referenced "nearly 1,000 customers" all PECO Gas customers?
d. Of the "nearly 1,000 customers" reference, how many are both PECO Electric and PECO Gas customers?
e. Is this discussion of the "other features and capabilities" added to the PECO website offered as support for PECO Gas's request for an addition of 15 basis points to the allowed return on equity for management performance?

RESPONSE:

a. "We" as used in the quote above refers to PECO Energy.
b. The added website features are available to all PECO customers.
c. This information is not available because customer-level data is not gathered or maintained related to these customer engagements.

d. This information is not available because customer-level data is not gathered or maintained related to these customer engagements.
e. No.

Responsible Witness: Amy E. Hamilton

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Nicholas A. DeMarco, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 5, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: June 17, 2024

Signature: /s/ Nicholas A. DeMarco
Nicholas A. DeMarco

Address: Office of Consumer Advocate
555 Walnut Street
Fifth Floor
Harrisburg, PA 17101

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

SURREBUTTAL TESTIMONY

OF

Nicholas A. DeMarco

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

Date Served:

August 2, 2024

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Introduction

Q. Mr. DeMarco, did you previously provide testimony in this proceeding on behalf of the Office of Consumer Advocate?

A. Yes. My initial testimony was submitted as OCA Statement 5. I also submitted supplemental direct testimony (OCA Statement 5 Supp.) regarding testimony provided at the Public Input Hearings held in June 2024 in this proceeding. I am a Regulatory Analyst for the Office of Consumer Advocate. My testimonies covered customer service and consumer protection concerns for the increase in rates for residential customers if PECO's request is approved. I also addressed, along with other witnesses, whether or not the Company's requested 15-basis point management performance adder should be approved.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimonies of Company Witnesses Amy E. Hamilton (PECO Gas St. 1R), Paul R. Moul (PECO Gas St. 5R), and Jaqueline F. Golden (PECO Gas St. 10R). I also address the rebuttal testimony of James Glenn (IBEW St. 1R) related to my direct testimony.

Summary

Q. Please provide an overview of your surrebuttal testimony.

A. First, I will address the rebuttal testimony submitted by Ms. Hamilton, Mr. Moul and Ms. Golden related to PECO Gas's request for a management performance adder. Second, I will address Ms. Golden's rebuttal testimony submitted in response to my analysis of PECO Gas's call center and online customer service, the customer service call center, along with its UCARE performance, bill payment fees, and PII.

Management Performance Adder

Q. What was your recommendation regarding PECO's proposal to increase the allowed return on equity by 15 basis points for its management performance?

A. It is my opinion that PECO Gas should not receive a management performance adder for the customer service it provides. According to reports published by the PUC for the last several years,[1] PECO Gas generally meets the PUC's basic metrics for customer service. However, that shows the Company is providing basic customer service. The Company has not shown that it provides more than the adequate and reasonable service it is obligated to provide as a regulated public utility:

- The upgrades to its website and mobile app described by Ms. Hamilton are standard service that should be expected from any company of PECO's size and the Company has not supported its claim that the upgrades reduced customer operation costs.
- Regarding its call center performance, PECO is on par with the PUC's Customer Service Performance Report metrics but in discovery the Company acknowledges that there is need for improvement.

It should also be noted that, in PECO Electric's pending base rate case, the Company also asked for a 15-basis point management performance adder. PECO Energy provides customer service and billing service for both the Electric and Gas Divisions. While the OCA opposes any management performance adder, if any amount of adder is awarded, PECO should not be permitted to double-dip for performance of the very same services that it provides using the same resources. In my view, PECO should receive no upward adjustment based on management performance, but if the Commission awards an adder, it should award it once not twice.

[1] 2022 Utility Consumer Activities Report and Evaluation (UCARES) reports https://www.puc.pa.gov/filing-resources/reports/consumer-activities-report-evaluation/; Customer Service Performance Reports https://www.puc.pa.gov/filing-resources/reports/customer-service-performance-reports/

Q. Did Company witness Hamilton agree with your assessment?

A. No. In her rebuttal testimony, Company Witness Hamilton states her belief that the Company provides service beyond what is considered to be "business as usual" and that rebuttal to my comments made regarding PECO's customer service performance will be addressed in Company Witness Golden's testimony.[2] Company Witness Hamilton states that counsel informed her that 66 Pa C.S.A. §523 grants the Commission authority to consider utility's performance to grant additional basis points to the return on equity (ROE).

Q. Do you have any comments?

A. Yes. While I will go into more comprehensive detail in the section of my testimony dedicated to responding to Company Witness Golden's testimony, I reiterate that PECO is statutorily obligated to provide adequate and reasonable service to its customers. This includes customer service. PECO has not shown that it warrants an increase to its ROE for management performance in terms of the customer service that it provides to its captive customer base.

Q. Did Company Witness Moul agree with your assessment?

A. No. Mr. Moul took issue with my assessment that by granting each PECO division a management performance adder, that the Company would be double-dipping by using the same resources to serve customers. He notes that not all customers receive both electric and gas services from PECO and that the rates of each division are determined separately.[3]

[2] PECO Gas St. 1R pg. 29 ln. 8-11
[3] PECO Gas St. 5R pg. 42-43 ln. 10-4

Q. Do you agree with Mr. Moul's analysis of the situation?

A. No. PECO shares resources between the two divisions at its convenience and similarly at its convenience appears to treat the divisions as two different entities. While the two divisions are separate entities, they are able to share resources when a customer receives both gas and electric service from PECO. In terms of the customer service resources available to customers, the website and mobile app are available to both PECO Gas and PECO Electric customers and are administered as a single resource. [4,5,6,7]

Q. What was your initial analysis of PECO's website and mobile app related to PECO Electric's and PECO Gas's request for management performance adders?

A. It has become standard practice for businesses of all sizes to operate a functional and accessible website to help customers interact and conduct business with the company. The incremental website upgrades performed by PECO do not support awarding the Company a management adder.

Further, the Company's assertion that the upgrades have reduced customer operations costs is not documented. I also disagree with the Company's premise that operational cost savings justify charging ratepayers higher rates through a higher ROE. Cost saving measures should ultimately benefit ratepayers.

[4] PECO Gas response to OCA-16-1
[5] PECO Gas response to OCA-16-2
[6] PECO Gas response to OCA-16-3
[7] PECO Gas response to OCA-16-4

Q. Did Ms. Golden provide any support for PECO witness Hamilton's assertion[8] that customer use of the website and mobile apps "directly reduces [PECO's] customer operations costs"?

A. No. Ms. Golden only repeated statements about additional customer enrollments in "MyAccounts" in 2023 and says that "overall cost savings may be difficult to quantify".[9]

Q. Do you have any comments?

A. Ms. Golden comments that it is premature to quantify cost savings to customers. It is likewise premature for PECO to use MyAccount increased enrollments as a factor to support its request to increase costs through a management adder. However, I continue to disagree with the Company's premise that operational cost savings justify charging ratepayers higher rates. Cost saving measures should ultimately benefit ratepayers.

I also find it important to note that Ms. Golden does not refute the fact that PECO Gas and PECO Electric website upgrades, features, and capabilities refer to PECO Energy as a whole and are shared benefits to both PECO Electric and PECO Gas customers.[10,11,12,13] As discussed in my direct testimony and above, PECO's seeks two increases for the same management performance.

Q. Ms. Golden next addresses your testimony about two-step identification.[14] Do you have any comments?

A. In my direct testimony, I discussed that a "two-step" authentication method for customers to use when logging into the Company website or mobile app is an example of a necessary

[8] PECO Gas St. 1 pg. 25 ln. 2-4
[9] PECO Gas St. 10R pg. 29 ln. 6-9
[10] PECO Gas response to OCA-16-1
[11] PECO Gas response to OCA-16-2
[12] PECO Gas response to OCA-16-3
[13] PECO Gas response to OCA-16-4
[14] PECO Gas St. 10R pg. 29 ln. 10-17

and reasonable upgrade, i.e. a basic requirement for online interaction with customers. Ms. Golden's statement that the Company has had two-factor identification as an option since 2022 and will make it mandatory for residential customers by the end of 2024[15] does not show that PECO is providing more than reasonable service.

"Two step identification" is a standard practice for businesses and, in particular, utility businesses. As stated on pg. 6 section 2.B in the joint United States Department of Energy and National Association of Regulatory Utility Commissioners (NARUC) "Cybersecurity Baselines for Electric Distribution Systems and DER":

> "Establish and enforce a policy that requires a minimum password length of 15 or more characters for in-scope IT and OT assets that are not otherwise protected behind multifactor authentication (MFA) or other passwordless authentication mechanism.
>
> • If 15-character passwords, MFA, or other passwordless authentication mechanisms are not feasible, use the maximum password length that the technology supports and document and implement equally or more effective alternative measures or compensating controls to achieve the intended action(s). Establish and enforce a policy to prohibit password reuse, unless an organization defined risk exception is necessary and documented."[16]

PECO's adoption of "two-step" authentication is standard practice in the utility space and beyond. It therefore should be considered best practice and not above and beyond what a customer should expect from a company that handles their Personally Identifiable Information (PII).

[15] PECO Gas St. 10R pg. 29 ln. 12-17
[16] Available at: https://pubs.naruc.org/pub/35247A70-0C45-9652-C6D9-99A77C87200F

Q. Does anything in Ms. Golden's testimony about what she claims to be PECO's "proactive implementation" of additional website and mobile app features cause you to change your position whether PECO should get a management adder?

A. No. A modern utility company should be expected to have a modern website, especially one as large as PECO. The Company's website and mobile app should not be considered towards the awarding of a management performance adder as its behavior is consistent with a utility or company of its size and should not be awarded additional profits as such.

A utility having a mobile app is not a unique offering. At least five other Class A utilities in Pennsylvania offer a mobile application.[17] Company Smart Energy Water[18], who is listed as the publisher of UGI's mobile application on the Google Play Store[19] offers mobile utility or utility related applications for over 40 different private and municipal utilities around the United States and World. The customer experience, multi-channel notifications, and payment options seem similar to that of those provided by PECO. On the Google Play Store, Exelon[20] offers 6 other apps in addition to PECO's.

[17] AQUA - https://play.google.com/store/apps/details?id=com.aquawater.app&hl=en_US
UGI - https://play.google.com/store/apps/details?id=com.sew.ugi&hl=en_US
Columbia Gas - https://play.google.com/store/apps/details?id=com.sew.columbia&hl=en_US
Duquesne Light - https://play.google.com/store/apps/details?id=com.mobile.DuquenseLight&hl=en_US
PGW - https://play.google.com/store/apps/details?id=com.sew.scm_pgw&hl=en_US
Veolia Pa – N/A (However Veolia has applications for its European customers) - https://play.google.com/store/apps/developer?id=By+Veolia
[18] https://www.sew.ai/
[19] https://play.google.com/store/apps/developer?id=Smart+Energy+Water
[20] https://www.sew.ai/content/developer

Q. In direct testimony, related to PECO's request for a higher ROE for management performance, you raised a concern that PECO had not defined its objectives or provided support for how it plans to reach its objectives to improve customer satisfaction. How did Ms. Golden respond?

A. On pages 30-33, Company Witness Golden went into further detail on PECO's plan to improve customer satisfaction using a mixture of surveys and strategic communications to obtain customer feedback, which the Company uses to identify investments. She states that "The investments implemented to date are designed to improve the availability of customer products and reliability of underlying platforms."[21]

Q. Does Ms. Golden's testimony change your position that PECO has not supported a management adder based on its goals to improve customer satisfaction and customer operations?

A. No. PECO should continue its customer communication and outreach but I do not believe that PECO has provided adequate support for the awarding of a management performance adder on the basis of its goals to improve customer satisfaction. As will be seen later in my testimony and can be seen in the analysis from my direct testimony, PECO has room for improvement with regards to its call center performance and UCARE statistics.

Additionally, Company Witness Golden touts PECO's customer communication performance.[22] This however is also less than perfect. There have been breakdowns in communication from the Company to the customer regarding important information that can affect a customer's bill. An example of a breakdown in communication can be seen

[21] PECO Gas St. 10R pg. 32 ln. 19-20
[22] PECO Gas St. 10R pg. 30-32

in my supplementary direct testimony. At least four customers testified specifically against PECO's proposed weather normalization adjustment (WNA). Tr. 100, 451-453, 506-507, 540. These customers raised some of the same concerns raised by OCA witness Colton in OCA Statement 4 about lack of transparency. In addition, customers testified the WNA would be confusing and hard for PECO to explain. Tr. 451-453, 523, 540.

If and when those improvements are in place, it would be appropriate to consider whether PECO has demonstrated excellence in its customer service such that it merits any upward adjustment to its return on equity for its Gas operations.

Customer Service

Q. What was your initial analysis of PECO's overall customer service?

A. Based on my review of the Company's call abandonment and average calls answered goals, I recommended the Company should take steps to implement a specific and tailored plan with actionable metrics for how it is going to meet its call abandonment and average calls answered goals.

I recommended PECO should address any ongoing issues with call handling that have not been resolved by the Company completing its implementation plan for the Bureau of Audits' 2022 PECO Energy Company Management and Operations Audit Report.

Regarding PECO's informal complaints and Verified Infractions, I recommended that the Company create a specific and tailored plan with metrics for how PECO will reduce the informal complaints and Verified Infractions. Also, the Company should use data from its existing 2021 root cause analysis or conduct a new root cause analysis and use that data to create metrics for reducing informal complaints and Verified Infractions.

I also recommended that PECO should eliminate any payment processing fees associated with paying a PECO bill when not using "MyAccounts", e.g., online "pay as guest" or phone payments.

I addressed the OCA's recommendation that PECO reduce the use and retention of PII and develop both workflow and cyber-security measures to reduce the threat of disclosure or theft of PII.

Q. Have you changed any of your initial recommendations based on new information from discovery or testimony?

A. In part. Where I modified a recommendation it is discussed below and also provided in my conclusion for ease of reference.

Call Center Performance and Training

Q. Does Company Witness Golden address PECO's call abandonment rate and average calls answered within 30 seconds?

A. Yes. Company Witness Golden states that the Company has seen an improvement from 2022 to 2023. Additionally, she says that the customer service team sees resolving a customer's issue on first contact as a higher priority than shorter wait times.[23]

Q. Does Company Witness Golden address your recommendation related to the Company's First Contact Resolution (FCR) strategy and remaining call handling issues not resolved since the Commission's July 2022 Audit report?

A. Company Witness Golden stated that prior to the July 2022 report PECO "upon its own initiative the Company transitioned to FCR and made it a top priority metric for

[23] PECO Gas St. 10R pg. 33 ln. 7-22

Customer Care."[24] And that the customer care team has made several changes to FCR since that time and is looking to identify more opportunities for process improvement.[25]

Q. Do you have any additional comments regarding the abandonment rate and average calls answered within 30 seconds?

A. The abandonment rate and calls answered within 30 seconds are metrics measured by the Commission to measure the quality of service a Company is providing. If PECO is choosing to prioritize its FCR plan over other metrics, it should still make efforts to uphold the standards that are measured by the Commission as an indicator of customer service performance. Even attributing the lesser performance in 2021 to be a symptom of an atypical year, and recognizing the data shows improvement from 2022 to 2023,[26] PECO's existing metrics do not warrant an increase in its return on equity. The Company should show that it can continuously meet these metrics over the course of a few years before any amount of management performance adder should be considered.

Q. Do you have any additional comments regarding the FCR?

A. Yes. As I addressed in my direct testimony, the Bureau of Audits stated in its July 2022 Audit Report regarding the FCR process that "call handling expediency may degrade customer satisfaction and increase customer call backs."[27] Specifically, the Bureau of Audit's stated:

> "Best in class customer service performance requires a balancing of all aspects of call handling from handling time to first call resolution. However, the primary focus of the call center should be on service quality and the customer experience over call quantity/speed to answer. PECO has established a call efficiency task force to evaluate longer and shorter than average calls to identify ways to streamline calls or improve performance. However, PECO's focus on average

[24] PECO Gas St. 10R pg. 34 ln. 7-9
[25] PECO Gas St. 10R pg. 34 ln. 9-14
[26] PECO Gas St. 10R pg. 33 ln. 10-13
[27] 2022 Audit Report pg. 90

> handle time may cause customer concerns to go unresolved, questions to be unanswered, etc. Therefore, PECO should continue to shift focus to First Call Resolution and service quality while balancing the business needs of call handling time, etc."[28]

Accepting 2021 as an atypical year, I maintain my recommendation that the Company follow the guidance from the Bureau of Audits report that PECO should keep balance in mind when looking to solve a customer's issue upon first contact.

Further, I continue to recommend the Company investigate any persistent issues with call handling that have not been resolved by the actions PECO agreed to take in its implementation plan for its 2022 Audit Report. Ms. Golden's statement that "in a sense" the Company has already implemented my recommendation because "Customer Care continues to focus on ways to improve FCR"[29] does not address whether PECO has implemented this part of my recommendation.

Q. Did Mr. James Glenn of IBEW Local 614 comment on your direct testimony related to call center training and performance?

A. Yes. Mr. Glenn stated that additional training is necessary. He provided examples that Customer Service Representative (CSR) supervisors frequently do not understand the role of CSRs. PECO shifted customer service software in February of 2024 and provided limited training and practice to its CSRs on the new software. He discusses that PECO has greatly reduced the training provided to CSRs for credit collecting.[30]

[28] 2022 Audit Report pg. 91-92
[29] PECO Gas St .10R, p. 34 ln. 1-14.
[30] IBEW Glenn PDF pg. 8-10

Mr. Glenn also comments on issues that the new system has caused for customers, including overcharges, unnecessary shut-offs, problems with following through with service requests, and failure of client information to carry over to the new system.[31]

Q. Do you have any comments?

A. While Mr. Glenn speaks extensively on how this lack of training and system change has caused "great stress and pressure" on PECO customer service representatives, I would like to emphasize the negative impacts caused to PECO's customers. Mr. Glenn's testimony underscores the need for PECO to address verified infractions and closely monitor informal complaints as I discuss next.

UCARE

Q. Does Company Witness Golden address your concerns regarding the Company's UCARE statistics related to the Company's customer complaint rate and verified infractions?

A. No. Company Witness Golden says that when PECO's statistics from 2021 are excluded that the data reported shows a decrease in residential complaints and that there is a "remains" steady trend in verified infractions.[32]

Q. Does this change your initial recommendation that PECO should conduct a root cause analysis and create a plan with actionable metrics providing how PECO will reduce informal complaints and Verified Infractions.

A. Partially. I note that the number of Verified Infractions for 2023 was not provided by the Company and the results that could be found on the Commission website were only

[31] IBEW Glenn PDF pg. 10
[32] PECO Gas St. 10R pg. 34-35 ln. 22-7

preliminary.[33] Even if PECO's Verified Infractions are not increasing, the Company should still be working to avoid a "remaining steady" trend. I continue to recommend that a root cause analysis be conducted regarding Verified Infractions or, as I also proposed, PECO can use existing information from its 2021 root cause analysis along with data that the results of the third-party surveys that Ms. Golden mentions to create a plan with actionable metrics for how it is going to reduce Verified Infractions. For informal complaints, based on the data for only two years 2022-2023, I recommend that PECO continue to watch this metric closely and if the number of informal complaints rises or remains steady for 2024 and 2025, the Company should take the same action I recommend for Verified Infractions for informal complaints.

Processing Fees

Q. Did PECO respond to your testimony raising concerns about PECO charging some customers a fee because they pay their bill without using "MyAccounts" or because they pay by phone?

A. Company witness Golden clarified that there is also an option for customers who pay in-person at an authorized payment location. Those customers are assessed a fee but are reimbursed by PECO on their next bill.[34] She also stated that the fees charged by third-party processing vendors, rather than PECO directly, are primarily associated with the fees assessed by the credit card industry. Company Witness Golden goes on to state that if PECO were to include these third-party vendor fees in their revenue requirement that this could increase PECO's revenue requirement by five million dollars ($5,000,000).[35]

[33] https://www.puc.pa.gov/media/2754/ucare_2023_q4.pdf
[34] PECO Gas St. 10R pg. 36 ln. 1-14
[35] PECO Gas St. 10R pg. 36 ln. 15-23

It is important to note that Company Witness Golden provided no support for this estimate. The OCA has asked discovery questions that may not be answered before this testimony is finalized as to how PECO calculated this number and other issues surrounding this claimed amount.[36]

Q. What was your initial opinion on PECO customers having to pay an upfront fee to make in-person payments?

A. While PECO has taken steps to help its low-income customers by reimbursing the customer in their next bill, this arrangement still leaves many low-income customers struggling. Ms. Golden stated that, in 2023, more than 250,000 walk-in payments were made and more than half of the available authorized bill payment locations are in Philadelphia where a majority of PECO's low-income customers are geographically located.[37] Low-income customers are more likely to be income constrained and unbanked with month-to-month affordability concerns. The reimbursement of in-person payment fees in the next bill leaves these customers without this money for 30 days when they need every dollar available. A better approach that would improve access for customers is for PECO to enter into agreements or otherwise arrange with the authorized bill payment locations for PECO to be directly billed for all payment fees.

Q. Do you have any comments regarding fees assessed for credit and debit card payments?

A. Yes. Many unbanked households experiencing poverty receive paychecks and benefits (including social security and supplemental security income (SSI)) on prepaid debit cards.

[36] OCA Set 20 to PECO Gas
[37] PECO Gas St. 10R, p. 36, ln. 6-11

Q. Do you have any recommendations?

A. Yes. I continue to recommend that these third-party processing fees should be included in PECO's revenue requirement rather than paid by individual customers. This is good practice[38] for reasons including that PECO no longer accepts in-person payments at locations where consumers could previously pay bills in person without incurring additional charges, and has replaced these locations with authorized agents that do require consumers to incur additional charges. Also, when a utility customer makes multiple payments during the course of a month, fees on credit and debit payments undercut their ability to apply funds to the payment of actual utility services. While Ms. Golden asserted that recovering these fees in rates would add an additional $5,000,000 to the Company's revenue requirement, she did not provide any support for that estimation.[39] I recommend that PECO be required, in its next rate case, to propose complete elimination of fees for bill payment using credit and debit cards and present a full cost analysis.

In addition to treating fees for credit and debit card payments uniformly for all PECO customers, regardless of the method of payment (e.g., with or without MyAccount, by phone, in-person, by mail), I recommend that PECO work to negotiate lower fees with its third-party vendors. Reducing the level of expense recovered in rates would benefit all customers.

[38] These and other reasons are discussed in NASUCA Resolution 2012-07. https://www.nasuca.org/2012-07-urging-utilities-to-eliminate-convenience-fees-for-paying-utility-bills-with-debit-and-credit-cards-and-urging-appropriate-state-regulatory-oversight/. I also note that Illinois has a statute that prohibits gas and electric utilities from charging a convenience fee or any surcharge "to any customer who elects to pay for service using a credit card that the electric or natural gas utility would not assess to the customer if the customer paid by other available methods acceptable to the utility." https://codes.findlaw.com/il/chapter-220-utilities/il-st-sect-220-5-8-201-9/ I am also aware that Duquesne Light Company, Columbia Gas of Pennsylvania, Inc., UGI Gas, Pittsburgh Water and Sewer Authority and Pennsylvania-American Water Company do not charge third-party transaction fees for payments.

[39] PECO Gas St. 10R pg. 36 ln. 15-23

PII

Q. Did Company witness Golden address your concerns related to the Company's retention of customer's PII?

A. Yes. Witness Golden states that PECO follow industry best practices around cyber security and PII. That the Company needs to retain such information to avoid fraudulent accounts.[40]

Q. Do you have any comments?

A. Yes. PECO indicates, both in Ms. Golden's rebuttal testimony and responses by Ms. Hamilton to OCA discovery (Set 18), that it has developed workflow and cyber-security measures to reduce the threat of disclosure or theft of PII. The OCA continues to recommend that all utilities, including PECO, work to reduce the use and retention of PII.

Conclusion

Q. Please summarize your conclusion.

A. My analysis shows that PECO Gas should not receive a management performance adder for the customer service it provides. PECO Energy provides customer service and billing service for both the Electric and Gas Divisions. While the OCA opposes any management performance adder, if any amount of adder is awarded, PECO should not be permitted to double-dip for performance of the very same services that it provides using the same resources. In my view, PECO should receive no upward adjustment based on management performance, but if the Commission awards an adder, it should award it once not twice.

[40] PECO Gas St. 10R pg. 37 ln. 8-18

Q. Please summarize your recommendations, as updated in your surrebuttal testimony.

A. My recommendations are the following:

- The Company should follow the guidance from the Bureau of Audits report that "best in class" customer service performance requires a balancing of all aspects of call handling from handling time to first call resolution.

- The Company should investigate any persistent issues with call handling that have not been resolved by the actions PECO agreed to take in its implementation plan for its 2022 Audit Report.

- Regarding PECO's informal complaints and Verified Infractions, I recommend that the Company create a specific and tailored plan with actionable metrics for how PECO will reduce Verified Infractions. Also, the Company should use data from its existing 2021 root cause analysis or conduct a new root cause analysis and use that data to create metrics for reducing Verified Infractions.

- For informal complaints, PECO should continue to watch this metric closely and if the number of informal complaints rises or remains steady for 2024 and 2025 compared to 2022 and 2023, the Company should take the same action I recommend for Verified Infractions for informal complaints.

- PECO should enter into arrangements with authorized bill payment locations to be directly billed for all payment fees and stop requiring up-front payment of these fees by the customer.

- PECO should eliminate any payment processing fees associated with paying a PECO bill when not using or enrolled in "MyAccounts", e.g., online "pay as guest" or phone payments. Specifically, in its next base rate case, PECO should be required to propose complete elimination of fees for bill payment using credit and debit cards and present a full cost analysis.

- PECO should work to negotiate lower transaction fees charged by its third-party vendors.

- The OCA recommends that PECO take steps to reduce the use and retention of PII.

Q. Does this conclude your testimony?

A. Yes, at this time.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Nicholas A. DeMarco, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement 5SR, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: August 2, 2024

Signature: */s/Nicholas A. DeMarco*
Nicholas A. DeMarco

Address: Office of Consumer Advocate
555 Walnut Street
Fifth Floor
Harrisburg, PA 17101

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No. R-2024-3046932
v.	:	
	:	
PECO Energy Company Gas Division	:	

SUPPLEMENTAL DIRECT TESTIMONY

OF

Nicholas A. DeMarco

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

Date Served: July 16, 2024

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Exhibit NAD-1-SD: Summary of Public Input Hearing Testimony

Introduction

Q. Mr. DeMarco, did you previously provide testimony in this proceeding on behalf of the Office of Consumer Advocate?

A. Yes. My initial testimony was submitted as OCA Statement 5. I am a Regulatory Analyst for the Office of Consumer Advocate. My testimony covered customer service and consumer protection issues.

Q. What is the purpose of your supplemental direct testimony?

A. The purpose of my supplemental direct testimony is to introduce an additional concern that was raised at the Public Input Hearings and which would have been addressed in my direct testimony had the OCA had this information at that time and also to introduce as an exhibit a summary of testimony given by concerned PECO customers at the Public Input Hearings held on June 6, 10, 12, 13 and 27, 2024. This summary is attached to this testimony as Exhibit NAD-1-SD.

Q. **Was the exhibit prepared by you or under your supervision?**

A. Yes. The summary was prepared by attorneys who participated in the public input hearings. I reviewed the public input hearing transcripts and determined that the summary is accurate.

Q. What additional topic will you be addressing?

A. I will be addressing customer comments and concerns related to PECO Gas' Weather Normalization Adjustment (WNA).

Weather Normalization Adjustment

Q. Did any OCA witnesses address the WNA in their Direct Testimony?

A. Yes. OCA witnesses Nelson (OCA Statement 6) and Colton (OCA Statement 4) recommended that the proposed WNA should be rejected. Mr. Colton specifically addressed concerns about the proposed WNA's lack of transparency, the detriment to low-income customers of having an additional part of their bill that they cannot control, and that budget billing is an underutilized and better alternative to protect residential customers generally and low-income customers in particular from bill volatility due to weather volatility.[1]

Q. **What did customers say about the WNA?**

A. At least four customers testified specifically against PECO's proposed weather normalization adjustment (WNA). Tr. 100, 451-453, 506-507, 540.[2] These customers raised some of the same concerns raised by OCA witnesses Nelson and Colton. In addition, customers testified the WNA would be confusing and hard for PECO to explain. Tr. 451-453, 523, 540.

Q. Do you have any comments?

A. Yes. The concerns raised by customers about the WNA would be addressed if the WNA is rejected as recommended by OCA witnesses Nelson and Colton.

Conclusion

Q. Please summarize your conclusion.

A. The summary provided in NAD-SD-1 may not be exhaustive to all of the issues raised by customers regarding the quality of service they are receiving from PECO. PECO should

[1] OCA Statement 4, pg. 87-94.
[2] Exhibit NAD-1-SD pg. 13-15.

work to address and alleviate the issues and concerns raised by its customers at the public input hearings.

Q. Does this conclude your testimony?

A. Yes, at this time.

OCA Summary of Public Input Testimony

Issues raised during Public Input Hearings:

1. Affordability 2
2. Aqua Rate Increase Simultaneous Impact on PECO Customers 5
3. Fixed Charges 6
4. Inflation.....8
5. Limited English Proficiency Households 9
6. LIHEAP Auto-enrollment.....10
7. LIURP Funding and Access.....11
9. Weather Normalization Adjustment.....12

In this proceeding, 31 unique customers testified regarding the above issues. While other customers testified as well, the OCA did not include those customers' testimony in this summary because the testimony was either not relevant to this proceeding, generally, or not relevant to the OCA's overall recommendations, as set forth in its direct testimony.

1. Affordability

During the Public Input Hearings, 20 unique customers presented testimony about the unaffordability of PECO's bills. Tr. 95, 106, 113, 117-118, 128, 166, 222-223, 239-241, 274-275, 334-335, 363, 423, 433, 443, 458-459, 463, 497, 515, 527, 577-579. PECO customers testified that they are struggling, or their communities are struggling, under PECO's rates at present, and that additional rate increases will place a substantial burden on household budgets. As stated by Ms. Bond at the June 12 afternoon Public Input Hearing, she has met many PECO customers "who are struggling with their bills already, who are making choices about which bills to pay or food versus utilities" Tr. 274. At already unaffordable rates, any rate increase will have a dramatic impact on customers' ability to stay current with their utility bills.

PECO customers urged the Commission to consider the current and future cost to ratepayers of any rate increase authorized in this proceeding. As Mr. Harvey Chanin recognized, in his testimony at the June 13 afternoon Public Input Hearing, the Commission "is obligated to ensure that all ratepayers have the electricity they need at rates they can afford." Tr. 433. PECO customers testified that, to determined "affordability," the Commission must consider customers' energy burden, or the portion of monthly income spent on utility bills. Tr. 463. According to Mr. Amernath, who also testified at the June 13 afternoon Public Input Hearing, "Philadelphia is one of the most energy burdened metropolitan centers in the country." Tr. 443. The substantial energy burdens customers in PECO's service territory are already under illuminates the importance of minimizing any authorized rate increase.

As Ms. Spathakes, at the June 13 afternoon Public Input Hearing, described it, the affordability crisis facing PECO's customers is sometimes called "eat, heat or treat, where families choose between food, medicine or paying their utility bills or even their rent. Sometimes staying on top of their bills means having to make these health harming choices. Sometimes that means

eating less, keeping homes at unhealthy or uncomfortable temperatures, or foregoing health sustaining medication." Tr. 458-459. Rising energy burdens and rationing essential services can also result in homelessness or pose an insurmountable obstacle to homeless people trying to find stable housing situations. Tr. 118, 240-241. Ms. Krivo, at the June 12 afternoon Public Input Hearing, testified that PECO's services "are not things that are discretionary or that households can just give up. They are essential." Tr. 240. Due to its essential nature, when customers are faced with difficult choices regarding what costs to ration each month, those customers put themselves and the others living in their household at risk.

PECO's customer assistance program (CAP) was also identified as an insufficient measure to preserve affordability. Mr. Mitchell Chanin, at the June 12 evening Public Input Hearing described it as the "one dollar over problem," or "[i]f you make a dollar over the [CAP] threshold you're still poor, you're still struggling to pay your bills." Tr. 335. While CAP improves affordability for qualifying customers, it provides little assistance for low-income customers who are not enrolled or for low-to-middle income customers slightly above the threshold. Tr. 128. As CAP thresholds are not related to the rates charged, but to monthly income relative to the Federal Poverty Guidelines, an increase in rates for a customer earning one dollar above the threshold will see no affordability assistance for increased PECO rates. Tr. 335. Further, customers enrolled in CAP can still struggle under unaffordable energy burdens. Tr. 459.

Testimony was also presented about how customers living on fixed incomes would struggle to afford increased rates. Tr. 578. PA Representatives Sappey and Borowski both testified regarding the substantial number of senior citizens in PECO's suburban service territory. Tr. 128, 166. Retired PECO customers, or other customers living on fixed income, will be disproportionately affected by rate increase due to less ability to adapt financially to a rate increase and the smaller

incremental increase in fixed payments annually, compared to the frequency with which PECO rates increase. Tr. 515.

In sum, the majority of public input hearing testimony referenced affordability – namely, that current PECO rates are unaffordable and that any increase in rates will present a substantial burden on customers in PECO's service territory. Due to the demographics of PECO's service territory, with a high number of already highly or severely energy burden households and customers living on fixed incomes, maintaining affordability of rates was of paramount importance to PECO's customers. Failing to consider affordability could create or exacerbate public health crises due to significant energy burdens, resulting in customers needing to pick between essentials – eating, heating, or treating – when putting together their monthly budget. While some witnesses recognized the benefits of CAP for improving PECO affordability, they also identified that CAP is not a silver bullet to unaffordable rates. As a result, customers requested that the Commission consider the impact of increasing already unaffordable rates when issuing its decision in this proceeding.

2. Aqua Rate Increase Simultaneous Impact on PECO Customers

Eight unique customers testified regarding the increased utility burden posed by simultaneous increases in electric, gas, water, and wastewater rates. Tr. 94, 106, 113, 128, 166, 170, 516, 527. While the rate increase proposed by Aqua at Docket Numbers R-2024-3047822 and R-2024-3047824 is not the subject of the instant proceeding, PECO customers raised concerns that the confluence of rate increases between PECO's gas and electric rates and Aqua's water and wastewater rates could create undue burdens on PECO customers following the effectiveness of such rates. PA Representative Borowski, at the June 6 evening Public Input Hearing described the multiple rate increases as a "stressor on many residents." Tr. 128. These customers – who, by and large are customers of both PECO gas and electric service – specifically urged the Commission to "take into consideration . . . all utility increases" when rendering a decision in this proceeding, as stated by Ms. Duncan at the June 10 evening Public Input Hearing. Tr. 170. As a result, the multiple simultaneous rate increases can, as stated by PA Representative Sappey, "put[] undue financial burden on customers" and PECO's rate increase request should be considered in the context of other cost increases.

3. Fixed Charges

Nine unique customers testified regarding the impact of increased fixed charges on affordability. Tr. 336, 364, 434, 444, 455, 498, 520, 532, 539. Specifically, customer testimony identified that increase the portion of a customer's bill that they cannot control places a disproportionate burden on low-income and low usage customers, who have little control over reducing their utility bills. Tr. 364. As stated by Ms. Ibarra at the June 13 evening Public Input Hearing, PECO's "proposals include increased fixed charges, which disproportionately hurt low-income customers. . . Before we even flip the switch or turn on the stove, we're being hit with higher fees just for being connected. It's unfair and it's pushing us further into financial hardship." Tr. 498. Ms. Greenfeld, testifying at the June 13 evening public input hearing, similarly testified that "there's no way for customers to reduce those charges, such as by reducing their usage, their energy usage, or by improving the energy efficiency of their home." Tr. 520. In sum, PECO customers agreed that fixed charges are particularly harmful to low-income and low usage customers because they constitute a significant portion of the unavoidable energy burden. Tr. 289.

Furthermore, as stated by Mr. Mitchell Chanin at the June 12 evening Public Input Hearing, high fixed charges are "a disincentive to investment by customers in energy-efficient appliances, insulation and other measures to reduce their usage." Tr. 336. They result in weaker price signals for energy savings, including "reducing the payback on personal investments, energy efficiency, distributed solar and storage," an issue raised by Mr. Amernath at the June 13 evening Public input Hearing. Tr. 444. Customers seeking to conserve energy and reduce their usage – through, *inter alia*, installing energy efficient appliances or simply using less – are penalized by higher fixed charges, which cannot be reduced by such efficiency measures.

As proposed, the rate increase for residential customers disproportionately comes from fixed charges, instead of volumetric rates. Tr. 532, 539. Therefore, PECO's customers requested

that, if the Commission did authorize a rate increase, no portion of the rate increase borne by residential customers would come from increased fixed charges. Tr. 520. Minimizing the fixed cost of receiving PECO service creates more affordable rates while preserving customer incentives to reduce usage and earn returns on their conservation-oriented investment in efficient appliances.

4. Inflation

Twelve unique customers testified about the impact of inflation on their ability to afford their PECO bills. Tr. 93, 99, 106, 113, 118, 251, 459, 464, 515-517, 527, 531, 539. These customers agreed that, although costs may be increasing for PECO to provide service, cost increases in food, gas, rent, childcare, and other essential expenses are already squeezing low- and middle-income customers. Tr. 515. Several customers noted that wages have not kept up with the pace of inflation, especially when considering minimum wage, making it difficult to continue to afford increasing costs. Tr. 93, 118. Ms. Lu, at the June 12 afternoon Public Input Hearing, testified that, "the cost of living has increased in recent years, whether that's with food, housing, or in this case, utility bills. And so, while PECO's proposed rate increases will affect all customers, it ultimately will harm those already burdened by its high cost the most." Tr. 251. For customers already struggling to afford their living expenses – especially those living on fixed incomes – a PECO rate increase which compounds the other inflationary pressures increasing experienced costs would cause substantial harm. Tr. 527.

This is especially true in PECO's service territory, as Ms. Cohen testified during the June 13 afternoon Public Input Hearing, that "the cost of groceries increased more in Philadelphia than in any other us metro area[.] Pennsylvania also had the highest grocery price inflation of any state in the nation." Tr. 464. As a result, PECO's customers testified that PECO should not be able to limit its own exposure to inflationary pressures by pushing those pressures on to its customers; instead, the burden of increased costs should be shared by the Company and its customers. Tr. 531.

5. Limited English Proficiency Households

Four customers testified that PECO should expand access to households with limited English proficiency by providing essential documents, such as termination notices, in other languages. Tr. 254, 275, 339, 365. Mr. Mitchell Chanin, at the June 12 evening Public Input Hearing, testified that "it's very hard to get good information about Customer Assistance Program, LIURP or other related programs in a language other than English." Tr. 339. A service territory as diverse and densely populated as PECO's should provide essential notices and assistance to customers in multiple languages, and ensure that – if such notices and assistance are not provided in multiple languages – that customers are provided information regarding translation and other services. Specifically, PECO should be willing and able to "provide information about [the Low-Income Usage Reduction Program, or] LIURP, about the Customer Assistance Program and other Universal Service Programs in multiple languages," according to Ms. Lu, who testified at the June 12 afternoon Public Input Hearing. As PECO's customers testified, ensuring that essential documents, such as termination notices and CAP information, are available to all customers within PECO's service territory – including customers who have limited English proficiency – is essential to providing adequate service.

6. LIHEAP Auto-enrollment

Six customers testified that PECO should automatically enroll customers who seek funding from the Low-Income Home Energy Assistance Program (LIHEAP) in its CAP. Tr. 223, 253, 275, 339, 365, 465. PECO's customers testified that PECO should be proactive in enrolling customers in its CAP if the customer is a recipient of LIHEAP assistance, instead of waiting for the customer to apply for CAP. Tr. 339. Proactive enrollment would permit low-income customers who qualify for CAP but are not enrolled to immediately see the benefits of CAP, including limiting monthly bill payments to a fixed percentage of income, without the need to apply for multiple programs. Tr. 245. Due to the significant number of qualifying but not enrolled low-income customers, using LIHEAP data to automatically enroll customers in CAP would help make rates affordable for the PECO customers who need it most. Tr. 465.

7. LIURP Funding and Access

Six customers testified that PECO should expand funding for, and access to, its Low-Income Usage Reduction Program (LIURP). Tr. 223, 253, 275, 337, 365, 465. As stated by Ms. Lu at the June 12 afternoon public input hearing, "improving the energy efficiency of homes can both reduce energy consumption and demand as well as reduce air pollution. That can be integrated with other Home Weatherization and Repair Programs offered to low and moderate-income households to reach as many eligible households as possible." Tr. 253. Mr. Mitchell Chanin, at the June 12 evening Public Input Hearing proposed that an "increase in LIURP spending should be proportionate to the increase in rates." Tr. 337. PECO's customers recognize the benefits that LIURP provides for low-income households, reducing bills and usage for qualifying customers, and recognize that the benefits of LIURP should be wider-spread than at present. Tr. 275.

8. Weather Normalization Adjustment

Four customers testified specifically against PECO's proposed weather normalization adjustment (WNA). Tr. 100, 451-453, 506-507, 540. These customers are opposed to the WNA because it rewards PECO for lower usage of its distribution system, the issues arising from Philadelphia Gas Works' (PGW) WNA in May 2022, because it makes it more difficult for customers to budget, and because it is difficult to understand.

Mr. Nelms, at the June 13 afternoon Public Input Hearing, testified that "[t]he WNA is essentially a charge for a product which customers do not use. It's unclear to me why I would be paying additional money to PECO because the weather was warmer in the winter and I did not use their product." Tr. 451. The disconnect between increased charges, from the WNA, and lower usage from a warmer winter is confusing to consumers, who testified that they would expect their bill to go down as temperatures increase during winter months, not down only a small amount. *Id.* Relatedly, Mr. Uhlman, at the June 6 evening Public Input Hearing, testified that the WNA rewards PECO for its past and future role in increasing local temperatures – through its carbon-emitting involvement in natural gas distribution service and well as reliance on natural gas-fired electrical generation – and improperly incentivizes PECO to continue involvement in carbon-emitting practices for increased WNA charges during progressively warmer winters. Tr. 100.

Mr. Nelms also discussed how PGW's WNA resulted in additional charges to customer bills in excess of $200 in May 2022, requiring PGW to reimburse $12.6 million in collected WNA charges due to the extreme levels of overcollection. Tr. 452. He reported that PGW's filings with the Commission regarding its WNA showed PGW collected over $20 million in WNA charges – net of credits – for the 2017, 2018, 2019, and 2020 heating seasons. *Id*. PECO customers are and concerned about the potential that PECO's proposed WNA will result in greater charges than credits if it is approved.

WNAs can also pose difficulty for customers with little month-to-month financial flexibility, such as low-income customers and those on fixed incomes. As Ms. Vanbuskirk testified at the June 13 evening Public Input Hearing, the WNA is confusing "you never know what the weather is going to be. And then that's going to be a charge where they're going to take it off your bill. But when you're on a fixed income, that is hard to calculate what I'm going to pay." Tr. 540. Mr. Nelms, as a senior citizen living on a fixed income, is "currently budgeting for increases in utilities, taxes, medical payments, food and insurance. As these costs continue to rise during the current economy, my fixed income remains stagnant." Tr. 453. The testimony shows that customers on fixed incomes or who qualify as low-income, as stated above regarding fixed charges, prize the portion of their bills over which they have control. As Ms. Vanbuskirk and Mr. Nelms identified, customers affected by the WNA will be subject to an additional portion of their monthly bill over which they have no control, in addition to fixed charges.

Furthermore, the unpredictability of the variation between actual and historical weather makes it difficult to budget for potential WNA charges. Tr. 540. Budgeting plays an important role for low-income customers and those on fixed incomes to ensure that as many essential costs are paid-for as possible; unpredictability when budgeting can place a significant burden on customers who rely on it. Tr. 458-59.

Mr. Tracey, at the June 13 afternoon Public Input Hearing, testified that he puts in the time and can figure out most of his gas bill but he cannot wrap his head around the proposed WNA and why he would be charged more if it's warmer in the winter and less if it's colder. Tr. 505. He also pointed out that temperatures are much different in PECO's service territory, even within one county, and does not understand which temperature PECO will use to decide whether it's "warmer" or "colder" out. Tr. 505. He stated "I go to a store, you buy something, you know what you're

paying for. But this - this WNA charge, no clue how its calculated, how it will be calculated, and that's going to lead to confusion. And people, a lot of people don't put the time in and they'll just pay it because they don't understand it. And I want to understand what I'm paying. And it seems to me to be like a paragraph on my bill trying for them to break it down, to explain to me what I'm paying for. And I don't appreciate that." Tr. 506-507.

For these reasons, the PECO customers who testified regarding the WNA universally opposed PECO's proposal to implement it. When customers were asked by PECO if they had taken part in a PECO survey regarding interest in a WNA, the customers denied ever having taken part in such a survey. Tr. 536-537, 542-543. The customers' testimony indicates that if the same customers had participated in a survey to provide PECO their thoughts regarding the WNA, they would have requested PECO not propose a WNA in this proceeding. Tr. 451-453.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Nicholas A. DeMarco, hereby state that the facts above set forth in my Supplemental Direct Testimony, OCA Statement 5 Supp., are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 16, 2024

Signature: */s/Nicholas A. DeMarco*
Nicholas A. DeMarco

Address: Office of Consumer Advocate
555 Walnut Street
Fifth Floor
Harrisburg, PA 17101

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

DIRECT TESTIMONY

OF

Ron Nelson

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

June 17, 2024

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I. Introduction

Q. Please state your name and business address.

A. My name is Ron Nelson. My business address is 1311 SE 53rd Avenue, Portland, Oregon, 97215.

Q. By whom are you employed and in what capacity?

A. I am the President and Founder of Volt-Watt Consulting LLC.

Q. Please describe your professional experience, educational background, and qualifications.

A. In 2024, I founded Volt-Watt Consulting LLC ("Volt-Watt"). Volt-Watt specializes in providing clients regulatory services in the areas of cost-of-service modeling, regulatory innovation, performance-based regulation, distributed energy resources ("DER"), rate design, renewable program development, grid modernization, gas transition issues, new grid technologies, and electric vehicles ("EVs"). I have worked with numerous consumer advocates, nongovernmental organizations, utilities, and public service commissions on issues related to cost-of-service modeling, rate design, grid modernization, distributed energy resource valuation and integration, and performance-based regulation. Prior to founding Volt-Watt, I was a Senior Director at Strategen Consulting and worked in various roles for six years.

Before joining Strategen in early 2018, I worked for the Minnesota Attorney General's Office for almost five years, where I led that office's work on cost of service, rate design, renewable energy program design, performance-based regulation, and utility business model issues. Before that, I worked for two universities and the United States Geological Survey as an economic researcher. I have a Master of Science from Colorado

State University in Agriculture and Resource Economics, and a Bachelor of Arts in Environmental Economics from Western Washington University, where I also minored in Mathematics. My resume and curriculum vitae is attached as Exhibit RN-1.

Q. Have you previously testified in regulatory proceedings?

A. Yes. I have testified in approximately 70 proceedings in Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, New Hampshire, North Carolina, North Dakota, Michigan, Minnesota, Ohio, Oklahoma, Pennsylvania, South Carolina, Utah, and Vermont. The issues covered in these proceedings include marginal and embedded cost of service studies, revenue apportionment, rate design, load management, renewable program design, fuel clause adjustments, formula rates, decoupling, performance-based regulation, multi-year rate plans, performance metrics, distributed energy resource ("DER") interconnection, DER compensation, DER integration, EV infrastructure investments, pilot frameworks, automated metering infrastructure, prudence review, distribution system planning, capital investment plan review, and smart inverter integration, among other topics.

I have also advised the Hawaii, Colorado, Kentucky, and Connecticut Public Service Commissions, and have supported clients in Federal Energy Regulatory Commission ("FERC") proceedings.

Q. Have you previously provided testimony before the Pennsylvania Public Utility Commission?

A. Yes. I submitted testimony on behalf of the OCA regarding PPL Electric Utilities' Distributed Energy Resources (DER) Management Plan in Docket No. P-2019-3010128. I also submitted testimony on behalf of the OCA regarding PECO Energy Company – Electric Division's Electric Vehicle ("EV") Charging Pilot in Docket No. R-2021-3024601

as well as Duquesne Light Company's Transportation Electrification (TE) Programs in Docket No. R-2021-3024750. I most recently testified on behalf of OCA in Philadelphia Gas Works' (PGW) proceeding to revise its weather normalization adjustment (WNA), Docket Nos. R-2022-3034229 and P-2022-3034264.[1]

Q. What is the purpose of your testimony in this case?

A. The purpose of my testimony is to respond to the Direct Testimony of PECO Energy Company (PECO or Company) witness Michael J. Trzaska's (Statement No. 3) regarding PECO's Weather Normalization Adjustment (WNA) proposal. I begin by discussing the objective of the WNA. After that, I analyze the Company's proposal, including the specific technical mechanism, lack of consumer protections, and the minimal analysis used to support said components of the Company's proposal. I provide support for my recommendation that the Commission should reject PECO's WNA proposal.

Q. Do you have specific qualifications related to the WNA?

A. Yes. I have testified and supported state commissions on the topics of full and partial decoupling, the WNA being a form of partial decoupling, for approximately a decade across several proceedings. My testimonies and advisory services have included how to design the technical mechanics of decoupling mechanisms as well as the role the decoupling mechanisms play within the broader regulatory framework. See Exhibit RN-1 for additional information. Of direct significance here, I served as an expert witness for the OCA regarding a rate investigation resulting from a Petition for Emergency Order that Philadelphia Gas Works (PGW) submitted in response to the dramatic customer bill

[1] I note that the referenced PGW cases were initiated as a direct result of PGW's Petition for Emergency Order at Docket No. P-2-22-3033477, which requested that the Commission approve tariff modifications to suspend PGW's application of its WNA for May 2022.

increases that occurred as a direct result of its WNA. As I will describe below, while not identical, PGW and PECO serve customers in neighboring service territories. Additionally, one of the central flaws that led to PGW's WNA-imposed billing emergency, exists in Peoples' proposal as well.

Q. Have you prepared Exhibits to accompany your testimony?

A. Yes. I have attached Exhibit RN-1 through RN-6 to my testimony. In total, these exhibits include my Resume, an outline of the factors under section 1330 of the Public Utility Code concerning PECO's WNA, and several of PECO's identified discovery responses that I reference in my testimony.

Q. Please summarize your conclusions and recommendations.

A. The Company's proposed WNA is unreasonable and unsupported. The WNA will shift excessive risk from shareholders and the utility to ratepayers. The Commission should reject the Company's WNA proposal.

Q. Does your recommendation for the Commission to deny WNA also mean that you reject climate change and the increase in temperature as a legitimate issue that a gas utility must address?

A. No, quiet to the contrary. The Company's WNA proposal highlights many challenges ahead for gas utilities. Most pertinently, climate change is lowering sales during the winter. Climate change, in combination with other industry factors that reduce the need for gas throughput, necessitates action be taken by the Commission to better understand the actions taken by gas utilities to ensure that ratepayers are paying just and reasonable rates now and in the future. However, as I explain below, shifting weather-related revenue risks to consumers is not a sustainable near- or long-term solution. In fact, the WNA treats a

symptom that gas utilities feel from climate change, but ignores the systemic regulatory and business models issues facing the utilities that are likely to only worsen without significant reforms.

Q. If the Commission determines to approve PECO's WNA, are there any conditions of approval that you would recommend?

A. Yes. If the Commission approves the WNA proposal, I recommend the following:

- The Commission require PECO to update its most recent long-term infrastructure improvement plan, requiring:
  - Publicly filed workpapers documenting all inputs and assumptions about its planned infrastructure growth with limited use of confidentiality;
  - Contract with a third-party to develop a range of load forecasts to inform the updated LTIIP; and,
  - Contract with a third-party to develop electrification assumptions—including cost, availability, and technical specifications—for inclusion in the utility's future gas sales forecasts and updated LTIIP.[2]

Q. Are there any other conditions that the Commission should consider if it rejects your primary recommendation and determines to approve the WNA?

A. Depending upon information that develops during the course of this case, there may be proposals that I am reserving the right to consider; however, at this time, on the facts available regarding PECO's proposal, there are simply too many concerns to convert it into a viable proposal within this case.

[2] The scope of work should be reviewed and approved by the Commission.

II. Weather Normalization Adjustment

Q. What is a Weather Normalization Adjustment (WNA)?

A. At a high-level, a WNA is a regulatory adjustment mechanism that adjusts a customer's bill due to variations from "normal weather" as calculated by the utility. The WNA is intended to address weather aberrations and levelize the utilities revenue. During billing periods that are warmer than normal weather, the Company will "undercollect" revenue from customers based on their targeted revenue requirement, and an adjustment in the form of a surcharge is applied to the customer's bill. When the weather is cooler than normal, the Company will "over collect" revenue from customers based on their targeted revenue requirement, and an adjustment in the form of a credit is applied to the customer's bill.

Q. How does PECO propose to implement the WNA?

A. PECO proposes to apply the WNA to residential and non-residential customers receiving service under GR and GC Rate Schedules. PECO indicates that the WNA will be effective for bills rendered in the months of October through May and that it will adjust the amount billed to each customer to offset the impact of actual heating degree day (AHDD) variations from normal heating degree days (NHDD), adjusted for a 1% deadband. PECO plans to adjust billings on a current monthly basis and to use adjustment factors that it claims will be representative of each customer's consumption characteristics.[3]

Q. What is a deadband?

A. The deadband provides a range of outcomes with the WNA that would not require any adjustment to be made through a surcharge or credit. For example, having a 5% deadband

[3] Trzaska Direct Testimony (PECO Statement No. 3) at 66.

would means that there are no credits or surcharges, if revenues stay within plus or minus 5% of normal weather revenues. The larger the deadband the further away revenues can stray from normal weather revenues. As will be evident later, the larger the deadband, the less risk that shift to ratepayers due to the fact that winters are warming and the number of HDDs are decreasing. Here, PECO proposes a 1% deadband.

Q. What benefits does the Company claim will be created with the WNA?

A. The Company claims that the WNA will: (1) "provide customers with more predictability in billing, which will better enable customers to budget and pay their bills and mitigate the impact of higher bills during severely cold months;" and (2) "provide PECO with a greater certainty in its ability to earn the distribution revenues authorized by the Commission when setting rates."[4]

Q. Why does PECO claim the WNA is needed?

A. PECO explains that its revenues are collected through fixed and volumetric rate components. The fixed portion is collected through a customer charge from residential customers that does not vary month to month. The volumetric rate component varies with a customer's monthly gas consumption. The volumetric rate is most influenced by weather conditions because a customer who heats their home with gas will use more gas when it is colder. Both customers' fixed and volumetric rate components are based on sales forecasts using weather normal assumptions. Weather fluctuations mean that the utility's actual revenues differ from its forecasted revenues because the weather deviates from the forecasted normal prediction.

[4] Trzaska Direct Testimony (PECO Statement No. 3) at 66.

Q. Do you have any concerns with the Company's claimed benefits and need for the WNA?

A. I have several concerns with the Company's claimed benefits and need for the WNA. I divide my concerns into; (1) risk shifting to ratepayers, (2) the lack of support the Company offered for its proposal, and (3) the unreasonable design of the WNA. I note that my concerns should be read in concert with those of other OCA witnesses, including OCA witness Roger Colton, who addresses the fact that customers would gain better rate stability and predictability from enrolling in budget billing rather than through PECO's proposed WNA, and Nicholas DeMarco, who identifies the lack of transparency for consumers in the WNA design.

A. The WNA shifts risk from shareholders and the utility to ratepayers

Q. What are your concerns related to risk shifting?

A. The WNA is one of many types of adjustment mechanisms used to shift risk onto ratepayers and away from the utility and shareholders. The decision to shift risk away from a utility and its shareholder to ratepayers should not be made lightly. It is important to remember that utilities have borne weather risk for over a century. It is also important to understand why, after over 100 years, the gas utility will now be asking its customers to bear the risk. I can confidently say it's not to benefit ratepayers. If shifting weather risk was all about benefiting ratepayers, regulators would likely have shifted that risk a century ago. Prior to approving a WNA, regulators should evaluate the broad regulatory framework to ensure that risk sharing across shareholders and ratepayers is appropriately balanced.

Q. Do you have additional risk-related concerns?

A. Yes. My second risk-related concern is the impact that climate change is having on natural gas utilities. Climate change is leading to a reduction of heating degree days during the winter and lower sales. The trend in lower sales due to rising temperatures is a threat to the natural gas utility business model. The WNA removes the impact of the weather to the Company's sales and makes the utility "whole." Implementing the WNA would effectively shift climate change risk from the owner and operator of the natural gas distribution system to its customers who now carry the burden of making the Company "whole" if they do not use as much gas as the Company forecasted due to conditions outside their control, the weather. It is not a prudent decision to shift climate risk to customers because we know that climate change will require the utility to make several systemic changes, as discussed below in my recommendations. Without the utility bearing the full risk of climate change, it is less likely to make prudent decisions about its investments and planning processes. The implementation of a WNA will likely have negative and unintended consequences on natural gas utilities, by making them complacent to the impacts of climate change to their customers and their system, and related, risks the detriment of ratepayers.

Q. Have you identified any other risk-related concerns?

A. Yes. My third concern is that applying the WNA only to gas operations creates additional asymmetric risk shifting away from shareholders and onto ratepayers. Summers and winters are getting warmer. It is not reasonable for regulators to allow utilities to pick and choose whether or not they implement WNA, and other decoupling mechanisms. The mechanisms are either beneficial or not. It is illogical to claim it is only good for gas ratepayers and not PECO's electric ratepayers who are bearing the risk of climate change

through increased cooling costs in the summer without recognition by the utility that with a decrease in HDDs there is also an increase in cooling degree days. This asymmetry is particularly apparent in a utility like PECO who serves customers as both a gas and an electric company in several of its counties.

I address each of these concerns in greater detail below.

i. Without significant regulatory changes and incremental policy commitments, the WNA creates an unfair risk shift to ratepayers

Q. Why do natural gas utilities like PECO propose WNAs and other decoupling mechanisms?

A. Natural gas utilities propose WNA and other decoupling mechanisms to stabilize revenues and insulate shareholders from revenue risk associated with weather and other factors. As I explained above, PECO has identified revenue stabilization as a goal of the WNA. I note that there are several approaches to stabilizing a utility's revenues. Full decoupling "enables utilities to offset the effect of revenues, of fluctuations in sales caused by customer participation in energy efficiency programs, deviations from 'normal' temperature patterns, (and) economic conditions … ."[5] While a partial decoupling mechanism addresses one or two of the factors of the full decoupling mechanism; making the WNA a form of partial decoupling.

Any adjustment mechanism, including the WNA, "effectively shifts the risk associated with recovery of the expense in question from shareholders to customers, because … the company is able to change its rates to recover its costs on a current basis, without any negative effect on the bottom line and without the expense and delay that accompanies a

[5] See https://www.spglobal.com/marketintelligence/en/documents/adjustment-clauses-state-by-state-overview.pdf

rate case filing."[6] Because the WNA shifts risk onto ratepayers, its reasonableness should not be evaluated in isolation. Instead, the WNA should be complemented by robust regulatory changes, including explicit incremental commitments to improve in key policy areas, to ensure benefits are created for customers and achieving public policy outcomes.

Q. Can you provide any examples of jurisdictions that enacted a more robust regulatory framework to complement decoupling?

A. Yes. A few jurisdictions have invested years of the commission's and stakeholder's time to carefully craft robust performance-based regulation frameworks paired with transparent planning processes, such as Hawaii, Illinois, and Connecticut. Within these processes, especially in Hawaii and Connecticut, decoupling mechanisms have been crafted in a way that weighs the risk shifting between several regulatory mechanisms.[7] Only by weighing and shifting the broader regulatory framework can full or partial decoupling be implemented in a way that is fair to ratepayers. Broad regulatory reform with specific incremental policy improvements are necessary because the weather is one of the primary predictors of utility revenue; meaning that the WNA addresses one of the utilities, and shareholders, largest revenue risks. Implementing any form of decoupling, including the WNA, should be done methodologically, otherwise it will only benefit shareholders and the utility. PECO has proposed no such process nor have they committed to any improvements in performance or achievement of incremental policy goals.

[6] See https://www.spglobal.com/marketintelligence/en/documents/adjustment-clauses-state-by-state-overview.pdf
[7] See Hawaii PUC Docket No. 2018-0088. See Also CT PURA Docket No. 21-05-15.

a. Climate change exacerbates an already inequitable risk shift

Q. Are there issues outside of regulatory changes and policy commitments that regulators should consider when weighing whether to approve a WNA?

A. Yes. The number of heating degree days (HDDs) during winter months are decreasing, according to the Company's own analysis.[8] As I noted above, customers will experience a surcharge when weather is warmer than normal in the winter. Obviously, if winters are getting warmer (i.e., HDDs are decreasing), customers are more likely to get a surcharge than a credit, which requires a higher number of HDDs than normal. The Company conducted an analysis on WNA that suggests ratepayers are far more likely to receive a surcharge than a credit based on the last 10 years.[9] I explain more about these results below.

1. The only analysis produced by the Company was on the WNA's revenue impact on the Company and shareholders[10]

Q. What analysis did the Company conduct to evaluate the WNA?

A. The only analysis that has been produced, to my knowledge, is analysis of the WNA's revenue impact on the Company and its shareholders. Notably, the Company has provided no customer bill impact analysis and no analysis on the specification of its WNA design, issues I address later.[11] The analysis appears to be a sensitivity analysis on different deadband options because the results appear to be a sensitivity analysis on utility revenues under 1%, 3%, and 5% deadbands. However, the Company did not include an explanation

[8] See PECO-Gas response to Attachment OCA-15-1(a) and Attachment OCA-10-4(a), attached as Exhibits RN-2 and RN-3, respectively.
[9] See PECO-Gas's response to OCA-10-4 and Attachment OCA-10-4(a), attached as Exhibit RN-3.
[10] See PECO-Gas's response to OCA-10-4 and Attachment OCA-10-4(a), attached as Exhibit RN-3.
[11] See PECO-Gas's response to OCA-10-4 and Attachment OCA-10-4(a), attached as Exhibit RN-3.

of the analysis or supporting workbooks to provide transparency into the calculations or objectives of the analysis. The deadband proposed by the Company is 1% and would not make any WNA adjustments if weather conditions remained within plus or minus 1% of the revenue collected under normal weather.

Q. What did the Company's WNA revenue analysis show?

A. The Company's analysis demonstrates that shareholders will be the primary beneficiary of the WNA.[12] Some of the takeaways include:

- Eight of the last ten years have been warmer than normal, resulting in an overall surcharge to residents.
- The residential class would have been surcharged between $94-$110 million over the last ten years.
- While there has been a total of 323 HDDs that were colder than normal using monthly true-up, there have been over 10 times more HDDs (3,388!) that are warmer than normal using the same monthly true-ups over the last 10 years of winter.
- Ratepayers will be harmed by severely warmer months, and less by severely cold months, based on the Company's historical data.

Q. Based on the Company's definition of normal weather, do warmer and colder HDDs occur with similar frequencies and magnitudes?

A. No, not based on the data the Company provided. The figure below demonstrates that months have been warmer than normal more frequently and have deviated further from normal by a higher magnitude compared to colder HDDs.

[12] See PECO-Gas's response to OCA-10-4 and Attachment OCA-10-4(a), attached as Exhibit RN-3.

Figure 1

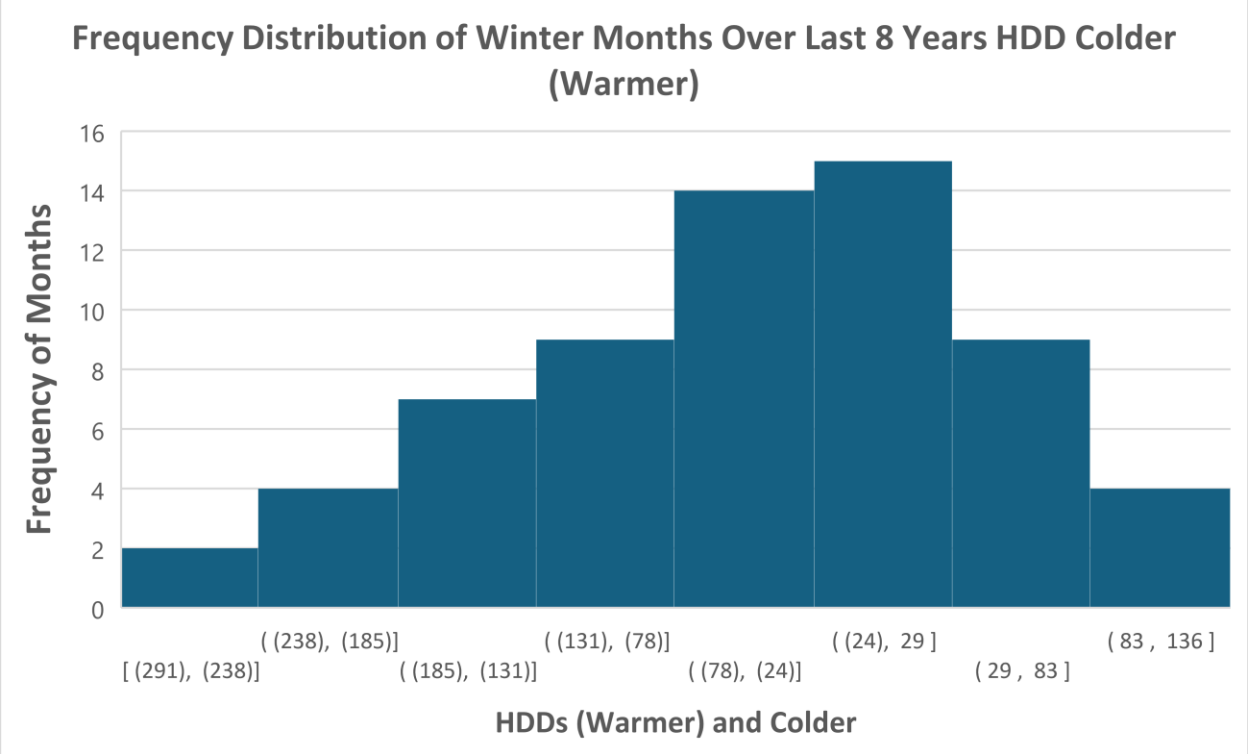


Figure #1 above is a frequency distribution graph showing the deviation of colder and warmer HDDs from normal HDDs. The y-axis is the frequency in which a monthly true-up deviated within the identified group that is on the y-axis. The x-axis displays HDD groups based on a range of HDD deviation from normal. The warmer days are in parenthesis. For example, the second group from the left is defined as monthly true-ups that were warmer than average by 238 to 185 HDDs, which occurred 4 times over an 8 year period. The extreme left group shows the largest months deviations from normal, which were 291 and 238 HDDs warmer than normal. The far right group demonstrates that colder days have been far less extreme and have only deviated by 83 and 136 HDD from normal.

Overall, 70% of months have been warmer than normal. This is demonstrated by the warmer HDD months beginning in the group third from the right. Figure 1 suggests that ratepayers will receive a surcharge 70% of the time. Furthermore, it suggests that the surcharge will be larger than the credits because extreme warm weather has been more common than extreme cold.

Q. How do the deviations of HDDs impact revenue collection for the residential class?

A. Figure 2 below shows the results of the Company's back casted WNA true-ups.

Figure 2

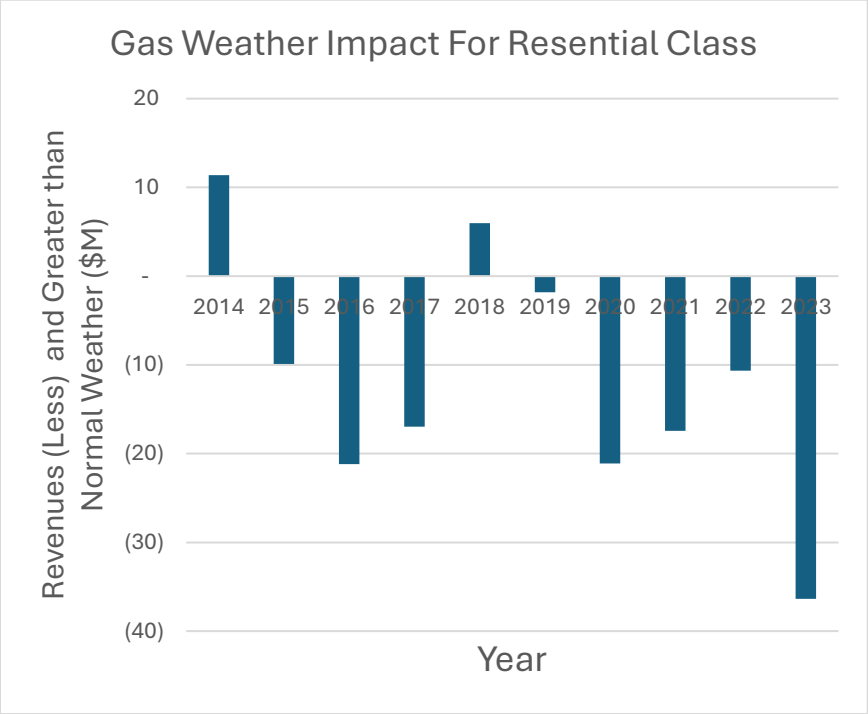


Figure 2 demonstrates that the residential class would receive significant surcharges under the WNA, based on data from the last 10 years.

Q. Why is it more likely that warmer weather occurs than colder weather?

A. Due to climate change, HDDs are decreasing.[13] Because HDDs are decreasing, the longer time horizon you use to define "normal weather" the higher the consumption that will be estimated in most circumstances. For example, the Company's gas sales forecast would drop 0.4% if a 20-year time horizon were used and 2% for 10-year, compared to the 30-year weather normalized forecast.[14] Assuming the Company used a 30-year period in its revenue analysis,[15] the last ten years of data is more likely to be warmer than normal because of rising temperatures. These factors demonstrate a clear and significant shift of climate change risk from shareholders and the utility onto ratepayers.

Q. Are there other issues with how the Company defines normal weather?

A. Yes. The Company uses a 30-year period to weather normalize its gas sales forecast. However, the Company is proposing to use a different definition of normal weather within the WNA. Specifically, the WNA defines normal HDD as reflecting "heating degree days associated with 'normal' weather during the billing period for the customer based on a 3-year average."[16] The Company does not provide any testimony or analysis to support the use of inconsistent definitions of normal weather.

Q. Are there other factors related to climate change that the Commission should consider prior to approving the WNA?

A. Yes. Utilities have been mitigating and operating with weather risk for over 100 years. Removing weather risk in the face of climate change will exacerbate the risk shift onto

[13] See PECO-Gas's response to OCA-15-1(a) and Attachment OCA-15-1(a), attached as Exhibit RN-2.
[14] See PECO-Gas's response to OCA-15-1(a) and Attachment OCA-15-1(a), attached as Exhibit RN-2.
[15] The Company did not provide workpapers with its analysis, nor did it define the variables in the spreadsheet provided.
[16] See Exhibit JAB-2, Original Page No. 84.

ratepayer to an even greater extent. As the Company's weather data and forecasts are demonstrating, HDDs are decreasing in the winter. Falling HDDs is an enormous problem for a business that largely derives purpose and revenue from space heating. Instead of mitigating this risk, the Company is attempting to shift it away from shareholders. However, shifting risk is not an effective means of mitigating risk. If you consider future scenarios with significant decreases in HDDs, the Company's cost of service will dramatically increase, while providing less of its service (i.e., heating) to its customers. Customers are unlikely to appreciate increasing costs, while decreasing consumption of the utility's service. The increasing cost of natural gas service will have serious implications on customer behavior, electrification being a major one.[17]

Q. Why is electrification a risk to utilities?

A. Electrification is rapidly increasing with one of the fastest electrified end uses being residential space heating with heat pumps. As natural gas rates increase, because of WNA adjustments and falling sales, among other things, electrification of space and water heating becomes increasingly cost effective for gas ratepayers. The Brattle Group has referred to this as the "Death Spiral for Gas Utilities," and has recommended immediate action be taken to improve natural gas planning processes as well as recommending sweeping regulatory changes.[18] Importantly, the Brattle Report does not mention WNAs as a strategy to address future risk. Instead, far more reaching and comprehensive reforms are needed. The climate change risk that the Company is attempting to shift onto ratepayers in this case,

[17] See Brattle's The Future of Gas Utilities Series. Available here: https://www.brattle.com/insights-events/publications/the-future-of-gas-utilities-series/

[18] See https://www.brattle.com/wp-content/uploads/2022/01/The-Future-of-Gas-Utilities-Series__Part-1.pdf See Also https://www.brattle.com/wp-content/uploads/2021/09/The-Future-of-Gas-Utilities-Series_Pt.-2-Evaluating-Strategies_Brattle-Sept-2021.pdf See Also https://www.brattle.com/wp-content/uploads/2021/11/The-Future-of-Gas-Utilities-Series__Part-3.pdf

is one of many natural gas regulatory issues that needs to be addressed comprehensively to ensure ratepayers are not saddled with excessive costs and risks.

Q. What should the Company do about decreasing HDDs?

A. The Company should be evaluating climate change's impact on its business and regulatory model, especially how it will impact revenues and its cost to serve. The current cost of service regulatory model is not likely to function well under decreasing sales and increasingly warmer winters. Gas utilities will need to rethink how they are investing in their system, how best to serve customers, and achieve state policy goals. However, permitting the Company to use regulatory band aid, like the proposed WNA, will only further delay tangible actions that could benefit ratepayers.

Q. What should the Commission do about decreasing HDDs?

A. The first step should be rejecting the WNA and keeping climate change risk within the Company and not shifting it to consumers. Instead, the Commission should require more transparent and comprehensive action related to gas utility planning processes, among other things. Recently, the Illinois Commerce Commission ordered three of its investor-owned gas utilities to undergo a future of gas proceeding, revisit the terms for line extensions, design an integrated resource planning process for gas, and begin more transparent capital planning processes, based on the changing dynamics within the gas industry.[19] The warming climate has enormous implications on consumers and these implications should not be haphazardly shifted onto to consumers with the WNA.

[19] See ICC Final Rate Case Orders in Docket Nos. 23-0067, 23-0068, and 23-0066.

Q. Did the Company's WNA revenue analysis have any shortcomings?

A. Yes. The Company's analysis was applied at the class level. While a class level WNA would likely address intra-class bill impact variations, the Company has proposed to apply the WNA at the customer-level. Applying the analysis to the class level omits customer-level bill impacts, and likely leads to less accurate revenue analysis results. The reason the analysis may be inaccurate is that when applying the WNA at the customer level, billing cycles are used and not monthly true-ups. It is unlikely that applying the WNA at the class level by month will yield the same results as applying it at the customer level by billing cycles, which add an unquantified error into the Company's only analysis.

ii. Recommendations

Q. How do you recommend the Commission address the fact that the WNA shifts climate change risk away from the utility and its shareholders and onto ratepayers?

A. First and foremost, I recommend that the WNA proposal be rejected. Based on the information presented, PECO has not shown that the WNA would in any way benefit customers. Furthermore, based on their limited modeling, it is difficult to propose changes to the WNA would "make it better." While I reserve the right to react to changes proposed by others and make suggestions in future rounds of testimony, the simple fact of the matter is that the WNA as proposed by PECO is flawed and should not be approved. However, if the Commission determines shifting climate change risk onto ratepayers is reasonable, along with any other consumer protections proposed in this proceeding, the Commission should require the Company to explicitly and transparently evaluate and incorporate climate change risk into the Company's load forecasting and planning processes. PECO's recently filed natural gas long term infrastructure improvement plan does not use the any

of the words "electrification," "weather," "climate change," "decreasing sales," or "(sales) forecast" once. These are all important risk factors and need to be transparently understood by regulators and stakeholders to ensure ratepayers are paying just and reasonable rates. Moreover, it is likely that Exelon is analyzing these risks, but its subsidiaries have not been required to share this information with regulators.[20] If the Commission approves the WNA proposal, I recommend the following:

- The Commission require PECO to updated its most recent long-term infrastructure improvement plan, requiring:
  - Publicly filed workpapers documenting all inputs and assumptions with limited use of confidentiality;
  - Contract with a third-party to develop a range of load forecasts to inform the updated LTIIP; and
  - Contract with a third-party to develop electrification assumptions—including cost, availability, and technical specifications—for inclusion in the utility's future gas sales forecasts and updated LTIIP.[21]

B. The WNA is not a just and reasonable component of alternative ratemaking

Q. What does the Commission consider when determining if an alternative distribution ratemaking mechanism is just and reasonable?

The Commission considers, among other things, the 14 distribution rate considerations:

[20] For example, Exelon is on the board of directors for EPRI. EPRI has conducted several studies on electrification and, at least, two significant studies on the impact electrification will have on gas demand. See Nelson Rebuttal and Attachments in ICC Docket No. 23-0067. Available here: https://icc.illinois.gov/docket/P2023-0067/documents/340150

[21] The scope of work should be reviewed and approved by the Commission.

(1) How the ratemaking mechanism and rate design align revenues with cost causation principles as to both fixed and variable costs.

(2) How the ratemaking mechanism and rate design impact the fixed utility's capacity utilization.

(3) Whether the ratemaking mechanism and rate design reflect the level of demand associated with the customer's anticipated consumption levels.

(4) How the ratemaking mechanism and rate design limit or eliminate interclass and intraclass cost shifting.

(5) How the ratemaking mechanism and rate design limit or eliminate disincentives for the promotion of efficiency programs.

(6) How the ratemaking mechanism and rate design impact customer incentives to employ efficiency measures and distributed energy resources.

(7) How the ratemaking mechanism and rate design impact low-income customers and support consumer assistance programs.

(8) How the ratemaking mechanism and rate design impact customer rate stability principles.

(9) How weather impacts utility revenue under the ratemaking mechanism and rate design.

(10) How the ratemaking mechanism and rate design impact the frequency of rate case filings and affect regulatory lag.

(11) If or how the ratemaking mechanism and rate design interact with other revenue sources, such as Section 1307 automatic adjustment surcharges, 66 Pa.C.S. § 1307 (relating to sliding scale of rates; adjustments), riders such as 66 Pa.C.S. § 2804(9) (relating to standards for restructuring of electric industry) or system improvement charges, 66 Pa.C.S. § 1353 (relating to distribution system improvement charge).

(12) Whether the alternative ratemaking mechanism and rate design include appropriate consumer protections.

(13) Whether the alternative ratemaking mechanism and rate design are understandable to consumers.

(14) How the ratemaking mechanism and rate design will support improvements in utility reliability.

52 Pa. Code §69.3302.

Q. What is the purpose of the Commission's policy statement for evaluating distribution rate considerations in the context of alternative ratemaking proposals?

A. The Commission's policy statement at 52 Pa. Code §69.3302 expands alternative ratemaking policy objectives to include reducing disincentives for promoting §1330 objectives. Additionally, the policy statement recognizes the goals of providing incentives to improve system economic efficiency and avoiding unnecessary future capital investments, while (1) ensuring adequate utility revenue to maintain the safe, secure and reliable operation of its system and (2) reflecting sound cost of service principles and a rate structure that is just and reasonable and considers customer impacts.[22] The above distribution rate consideration factors were adopted by the Commission in the *Fixed Utility Distribution Rates Policy Statement*, at Docket No. M-2015-2518883, on July 11, 2019, in an implementation proceeding resulting from the enactment of Section 1330 of the Public Utility Code, the portion of the Code relating to alternative ratemaking for utilities. Should the Company fail to carry its burden of proof that the proposed WNA is just and reasonable, as informed by the above factors, then the Commission should not approve the WNA.

[22] **§69.3301. Purpose and scope.** Federal and State policy initiatives promote the efficient use of electricity, natural gas and water through technologies and information, including distributed energy resources. The purpose of this policy statement is to invite the proposal, within a utility's base rate proceeding, of fixed utility distribution ratemaking mechanisms and rate designs that further promote these Federal and State policy objectives, the objectives of 66 Pa. C.S. § 1330 (relating to alternative ratemaking for utilities), and may include reducing disincentives for promoting these objectives, providing incentives to improve system economic efficiency, and avoiding unnecessary future capital investments while ensuring that fixed utilities receive adequate revenue to maintain the safe, secure and reliable operation of their distribution systems. At the same time, an alternative rate design methodology should reflect the sound application of cost of service principles, establish a rate structure that is just and reasonable, and consider customer impacts.

Q. In Statement No. 3, PECO's witness Trzaska evaluated the WNA under the Commission's policy statement factors and determined that the factors weighed in favor of approving the WNA. Do you agree?

A. I do not. I too reviewed the WNA in the context of each of the fourteen policy statement factors, and my analysis demonstrates that the factors weigh heavily against the WNA. For ease of reference, I included my analysis as Exhibit RN-4, and it reviews each of the factors in a manner that is responsive to witness Trzaska claims. I incorporate my analysis here, and in totality, it demonstrates that PECO's WNA is not a just and reasonable rate.

Q. Do you have a high-level observation from PECO's responses to the 14 distribution rate considerations?

A. Yes. For each of the responses that asked for the "impact," "stability," and whether the WNA incentives or disincentives a behavioral change, the Company responded with a qualitative declaration that was unsupported. Demonstrating impact or stability is inherently a quantitative issue, and the Company did not conduct any quantitative analysis. This fact renders most of the Company's responses meaningless. Stating that something will or will not have an impact is distinct from demonstrating and supporting whether or not a mechanism will have an impact. The Company has demonstrated nothing when it comes to the customer-level impacts of the WNA.

C. The Company did not provide quantitative analysis to support the implementation or design of its WNA

Q. What are your concerns related to the Company's lack of support and design flaws related to the WNA?

A. I have several concerns related to the lack of support and analysis conducted by the Company. My concerns include the Company's failure to: (1) conduct customer bill impact analysis, (2) evaluate the inclusion of shoulder months and how it impacts bill predictability and stability, (3) critically analyze the costs and benefits of its proposal, and (4) reasonably design the WNA.

Q. Why are you concerned that the Company did not conduct a customer bill impact analysis?

A. Any regulatory mechanism can have unintended consequences and results. The recent Philadelphia Gas Works (PGW) case demonstrated the detailed design parameters of a WNA matter. In that case, customers reported WNA surcharges of as high as $201.51 per month.[23] A WNA mechanism that creates this level of surcharges is unreasonable, and the Company has not provided any analysis to demonstrate its proposal will not have similar results.

Q. Does the Company's proposed deadband address your concern about bill impacts?

A. No. The deadband proposed by the Company is *de minimis*, provides almost no ratepayer benefit, and is not a substitute for analyzing potential bill impacts nor for a cap on bill impacts. Several state commissions have required that utilities have caps on decoupling mechanisms.[24]

[23] PGW Nelson Direct Testimony at 10.
[24] RAP Decoupling Design at 25 and 27

Q. Why were the WNA surcharges for PGW so high?

A. PGW's WNA mechanism was sensitive to shoulder months that border the winter; May and October. The sensitivity in shoulder months is likely caused by the higher likelihood of a heat wave during these months. PECO has included shoulder months within its WNA proposal with no analysis of potential customer bill impacts. It is likely that one or both months should be eliminated from the WNA. Another reason PGW's surcharges were likely high is that it, like PECO's proposal, makes monthly customer level adjustments as opposed to annual, class level adjustments. Adjusting at the class and annual levels lowers the volatility in rate adjustments.

Q. Did the Company conduct a cost-benefit analysis on the WNA?

A. No. As demonstrated throughout my testimony, the claimed ratepayer benefits of the WNA are illusory. Specifically, the Company claims that the WNA will "provide customers with more predictability in billing, which will better enable customers to budget and pay their bills and mitigate the impact of higher bills during severely cold months."[25] While I have indirectly addressed this claim above, I break the Company's claim into several pieces for clarity.

(1) The Company claims improved predictability in billing. I do not know exactly what benefit the Company is claiming from this statement. First, the WNA does not allow the customer to predict what their next bill will be. However, as shown by OCA witness Roger Colton, the Company has a budget billing option that is more effective at allowing customers to predict bills and keeps bills more stable. The budget billing option provides customers with the option to receive an averaged bill for several months in a row, which

[25] Trzaska Direct Testimony (Statement No. 3) at 66.

enables predictability. No such prediction can be done with the WNA. In fact, the customers would need to forecast the weather to do so and understand how their billing cycle will interact with the WNA charge. For these reasons, the WNA does not improve predictability as compared to currently available billing options.

(2) The Company claims the WNA will better enable the ratepayers to budget. No evidence or support was provided for this statement. Again, the budget billing option is also a superior rate option if budgeting is desired for customers. Most importantly, no bill impact analysis was conducted, so the Company does not know how variable bills will be and therefore how challenging it will be to budget for the WNA surcharge. It seems unlikely that PGW customers thought that a $200 per month charge "enable" them to budget better. Additionally, no WNA design sensitivity was conducted on the months of May and October, so bills could be less stable for a portion of residential customers and harder to budget for.

(3) The Company claims the WNA will help ratepayers pay their bills. Based on the Company's own analysis, affordability will decrease under the WNA. The WNA will most likely lead to surcharges, only negatively impacting affordability and ratepayers' ability to pay bills. The Company's claim that the WNA will improve affordability is false, based on the only analysis the Company conducted.

(4) The Company claims that the WNA will mitigate higher bills during severely cold months. The Company did not provide a customer level bill impact to support this statement. Without such analysis, it is a speculative and baseless claim. The Company has not demonstrated that credits for cold weather months will be higher in magnitude than surcharges during warmer than normal months. Based on the data provided by the

Company, the average class impacts suggest that surcharge impacts may be larger than credits. And again, if the objective is to smooth large winter bills, the budget billing tariff would mitigate higher bills during the winter months better. Based on the Company's own data and analysis, customers will mostly be harmed by high surcharges because of warmer weather.

To summarize, the Company has not demonstrated any tangible benefits that will be created by the WNA that accrue to ratepayers. PECO has not presented any data to indicate that customers are interested in the WNA for purposes of bill stability. Most, if not all, of the benefits claimed are already provided through a superior budget billing option.

Q. Did the Company quantify the costs of implementing the WNA?

A. No.[26] The Company does not know currently know the "IT changes required to implement the WNA, the total costs, (or) timeline … ."[27]

Q. Does it concern you that the Company does not understand the scope of the IT changes required, the total costs, and timeline to implement the WNA?

A. Yes. The IT changes related to billing can be costly. Not having an estimate of the costs and timeline at the time of the proposal is unusual, since the cost of implementation could be a key factor in determining whether a proposal is reasonable.

D. The Design of the WNA is flawed

Q. Is the Company's proposed WNA mechanism designed well?

A. No. The Company has designed the WNA to maximize the revenue benefits of the mechanism and omitted components for consumer protections. Examples of this include:

[26] See PECO-Gas's response to OCA-14-2, attached as Exhibit RN-5.
[27] See PECO-Gas's response to OCA-14-2, attached as Exhibit RN-5.

- The deadband is as small as possible, maximizing the benefit to the utility and shareholders.
- There is no cap on bill impacts, increasing the potential for unintended and unexpected significant bill impacts.[28]
- The adjustments are made at the customer level and not the class level. Doing so, increases the variability of bill impacts within the customer classes.
- The adjustments are made monthly, which are as frequent as possible. This minimizes regulatory lag and will result in the Company collecting surcharges as rapidly as possible. Longer adjustment periods would reduce the variability and magnitude of the adjustments.
- The months of May and October are included, which will likely improve revenue stability for the Company while increasing bill impacts for ratepayers.
- The WNA uses an inconsistent and unsupported definition of normal weather.

III. Conclusion

Q. Please summarize your conclusions and recommendations.

A. The Company's proposed WNA unreasonably shifts risks away from shareholders and the utility and onto ratepayers. The Company has designed the WNA to largely maximize the benefits for shareholders and the utility to the detriment of ratepayers. Importantly, the Company has failed to provide analysis of any customer impacts associated with the WNA. For all of these reasons, the Commission should reject the Company's WNA proposal.

Q. Does this conclude your Direct Testimony?

A. Yes, it does.

[28] See PECO-Gas's response to OCA-10-6, attached as Exhibit RN-6.

Ron Nelson



Ron is a subject matter expert in gas and electric Advanced Rate Design, Cost of Service Studies, and Decarbonization. Ron leads a team that provides expertise and expert testimony on numerous topics, including multi-year utility rate plans, performance incentive mechanisms, cost of service modeling, line extension policies, residential and commercial rate design, renewable energy program design, system planning, DER interconnection cost allocation and recovery, and DER integration.

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MS
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+ Subject matter and testimony expert in advanced rate design, embedded and marginal cost of service modeling, performance-based regulation, gas decarbonization, and DER integration and compensation.
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Senior Director

Strategen / Portland, OR / 2018 - 2024

+ Expert witness and advisor that has testified across 12 states in over 60 proceedings and supported multiple state commissions in various proceedings

Economist

Minnesota Attorney General's Office / St. Paul, MN / 2013 - 2017

+ Provided expert testimony on cost of service modeling, rate design, grid modernization and utility business models.
+ Analyzing issues related to conservation incentive programs, value of solar, grid modernization, performance-based regulation, renewable energy program design, and MISO.
+ Reviewed and made recommendation to improve gas company pipeline replacement programs, demand response tariffs, performance metrics, and rate designs.

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Gas Decarbonization

Rate Design

Performance-Based Regulation

Performance Inventive Mechanisms

Cost of Service Analysis

DER Compensation

Rate Case Support

Electric Vehicles

Renewable Energy Program Design

Expert Testimony

68. Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil, pursuant to G.L. c. 164, § 92B, for approval by the Department of Public Utilities of its Electric Sector Modernization Plan. D.P.U. 24-12, Petition of Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid, pursuant to G.L. c. 164, § 92B, for approval by the Department of Public Utilities of its Electric Sector Modernization Plan. D.P.U. 24-11, Petition of NSTAR Electric Company d/b/a Eversource Energy, pursuant to G.L. c. 164, § 92B, for approval by the Department of Public Utilities of its Electric Sector Modernization Plan. D.P.U. 24-10
Grid Planning and DER Integration
Direct

67. In the Matter of the Application of Potomac Electric Power Company for and Electric Multi-Year Plan for the Distribution of Electric Energy Case No. 9702
Electric Rate Design
Direct

66. In the Matter of the Application of Nevada Power Company, d/b/a NV Energy, files pursuant to NRS 704.110 (3) and (4), addressing its annual revenue requirement for general rates charged to all classes of customers
Electric TOU Rate Design
Testimony

65. In the Matter of Advice No. 1923 – Electric of Public Service Company of Colorado to Revise its Colorado P.U.C. No. 8 – Electric Tariff to Reset the General Rate Schedule Adjustments, to Place into Effect Revised Base Rates, and to Implement Other Phase II Tariff Proposals to Become Effective June 15, 2023
Electric TOU Rate Design
Testimony

64. Application of Baltimore Gas and Electric Company for a Second Electric and Gas Multi-Year Plan Case No. 9692
Electric and Gas Rate Design, Gas Transition, Bill Impacts
Direct | Rebuttal | Surrebuttal

63. Massachusetts Electric Company Nantucket Electric Company d/b/a National Grid, Capital Investment Project Filing: D.P.U. 22-170, 23-06, 23-09, and 23-12 On Behalf of the MA AGO w/ Panelists Jorge Camacho and Eli Asher
DER Integration, Interconnection and Cost Allocation
Direct | Surrebuttal

62. Order Requiring Commonwealth Edison Company to file an Initial Multi-Year Integrated Grid Plan and Initiating Proceeding to Determine Whether the Plan is Reasonable and Complies with the Public Utilities Act. Docket No. 22-0486. On Behalf of Environmental Law and Policy Center, Natural Resources Defense Council, Union of Concerned Scientists, and Vote Solar.
Hosting Capacity, Value of DER, Peak Load Reduction, Flexible Interconnection, DERMS
Direct

61. Ameren Illinois Company. Proposed General Increase in Rates and Revisions to Other Terms and Conditions of Service. Docket No. 23-0067. On Behalf of Environmental Law and Policy Center, Environmental Defense Fund, Natural Resources Defense Council, Illinois State Public Interest Research Group, Inc.
Gas Transition, Capital Planning, Line Extensions, Non-Pipeline Alternatives, Bill Impacts, Gas System Planning, PBR, Rate Design
Direct

60. Pennsylvania Public Utility Commission V. Philadelphia Gas Works. Docket No. R-2023-3037933. On Behalf of The Office of Consumer Advocate
Weather Normalization Adjustment and Decoupling

59. DEP and DEC EVSE Program. Docket No. 2022-158-E. On Behalf of The South Carolina Office of Regulatory Staff
EV Program Design
Direct | Surrebuttal

58. Petition of Philadelphia Gas Works for Approval on Less than Statutory Notice of Tariff Supplement Revising Weather Normalization Adjustment. Docket No. 2022-3034264. On Behalf of the Office of the Consumer Advocate
Weather Normalization Adjustment

57. In the Matter of Application of Duke Energy Progress, LLC, for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina and for Performance Based Regulation. On Behalf of the North Carolina Attorney General's Office
Cost of Service, Rate Design, Performance-Based Regulation
Direct

56. Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations, and Conditions of Service for Electric Service in the State of Oklahoma and to Approve a Formula Based Rate Proposal . On Behalf of AARP
Cost of Service and Rate Design
Responsive Testimony

Expert Testimony (Continued)

55. Montana-Dakota Utilities Co. 2022 Electric Rate Increase Application. On Behalf of AARP
Cost of Service and Rate Design
Direct | Surrebuttal

54. Northern Indiana Public Service Company Rate Case. On Behalf of Citizens Action Coalition
Cost of Service and Rate Design
Direct

53. Central Maine Power Company: Request for Approval of Distribution Rate Increase and Rate Design Changes Pursuant to 35-A M.R.S. Section 307, Docket 2022-00152, On Behalf of the Governor's Energy Office w/Panelists Caroline Palmer and Nikhil Balakumar. On Behalf of the Governor's Energy Office
Marginal Cost of Service, Performance-Based Regulation, Distribution System Planning
Direct

52. Georgia Power Company's 2022 Rate Case. On Behalf of Americans for Affordable and Clean Energy
Electric Vehicle Rate Design
Direct

51. In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in Minnesota (Docket No 21-630), On Behalf of the Citizen's Utility Board of Minnesota
Rate Riders, Fuel Clause Risk Sharing, and MYRP Structure
Direct | Rebuttal

50. In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in Minnesota (Docket No 21-630), On Behalf of the Clean Energy Organizations
Advanced Rate Design, Regulatory Sandbox, TOU Rate Design
Direct | Surrebuttal

49. NSTAR Electric Company d/b/a Eversource Energy, Capital Investment Project Filing: D.P.U. 22-51 through 55 On Behalf of the MA AGO w/ Panelists Jorge Camacho and Eli Asher
DER Integration, Interconnection and Cost Allocation
Direct | Surrebuttal

48. Massachusetts Electric Company Nantucket Electric Company d/b/a National Grid, Capital Investment Project Filing: Shutesbury (D.P.U. 22-61) On Behalf of the MA AGO w/ Panelists Jorge Camacho and Eli Asher
DER Integration, Interconnection and Cost Allocation
Direct

47. In the Matter of Delmarva Power and Light Company's Application for an Electric Multi-Year Plan (Case No. 9681) On Behalf of the Office of People's Counsel w/ Panelist Jorge Camacho
Distribution System Planning, Capital Investment Plan, Multi-Year Rate Plan Structure, Revenue Decoupling
Direct (No. 21) | Rebuttal (No. 23)

Expert Testimony (Continued)

46. Petition of NSTAR Electric Company d/b/a Eversource Energy for approval by the Department of Public Utilities of the Company's Marion-Fairhaven capital project proposal under the Provisional Program established by the Department in Provisional System Planning Program, D.P.U 20-75-B (2021) (D.P.U. 22-47) On Behalf of the MA AGO w/ Panelists Jorge Camacho, Eli Asher, and Fred Schaefer
DER Integration, Interconnection and Cost Allocation
Direct | Surrebuttal

45. Petition for Approval of Beneficial Electrification Plan under the Electric Vehicle Act, 20 ILCS 627/45 and New EV Charging Delivery Classes under the Public Utilities Act, Article IX. (Docket No. 22-0432 and 22-0442) On Behalf of NRDC, Sierra Club, EDF, RHA and Little Village Environmental Justice Organization (LVEJO)
Electric Vehicle Rate Design and Energy Management Systems

44. Petition for Approval of Beneficial Electrification Plan pursuant to Section 45 of the Electric Vehicle Act (Docket No. 22-0431 and 22-0443) On Behalf of NRDC, Sierra Club, EDF, and RHA
Electric Vehicle Rate Design and Energy Management Systems

43. In the Matter of the Application of Oklahoma Gas & Electric Company for an Order of the Commission Authorizing Applicant to Modify Its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma
Cost of service, rate design, formula rate plan
Direct | Stipulation

42. Petition for Establishment of Performance Metrics Under Section 16-108.18(e) of the Public Utilities Act, Commonwealth Edison Company, Docket No. 22-0067 On Behalf of NRDC
Demand Response and Electric Vehicle Performance metrics
Direct | Rebuttal

41. Petition for Establishment of Performance Metrics Under Section 16-108.18(e) of the Public Utilities Act, Ameren Illinois Company, Docket No. 22-0063 On Behalf of NRDC
Demand Response and Electric Vehicle Performance metrics
Direct | Rebuttal

40. In the matter of the application of CONSUMERS ENERGY COMPANY for authority to increase its rates for the distribution of natural gas and for other relief. U-21148. On Behalf of NRDC
Performance-based regulation and gas decarbonization
Direct

39. Petition of NSTAR Electric Company d/b/a Eversource Energy for approval by the Department of Public Utilities of the Company's Marion-Fairhaven capital project proposal under the Provisional Program established by the Department in Provisional System Planning Program, D.P.U 20-75-B (2021)
DER integration, Flexible interconnection, Capital Investment Project
Direct | Surrebuttal

Expert Testimony (Continued)

38. In the Matter of the Application of Oklahoma Gas & Electric Company for an Order of the Commission Authorizing Applicant to Modify Its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma
Cost of service, rate design, formula rate plan
Direct | Stipulation

37. In the Matter of the Application of Minnesota Power for Authority to Increase Rates for Electric Utility Service in Minnesota. Docket No. E-015/GR-21-335. On Behalf of CUB Minnesota
Cost recovery, cost of service, and revenue apportionment
Direct | Surrebuttal

36. In the matter of the application of CONSUMERS ENERGY COMPANY for authority to increase its rates for the distribution of natural gas and for other relief. U-21148. On Behalf of NRDC
Performance-based regulation and gas decarbonization
Direct

35. Phase 2: Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil for approval of its Electric Vehicle Infrastructure Program, Electric Vehicle Demand Charge Alternative Proposal, and Residential Electric Vehicle Time-of-Use Rate Proposal (D.P.U 21-92) On Behalf of the Attorney General's Office
EV Program Design and Load Management
Direct

34. Phase 2: Petition of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, for approval of its Phase III Electric Vehicle Market Development Program and Electric Vehicle Demand Charge Alternative Proposal (D.P.U 21-91) On Behalf of the Attorney General's Office
EV Program Design and Load Management
Direct

33. Phase 2: Petition of NSTAR Electric Company d/b/a Eversource Energy for approval of its Phase II Electric Vehicle Infrastructure Program and Electric Vehicle Demand Charge Alternative Proposal (D.P.U 21-90) On Behalf of the Attorney General's Office
EV Program Design and Load Management
Direct

32. Phase 1: Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil for approval of its Electric Vehicle Infrastructure Program, Electric Vehicle Demand Charge Alternative Proposal, and Residential Electric Vehicle Time-of-Use Rate Proposal (D.P.U 21-92) On Behalf of the Attorney General's Office
EV Program Design and Load Management
Direct

Ron Nelson

Senior Director

Expert Testimony (Continued)

31. Phase 1: Petition of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, for approval of its Phase III Electric Vehicle Market Development Program and Electric Vehicle Demand Charge Alternative Proposal (D.P.U 21-91) On Behalf of the Attorney General's Office
EV Program Design and Load Management
Direct

30. Phase 1: Petition of NSTAR Electric Company d/b/a Eversource Energy for approval of its Phase II Electric Vehicle Infrastructure Program and Electric Vehicle Demand Charge Alternative Proposal (D.P.U 21-90) On Behalf of the Attorney General's Office
EV Program Design and Load Management
Direct

29. In the Matter of the Petitions for Recovery of Certain Gas Costs (DKT: 21-138, 21-235, 21-610, 21-611) On Behalf of The Citizens Utility Board of Minnesota
Prudency Review
Direct

28. In the Matter of the Application of CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Rates for Natural Gas Utility Service in Minnesota (Docket No. 21-435) On Behalf of the Clean Energy Organizations
Rate Design and Line Extension Policy
Direct

27. In the Matter of the Petitions for Recovery of Certain Gas Costs (DKT: 21-138, 21-235, 21-610, 21-611) On Behalf of The Citizens Utility Board of Minnesota
Prudency Review
Direct

26. Green Mountain Power (DKT: 2021-3707-PET) On Behalf of Green Mountain Power
Multi Year Rate Plan
Prefiled Direct Testimony

25. Public Service of Oklahoma (DKT: 202100055) On Behalf of AARP
ECOSS and Rate Design
Responsive Testimony

24. Duquesne Light Company (DKT: R-2021-3024750) On Behalf of the PA OCA
Transportation Electrification, Load Control
Direct | Surrebuttal (note: please type in the docket number, the testimony cannot be directly referenced)

Expert Testimony (Continued)

23. PECO (DKT: R-2021-3024601) On Behalf of the PA OCA
Transportation Electrification, Load Control
Direct (note: please type in the docket number, the testimony cannot be directly referenced)

22. Rocky Mountain Power (DKT: 20-035-04) On Behalf of the Utah Office of Consumer Services
Embedded COS, Rate Design, and AMI Rollout
Direct

21. Minnesota Power* On Behalf of the MN CUB
ECOSS and low-income rate design

20. Pennsylvania Power and Light: DER Management Petition (DKT: P-2019-3010128) On Behalf of the PA OCA
DER integration
Direct | Surrebuttal (note: please type in the docket number, the testimony cannot be directly referenced)

19. Public Service of New Hampshire (dba Eversource Energy) (DKT: DE 19-057) On Behalf of the NH OCA
Embedded and marginal COS, Rate Design, and PBR
Direct

18. Liberty Utilities (DKT: DE 19-064) On Behalf of the NH OCA
Marginal COS, Rate Design, decoupling and PBR
Direct
*Settled before direct was filed

17. Oklahoma Gas and Electric (DKT: 201800140) On Behalf of AARP
Rate Design and CCOSS
Direct

16. Vectren Energy Delivery of Ohio (DKT: 18-0298-GA-AIR) On Behalf of the Environmental Law and Policy Center
CCOSS and Rate Design
Direct | Supplemental | Case link

15. Commonwealth Edison (DKT: 18-0753) On Behalf of the IL AG
Distributed Generation Rebates and Smart Inverter Specifications
Direct | Rebuttal | Case link

14. Ameren Illinois Company (DKT: 18-0537) On Behalf of the IL AG
Distributed Generation Rebates and Smart Inverter Specifications
Direct | Rebuttal | Case file

Ron Nelson

Senior Director

Expert Testimony (Continued)

13. Public Service Company of Oklahoma (DKT: 201800096) On Behalf of AARP
Formula Rates, Performance Metrics, Rate Design, and CCOSS
Direct

12. Oklahoma Gas and Electric (DKT: 201700496) On Behalf of AARP
CCOSS and Revenue Apportionment
Responsive | Case link

11. Minnesota Power (DKT: E-002/GR-16-664) On Behalf of the MN OAG
CCOSS, Rate Design, and the Utility Business Model
Surrebuttal | Rebuttal: | Testimony | Case Link

10. Minnesota Power (DKT: E-002/GR-16-664) On Behalf of the MN OAG
CCOSS, Rate Design, and the Utility Business Model
Surrebuttal | Rebuttal: | Testimony | Case Link

9. Otter Tail Power (DKT: E-002/GR-15-1033) On Behalf of the MN OAG
Marginal and Embedded CCOSS and Rate Design
Opening Statement | Direct | Rebuttal | Case link

8. Xcel Energy (DKT: E-002/GR-15-826) On Behalf of the MN OAG
CCOSS, Rate Design, and Performance-Based Regulation
Direct | Rebuttal | Surrebuttal |Case link

7. Minnesota Energy Resources Corp. (DKT: G-011/GR-15-736) On Behalf of the MN OAG
CCOSS and Rate Design
Direct : | Rebuttal | Surrebuttal | Case link

6. CenterPoint Energy (DKT: E-002/GR-15-424) On Behalf of the MN OAG
CCOSS and Rate Design
Opening Statement | Direct | Rebuttal | Surrebuttal | Case link

5. Dakota Energy Association (DKT: E-002/GR-14-482) On Behalf of the MN OAG
CCOSS and Rate Design
Direct | Rebuttal | Surrebuttal | Case link

4. Xcel Energy (DKT: E-002/GR-13-868) On Behalf of the MN OAG
CCOSS and Rate Design
Direct | Rebuttal | Surrebuttal: Case Link

3. Xcel Energy, Minnesota Energy Resources Corp, CenterPoint Energy (DKT: 21-138)
Natural Gas Prudence Testimony
Case Details | Direct

Ron Nelson

Senior Director

Expert Testimony (Continued)

2. Minnesota Energy Resources Corp. (DKT: G-011/GR-13-617) On Behalf of the MN OAG
CCOSS
Direct | Surrebuttal | Case Link

1. CenterPoint Energy (DKT: G-008/GR-13-316) On Behalf of the MN OAG
CCOSS
Direct | Surrebuttal | Case Link

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 15

Response Date: June 03, 2024

OCA-15-1

Reference: PECO-Gas, St. 2, pp. 21-23 regarding PECCP's gas sales forecast. Has the Company conducted on analysis on using a shorter period of time for its weather normalization, such as 20-years? Please provide any and all analysis on other timelines. Where applicable, provide your response in a live, unlocked Excel spreadsheet with all links and formula intact.

RESPONSE:

The Company conducted a high-level analysis estimating the impact of using 20-year or 10-year weather normals instead of 30-year weather normals. The analysis concluded that changing to a 20-year weather normal period would result in a 0.4% reduction in the sales forecast and changing to a 10-year weather normal period would result in a 2.0% reduction in the sales forecast.

Please see Attachment OCA-15-1(a) for supporting data.

Responsible Witness: Marissa E. Humphrey

20 Yr Normals

Change in Forecast (MMCF)					2023 Forecast (30 Year Normal)				WN Change Impact
	Res	GC	Trans	Total	Res	GC	Trans	Total	Sales
Jan	7.1	11.6	2.4	21.1	8,676	4,245	2,665	15,661	0.1%
Feb	38.3	6.1	1.9	46.3	7,196	3,585	2,447	13,298	0.3%
Mar	(94.6)	(44.2)	(20.2)	(159.0)	5,807	2,930	2,477	11,281	-1.4%
Apr	(58.1)	(18.5)	(7.1)	(83.7)	2,884	1,588	1,974	6,498	-1.3%
May	(13.3)	(5.0)	2.1	(16.2)	1,690	814	1,773	4,328	-0.4%
Jun	(1.1)	(0.1)	(0.0)	(1.3)	901	590	1,691	3,229	0.0%
Jul	(0.4)	(0.2)	8.9	8.3	726	575	1,788	3,132	0.3%
Aug	1.1	(0.3)	9.0	9.8	739	580	1,719	3,084	0.3%
Sep	(21.5)	(11.2)	(1.0)	(33.7)	780	714	1,684	3,228	-1.0%
Oct	(48.6)	(15.6)	(6.3)	(70.5)	2,031	1,216	2,007	5,304	-1.3%
Nov	(49.4)	(12.6)	(6.3)	(68.3)	4,516	2,312	2,259	9,138	-0.7%
Dec	(27.4)	(15.9)	(3.3)	(46.6)	7,268	3,502	2,562	13,396	-0.3%
Full Year	(267.9)	(105.8)	(20.0)	(393.8)	43,215	22,651	25,047	91,577	-0.4%

10 Yr Normals

Change in Forecast (MMCF)					2023 Forecast (30 Year Normal)				WN Change Impact
	Res	GC	Trans	Total	Res	GC	Trans	Total	Sales
Jan	(270.2)	(88.3)	(21.3)	(379.8)	8,676	4,245	2,665	15,661	-2.4%
Feb	(237.1)	(90.9)	(21.2)	(349.1)	7,196	3,585	2,447	13,298	-2.6%
Mar	(64.4)	(30.6)	(14.7)	(109.7)	5,807	2,930	2,477	11,281	-1.0%
Apr	(55.7)	(29.0)	(12.4)	(97.1)	2,884	1,588	1,974	6,498	-1.5%
May	(20.8)	(15.3)	1.2	(34.9)	1,690	814	1,773	4,328	-0.8%
Jun	(5.3)	0.4	(2.3)	(7.2)	901	590	1,691	3,229	-0.2%
Jul	(0.5)	(0.2)	26.9	26.2	726	575	1,788	3,132	0.8%
Aug	0.7	(0.3)	11.0	11.4	739	580	1,719	3,084	0.4%
Sep	(8.2)	(13.2)	12.2	(9.3)	780	714	1,684	3,228	-0.3%
Oct	(271.1)	(84.7)	(40.2)	(395.9)	2,031	1,216	2,007	5,304	-7.5%
Nov	136.7	54.6	27.4	218.8	4,516	2,312	2,259	9,138	2.4%
Dec	(461.9)	(211.9)	(47.0)	(720.8)	7,268	3,502	2,562	13,396	-5.4%
Full Year	(1,257.9)	(509.4)	(80.4)	(1,847.7)	43,215	22,651	25,047	91,577	-2.0%

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 10

Response Date: May 28, 2024

OCA-10-4

Please provide all customer bill impact and utility revenue analysis the Company conducted, or had conducted on its behalf, when evaluating the WNA proposal including, but not limited to, alternative mechanism designs. Where applicable, provide your response in a live, unlocked Excel spreadsheet with all links and formulas intact.

RESPONSE:

Refer to Attachment OCA-10-4(a) for the revenue analysis conducted by the Company in a live excel format.

Responsible Witness: Michael J. Trzaska

Historical WNA Impact on Gas Revenue

Year	Gas Total Weather Impact
2014	15
2015	(12)
2016	(29)
2017	(24)
2018	9
2019	(2)
2020	(30)
2021	(24)
2022	(14)
2023	(48)
Total	**(160)**

% of Total Weather Impact Recouped / Retained

	5% Dead Band ($M)				3% Dead Band ($M)				1% Dead Band ($M)			
	Gas $			WNA	Gas $			WNA	Gas $			WNA
	Res	SCI	Total	%(*)	Res	SCI	Total	%(*)	Res	SCI	Total	%(*)
2014	(8)	(3)	(11)	71%	(10)	(3)	(13)	84%	(11)	(4)	(15)	96%
2015	10	3	12	101%	10	3	12	99%	9	2	12	97%
2016	12	4	16	54%	14	5	19	65%	18	7	24	83%
2017	16	6	22	93%	16	6	22	94%	16	6	23	95%
2018	(4)	(1)	(5)	62%	(4)	(1)	(6)	66%	(5)	(2)	(7)	78%
2019	2	1	2	91%	2	1	2	92%	2	1	2	90%
2020	15	6	21	69%	17	7	24	80%	20	8	27	91%
2021	14	5	19	81%	15	6	21	88%	17	6	23	94%
2022	10	3	13	91%	10	3	13	94%	10	3	13	94%
2023	28	9	38	78%	32	10	42	86%	35	11	46	94%
Total	**94**	**33**	**127**	**79%**	**102**	**35**	**137**	**86%**	**110**	**38**	**148**	**93%**

(*) WNA % is on total weather impact (including LCI and Other classes)

Year	Gas Weather Impact by Class G,GH	GC	Trans	Total
2014	11	4	(0)	15
2015	(10)	(3)	0	(12)
2016	(21)	(8)	(0)	(29)
2017	(17)	(6)	(1)	(24)
2018	6	2	0	9
2019	(2)	(1)	0	(2)
2020	(21)	(8)	(1)	(30)
2021	(17)	(6)	(0)	(24)
2022	(11)	(3)	0	(14)
2023	(36)	(11)	(1)	(48)
Total	**(118)**	**(40)**	**(2)**	**(160)**

Remaining Weather Impact with WNA

	5% Dead Band ($M)				3% Dead Band ($M)				1% Dead Band ($M)			
	Gas $				Gas $				Gas $			
	Res	SCI	Trans.	Total	Res	SCI	Trans.	Total	Res	SCI	Trans.	Total
2014	3	1	(0)	5	2	1	(0)	3	0	0	(0)	1
2015	(0)	0	0	0	(0)	0	0	(0)	(0)	(0)	0	(0)
2016	(10)	(4)	(0)	(13)	(7)	(3)	(0)	(10)	(3)	(1)	(0)	(5)
2017	(1)	(0)	(1)	(2)	(1)	(0)	(1)	(2)	(0)	(0)	(1)	(1)
2018	2	1	0	3	2	1	0	3	1	1	0	2
2019	(0)	(0)	0	(0)	(0)	(0)	0	(0)	(0)	(0)	0	(0)
2020	(6)	(2)	(1)	(9)	(4)	(2)	(1)	(6)	(1)	(1)	(1)	(3)
2021	(3)	(1)	(0)	(5)	(2)	(1)	(0)	(3)	(1)	(0)	(0)	(1)
2022	(1)	(0)	0	(1)	(1)	(0)	0	(1)	(1)	(0)	0	(1)
2023	(8)	(2)	(1)	(11)	(5)	(1)	(1)	(7)	(2)	(0)	(1)	(3)
Total	**(24)**	**(8)**	**(2)**	**(33)**	**(16)**	**(5)**	**(2)**	**(23)**	**(8)**	**(2)**	**(2)**	**(12)**

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas R Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
									5%	**3%**	**1%**
2014	1	1131	0	970	0	161	17%	**5.1**	3.6	4.2	4.8
2014	2	912	0	817	0	95	12%	**4.6**	2.7	3.5	4.3
2014	3	801	0	645	1	156	24%	**5.6**	4.4	4.9	5.3
2014	4	339	9	331	14	8	2%	**(0.1)**	-	-	(0.1)
2014	5	54	74	104	83	(50)	-48%	**(0.6)**	(0.6)	(0.6)	(0.6)
2014	6	0	292	8	269	(8)	-100%	**(0.1)**			
2014	7	0	412	0	423	(0)	-100%	**0.1**			
2014	8	0	311	1	373	(1)	-100%	**0.1**			
2014	9	14	188	31	169	(17)	-54%	**(0.3)**			
2014	10	176	25	242	25	(66)	-27%	**(2.2)**	(1.8)	(1.9)	(2.1)
2014	11	588	0	513	0	75	15%	**3.2**	2.1	2.5	3.0
2014	12	734	0	837	0	(103)	-12%	**(4.0)**	(2.4)	(3.0)	(3.7)
						250		**11.4**	8.1	9.5	11.0
									71%	*84%*	*97%*
2015	1	1048	0	967	0	81	8%	**2.7**	1.1	1.7	2.4
2015	2	1093	0	816	0	277	34%	**11.1**	9.4	10.1	10.7
2015	3	793	0	647	1	146	23%	**4.9**	3.8	4.3	4.7
2015	4	286	3	327	15	(41)	-13%	**(2.4)**	(1.5)	(1.9)	(2.2)
2015	5	32	196	104	86	(72)	-69%	**(1.5)**	(1.4)	(1.4)	(1.5)
2015	6	12	314	8	272	4	51%	**0.1**			
2015	7	0	449	0	426	(0)	-100%	**(0.0)**			
2015	8	0	444	1	371	(1)	-100%	**(0.0)**			
2015	9	0	293	30	166	(30)	-100%	**(0.6)**			
2015	10	207	12	239	27	(32)	-13%	**(1.0)**	(0.6)	(0.8)	(0.9)
2015	11	353	7	515	0	(162)	-31%	**(6.9)**	(5.8)	(6.3)	(6.7)
2015	12	421	2	831	0	(410)	-49%	**(16.2)**	(14.6)	(15.3)	(15.9)
						(239)		**(9.9)**	(9.6)	(9.5)	(9.4)
									97%	*96%*	*96%*
2016	1	947	0	965	0	(18)	-2%	**(2.0)**	-	-	(0.9)
2016	2	758	0	821	0	(63)	-8%	**(3.1)**	(1.1)	(1.9)	(2.7)
2016	3	432	5	643	1	(211)	-33%	**(8.9)**	(7.5)	(8.1)	(8.6)
2016	4	343	12	324	15	19	6%	**(0.1)**	(0.0)	(0.0)	(0.0)
2016	5	145	91	99	87	46	46%	**1.0**	0.9	0.9	0.9
2016	6	0	282	8	273	(8)	-100%	**(0.2)**			
2016	7	0	511	0	431	(0)	-100%	**(0.1)**			
2016	8	0	505	1	370	(1)	-100%	**(0.2)**			
2016	9	10	272	27	170	(17)	-63%	**(0.5)**			
2016	10	179	42	240	26	(61)	-26%	**(1.8)**	(1.5)	(1.6)	(1.7)
2016	11	442	0	514	0	(72)	-14%	**(3.6)**	(2.3)	(2.8)	(3.4)
2016	12	804	0	832	0	(28)	-3%	**(1.8)**	-	(0.2)	(1.3)
						(414)		**(21.2)**	(11.5)	(13.7)	(17.7)
									54%	*65%*	*84%*
2017	1	815	0	968	0	(153)	-16%	**(7.1)**	(4.9)	(5.8)	(6.7)
2017	2	576	0	836	0	(260)	-31%	**(8.9)**	(7.5)	(8.1)	(8.7)
2017	3	703	0	655	1	48	7%	**2.7**	0.8	1.6	2.3
2017	4	200	40	330	14	(130)	-39%	**(4.1)**	(3.6)	(3.8)	(4.0)
2017	5	121	71	102	91	19	19%	**0.6**	0.5	0.5	0.6
2017	6	8	304	8	279	(0)	-4%	**(0.0)**			

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas R Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
2017	7	0	450	0	435	(0)	-100%	**(0.0)**			
2017	8	0	325	1	376	(1)	-100%	**0.1**			
2017	9	14	214	28	174	(14)	-49%	**(0.3)**			
2017	10	105	86	247	26	(142)	-57%	**(3.4)**	(3.1)	(3.2)	(3.3)
2017	11	522	0	518	1	4	1%	**(0.1)**	-	-	-
2017	12	891	0	820	0	71	9%	**3.7**	1.6	2.4	3.3
						(558)		**(17.0)**	(16.2)	(16.3)	(16.5)
									95%	*96%*	*97%*
2018	1	993	0	966	0	27	2.8%	**0.8**	-	-	0.5
2018	2	641	0	830	0	(189)	-22.8%	**(7.9)**	(6.1)	(6.8)	(7.5)
2018	3	784	0	648	1	136	21.0%	**5.7**	4.3	4.8	5.4
2018	4	437	8	329	15	108	33.0%	**4.5**	3.8	4.1	4.3
2018	5	38	121	104	90	(66)	-63.4%	**(1.4)**	(1.3)	(1.4)	(1.4)
2018	6	7	246	8	279	(1)	-13.9%	**0.1**			
2018	7	0	438	0	438	(0)	-100.0%	**0.0**			
2018	8	0	443	0	382	(0)	-100.0%	**0.1**			
2018	9	13	243	27	179	(14)	-51.7%	**0.2**			
2018	10	257	78	244	26	13	5.5%	**0.8**	0.1	0.4	0.7
2018	11	632	0	512	1	120	23.3%	**5.2**	4.1	4.6	5.0
2018	12	758	0	819	0	(61)	-7.4%	**(2.1)**	(0.7)	(1.3)	(1.8)
						73		**6.0**	4.1	4.4	5.1
									69%	*73%*	*86%*
2019	1	972	0	959	0	13	1.4%	**0.8**	-	-	0.2
2019	2	775	0	819	0	(44)	-5.3%	**(1.3)**	(0.1)	(0.6)	(1.1)
2019	3	685	2	651	1	34	5.2%	**1.1**	0.0	0.5	0.9
2019	4	193	22	323	16	(130)	-40.3%	**(3.6)**	(3.1)	(3.3)	(3.5)
2019	5	74	126	103	89	(29)	-28.3%	**(0.2)**	(0.2)	(0.2)	(0.2)
2019	6	3	277	8	279	(5)	-64.1%	**(0.1)**			
2019	7	0	501	0	438	(0)	-100.0%	**(0.1)**			
2019	8	0	406	0	382	(0)	-100.0%	**0.0**			
2019	9	2	236	27	181	(25)	-92.5%	**(0.5)**			
2019	10	150	40	234	29	(84)	-35.9%	**(2.7)**	(2.3)	(2.5)	(2.6)
2019	11	647	0	512	1	135	26.3%	**5.0**	4.1	4.5	4.8
2019	12	806	0	821	0	(15)	-1.9%	**(0.3)**	-	-	(0.2)
						(151)		**(1.8)**	(1.6)	(1.6)	(1.6)
									89%	*91%*	*89%*
2020	1	803	0	953	0	(150)	-15.7%	**(6.8)**	(4.7)	(5.5)	(6.4)
2020	2	694	0	810	0	(116)	-14.4%	**(5.4)**	(3.5)	(4.3)	(5.0)
2020	3	492	0	655	1	(163)	-24.9%	**(7.0)**	(5.6)	(6.1)	(6.7)
2020	4	397	0	324	16	73	22.7%	**1.8**	1.4	1.6	1.8
2020	5	168	66	101	90	67	66.9%	**2.6**	2.4	2.4	2.5
2020	6	3	310	7	279	(4)	-59.5%	**(0.1)**			
2020	7	0	535	0	436	(0)	-100.0%	**(0.1)**			
2020	8	0	417	0	383	(0)	-100.0%	**(0.0)**			
2020	9	37	176	26	186	11	44.0%	**0.2**			
2020	10	177	16	228	31	(51)	-22.5%	**(1.2)**	(0.9)	(1.0)	(1.1)
2020	11	380	1	516	1	(136)	-26.3%	**(4.9)**	(4.0)	(4.4)	(4.7)
2020	12	808	0	816	0	(8)	-1.0%	**(0.2)**	-	-	-
						(478)		**(21.1)**	(14.8)	(17.2)	(19.7)
									70%	*82%*	*93%*

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas R Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
2021	1	901	0	956	0	(55)	-5.7%	**(2.2)**	(0.3)	(1.1)	(1.9)
2021	2	858	0	808	0	50	6.2%	**2.3**	0.5	1.2	2.0
2021	3	543	5	654	1	(111)	-17.0%	**(4.5)**	(3.2)	(3.7)	(4.3)
2021	4	289	16	317	17	(28)	-8.9%	**(0.9)**	(0.4)	(0.6)	(0.8)
2021	5	115	94	98	93	17	16.9%	**0.6**	0.4	0.5	0.5
2021	6	0	308	8	278	(8)	-100.0%	**(0.1)**			
2021	7	0	437	0	440	(0)	-100.0%	**(0.0)**			
2021	8	0	449	0	385	(0)	-100.0%	**(0.1)**			
2021	9	4	208	24	187	(20)	-83.5%	**(0.1)**			
2021	10	90	69	226	32	(136)	-60.1%	**(3.8)**	(3.5)	(3.6)	(3.8)
2021	11	541	0	517	1	24	4.6%	**1.3**	-	0.4	1.0
2021	12	605	0	802	0	(197)	-24.5%	**(9.8)**	(7.8)	(8.6)	(9.4)
						(463)		**(17.4)**	(14.3)	(15.5)	(16.6)
									82%	*89%*	*95%*
2022	1	1004	0	956	0	48	5.0%	**2.5**	-	1.0	2.0
2022	2	697	0	808	0	(111)	-13.8%	**(4.9)**	(3.1)	(3.8)	(4.5)
2022	3	527	1	651	1	(124)	-19.0%	**(6.1)**	(4.5)	(5.1)	(5.8)
2022	4	329	6	317	16	12	3.6%	**0.1**	-	0.0	0.1
2022	5	56	138	99	94	(43)	-43.6%	**(0.8)**	(0.7)	(0.8)	(0.8)
2022	6	0	290	7	281	(7)	-100.0%	**(0.1)**			
2022	7	0	541	0	445	(0)	-100.0%	**(0.1)**			
2022	8	0	510	0	388	(0)	-100.0%	**(0.2)**			
2022	9	19	239	23	188	(4)	-18.9%	**(0.2)**			
2022	10	238	4	226	30	12	5.5%	**(0.1)**	(0.0)	(0.0)	(0.1)
2022	11	427	14	514	1	(87)	-16.9%	**(2.0)**	(1.4)	(1.7)	(1.9)
2022	12	838	0	805	0	33	4.2%	**1.2**	-	0.3	0.9
						(273)		**(10.7)**	(9.7)	(10.0)	(10.0)
									91%	*94%*	*94%*
2023	1	664	0	955	0	(291)	-30.5%	**(13.4)**	(11.2)	(12.1)	(13.0)
2023	2	616	0	813	0	(197)	-24.3%	**(8.8)**	(7.0)	(7.7)	(8.4)
2023	3	608	0	649	1	(41)	-6.3%	**(2.7)**	(0.6)	(1.4)	(2.2)
2023	4	221	26	317	16	(96)	-30.2%	**(2.9)**	(2.4)	(2.6)	(2.8)
2023	5	106	30	102	90	4	4.4%	**0.3**	-	0.1	0.3
2023	6	3	177	7	281	(4)	-59.3%	**0.1**			
2023	7	0	472	0	444	(0)	-100.0%	**(0.1)**			
2023	8	0	372	0	388	(0)	-100.0%	**0.0**			
2023	9	18	220	22	189	(4)	-18.3%	**(0.1)**			
2023	10	151	48	221	31	(70)	-31.7%	**(2.2)**	(1.9)	(2.0)	(2.1)
2023	11	540	0	514	1	26	5.0%	**0.9**	0.0	0.3	0.7
2023	12	660	0	798	0	(138)	-17.3%	**(7.6)**	(5.4)	(6.3)	(7.1)
						(812)		**(36.4)**	(28.4)	(31.6)	(34.7)
									78%	*87%*	*96%*

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas SCI Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
									5%	**3%**	**1%**
2014	1	1131	0	970	0	161	17%	**1.8**	1.3	1.5	1.7
2014	2	912	0	817	0	95	12%	**1.6**	0.9	1.2	1.5
2014	3	801	0	645	1	156	24%	**2.0**	1.6	1.7	1.9
2014	4	339	9	331	14	8	2%	**(0.0)**	-	-	(0.0)
2014	5	54	74	104	83	(50)	-48%	**(0.2)**	(0.2)	(0.2)	(0.2)
2014	6	0	292	8	269	(8)	-100%	**0.0**			
2014	7	0	412	0	423	(0)	-100%	**0.0**			
2014	8	0	311	1	373	(1)	-100%	**0.0**			
2014	9	14	188	31	169	(17)	-54%	**(0.1)**			
2014	10	176	25	242	25	(66)	-27%	**(1.0)**	(0.8)	(0.9)	(0.9)
2014	11	588	0	513	0	75	15%	**1.2**	0.8	1.0	1.1
2014	12	734	0	837	0	(103)	-12%	**(1.4)**	(0.8)	(1.1)	(1.3)
						250		**3.9**	2.7	3.2	3.7
									69%	*82%*	*94%*
2015	1	1048	0	967	0	81	8%	**1.0**	0.4	0.6	0.8
2015	2	1093	0	816	0	277	34%	**4.0**	3.4	3.6	3.8
2015	3	793	0	647	1	146	23%	**1.8**	1.4	1.6	1.8
2015	4	286	3	327	15	(41)	-13%	**(0.5)**	(0.3)	(0.4)	(0.4)
2015	5	32	196	104	86	(72)	-69%	**(0.7)**	(0.7)	(0.7)	(0.7)
2015	6	12	314	8	272	4	51%	**0.0**			
2015	7	0	449	0	426	(0)	-100%	**(0.0)**			
2015	8	0	444	1	371	(1)	-100%	**(0.0)**			
2015	9	0	293	30	166	(30)	-100%	**(0.2)**			
2015	10	207	12	239	27	(32)	-13%	**(0.4)**	(0.2)	(0.3)	(0.3)
2015	11	353	7	515	0	(162)	-31%	**(0.9)**	(0.8)	(0.8)	(0.9)
2015	12	421	2	831	0	(410)	-49%	**(6.7)**	(6.0)	(6.3)	(6.6)
						(239)		**(2.6)**	(2.8)	(2.6)	(2.5)
									107%	*102%*	*96%*
2016	1	947	0	965	0	(18)	-2%	**(0.8)**	-	-	(0.4)
2016	2	758	0	821	0	(63)	-8%	**(1.2)**	(0.4)	(0.7)	(1.1)
2016	3	432	5	643	1	(211)	-33%	**(3.5)**	(3.0)	(3.2)	(3.4)
2016	4	343	12	324	15	19	6%	**(0.0)**	(0.0)	(0.0)	(0.0)
2016	5	145	91	99	87	46	46%	**0.3**	0.3	0.3	0.3
2016	6	0	282	8	273	(8)	-100%	**(0.1)**			
2016	7	0	511	0	431	(0)	-100%	**(0.1)**			
2016	8	0	505	1	370	(1)	-100%	**(0.1)**			
2016	9	10	272	27	170	(17)	-63%	**(0.2)**			
2016	10	179	42	240	26	(61)	-26%	**(0.6)**	(0.5)	(0.5)	(0.6)
2016	11	442	0	514	0	(72)	-14%	**(1.3)**	(0.8)	(1.0)	(1.2)
2016	12	804	0	832	0	(28)	-3%	**(0.7)**	-	(0.1)	(0.5)
						(414)		**(8.2)**	(4.4)	(5.3)	(6.8)
									54%	*64%*	*83%*
2017	1	815	0	968	0	(153)	-16%	**(2.6)**	(1.8)	(2.1)	(2.5)
2017	2	576	0	836	0	(260)	-31%	**(3.4)**	(2.8)	(3.0)	(3.2)
2017	3	703	0	655	1	48	7%	**0.9**	0.3	0.6	0.8
2017	4	200	40	330	14	(130)	-39%	**(1.5)**	(1.3)	(1.4)	(1.5)
2017	5	121	71	102	91	19	19%	**0.2**	0.2	0.2	0.2
2017	6	8	304	8	279	(0)	-4%	**(0.0)**			

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas SCI Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
2017	7	0	450	0	435	(0)	-100%	**(0.0)**			
2017	8	0	325	1	376	(1)	-100%	**0.0**			
2017	9	14	214	28	174	(14)	-49%	**(0.1)**			
2017	10	105	86	247	26	(142)	-57%	**(1.0)**	(0.9)	(1.0)	(1.0)
2017	11	522	0	518	1	4	1%	**(0.0)**	-	-	-
2017	12	891	0	820	0	71	9%	**1.3**	0.5	0.8	1.1
						(558)		**(6.2)**	(5.9)	(5.9)	(6.0)
									95%	*96%*	*98%*
2018	1	993	0	966	0	27	2.8%	**0.3**	-	-	0.2
2018	2	641	0	830	0	(189)	-22.8%	**(2.9)**	(2.3)	(2.5)	(2.8)
2018	3	784	0	648	1	136	21.0%	**1.9**	1.5	1.7	1.9
2018	4	437	8	329	15	108	33.0%	**1.5**	1.3	1.4	1.5
2018	5	38	121	104	90	(66)	-63.4%	**(0.5)**	(0.5)	(0.5)	(0.5)
2018	6	7	246	8	279	(1)	-13.9%	**0.1**			
2018	7	0	438	0	438	(0)	-100.0%	**0.0**			
2018	8	0	443	0	382	(0)	-100.0%	**0.1**			
2018	9	13	243	27	179	(14)	-51.7%	**0.3**			
2018	10	257	78	244	26	13	5.5%	**0.4**	0.0	0.2	0.3
2018	11	632	0	512	1	120	23.3%	**1.9**	1.5	1.7	1.9
2018	12	758	0	819	0	(61)	-7.4%	**(0.7)**	(0.2)	(0.4)	(0.6)
						73		**2.3**	1.3	1.4	1.7
									57%	*62%*	*75%*
2019	1	972	0	959	0	13	1.4%	**0.3**	-	-	0.1
2019	2	775	0	819	0	(44)	-5.3%	**(0.5)**	(0.0)	(0.2)	(0.4)
2019	3	685	2	651	1	34	5.2%	**0.4**	0.0	0.2	0.3
2019	4	193	22	323	16	(130)	-40.3%	**(1.3)**	(1.2)	(1.2)	(1.3)
2019	5	74	126	103	89	(29)	-28.3%	**(0.1)**	(0.1)	(0.1)	(0.1)
2019	6	3	277	8	279	(5)	-64.1%	**(0.0)**			
2019	7	0	501	0	438	(0)	-100.0%	**(0.0)**			
2019	8	0	406	0	382	(0)	-100.0%	**0.0**			
2019	9	2	236	27	181	(25)	-92.5%	**(0.1)**			
2019	10	150	40	234	29	(84)	-35.9%	**(0.9)**	(0.8)	(0.8)	(0.9)
2019	11	647	0	512	1	135	26.3%	**1.9**	1.6	1.7	1.8
2019	12	806	0	821	0	(15)	-1.9%	**(0.1)**	-	-	(0.1)
						(151)		**(0.6)**	(0.5)	(0.5)	(0.5)
									94%	*93%*	*91%*
2020	1	803	0	953	0	(150)	-15.7%	**(2.7)**	(1.8)	(2.1)	(2.5)
2020	2	694	0	810	0	(116)	-14.4%	**(2.2)**	(1.4)	(1.7)	(2.0)
2020	3	492	0	655	1	(163)	-24.9%	**(2.6)**	(2.1)	(2.3)	(2.5)
2020	4	397	0	324	16	73	22.7%	**0.7**	0.6	0.6	0.7
2020	5	168	66	101	90	67	66.9%	**0.3**	0.3	0.3	0.3
2020	6	3	310	7	279	(4)	-59.5%	**(0.1)**			
2020	7	0	535	0	436	(0)	-100.0%	**(0.1)**			
2020	8	0	417	0	383	(0)	-100.0%	**(0.0)**			
2020	9	37	176	26	186	11	44.0%	**0.1**			
2020	10	177	16	228	31	(51)	-22.5%	**(0.3)**	(0.2)	(0.2)	(0.3)
2020	11	380	1	516	1	(136)	-26.3%	**(1.6)**	(1.3)	(1.4)	(1.6)
2020	12	808	0	816	0	(8)	-1.0%	**(0.1)**	-	-	-
						(478)		**(8.4)**	(6.0)	(6.9)	(7.8)
									71%	*82%*	*93%*

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas SCI Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
2021	1	901	0	956	0	(55)	-5.7%	**(0.8)**	(0.1)	(0.4)	(0.7)
2021	2	858	0	808	0	50	6.2%	**0.9**	0.2	0.5	0.8
2021	3	543	5	654	1	(111)	-17.0%	**(1.8)**	(1.2)	(1.4)	(1.7)
2021	4	289	16	317	17	(28)	-8.9%	**(0.4)**	(0.2)	(0.2)	(0.3)
2021	5	115	94	98	93	17	16.9%	**0.2**	0.2	0.2	0.2
2021	6	0	308	8	278	(8)	-100.0%	**(0.1)**			
2021	7	0	437	0	440	(0)	-100.0%	**(0.0)**			
2021	8	0	449	0	385	(0)	-100.0%	**(0.1)**			
2021	9	4	208	24	187	(20)	-83.5%	**0.1**			
2021	10	90	69	226	32	(136)	-60.1%	**(1.3)**	(1.2)	(1.3)	(1.3)
2021	11	541	0	517	1	24	4.6%	**0.4**	-	0.1	0.3
2021	12	605	0	802	0	(197)	-24.5%	**(3.4)**	(2.7)	(3.0)	(3.3)
						(463)		**(6.3)**	(5.1)	(5.6)	(6.0)
									82%	*89%*	*96%*
2022	1	1004	0	956	0	48	5.0%	**0.8**	-	0.3	0.7
2022	2	697	0	808	0	(111)	-13.8%	**(1.6)**	(1.0)	(1.2)	(1.4)
2022	3	527	1	651	1	(124)	-19.0%	**(2.0)**	(1.4)	(1.6)	(1.8)
2022	4	329	6	317	16	12	3.6%	**0.0**	-	0.0	0.0
2022	5	56	138	99	94	(43)	-43.6%	**(0.3)**	(0.2)	(0.3)	(0.3)
2022	6	0	290	7	281	(7)	-100.0%	**(0.1)**			
2022	7	0	541	0	445	(0)	-100.0%	**(0.1)**			
2022	8	0	510	0	388	(0)	-100.0%	**(0.1)**			
2022	9	19	239	23	188	(4)	-18.9%	**(0.1)**			
2022	10	238	4	226	30	12	5.5%	**0.0**	0.0	0.0	0.0
2022	11	427	14	514	1	(87)	-16.9%	**(0.5)**	(0.3)	(0.4)	(0.5)
2022	12	838	0	805	0	33	4.2%	**0.4**	-	0.1	0.3
						(273)		**(3.4)**	(3.0)	(3.1)	(3.0)
									89%	*91%*	*90%*
2023	1	664	0	955	0	(291)	-30.5%	**(4.6)**	(3.8)	(4.1)	(4.4)
2023	2	616	0	813	0	(197)	-24.3%	**(3.5)**	(2.8)	(3.1)	(3.4)
2023	3	608	0	649	1	(41)	-6.3%	**(0.8)**	(0.2)	(0.4)	(0.6)
2023	4	221	26	317	16	(96)	-30.2%	**(1.1)**	(0.9)	(1.0)	(1.0)
2023	5	106	30	102	90	4	4.4%	**0.1**	-	0.0	0.1
2023	6	3	177	7	281	(4)	-59.3%	**0.1**			
2023	7	0	472	0	444	(0)	-100.0%	**(0.0)**			
2023	8	0	372	0	388	(0)	-100.0%	**0.0**			
2023	9	18	220	22	189	(4)	-18.3%	**(0.0)**			
2023	10	151	48	221	31	(70)	-31.7%	**(0.2)**	(0.2)	(0.2)	(0.2)
2023	11	540	0	514	1	26	5.0%	**0.8**	0.0	0.3	0.6
2023	12	660	0	798	0	(138)	-17.3%	**(1.9)**	(1.3)	(1.6)	(1.8)
						(812)		**(11.1)**	(9.2)	(10.0)	(10.8)
									83%	*90%*	*97%*

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas R Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
									5%	**3%**	**1%**
2014	1	1131	0	970	0	161	17%	**7.0**	4.9	5.7	6.5
2014	2	912	0	817	0	95	12%	**6.3**	3.6	4.6	5.7
2014	3	801	0	645	1	156	24%	**7.5**	6.0	6.6	7.2
2014	4	339	9	331	14	8	2%	**(0.1)**	-	-	(0.1)
2014	5	54	74	104	83	(50)	-48%	**(0.9)**	(0.8)	(0.8)	(0.9)
2014	6	0	292	8	269	(8)	-100%	**(0.1)**			
2014	7	0	412	0	423	(0)	-100%	**0.1**			
2014	8	0	311	1	373	(1)	-100%	**0.1**			
2014	9	14	188	31	169	(17)	-54%	**(0.4)**			
2014	10	176	25	242	25	(66)	-27%	**(3.1)**	(2.6)	(2.8)	(3.0)
2014	11	588	0	513	0	75	15%	**4.4**	2.9	3.5	4.1
2014	12	734	0	837	0	(103)	-12%	**(5.4)**	(3.2)	(4.1)	(5.0)
						250		**15.3**	10.8	12.8	14.7
									70%	*83%*	*96%*
2015	1	1048	0	967	0	81	8%	**3.7**	1.5	2.3	3.2
2015	2	1093	0	816	0	277	34%	**15.0**	12.8	13.7	14.6
2015	3	793	0	647	1	146	23%	**6.8**	5.3	5.9	6.5
2015	4	286	3	327	15	(41)	-13%	**(2.9)**	(1.8)	(2.2)	(2.7)
2015	5	32	196	104	86	(72)	-69%	**(2.2)**	(2.0)	(2.1)	(2.2)
2015	6	12	314	8	272	4	51%	**0.2**			
2015	7	0	449	0	426	(0)	-100%	**(0.0)**			
2015	8	0	444	1	371	(1)	-100%	**(0.0)**			
2015	9	0	293	30	166	(30)	-100%	**(0.8)**			
2015	10	207	12	239	27	(32)	-13%	**(1.3)**	(0.8)	(1.0)	(1.2)
2015	11	353	7	515	0	(162)	-31%	**(7.8)**	(6.6)	(7.1)	(7.6)
2015	12	421	2	831	0	(410)	-49%	**(23.0)**	(20.6)	(21.6)	(22.5)
						(239)		**(12.5)**	(12.3)	(12.1)	(11.9)
									99%	*97%*	*96%*
2016	1	947	0	965	0	(18)	-2%	**(2.8)**	-	-	(1.3)
2016	2	758	0	821	0	(63)	-8%	**(4.3)**	(1.5)	(2.6)	(3.7)
2016	3	432	5	643	1	(211)	-33%	**(12.4)**	(10.5)	(11.3)	(12.0)
2016	4	343	12	324	15	19	6%	**(0.1)**	(0.0)	(0.0)	(0.0)
2016	5	145	91	99	87	46	46%	**1.3**	1.1	1.2	1.3
2016	6	0	282	8	273	(8)	-100%	**(0.2)**			
2016	7	0	511	0	431	(0)	-100%	**(0.2)**			
2016	8	0	505	1	370	(1)	-100%	**(0.3)**			
2016	9	10	272	27	170	(17)	-63%	**(0.7)**			
2016	10	179	42	240	26	(61)	-26%	**(2.4)**	(1.9)	(2.1)	(2.3)
2016	11	442	0	514	0	(72)	-14%	**(4.9)**	(3.2)	(3.9)	(4.6)
2016	12	804	0	832	0	(28)	-3%	**(2.5)**	-	(0.3)	(1.8)
						(414)		**(29.3)**	(15.9)	(19.0)	(24.5)
									54%	*65%*	*83%*
2017	1	815	0	968	0	(153)	-16%	**(9.8)**	(6.7)	(7.9)	(9.2)
2017	2	576	0	836	0	(260)	-31%	**(12.3)**	(10.3)	(11.1)	(11.9)
2017	3	703	0	655	1	48	7%	**3.6**	1.1	2.1	3.1
2017	4	200	40	330	14	(130)	-39%	**(5.6)**	(4.9)	(5.2)	(5.5)
2017	5	121	71	102	91	19	19%	**0.9**	0.6	0.7	0.8

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas R Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
2017	6	8	304	8	279	(0)	-4%	**(0.0)**			
2017	7	0	450	0	435	(0)	-100%	**(0.0)**			
2017	8	0	325	1	376	(1)	-100%	**0.1**			
2017	9	14	214	28	174	(14)	-49%	**(0.4)**			
2017	10	105	86	247	26	(142)	-57%	**(4.4)**	(4.0)	(4.2)	(4.3)
2017	11	522	0	518	1	4	1%	**(0.1)**	-	-	-
2017	12	891	0	820	0	71	9%	**4.9**	2.1	3.2	4.4
						(558)		**(23.1)**	(22.1)	(22.3)	(22.5)
									95%	*96%*	*97%*
2018	1	993	0	966	0	27	2.8%	**1.0**	-	-	0.7
2018	2	641	0	830	0	(189)	-22.8%	**(10.8)**	(8.4)	(9.4)	(10.3)
2018	3	784	0	648	1	136	21.0%	**7.6**	5.8	6.5	7.2
2018	4	437	8	329	15	108	33.0%	**6.0**	5.1	5.4	5.8
2018	5	38	121	104	90	(66)	-63.4%	**(2.0)**	(1.8)	(1.9)	(1.9)
2018	6	7	246	8	279	(1)	-13.9%	**0.2**			
2018	7	0	438	0	438	(0)	-100.0%	**0.0**			
2018	8	0	443	0	382	(0)	-100.0%	**0.1**			
2018	9	13	243	27	179	(14)	-51.7%	**0.5**			
2018	10	257	78	244	26	13	5.5%	**1.2**	0.1	0.5	1.0
2018	11	632	0	512	1	120	23.3%	**7.2**	5.6	6.2	6.9
2018	12	758	0	819	0	(61)	-7.4%	**(2.8)**	(0.9)	(1.7)	(2.4)
						73		**8.3**	5.5	5.8	6.8
									66%	*70%*	*82%*
2019	1	972	0	959	0	13	1.4%	**1.1**	-	-	0.3
2019	2	775	0	819	0	(44)	-5.3%	**(1.8)**	(0.1)	(0.8)	(1.5)
2019	3	685	2	651	1	34	5.2%	**1.5**	0.1	0.7	1.3
2019	4	193	22	323	16	(130)	-40.3%	**(4.9)**	(4.3)	(4.5)	(4.8)
2019	5	74	126	103	89	(29)	-28.3%	**(0.3)**	(0.3)	(0.3)	(0.3)
2019	6	3	277	8	279	(5)	-64.1%	**(0.1)**			
2019	7	0	501	0	438	(0)	-100.0%	**(0.1)**			
2019	8	0	406	0	382	(0)	-100.0%	**0.1**			
2019	9	2	236	27	181	(25)	-92.5%	**(0.6)**			
2019	10	150	40	234	29	(84)	-35.9%	**(3.6)**	(3.1)	(3.3)	(3.5)
2019	11	647	0	512	1	135	26.3%	**6.9**	5.6	6.2	6.7
2019	12	806	0	821	0	(15)	-1.9%	**(0.4)**	-	-	(0.2)
						(151)		**(2.4)**	(2.1)	(2.2)	(2.1)
									90%	*91%*	*90%*
2020	1	803	0	953	0	(150)	-15.7%	**(9.5)**	(6.5)	(7.7)	(8.9)
2020	2	694	0	810	0	(116)	-14.4%	**(7.6)**	(4.9)	(6.0)	(7.0)
2020	3	492	0	655	1	(163)	-24.9%	**(9.6)**	(7.7)	(8.5)	(9.2)
2020	4	397	0	324	16	73	22.7%	**2.6**	2.0	2.2	2.5
2020	5	168	66	101	90	67	66.9%	**2.9**	2.7	2.8	2.9
2020	6	3	310	7	279	(4)	-59.5%	**(0.2)**			
2020	7	0	535	0	436	(0)	-100.0%	**(0.1)**			
2020	8	0	417	0	383	(0)	-100.0%	**(0.1)**			
2020	9	37	176	26	186	11	44.0%	**0.3**			
2020	10	177	16	228	31	(51)	-22.5%	**(1.4)**	(1.1)	(1.2)	(1.4)
2020	11	380	1	516	1	(136)	-26.3%	**(6.5)**	(5.3)	(5.8)	(6.3)
2020	12	808	0	816	0	(8)	-1.0%	**(0.2)**	-	-	-

Year	Month	Actual HDD	Actual CDD	HDD Norm	CDD Norm	HDD colder / (warmer)	HDD Variance '%	**Gas R Revenue**	HDD 5% dead band	HDD 3% dead band	HDD 1% dead band
						(478)		**(29.6)**	(20.8)	(24.2)	(27.5)
									70%	*82%*	*93%*
2021	1	901	0	956	0	(55)	-5.7%	**(3.1)**	(0.4)	(1.5)	(2.5)
2021	2	858	0	808	0	50	6.2%	**3.2**	0.6	1.7	2.7
2021	3	543	5	654	1	(111)	-17.0%	**(6.3)**	(4.4)	(5.2)	(5.9)
2021	4	289	16	317	17	(28)	-8.9%	**(1.2)**	(0.5)	(0.8)	(1.1)
2021	5	115	94	98	93	17	16.9%	**0.8**	0.6	0.6	0.7
2021	6	0	308	8	278	(8)	-100.0%	**(0.2)**			
2021	7	0	437	0	440	(0)	-100.0%	**(0.0)**			
2021	8	0	449	0	385	(0)	-100.0%	**(0.1)**			
2021	9	4	208	24	187	(20)	-83.5%	**(0.0)**			
2021	10	90	69	226	32	(136)	-60.1%	**(5.2)**	(4.7)	(4.9)	(5.1)
2021	11	541	0	517	1	24	4.6%	**1.6**	-	0.6	1.3
2021	12	605	0	802	0	(197)	-24.5%	**(13.2)**	(10.5)	(11.6)	(12.7)
						(463)		**(23.7)**	(19.4)	(21.1)	(22.6)
									82%	*89%*	*95%*
2022	1	1004	0	956	0	48	5.0%	**3.3**	-	1.3	2.7
2022	2	697	0	808	0	(111)	-13.8%	**(6.4)**	(4.1)	(5.0)	(6.0)
2022	3	527	1	651	1	(124)	-19.0%	**(8.0)**	(5.9)	(6.8)	(7.6)
2022	4	329	6	317	16	12	3.6%	**0.2**	-	0.0	0.1
2022	5	56	138	99	94	(43)	-43.6%	**(1.1)**	(1.0)	(1.0)	(1.1)
2022	6	0	290	7	281	(7)	-100.0%	**(0.2)**			
2022	7	0	541	0	445	(0)	-100.0%	**(0.2)**			
2022	8	0	510	0	388	(0)	-100.0%	**(0.3)**			
2022	9	19	239	23	188	(4)	-18.9%	**(0.3)**			
2022	10	238	4	226	30	12	5.5%	**(0.1)**	(0.0)	(0.0)	(0.1)
2022	11	427	14	514	1	(87)	-16.9%	**(2.5)**	(1.8)	(2.1)	(2.4)
2022	12	838	0	805	0	33	4.2%	**1.5**	-	0.4	1.2
						(273)		**(14.0)**	(12.7)	(13.1)	(13.1)
									91%	*93%*	*93%*
2023	1	664	0	955	0	(291)	-30.5%	**(18.0)**	(15.0)	(16.2)	(17.4)
2023	2	616	0	813	0	(197)	-24.3%	**(12.3)**	(9.8)	(10.8)	(11.8)
2023	3	608	0	649	1	(41)	-6.3%	**(3.4)**	(0.7)	(1.8)	(2.9)
2023	4	221	26	317	16	(96)	-30.2%	**(4.0)**	(3.3)	(3.6)	(3.8)
2023	5	106	30	102	90	4	4.4%	**0.5**	-	0.2	0.4
2023	6	3	177	7	281	(4)	-59.3%	**0.2**			
2023	7	0	472	0	444	(0)	-100.0%	**(0.1)**			
2023	8	0	372	0	388	(0)	-100.0%	**0.0**			
2023	9	18	220	22	189	(4)	-18.3%	**(0.1)**			
2023	10	151	48	221	31	(70)	-31.7%	**(2.4)**	(2.1)	(2.2)	(2.4)
2023	11	540	0	514	1	26	5.0%	**1.6**	0.0	0.7	1.3
2023	12			798	0	(798)	-100.0%				
						(1,472)		**(38.0)**	(30.9)	(33.8)	(36.6)
									81%	*89%*	*96%*

	Gas (Mmcf)				Gas Distribution Revenue Impact ($,000)				
	G	GH	GC	Trans	G	GH	GC	Trans	Total
Jan-14	(88)	(889)	(434)	(46)	465	4,678	1,819	50	$ 7,011
Feb-14	(78)	(805)	(384)	(66)	412	4,236	1,608	71	$ 6,327
Mar-14	(95)	(965)	(472)	(142)	498	5,077	1,975	153	$ 7,703
Apr-14	1	18	10	(48)	(5)	(93)	(41)	51	$ (87)
May-14	9	112	58	23	(46)	(591)	(242)	(25)	$ (904)
Jun-14	(0)	28	(3)	(11)	0	(150)	13	11	$ (125)
Jul-14	(2)	(11)	(11)	10	9	57	47	(11)	$ 102
Aug-14	(1)	(10)	(8)	181	7	54	35	(194)	$ (98)
Sep-14	5	48	23	(22)	(26)	(259)	(95)	23	$ (357)
Oct-14	40	369	233	89	(213)	(1,950)	(974)	(96)	$ (3,233)
Nov-14	(56)	(551)	(288)	(124)	294	2,903	1,205	133	$ 4,535
Dec-14	71	688	337	187	(376)	(3,617)	(1,413)	(201)	$ (5,607)
Jan-15	(48)	(467)	(227)	(62)	250	2,454	952	67	$ 3,723
Feb-15	(192)	(1,912)	(945)	(254)	1,010	10,059	3,959	273	$ 15,301
Mar-15	(88)	(847)	(441)	(269)	462	4,457	1,845	290	$ 7,054
Apr-15	31	429	116	118	(164)	(2,263)	(488)	(127)	$ (3,043)
May-15	12	271	168	98	(63)	(1,433)	(705)	(106)	$ (2,307)
Jun-15	(2)	(17)	(12)	(31)	10	91	50	33	$ 184
Jul-15	(0)	0	0	(169)	0	(2)	(1)	182	$ 178
Aug-15	0	3	2	(209)	(1)	(17)	(7)	225	$ 199
Sep-15	11	93	52	(123)	(57)	(497)	(219)	133	$ (641)
Oct-15	18	170	85	34	(94)	(896)	(357)	(37)	$ (1,384)
Nov-15	63	1,255	214	269	(333)	(6,612)	(895)	(290)	$ (8,130)
Dec-15	305	2,783	1,600	390	(1,604)	(14,644)	(6,702)	(420)	$ (23,371)
Jan-16	36	337	190	119	(191)	(1,774)	(796)	(128)	$ (2,890)
Feb-16	58	527	290	189	(305)	(2,774)	(1,216)	(204)	$ (4,498)
Mar-16	175	1,510	842	224	(921)	(7,948)	(3,525)	(241)	$ (12,635)
Apr-16	1	9	1	4	(7)	(46)	(4)	(5)	$ (61)
May-16	(19)	(163)	(76)	(34)	102	863	320	37	$ 1,322
Jun-16	2	30	14	79	(11)	(158)	(61)	(85)	$ (315)
Jul-16	2	17	13	(170)	(10)	(88)	(56)	183	$ 29
Aug-16	3	27	23	(291)	(17)	(142)	(96)	313	$ 58
Sep-16	10	81	41	(124)	(51)	(434)	(172)	133	$ (523)
Oct-16	32	311	142	11	(170)	(1,643)	(596)	(11)	$ (2,421)
Nov-16	69	619	308	11	(361)	(3,259)	(1,289)	(12)	$ (4,921)
Dec-16	35	314	162	5	(183)	(1,650)	(677)	(6)	$ (2,515)
Jan-17	138	1,219	632	22	(725)	(6,410)	(2,647)	(23)	$ (9,805)
Feb-17	174	1,526	800	519	(914)	(8,027)	(3,351)	(558)	$ (12,850)
Mar-17	(52)	(458)	(225)	(64)	275	2,410	943	69	$ 3,698
Apr-17	84	694	360	104	(441)	(3,662)	(1,508)	(112)	$ (5,724)
May-17	(13)	(104)	(58)	(38)	69	548	242	41	$ 901
Jun-17	0	2	1	(58)	(1)	(10)	(4)	63	$ 49
Jul-17	0	4	3	(18)	(2)	(19)	(11)	19	$ (14)
Aug-17	(2)	(12)	(12)	107	8	62	49	(115)	$ 4
Sep-17	6	54	23	(13)	(34)	(288)	(96)	14	$ (404)
Oct-17	69	571	243	157	(366)	(3,016)	(1,018)	(169)	$ (4,568)
Nov-17	2	18	10	6	(10)	(93)	(41)	(6)	$ (150)
Dec-17	(71)	(629)	(301)	(96)	373	3,309	1,261	103	$ 5,047
Jan-18	(15)	(134)	(63)	(20)	77	704	265	21	$ 1,068
Feb-18	158	1,337	699	118	(834)	(7,035)	(2,929)	(127)	$ (10,925)
Mar-18	(110)	(964)	(464)	(139)	580	5,074	1,944	150	$ 7,748
Apr-18	(90)	(760)	(358)	(96)	475	4,009	1,500	104	$ 6,087
May-18	30	242	126	34	(159)	(1,282)	(528)	(36)	$ (2,005)
Jun-18	(3)	(23)	(19)	31	16	121	80	(34)	$ 184
Jul-18	(0)	(2)	(1)	61	1	9	6	(65)	$ (50)
Aug-18	(2)	(14)	(13)	(187)	9	75	55	201	$ 341
Sep-18	(4)	(38)	(70)	(113)	23	203	295	122	$ 642
Oct-18	(17)	(134)	(90)	(44)	89	709	376	47	$ 1,221
Nov-18	(116)	(877)	(463)	(158)	611	4,617	1,937	170	$ 7,336
Dec-18	39	366	160	57	(206)	(1,925)	(669)	(61)	$ (2,862)
Jan-19	(13)	(135)	(67)	(24)	69	712	280	26	$ 1,086

	Gas (Mmcf)				Gas Distribution Revenue Impact ($,000)				
	G	GH	GC	Trans	G	GH	GC	Trans	Total
Feb-19	24	229	114	41	(125)	(1,204)	(479)	(44)	$ (1,852)
Mar-19	(17)	(198)	(100)	(40)	87	1,042	419	43	$ 1,592
Apr-19	70	605	322	147	(371)	(3,193)	(1,348)	(158)	$ (5,071)
May-19	3	41	27	(0)	(17)	(216)	(113)	0	$ (346)
Jun-19	2	16	7	41	(12)	(87)	(29)	(44)	$ (171)
Jul-19	1	9	8	(107)	(5)	(48)	(35)	115	$ 26
Aug-19	(1)	(6)	(5)	3	3	30	20	(3)	$ 51
Sep-19	11	77	36	21	(56)	(411)	(149)	(23)	$ (639)
Oct-19	59	454	220	94	(310)	(2,400)	(920)	(101)	$ (3,732)
Nov-19	(104)	(851)	(458)	(197)	547	4,483	1,919	212	$ 7,161
Dec-19	6	55	30	10	(33)	(290)	(126)	(10)	$ (459)
Jan-20	129	1,170	633	212	(677)	(6,152)	(2,652)	(229)	$ (9,710)
Feb-20	101	922	521	169	(530)	(4,851)	(2,182)	(182)	$ (7,744)
Mar-20	133	1,192	631	285	(699)	(6,272)	(2,643)	(306)	$ (9,921)
Apr-20	(34)	(316)	(171)	(80)	178	1,668	717	86	$ 2,649
May-20	(47)	(436)	(82)	(84)	250	2,304	345	90	$ 2,989
Jun-20	3	23	16	10	(18)	(123)	(65)	(10)	$ (216)
Jul-20	2	15	13	(168)	(9)	(82)	(54)	181	$ 36
Aug-20	1	7	5	(44)	(5)	(39)	(21)	47	$ (18)
Sep-20	(3)	(35)	(17)	(13)	18	188	71	14	$ 291
Oct-20	18	202	64	43	(95)	(1,067)	(269)	(46)	$ (1,478)
Nov-20	80	853	388	185	(423)	(4,493)	(1,626)	(200)	$ (6,741)
Dec-20	3	30	16	5	(18)	(158)	(67)	(6)	$ (249)
Jan-21	43	384	200	68	(224)	(2,020)	(838)	(73)	$ (3,156)
Feb-21	(44)	(401)	(214)	(71)	234	2,108	896	77	$ 3,315
Mar-21	87	774	420	188	(460)	(4,076)	(1,757)	(202)	$ (6,495)
Apr-21	15	151	86	36	(79)	(796)	(358)	(39)	$ (1,273)
May-21	(10)	(95)	(54)	(24)	55	500	228	26	$ 809
Jun-21	3	19	18	(59)	(17)	(103)	(75)	63	$ (132)
Jul-21	0	2	2	(67)	(1)	(11)	(8)	72	$ 52
Aug-21	2	15	14	(121)	(10)	(79)	(59)	130	$ (18)
Sep-21	1	16	(18)	128	(5)	(85)	77	(138)	$ (150)
Oct-21	66	660	320	125	(349)	(3,486)	(1,340)	(134)	$ (5,309)
Nov-21	(22)	(216)	(92)	(38)	115	1,135	386	41	$ 1,677
Dec-21	192	1,668	817	161	(1,010)	(8,774)	(3,421)	(173)	$ (13,378)
Jan-22	(46)	(429)	(196)	(39)	243	2,258	819	42	$ 3,362
Feb-22	95	830	372	74	(501)	(4,366)	(1,560)	(80)	$ (6,507)
Mar-22	111	1,042	466	216	(587)	(5,486)	(1,951)	(233)	$ (8,256)
Apr-22	(2)	(21)	(12)	(6)	13	112	48	7	$ 180
May-22	15	140	64	16	(78)	(742)	(269)	(17)	$ (1,105)
Jun-22	3	23	21	13	(14)	(123)	(88)	(14)	$ (239)
Jul-22	2	19	18	(164)	(11)	(99)	(77)	176	$ (11)
Aug-22	3	25	25	(193)	(15)	(136)	(104)	208	$ (47)
Sep-22	4	37	18	(1)	(23)	(196)	(73)	1	$ (291)
Oct-22	1	12	(1)	1	(7)	(64)	6	(1)	$ (66)
Nov-22	39	344	117	65	(206)	(1,814)	(491)	(70)	$ (2,582)
Dec-22	(19)	(204)	(87)	(19)	102	1,071	366	20	$ 1,559
Jan-23	250	2,298	1,092	217	(1,315)	(12,086)	(4,575)	(233)	$ (18,209)
Feb-23	161	1,503	847	148	(846)	(7,910)	(3,550)	(159)	$ (12,465)
Mar-23	47	459	180	86	(247)	(2,415)	(754)	(92)	$ (3,508)
Apr-23	49	499	256	101	(257)	(2,633)	(1,071)	(109)	$ (4,071)
May-23	(6)	(57)	(36)	(5)	31	301	150	5	$ 487
Jun-23	(2)	(17)	(14)	43	10	88	60	(47)	$ 111
Jul-23	1	9	9	(57)	(6)	(47)	(38)	62	$ (30)
Aug-23	(1)	(4)	(4)	38	3	24	18	(41)	$ 3
Sep-23	1	23	1	(57)	(5)	(122)	(6)	61	$ (72)
Oct-23	24	393	55	59	(129)	(2,078)	(230)	(63)	$ (2,500)
Nov-23	(43)	(120)	(183)	(42)	226	632	766	45	$ 1,669
Dec-23	117	1,324	451	110	(615)	(6,968)	(1,891)	(119)	$ (9,593)

Response to Distribution Rates – Statement of Policy
Proposed Weather Normalization Adjustment

52 Pa. Code § 69.3302. Distribution rate considerations.

(a) In determining just and reasonable alternative distribution ratemaking mechanisms and rate designs that promote the purpose and scope of this statement of policy and the objectives of 66 Pa. C.S. § 1330 (relating to alternative ratemaking for utilities), the Commission may consider, among other relevant factors, the following:

(1) How the ratemaking mechanism and rate design align revenues with cost causation principles as to both fixed and variable costs.

PECO

PECO's proposed WNA mechanism is designed to recover distribution revenues needed to satisfy the cost-of-service requirement determined in this proceeding, while mitigating the variance between actual and authorized distribution revenues due to weather. PECO recovers a significant portion of fixed costs through volumetric rates. These fixed costs do not vary with the amount of gas delivered to customers and are composed of fixed operation and maintenance ("O&M") expenses, administrative and general expenses, depreciation, certain taxes, a portion of working capital requirements, and return on investment. These costs also do not vary in the short-term with changes in temperature. In the absence of a Straight Fixed Variable ("SFV") rate design, where all fixed costs are recovered in a fixed monthly charge, the Company's WNA mechanism will better align distribution revenues with cost causation principles; appropriately accounting for customer variation in usage due to weather. PECO St. No. 3 at 74-75.

OCA

PECO defined fixed costs as those incurred within the test year, which is fully forecasted. To the extent that rates are in effect outside of the test year, which is almost certain, PECO does not claim its costs are fixed. The concept of fixed costs is poorly defined because all costs are variable in the longer. After the test year, the portion of costs considered to be fixed begins to shrink and the alignment

supposedly created by the WNA becomes more and more tenuous as does the link to cost causation. Furthermore, with a fully forecast test year, the fixed costs within the test year are already addressed including the normalization of weather, so the WNA is a duplicative and unnecessary measure to address fixed costs in the test year.

(2) How the ratemaking mechanism and rate design impact the fixed utility's capacity utilization.

PECO

PECO's proposed WNA mechanism has no identifiable impact on capacity utilization. PECO St. No. 3 at 75.

OCA

PECO's proposed WNA is not mathematically related to the utilization of the system. However, per customer utilization of PECO's system is falling, according to data provided by the Company. The WNA is an ineffective method for addressing failing per customer, and likely system, utilization.

(3) Whether the ratemaking mechanism and rate design reflect the level of demand associated with the customer's anticipated consumption levels.

PECO

Customer-specific usage factors corresponding to individual demand (the BLMC for each customer) are continually updated and reflect the level of demand associated with the customers' anticipated consumption levels. PECO St. No. 3 at 75.

OCA

PECO did not adequately define or analyze customer's anticipated consumptions levels. Customer's anticipated consumption levels vary significantly depending on the weather normalization assumptions used.

(4) How the ratemaking mechanism and rate design limit or eliminate interclass and intraclass cost shifting.

PECO

Since the proposed WNA mechanism is applying rates which are based upon the specific revenue allocation and rate design approved by the Commission, it will mitigate the potential for interclass or intraclass cost shifting related to weather driven usage variances from those weather assumptions used in establishing rates. PECO St. No. 3 at 76.

OCA

PECO provided no quantitative analysis on this issue, so there is no analytical support either way. Theoretically, if the WNA supports PECO's business as usual capital planning approach, as opposed to taking tangible steps to address the impact of falling winter demand, the WNA will increase costs for all ratepayers.

(5) How the ratemaking mechanism and rate design limit or eliminate disincentives for the promotion of efficiency programs.

PECO

The WNA does not limit or eliminate disincentives for the promotion of energy efficiency programs as the WNA mechanism only addresses variations due to weather. PECO St. No. 3 at 76.

OCA

The proposed WNA disincentivizes energy efficiency programs because it imposes a disconnect between cost-savings for customers to participate in energy efficiency programming. The disincentive exists in that by relying upon temperature variances to impose a WNA regardless of reduced usage that may otherwise result from participation in an energy efficiency program, insert an artificial variable that would mitigate at least some cost-savings contingent on the weather. At a minimum, the WNA makes bills and savings more confusing, which will likely act as a barrier to energy efficiency investments.

(6) How the ratemaking mechanism and rate design impact customer incentives to employ efficiency measures and distributed energy resources.

PECO

Customers will continue be incentivized to employ energy efficiency measures and distributed energy resources because the WNA mechanism will only be implemented in the event that actual weather varies from normal weather beyond the deadband. A reduction in a customer's usage resulting from any efficiency measures or distributed energy resources will still reduce the customer's overall bill, including the portion of their bill that is subject to the WNA mechanism. PECO St. No. 3 at 76.

OCA

PECO's proposed WNA only considers the impact of weather on a customer's usage. If a customer reduces usage for reasons not related to the weather, such as pursuing cost savings, replacing a

furnace, switching to electric appliances, or using less gas, Peoples' WNA is incapable of considering increased efficiency when calculating the hypothetical, weather-dependent usage. Customers are disincentivized from improving efficiency because they will be paying for gas they do not use – charged at the distribution rate – under PECO's WNA. While the Company claims that efficiency will still result in a lower overall bill, decreases to a customer's bill will not be as impactful as if the WNA were not in place, limiting customers' incentives to use less gas. Additionally, the bill impacts created from customer adoption of electric heat or other investments that significantly alter gas demand have not been addressed by PECO. These changes could create significant and unwarranted bill impacts for gas customers that altered their demand with electrification.

(7) How the ratemaking mechanism and rate design impact low-income customers and support consumer assistance programs.

PECO

Customers served under the Company's current CAP receive bill discounts determined by household size and income level. Under PECO's current percentage of income program, or PIPP, customers enrolled in CAP will receive the bill based on their affordability level and, therefore, will not be impacted by the proposed WNA mechanism. PECO St. No. 3 at 76-77.

OCA

PECO did not conduct bill impact analysis for any type of customer taking service under the WNA, including low income customers and those participating in customer assistance programs. The bill impacts could be significant for low income residents as demonstrates in the PGW WNA case. Additionally, the WNA proposal has an obvious negative impact on the Company's ability to provide affordable service to low-income customers because it will increase the burden upon low-income customers who have not been enrolled in assistance programming by adding more expense to their bills. Based on data provided by the Company, customers, including low-income, will receive surcharges far more frequently than credits. The size of the surcharges is unknown, but customers will likely pay more under the WNA.

(8) How the ratemaking mechanism and rate design impact customer rate stability principles.

PECO

The WNA mechanism will adjust applicable customers' bills due to variations from normal weather. The WNA mechanism will directly improve stability in customer billing and mitigate volatility in their monthly costs. PECO St. No. 3 at 77.

OCA

PECO did not conduct any bill impact or stability analysis for customers. The WNA could increase volatility and make budgeting more challenging for customers. The Company has a budget billing tariff available that addresses volatility and stability better than the WNA.

(9) How weather impacts utility revenue under the ratemaking mechanism and rate design.

PECO

The proposed WNA mechanism will be employed for usage during the heating season months (October – May). The WNA mechanism will only apply to the Company's weather sensitive customer classes and its use does not ensure that the Company will recover 100% of its authorized distribution revenues. However, the WNA mechanism will reduce the amount of weather-related variation in both customer bills and PECO's associated distribution revenues. PECO St. No. 3 at 77.

OCA

Weather will significantly impact PECO's revenue under the proposed WNA. Warmer weather results in greater revenues while colder weather results in lesser revenues. However, as weather continues to warm over time, it becomes more and more likely that PECO's revenues will increase, instead of being revenue neutral, virtually eliminating any weather-related risk for PECO and transferring that risk to customers. Additionally, revenue neutrality depends on the number of years used to define normal weather. PECO is using 30 years which will likely lead to the largest amount of surcharges, when compared to a 10 or 20 year weather normal.

(10) How the ratemaking mechanism and rate design impact the frequency of rate case filings and affect regulatory lag.

PECO

The WNA is not anticipated to (nor intended to) impact the frequency of rate cases or have an impact on regulatory lag. PECO St. No. 3 at 77.

OCA

The Company's proposed WNA does not benefit customers in the form of reducing its rate case frequency or have an effect on regulatory lag, if approved.

(11) If or how the ratemaking mechanism and rate design interact with other revenue sources, such as Section 1307 automatic adjustment surcharges, 66 Pa.C.S. § 1307 (relating to sliding scale of rates; adjustments), riders such as 66 Pa.C.S. § 2804(9) (relating to standards for restructuring of electric industry) or system improvement charges, 66 Pa.C.S. § 1353 (relating to distribution system improvement charge).

PECO

The Company's proposed WNA mechanism will apply to variable distribution service charges recovering the base distribution revenue requirement, the Consumer Education Charge, and the Universal Service Fund Charge from applicable WNA rate schedules for the heating season of October through May. The billing for the remainder of the Company's riders will continue to be based on actual monthly usage. The calculated WNA amounts shall be subject to the State Tax Adjustment Surcharge ("STAS") and Distribution System Improvement Charge ("DSIC"). PECO St. No. 3 at 78.

OCA

PECO did not conduct any quantitative analysis on this issue. The answer is unknown.

(12) Whether the alternative ratemaking mechanism and rate design include appropriate consumer protections.

PECO

The WNA mechanism will assist in protecting consumers from higher bills during colder months. The WNA mechanism will result in an adjusted bill that reflects the revenues that would be recovered under normal weather, i.e., the same normal weather used to set rates in the base rate case proceeding. PECO will not recover additional distribution revenues due to colder than average temperatures that result in higher-than-normal usage from customers. The WNA mechanism insulates customers from high bills during colder than-

normal months, as WNA bills will be otherwise lower than non-WNA bills during colder than normal periods. PECO St. No. 3 at 78-79.

OCA

PECO has proposed no significant consumer protections for its WNA.

(13) Whether the alternative ratemaking mechanism and rate design are understandable to consumers.

PECO

PECO's WNA mechanism is not a new concept to gas customers in Pennsylvania or the broader regulated utility industry. Similar mechanisms have been successfully implemented by other Pennsylvania natural gas distribution companies and by utilities in other jurisdictions across the country. PECO has proposed a WNA tariff that provides detailed information to customers of how the mechanism works based on successful working versions found in the tariffs of other Pennsylvania natural gas distribution companies that have implemented a WNA tariff. Educational materials and customer service training will be developed upon approval of the mechanism. PECO will also provide appropriate notice to customers related to the WNA being approved, pursuant to the Commission's alternative ratemaking notice requirements. PECO St. No. 3 at 79.

OCA

PECO has not conducted any analysis on whether the WNA will be understandable to customers. It will be challenging for customers to understand the WNA because it has unknown bill impacts.

(14) How the ratemaking mechanism and rate design will support improvements in utility reliability.

PECO

PECO's cost of service is inclusive of investments and costs to continue to enhance the safety and reliability of its system. The proposed WNA will help minimize the volatility of the recovery of these costs. PECO St. No. 3 at 79.

OCA

The WNA is addressing a symptom of climate change and electrification. Not addressing the regulatory and utility business model issues related to climate change and electrification, have the potential to negatively impact system reliability.

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 14

Response Date: June 03, 2024

OCA-14-2

Reference PECO Gas St. 3, at page 74, which states that the actual Weather Normalization Adjustment implementation date "will depend on the PECO IT system readiness to implement the WNA mechanism." Identify the steps that PECO anticipates needing to take for each step necessary for the implementation, and quantify the anticipated costs associated with each step.

RESPONSE:

The IT changes required to implement the WNA, the total costs, and timeline are being developed.

Responsible Witness: Michael J. Trzaska

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 10

Response Date: May 28, 2024

OCA-10-6

Reference: PECO-Gas, St. 3, WNA section. Are the potential bill impacts to customers uncapped under the Company's proposal? If yes, explain why uncapped bill impacts are reasonable for customers. If no, explain.

RESPONSE:

The Company's proposed WNA does not include a cap on bill impact. The WNA is designed to reflect the customer's normal weather level bill (as authorized in the base rate case proceeding) each month with a 1% deadband.

Responsible Witness: Michael J. Trzaska

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Ron Nelson, hereby state that the facts above set forth in my Direct Testimony, OCA Statement 6, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: June 17, 2024

Signature: RON Nelson

Ron Nelson

Address: Volt-Watt Consulting LLC
1311 SE 53rd Avenue
Portland, OR 97215

OCA Statement 6R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

REBUTTAL TESTIMONY

OF

Ron Nelson

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

July 16, 2024

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I. Introduction

Q. Please state your name and business address.

A. My name is Ron Nelson. My business address is 1311 SE 53rd Avenue, Portland, Oregon, 97215.

Q. By whom are you employed and in what capacity?

A. I am the President and Founder of Volt-Watt Consulting LLC.

Q. For whom are you testifying in the matter?

A. I am testifying on behalf of the Pennsylvania Office of Consumer Advocate ("OCA").

Q. Did you previously submit testimony in this matter?

A. Yes. My direct testimony was submitted on behalf of the OCA as OCA Statement 6 on June 17, 2024.

Q. What is the purpose of your rebuttal testimony?

A. I respond to the Bureau of Investigation and Enforcement ("I&E") witness Ethan H. Cline and Pennsylvania Office of Small Business Advocate ("OSBA") witness Mark D. Ewen on the analysis and positions taken on PECO Energy Company's ("PECO's" or "Company's") proposed Weather Normalization Adjustment ("WNA") mechanism.

II. Response to Intervenors' Direct Testimony Regarding PECO's WNA Proposal

Q. What position did you take on PECO's WNA proposal in your direct testimony?

A. My position was that PECO's WNA proposal should be denied for multiple reasons. I explained how, without significant regulatory changes, the WNA shifts climate change risk away from the utility and shareholders and onto ratepayers.[1] Based on the data provided by PECO, winters are warming and reducing the number of heating degree days ("HDDs").

[1] OCA St. 6 at 8-11

The trend of decreasing HDDs means that ratepayers are far more likely to receive surcharges than credits over time, creating a tangible and clear shift of climate risk away from the utility and shareholders onto ratepayers.[2] Shifting climate change risk onto ratepayers will have a negative influence on the decisions PECO is making with respect to capital and other planning practices because they will not be incentivized to address climate change risk to the same degree.[3] Furthermore, PECO failed to establish that the WNA would be a just and reasonable rate under the Commission's policy statement for evaluating distribution rate considerations for alternative ratemaking proposals.[4] Additionally, my direct testimony demonstrated that PECO did not support the design or implementation process for its proposed WNA. The Company did not conduct bill impact analysis, which could be significant for specific customers[5]. Finally, I noted several design flaws with PECO's proposed WNA.[6]

Q. Please briefly summarize I&E's position regarding PECO's WNA proposal.

A. I&E witness Cline indicates that if PECO's WNA is approved, it should only be approved with conditions. The conditions he recommends include requiring PECO to include a 3% deadband instead of the 1% deadband proposed and requiring PECO to provide annual reporting of its WNA results.

[2] OCA St. 6 at 11-16.
[3] OCA St. 6 at 16-18.
[4] OCA St. 6 at 20-23; OCA Exh. RN-4.
[5] OCA St. 6 at 24-27.
[6] OCA St. 6 at 27-28.

Q. Were witness Cline's recommendations made in an attempt to address concerns he identified?

A. Yes. As part of his limited review of PECO's WNA proposal, witness Cline took issue with PECO's *de minimis* deadband. Additionally, witness Cline indicated that WNA adjustments are only needed when there are extraordinary circumstances.[7] As part of witness Cline's analysis, he pointed out the lack of Company support and analysis for its recommended 1% deadband, and he recommended that a 3% deadband be implemented.[8] Additionally, witness Cline noted the potential that WNAs have for creating "unusually large changes to (customers) bills."[9] In an apparent attempt to address this concern, I&E recommended tracking various annual reporting metrics "to assess whether changes to customers bills are becoming excessive in April and May."[10]

Q. Please briefly summarize OSBA's position regarding PECO's WNA proposal.

A. OSBA Witness Ewen took issue with several aspects of PECO's proposed WNA, but he appears to recommend conditional approval of the WNA. The issues witness Ewen identified included that the WNA could result in (1) customer confusion created by being billed for an estimated amount of gas versus metered amount, (2) a weaker price signal for energy conservation, (3) the potential inaccuracy of customer-specific heat sensitive load baseline calculations, (4) the potential for creating large WNA adjustments for customers, (5) explicit and tangible reductions to the utility's cost of capital can difficult, and (6) PECO's customers have reacted "substantially negative" to the proposed WNA.[11] To

[7] I&E St. No. 3, Cline Direct at page 4, line 22, to page 5, line 2.
[8] I&E St. No. 3, Cline Direct at 5-6.
[9] I&E St. No. 3, Cline Direct at 6, lines 12-14.
[10] I&E St. No. 3, Cline Direct at 7, lines 1-3.
[11] OSBA St. No. 1, Ewen Direct at 25-26.

address OSBA's concerns, witness Ewen recommended that the WNA be modified to "not apply when actual HDDs for a billing period are below 100 HDDs," and create a process to monitor "customers' implied heating usage per degree day."[12] Additionally, OBSA encouraged the Company to develop communication and education strategies to help customers understand the WNAs.

Q. What aspects of I&E's and OSBA's direct testimonies does your response focus on?

A. I focus on I&E and OSBA's collective arguments related to customer bill impacts and the potential for customer confusion related to PECO's WNA proposal. I also address I&E and OSBA's lack of analysis regarding PECO's WNA proposal and the insufficiency of their recommended conditions as predicates for approving the WNA.

A. RESPONSE TO I&E WITNESS CLINE

Q. What is your response to I&E's direct testimony regarding PECO's WNA proposal?

A. While I agree with many of I&E's concerns regarding customer bill impacts, I&E's recommendations do not sufficiently address the identified concerns. For example, I&E's recommendation to use annual tracking metrics to address excessive bill impacts is wholly insufficient because it is too little, too late. The customers will have already incurred the excessive bills prior to any compliance filing. I&E's recommendation is also vague and underdeveloped in that it does not define what "excessive" bill impacts are, how they will be determined, or how they will be addressed. For example, if bills are found to be excessive, will customers be issued refunds? The watch and see approach to the WNA does not seem appropriate, given that the Commission is already aware that a poorly designed WNA has created excessive bills.

[12] OSBA St. No. 1,Ewen Direct at 27, lines 1-8.

I also generally disagree with the use of tracking metrics as a consumer protection for a rate adjustment. The proposed WNA will have customer level impacts, not average impacts like many other ratemaking mechanisms. For this reason, attention needs to be paid to how the WNA mechanism is designed and its potential impacts prior to Commission approval, not a year or years afterwards.

Q. Do you agree with I&E witness Cline that imposing a 3% deadband for PECO's WNA is a sufficient condition that would warrant approval of the WNA?

A. No. Mr. Cline never provides any analysis or explanation of how the 3% deadband would make the WNA palatable. In fact, Mr. Cline's only basis for recommending that PECO implement a 3% deadband appears to be that a 3% deadband is in place for other natural gas utilities in Pennsylvania, including Columbia Gas, NFG, and UGI.[13] Mr. Cline does not present any analysis of PECO's weather, nor does Mr. Cline evaluate the impact that increasing the deadband to 3% would have upon customer bills. In short, there appears to be no fact-based analysis of PECO's proposal underlying his recommendation.

Q. Did I&E present an analysis of the WNA under the Commission's distribution rate considerations to evaluate whether the WNA would be a just and reasonable rate?

A. No, I&E did not include an analysis of the Commission's distribution rate considerations identified in 52 Pa. Code § 69.3302.

[13] I&E St. No. 3, Cline Direct at 4-6.

B. RESPONSE TO OSBA WITNESS EWEN

Q. How do you respond to OSBA's recommendation that PECO adopt communication strategies in response to customer complaints regarding the WNA?

A. OSBA's recommendation is vague and insufficient to address the concerns identified. First, after recognizing that customer reactions to PECO's WNA have been negative at the public input hearings, the OSBA simply suggests that PECO "adopt communication strategies that explain how the mechanism works."[14] Witness Ewen's testimony is vague about what type of communication strategies should be adopted, but I note that the formula for the WNA adjustment is as follows:

$$\text{WNBC} = \text{BLMC} + [\frac{\text{NHDD} +/- (NHDD * 1\%)}{\text{AHDD}} \text{x } (\text{AMC} - \text{BLMC})]$$
$$\text{WNAC} = \text{WNBC} - \text{AMC}$$
$$\text{WNA} = \text{WNAC x Distribution Charge}$$

As demonstrated above, the WNA uses multivariate algebra to calculate adjustments on customers' bills. While I am aware that complex ratemaking schemes exist, the objective here should be to minimize the complexity that individual ratepayers experience. For example, some performance-based ratemaking paradigms use indexes and other information to make complex adjustments on customer bills. However, these calculations are often applied across customer classes on average, not at the individual customer level. Applying calculations at the customer level creates disparities within the customer class and introduces more uncertainty, which can cause customers to question the fairness of customer specific calculations, especially those that have a tenuous link to cost causation. I frankly question PECO's ability to educate customers on a multivariate algebraic equation

[14] OSBA St. No. 1 at 26-27.

and how it interfaces with customers individual bills. I also hold a question as to how much it will cost to adequately educate ratepayers on the WNA and whether it outweighs any alleged benefits.

Q. Is Mr. Ewen correct that customer reaction to the WNA mechanism has been negative at public input hearings?

A. Yes, but Mr. Ewen fails to highlight the important context of confusion that underlies some of the negative customer reactions at PECO's public input hearings for this case regarding the WNA proposal. As an example, PECO customer Kevin Tracey testified that while he is an informed customer, he is very confused about the WNA, including the basis for and calculation of underlying weather assumptions and the amount that they could increase bills.[15] Mr. Tracey indicates that the WNA "is going to be so confusing for the customer to figure out."[16] Because Mr. Tracey does not understand the WNA, he cannot plan for the impact it may have to his budget.[17] In another example, PECO customer Peggy Greenfeld indicated that the word "confusion" entered her mind when she heard discussion of the WNA[18], and customer Tanis Van Buskirk indicated that a WNA is confusing and that would make it hard to calculate what she is going to pay.[19] With this context in mind, it is hard to understand how OSBA's vague recommendation for PECO to "adopt communication strategies" for the WNA would remedy the type of confusion customers described.

[15] Tr. at 504-506
[16] Tr. at 506.
[17] Tr. at 508.
[18] Tr. at 523.
[19] Tr. at 540.

Q. How do you respond to OSBA's recommendation that PECO modify the WNA so that it will not be applied when actual HDDs for a billing period are below 100 HDDs to avoid for extreme multipliers?[20]

A. OSBA's recommendation to only adjust bills when actual HDDs for a billing period are above 100 HDDs adds further complexity and unknown, but potentially significant, billing and accounting costs to implement the WNA. The Company has, confusingly, not estimated the cost of the billing and accounting changes that would be required to implement the WNA. The OSBA's recommendation, while potentially a helpful consumer protection, may add complexity and cost to the WNA's implementation.

Q. Did OSBA present an analysis of the WNA under the Commission's distribution rate considerations to evaluate whether the WNA would be a just and reasonable rate?

A. No, like I&E, OSBA also did not include an analysis of the Commission's distribution rate considerations identified in 52 Pa. Code § 69.3302.

III. Conclusion

Q. Do either I&E or OSBA's positions regarding PECO's WNA cause you to change your recommendations that PECO's WNA proposal should be denied?

A. No. I continue to support the recommendation made in my direct testimony, and none of the conditions that these parties recommend are supported or sufficient to convert the WNA into a just and reasonable rate.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

[20] OSBA St. No. 1 at 26-27.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Ron Nelson, hereby state that the facts above set forth in my Rebuttal Testimony, OCA Statement 6R, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 16, 2024

Signature: RON Nelson

Ron Nelson

Address: Volt-Watt Consulting LLC
1311 SE 53rd Avenue
Portland, OR 97215

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

SURREBUTTAL TESTIMONY

OF

Ron Nelson

On behalf of the

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

August 2, 2024

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I. Introduction

Q. Please state your name and business address.

A. My name is Ron Nelson. My business address is 1311 SE 53rd Avenue, Portland, Oregon, 97215.

Q. By whom are you employed and in what capacity?

A. I am the President and Founder of Volt-Watt Consulting LLC.

Q. For whom are you testifying in the matter?

A. I am testifying on behalf of the Pennsylvania Office of Consumer Advocate ("OCA").

Q. Did you previously submit testimony in this matter?

A. Yes. My direct testimony was submitted on behalf of the OCA as OCA Statement 6 on June 17, 2024. Additionally, my rebuttal testimony was submitted as OCA Statement 6R on July 16, 2024.

Q. What is the purpose of your surrebuttal testimony?

A. I respond to the rebuttal testimony of PECO Energy Company – Gas Division ("PECO" or "Company") witness Micheal J. Trzaska on PECO's proposed weather normalization adjustment ("WNA") mechanism.

Q. Please summarize your conclusions and recommendations.

A. The Company's proposed WNA is unreasonable and unsupported. The Company's arguments in rebuttal, as with direct testimony, lacked objective support. The Company consistently replies to objective analysis with its unsubstantiated "belief" or "anticipation" about concepts that could have been objectively analyzed.[1] I continue to assert that the

[1] By way of direct examples, in PECO-Gas St. No. 3-R, Mr. Trzaska's Rebuttal Testimony includes the following content at the referenced pages: On Page 14 Mr. Trzaska states "The Company believes that its revenue analysis is reasonable … ."; at 18 he states "The Company does not believe 10 years provides a large enough data set, and …

WNA will shift excessive risk from shareholders and the utility onto ratepayers, and that it will do so unnecessarily and in ways that will harm consumers.[2] The Company's inadequate rebuttal only reinforces my concerns regarding the WNA. The Commission should reject the Company's WNA proposal.

Q. Did the Company provide any modifications to the WNA that would make the mechanism reasonable?

A. No. The Commission should reject the WNA regardless of any of the changes proposed in this case.

II. Overall Response

Q. Please share your overall response to PECO's WNA rebuttal.

A. PECO attempted to shirk nearly every analytical point made within my direct testimony and the objective evidence in the record was consistently cast aside and ignored. The Company failed to engage in the analytical details of the WNA mechanisms and seems to be heavily relying on the facts in other gas utility cases to support the adoption of the WNA in this case. My response is summarized as follows:

- The alternative ratemaking policies and PA Code permit the Commission to approve a WNA, but only if the WNA is just and reasonable.[3] The alternative ratemaking policies and PA Code certainly do not require the Commission to approve a WNA. To approve the WNA, the Commission must determine the facts in this case, not another

(believes) … there is little variation between utilizing 20 years of data versus 30 years." At page 18, Mr. Trzaska states "The Company believes the WNA is understandable … ." at 20 he states "The Company does not anticipate that the WNA will impact affordability or otherwise disproportionately impact low-income customers." Each of these statements could have been supported with objective data analysis and the Company chose not to provide support. In the place of analysis, the Company offered its beliefs on the subject, which are subjective and influenced by its fiduciary responsibility to maximize profits for its shareholders.

[2] OCA St. 6 at 28.

[3] OCA St. 6 at 22.

Pennsylvania gas utility case, result in PECO's customers paying just and reasonable rates. I have demonstrated that approval of the WNA will not result in just and reasonable rates for several objective reasons, as supported in my analysis of the Commission's policy statement factors that are used to evaluate the justness and reasonableness of alternative ratemaking proposals.[4] As I mentioned above, PECO's attempt to refute my analysis is based almost completely upon its unsubstantiated beliefs and generalizations and not upon data-driven analysis or support.[5]

- PECO has not rebutted that temperatures are rising, and winters are becoming warmer with fewer heating degree days ("HDDs").
- PECO did no customer-specific bill impact analysis on the WNA. PECO should be aware that extreme weather could create significant bill impacts through the WNA. PECO chose not to conduct analysis on this topic, and in its rebuttal testimony fails to respond to this concerning defect that I raised in my direct testimony.[6] As a result, PECO essentially proposes that the Commission require PECO's customers to assume the risk of the WNA without any data to inform what that impact may be.
- PECO did no quantitative analysis on the underlying formula used for the WNA.[7] PECO should be aware that the inclusion of shoulder months within the WNA could create significant bill impacts to ratepayers. PECO chose not to conduct this analysis.
- PECO chose to use 30-year weather normals for its WNA as opposed to a 20-year or 10-year period. PECO appears aware that using the 30-year WNA will likely result in

[4] OCA St. 6 at 22-23; OCA Exh. RN-4.
[5] PECO St. 3-R at 16-19.
[6] OCA St. 6 at 24.
[7] PECO did a sensitivity analysis that involved the deadband but appears to have only evaluated the results from a utility-revenue standpoint as opposed to a ratepayer protection standpoint. See, PECO St. 3 at 70.

more revenues (i.e., more frequent and higher surcharges), given that winters are becoming warmer and there are fewer HDDs. PECO chose to use a longer timeline that will likely lead to higher revenues for shareholders and to not conduct any analysis on the revenue and bill impacts this decision will have on its customers.

- The evidence in the record from PECO's customers indicates that the WNA confuses customers.[8] The confusion is exacerbated by the extremely complex multivariate algebra used to calculate WNA adjustments on customers' bills.[9] The only evidence PECO has offered to suggest otherwise is the Company witness's unsupported personal belief that it does not.

Only by ignoring the objective analysis I provided in direct testimony and refusing to conduct any analysis of its own, could the Company come to the fully unsupported conclusions that the WNA does not "unfairly shift risk to customers" and that customers will "mutually benefit."[10] I address each of these issues further below.

III. Response to PECO

Q. Please summarize the analysis conducted and conclusions reached in your previous testimony on the WNA.

A. My direct testimony focused on the risk shift from the utility and shareholders to ratepayers created by the WNA, areas where the WNA does not meet the alternative ratemaking requirements, the complete lack of analytical support PECO offered for the WNA, and several design flaws with the WNA.[11] Because winters are warming and heating degree days ("HDDs") are falling, PECO gas sales are also falling, all else constant. To address

[8] OCA St. 6R at 7.
[9] OCA St. 6 at 6.
[10] PECO-Gas St. No. 3-R, Trzaska Rebuttal at 12, line 4.
[11] OCA St. 6 at 8.

warming winters and falling sales, PECO has proposed the WNA. Therefore, the WNA is being used as a tool to shift climate change risk away from the Company and its shareholders and onto ratepayers. Shifting climate change risk onto ratepayers will reduce, or eliminate, the Company's incentive to address falling sales and other climate change related impacts on its system, which will increase costs for ratepayers in the medium and long term.[12] Costs will increase for ratepayers because the Company will continue to build and plan its system as though sales are not falling (because the Company's revenues are being made whole), and winters are not warmer, resulting in an overbuilt system.

To demonstrate the risk shift created by the WNA, my direct testimony demonstrated that ratepayers are far more likely to receive a surcharge than a rebate under the WNA.[13] Furthermore, I demonstrated the Company's selection of a 30-year WNA, rather than a shorter period, will likely result in the most revenue and highest bill impacts.

Q. How is your response to PECO organized?

A. I organize the response to PECO into the following categories (1) purpose of the WNA; (2) precedent, statutory authority, and risk shifting; (3) the WNA does not align with the alternative regulations and PA Code, (4) the lack of support and analysis, and (5) design issues with the WNA.

A. <u>The WNA Does Not Achieve Its Stated Purpose</u>

Q. Please summarize PECO position on the purpose of the WNA.

A. PECO witness Trzaska reiterated the purpose of the WNA as being: (i) to provide customers with more predictability in billing, which will better enable customers to budget for their bills and mitigate the impact of higher bills during severely cold months; and (ii)

[12] OCA St. 6 at 17-18.
[13] OCA St. 6 at 13-15.

to stabilize PECO's revenues by providing PECO with greater certainty to earn PUC-approved distribution revenues.[14]

Q. Does the WNA achieve the stated purpose?

A. The WNA does not address the first stated purpose. It is not clear what PECO means by bill predictability or ability of customers to budget their bills. If what PECO means by this is that customers' bill *amounts* will be more consistent month to month regardless of weather because of the addition of the WNA, this may be true given that PECO seeks to impose a charge on customers through the WNA when they use less energy due to warmer weather. I doubt very much that bills that are consistently higher because of this charge is the kind of bill predictability that customers would find to be desirable. Furthermore, there is no basis for PECO to legitimately assert that the WNA will make bills easier to predict from a bill calculation standpoint. To demonstrate why the WNA does not provide predictability and enable budgeting, I provide the WNA equation below.

Figure #1

$$\text{WNBC} = \text{BLMC} + \left[\frac{\text{NHDD} +/- (NHDD * 1\%)}{\text{AHDD}} \text{x } (\text{AMC} - \text{BLMC})\right]$$

$$\text{WNAC} = \text{WNBC} - \text{AMC}$$

$$\text{WNA} = \text{WNAC x Distribution Charge}$$

Figure #1 is the multivariate equation used to calculate individual customer's bills each month. The equation has five variables that can all change each month. An equation with five variables cannot feasibly be used for budgeting or predicting bills. A person can create a visual representation of an equation that has three variables at the most. For example, an equation that has two variables is a simple two-dimensional graph (e.g., an x- and y-axis),

[14] PECO St. 3-R at 11-12.

while three variables requires a three-dimensional graph (e.g., creating a sphere of potential solutions to the equation with a z-axis). However, once an equation extends to 4 variables, a person cannot visually evaluate the solutions to an equation, much less 5 variables.

Additionally, to solve a 5-variable equation, customers would need to know 4 of the variables. In the case of the WNA, the customers don't know any of the variables. It is not a solvable equation. This demonstrates that the WNA cannot be used to predict bills or to help budget because the equation is too complicated for customers to use for visualization or conduct scenario analysis. Suggesting that it helps with predicting bills and budgeting is objectively false. It is impossible that the WNA helps customers with predicting bills and budgeting—a mathematical fact, not an opinion—which demonstrates the Company has failed to achieve one of the two purposes set by the WNA.

Q. Will the WNA stabilize PECO's revenues as Mr. Trzaska claims?

A. The WNA will stabilize PECO's revenues; however, it will do so to an unreasonable, unjustifiable extent. Using the 30-year WNA authorizes unusually and unreasonably high revenue because it no longer represents normal weather. Instead, a 30-year WNA allows the utility to over-collect when compared to anticipated and more accurate forecasts that reflect warmer trends.

B. Precedent, Statutory Authority, and Risk Shifting

Q. Please summarize PECO response on precedent, statutory authority, and risk shifting.

A. PECO witness Trzaska claims that the "WNA is a reciprocal mechanism under which customers may be entitled to a credit when actual weather is colder than normal or a

surcharge when actual weather is warmer than normal."[15] Witness Trzaska disagrees that the WNA unfairly shifts risk to customers "since the WNA is designed to ensure that customers will only pay for, and the Company will only be able to collect, the level of revenue that is authorized by the Commission … ."[16] PECO states plainly that it does not "believe the WNA shifts any risk to customers."[17] Witness Trzaska notes that the "Commission has approved similar WNA mechanisms for other natural gas utilities … ."[18] As to the mechanics of the WNA, witness Trzaska notes that the 30-year WNA is updated annually and therefore takes into account evolving temperatures.[19]

Q. How do you respond to PECO on reliance upon the Commission's approval of other WNA mechanisms for other utilities?

A. The Company's point that the Commission has approved other WNA mechanisms is not relevant. While PECO may be factually correct, PECO fails to draw any factual connections between this case and other cases. PECO has not provided any information in the record that directly compares its WNA mechanism to any other utility. More importantly, the facts in this case are distinct and informed by the Commission's recent experience with PGW, which PECO appears to have largely ignored while developing its own proposal.[20]

Q. Do you agree with Mr. Trzaska's claim that the WNA is "reciprocal?"

A. No. The claim that the WNA is "reciprocal" and does not shift risks to customers, while mathematically true is unequivocally false in a practical sense, and PECO does not rebut

[15] PECO-Gas St. No. 3-R, Trzaska Rebuttal at 11, lines 18-20.
[16] PECO-Gas St. No. 3-R, Trzaska Rebuttal at 12, lines 4-6.
[17] PECO-Gas St. No. 3-R, Trzaska Rebuttal at 13, line 8.
[18] PECO-Gas St. No. 3-R, Trzaska Rebuttal at 12, lines 10-12.
[19] PECO-Gas St. No. 3-R, Trzaska Rebuttal at 13.
[20] For example, shoulder months created large bill impacts for PGW customers. PECO was aware of this but made no modifications to its proposal.

my quantitative analysis from direct testimony.[21] My direct testimony demonstrates that customers are more likely to receive a surcharge than a rebate, clearly an unequal sharing of weather risk. Furthermore, I demonstrated that selecting the 30-year WNA over the 10- or 20-year will likely result in more revenue being collected by the utility. This brings into question the reasonableness of the distribution revenue authorized under a WNA. PECO will likely charge customers more money using the 30-year WNA than the 10- or 20-year, another clear shift of risk.

Q. Is there merit to PECO's claims about the value of its 30-year forecasting?

A. No. Finally, PECO's claim that updating the 30-year forecast annually somehow captures evolving temperatures is a red herring. The longer forecast period minimizes the impacts of rapid and clear warming trends. Incorporating one new year of data into a 30-year data set will have far less of an impact than it would with a short period of 10- or 20-year data set, demonstrating this does not address any of the issues I have presented.

C. <u>The WNA Does Not Align with the Alternative Regulations</u>

Q. Did PECO respond to your analysis on the Commission's alterative regulations?

A. Yes. Witness Trzaska generally responded to the distribution rate considerations. I respond in turn to each issue consideration that warrants a response.

[21] In an attempted rebuttal witness Trzaska state that my analysis shows that "no two years' actual weather was the same." See below for my response.

Q. For distribution rate consideration (1) Mr. Trzaska responded that "PECO does have certain costs that are fixed and other are variable. I disagree with Mr. Nelson that fixed costs are 'poorly defined' and that 'all costs are variable in the (long-term).'"[22] How do you respond?

A. PECO defined fixed costs as "in the context of the WNA, … costs that do not vary depending on customer usage of natural gas in the fully projected test year."[23] First, the definition of fixed costs should not be dependent on "the context of the WNA." It is an economic concept, not a concept tied to the WNA. Second, PECO's definition says that costs are fixed for one year, while the WNA will extend beyond one year. I don't see how PECO's definition of fixed costs aligns with distribution consideration (1) based on the Company's definition. Therefore, I continue to conclude that Company's definition of fixed costs is poorly defined. Lastly, PECO's disagreement with all costs being variable in the long-term is confusing. All costs being variable in the long-term is a well-established economic concept.[24]

[22] PECO St. 3-R at 16.
[23] Response of PECO Energy Company to Interrogatories of the Office of Consumer Advocate, OCA-10-5.
[24] Kahn (1988). The Economics of Regulation: Principles and Institutions, Volume I, Chapter 4: The Application of Long- and Short-Run Marginal Costs.

Q. For distribution rate consideration (3) Mr. Trzaska stated that "Customer consumption is taken into account when forecasting customer usage and will be continuously updated. I disagree with Mr. Nelson's conclusion that PECO did not adequately define or analyze customers' anticipated consumption levels."[25] How do you respond?

A. PECO gets to one of the primary issues of the WNA with this response. The forecast versus the anticipated level of customer consumption levels is biased toward the Company and its shareholders because of the use of 30-year weather normals for the WNA. Anticipated consumption levels going forward are not well represented by a forecast based on 30-years of consumption data. This is reflected in the difference between using the 10-year WNA and 30-year WNA, which is a difference of 2%.[26] By using the 30-year WNA instead of the 10-year WNA, the Company is essentially requesting an additional 2% rate increase on customers and creating a misalignment with anticipated and forecasted consumption levels. For this reason, PECO's WNA does not "reflect the level of demand associated with the customer anticipated consumption levels."[27]

Q. For distribution rate consideration (5-6) Mr. Trzaska stated, in part, that "PECO also disagrees that the WNA will make bills and savings confusing."[28] How do you respond?

A. PECO offer no evidence to support its belief that the WNA will not "make bills and savings confusing."[29] As I explained above, public input testimony demonstrates that customers

[25] PECO St. 3-R at 17.
[26] See PECO-Gas's response to OCA-15-1(a) and Attachment OCA-15-1(a), which were attached to my direct testimony as Exhibit RN-2.
[27] 52 Pa. Code § 69.3302. Distribution rate considerations #3.
[28] PECO St. 3-R at 17.
[29] OCA Statement No. 6R, Nelson Rebuttal at 6-7.

are clearly confused by the WNA, and the complexity underlying its calculation only serves to exacerbate that confusion. There have been newspaper articles and there are public website threads discussing how confusing and frustrating the WNA has been for customers in Pennsylvania.[30] The only rebuttal PECO has offered to these facts is that their WNA witness believes otherwise.[31]

Q. For distribution rate consideration (7) PECO claimed that "Mr. Nelson did not support his conclusory statements that the WNA will harm low-income customers."[32] How do you respond.

A. It is unclear what type of "support" PECO is looking for to demonstrate harm to low-income customers. I demonstrated in direct testimony that the WNA will result in frequent and relatively high surcharges more frequently than rebates, and that PECO chose the 30-year WNA that will likely maximize the utilities revenue compared to feasible alternatives.[33] Each of these issues will harm low-income customers because they will increase bills. Each of these issues is supported with objective analysis conducted with data from the Company. I also note that OCA witness Colton provided significant testimony on the harm that low-income customers will experience as a result of the WNA,[34] and Mr. Trzaska conveniently ignores Mr. Colton's analysis on this point.

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[30] See https://whyy.org/articles/pgw-bill-adjustments-may-normalization-weather-fluctuations/ See Also https://www.reddit.com/r/philadelphia/comments/vd92wp/pgw_weather_normalization_adjustment_charge_of/ See Also https://www.reddit.com/r/Pennsylvania/comments/1d549lq/how_is_this_ridiculous_weather_normalization/ See Also https://www.inquirer.com/business/energy/puc-pa-gas-bill-weather-normalization-adjustment-20230926.html See Also https://www.citizensvoice.com/news/business/ugi-adds-weather-normalization-adjustment-charge-to-bills/article_a0cf08e9-6bd4-589b-a3c5-abc31d75cb92.html See Also https://www.citizensvoice.com/opinion/letters/puc-should-end-ugis-weather-adjusted-billing/article_9171690a-caf9-5959-b839-688c65945b8d.html

[31] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 18, lines 11-13.

[32] PECO St. 3-R at 17.

[33] OCA Statement No. 6, Nelson Direct at 12-19.

[34] OCA St. 4 at 84-87.

Q. For distribution rate consideration (8) PECO claims that "Mr. Nelson did not support his conclusory statements that the WNA could increase volatility and make budgeting more challenging, or that budget billing addresses volatility and stability better than the WNA."[35] How do you respond?

A. While I lack customer data access to provide a direct example of a PECO customer, PECO could have easily done but chose not to, I can confirm that the budget billing option addresses the vast majority of customers bill volatility and stability issues when WNA bill impacts are not excessive. Take an illustrative example, assuming a customer has a high bill in the winter of $300 per month and a low bill in the summer of $30 per month with an annual gas bill of $1680. The budget billing option would charge the customer $140 per month every month, essentially eliminating volatility and stability issues by addressing swings in bills as large as $270 between different months and flattening them over the year. The WNA does nothing to address the large swing in bills throughout the year. The WNA will only be applied in the winter so it could increase volatility in bills by assigning surcharges to already comparatively large bills. In the PGW case, WNA charges were as high as $120 per month. Applying this to the example above would increase the winter bill to $420 with the low in the summer still being $30 per month—increasing volatility and decreasing stability! This demonstrates, using objective math, that the WNA can increase volatility and reduce stability in violation of the distribution consideration (8).

[35] PECO St. 3-R at 17.

Q. For distribution rate consideration (9) PECO stated that "The Company considered utilizing 10- and 20-year weather normals as well. The Company does not believe 10 years provides a large enough data set, and there is little variation between utilizing 20 years of data versus 30 years. The Company believes that utilizing 30 years is appropriate."[36] How do you respond?

A. The Company makes statical determinations with opinions instead of using math.[37] The Company is also implicitly confirming it chose the time period that is likely to yield them the highest level of revenue as winters continue to become warmer. It is also unclear why ratepayers should not benefit from the "little variation" the 20-year WNA would have yielded. Finally, it is unclear how the determination that the 10-year data set was not large enough and why 15-years was not considered.

Q. For distribution rate consideration (11) PECO claimed that "Mr. Nelson did not contradict the Company's conclusions regarding how the WNA will interact with other revenue sources."[38] How do you respond?

A. Upon further reflection, I note that if the Company does not bear climate change risk, the WNA will likely increase the cost of utility service over time because ratepayers will bear additional risk of overbuilding the system. Under the WNA, the Company will continue to build to sales projections that use 30 years of data, now consisting of data from 1993 to

[36] PECO St. 3-R at 17-18.
[37] Witness Trzaska does not cite to any analysis from PECO forecasting witness that supports the stated conclusion.
[38] PECO St. 3-R at 18.

2022,[39] and are biased upward, while winter sales will drop significantly and require a smaller system.

Q. For distribution rate consideration (13) PECO witness Trzaska claimed that "Mr. Nelson did not support his conclusory statement that the WNA will be challenging for customers to understand. The Company believes the WNA is understandable for the reasons set forth in my direct testimony."[40] How do you respond?

A. I have addressed the issue of customer's ability to understand above. I will add that the Company's rebuttal is a "belief" as opposed to offering objective facts. It is not important whether the Company believes the WNA is difficult to understand. It is important whether customers understand the WNA. There are objective facts that indicate that customers find the WNA confusing, frustrating, and unfair.

D. <u>The Company Did Not Provide Sufficient Support or Analysis on the WNA</u>

Q. In response to the analysis you conducted on high and prevalent surcharges being administered to residents, PECO respond that "The data relied upon by Mr. Nelson shows that no two years' actual weather was the same."[41] How do you respond?

A. PECO's observation of the data is meaningless and completely unrelated to my analysis and results. It would be a statistical anomaly with a near-zero probability for two years of weather to be the same. I do not consider this observation to be a rebuttal or even relevant. My analysis addressed trends in the data and the resulting shift of risk caused by increasing temperatures. My analysis and results are unrebutted.

[39] See PECO's response to OCA-19-2, attached here as Exhibit RN-1-SR.
[40] PECO St. 3-R at 18.
[41] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 14, lines 17-18.

Q. How did the Company respond to your critique that it did not do any customer level bill impact analysis?[42]

A. The Company claimed that it "believes its revenue analysis is reasonable and consistent with the level of analysis provided by other utilities… Mr. Nelson … provides no support that a customer-level analysis would provide more accurate data than the Company's class-level analysis."[43]

Q. How do you respond?

A. I have addressed the fact that PECO's lack of analysis in this case speaks for itself and what happened in other gas cases needs to be evaluated in that context. However, I will note that the cases provided as support for the Company's above statement, including Columbia Gas's 2012 rate case, UGI Utilities, Inc's 2021 rate case, and National Fuel Gas Distribution Corporation's 2022 base rate case, are all cases that predate the significant bill issues that recently came to light for PGW's customers.[44] As I described more fully in my direct testimony, in 2022, PGW filed a Petition for Emergency Order after dramatic customer bill increases occurred as a direct result of its WNA, culminating in a billing emergency resulting in WNA surcharges as high as $201.51 per month.[45] The PGW billing emergency demonstrates the need for more in-depth analysis of the WNA's impacts on customers. As for the Company's argument that I did not support the idea that customer-level analysis would be more accurate than class-level analysis, I see my position as a statement of fact, based on how ratemaking works. Customer-level analysis is objectively more granular and accurate when looking at bill impacts than at the customer-class.

[42] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 14.
[43] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 14, lines 7-12.
[44] See PECO's response to OCA-19-8, attached as Exhibit RN-2-SR.
[45] OCA St. 6 at 3-5, 24.

Looking at class-level impacts are averages, while customer level analysis shows intra-class distributional impacts that vary more widely. In fact, I found that intra-class distributional bill impacts for PGW's WNA varied by a minimum WNA charge of $25 per billing cycle up to $120 per billing cycle. On the other hand, the analysis conducted by the Company does not even calculate average class bill impacts. The Company's critique is baseless and again seems to ignore or misinterpret analysis and facts.

Q. How does PECO respond to your recommendations and observations regarding the need to evaluate the gas utilities' forecasting and planning practices given the changing industry landscape?

A. The Company claims that the rate case is not the proper forum for "questions like climate change and the natural gas utility business model."[46] PECO further recommended that the Commission open a generic proceeding to address these issues, if the Commission finds it necessary. The Company also claimed that I did not express any concern regarding the Company's 30-year weather normals.

Q. How do you respond?

A. First, while I described natural gas utility industry issues being disrupted by climate change, I want to be clear that fundamental regulatory issues are at issue in this case. PECO determined to inject a WNA proposal into this case and my concerns are directly responsive to the WNA proposal and PECO's claimed basis for its proposal. Specifically, PECO's claimed need for revenue stabilization and its falling sales is an issue that requires regulatory attention in this case. Electrification of heating is accelerating, which will further erode sales and requires regulatory attention. My assumption is that PECO does not

[46] PECO St. 3-R at 15.

consider accelerating electrification within its forecasting process, which is a regulatory issue in this case. Each of the issues I have listed can and should be addressed under a rate case umbrella because each impacts rates, and at the end of the case the Commission must determine just and reasonable rates for PECO and whether the WNA is consistent with just and reasonable rates.

To understand how significant these issues are, consider Ameren Illinois' (Ameren) gas utility. Ameren conducted multiple electrification studies with EPRI and found that gas sales were projected to fall 18 percent to 40 percent.[47] The range of projections included a "do nothing" scenario and gas consumption fell significantly for purely economic reasons (i.e., no policy factors were considered in the scenario). The study was conducted prior to the Inflation Reduction Act, which includes significant electrification incentives including those related to heat pumps. This demonstrates that the Ameren study is likely a conservative estimate of how much gas consumption will fall. What happens to rates if PECO's gas demand falls 40 percent? If PECO has conducted similar studies, how is that impacting the utility's planning?[48] Why isn't the Company incorporating electrification into its forecasts when impacts could be so significant on customers? All of these questions and more should be answered in order to set just and reasonable rates and certainly prior to shifting a portion of this risk to ratepayers via a WNA.

[47] See https://icc.illinois.gov/docket/P2023-0067/documents/340150/files/593424.pdf

[48] As noted in my direct testimony, Exelon is on the board of directors of EPRI. PECO should be aware of this study and more.

Q. Has PECO conducted any analysis on how electrification or broader climate change could impact its sales, forecasting methodologies, or planning processes?

A. No. While PECO is attempting to shift climate change risk onto its customers in this proceeding, it has not begun to address any of the associated issues within its forecasting or planning process.[49] As explained above in my example of Ameren's study,, other natural gas utilities do recognize that climate change and electrification are going to impact sales and system needs.

Q. Is PECO correct to say that you did not take issue with its 30-year weather normal selection?

A. No. To be clear, I certainly do take issue with PECO's 30-year weather normal selection. In my direct testimony I demonstrated that choosing a 10- or 20-year weather normal selection would likely reduce the revenue collected by the Company through its WNA.[50]

E. <u>The WNA is Designed Poorly</u>

Q. How did PECO respond to your concern about including shoulder months within the WNA?

A. PECO claimed that aside from PGW, "to PECO's knowledge, no other Pennsylvania utility with a WNA has experienced any issue associated with the inclusion of shoulder months."[51]

Q. How do you respond?

A. PECO's passive shoulder-shrug of a response provides no explanation as to what, if any, analysis underliers its lack of knowledge. PECO does not have access to other utilities'

[49] See PECO's responses to OCA , OCA-19-4, and OCA-19-5, attached as Exhibits RN-3-SR and RN-4-SR, respectively.
[50] OCA St. 6 at 16.
[51] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 18, lines 20-22.

billing systems. PECO did no analysis. PECO, again, gives a qualitative opinion unsupported by facts or data analysis. PECO also ignores that its service territory is geographically closest to Philadelphia where specific weather-based volatility imposed by inclusion of the shoulder month of May was a direct cause of significant bill increases that culminated in PGW issuing $12 million in refunds and amending its WNA tariff to exclude the month of May from is calculation.[52] PECO provides no location and weather-based evaluation of the "other utilities" it references, but mapping of Pennsylvania's natural gas utilities' service territories reveals that PECO is, by far, the closest regulated natural gas utility to Philadelphia Gas Works' service territory.[53]

Q. How did PECO respond to your concern about the size of the deadband?

A. PECO stated "The deadband by nature is an arbitrary figure because the purpose of alternative rate recovery tools like the WNA is to allow the utility to recover an amount that the Commission has approved."[54]

Q. How do you respond.

A. PECO's position that the purpose of alternative regulation is "to allow the utility to recovery an amount (of revenue) that the Commission has approved" is one of the most misguided positions I have heard articulated by an investor-owned utility on alternative regulation. This position also illuminates why the Company sees the WNA as being fair to customers, when they are not considered at all within PECO's position. Having advised several state commissions on alternative regulation and having testified in dozens of

[52] "PGW Ordered to Stop Adjusting Customers' Bills to Account for May Weather Fluctuations" WHYY News, Sept, 25, 2023. https://whyy.org/articles/pgw-bill-adjustments-may-normalization-weather-fluctuations/#:~:text=PGW%20will%20stop%20adjusting%20customers,doesn't%20go%20far%20enough.
[53] https://energo.com/pennsylvania-natural-gas-coverage-map/
[54] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 19-20.

dockets on this issue, I strongly disagree with PECO's position on the purpose of alternative regulation. At a high-level, alternative regulation is an acknowledgment that traditional utility business models and regulatory frameworks are not well designed to addressed modern industry issues, such as electrification and emissions reduction goals, and therefore are not well aligned with ratepayers. Due to this misalignment, alternative regulation seeks to create mechanisms that redistribute financial incentives and associated risk to more equitably and efficiently achieve regulatory outcomes. First and foremost, alternative ratemaking aims to share risk, not being solely focused on utilities obtaining authorized revenues. Even within an alternative ratemaking framework, the regulator's objective is to act as a substitute for competition, not a cash machine for shareholders.

Furthermore, PECO casts aside the deadband as being "arbitrary." The deadband is the one consumer protection that PECO proposed and the Company labels it as arbitrary. It is also the only aspect of the WNA the Company analyzed. I am perplexed by the Company's dismissal of this component of the WNA.

Q. How did the Company respond to your concerns regarding low-income customers?

A. PECO stated "The Company does not anticipate that the WNA will impact affordability or otherwise disproportionately impact low-income households. Low-income customers not enrolled in the Company's CAP will not be treated differently than any other residential customer."[55]

Q. How do you respond?

A. PECO responded with its belief, when the Company could have done quantitative analysis to support its position. I have demonstrated that residents will get more frequent surcharges

[55] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 20, lines 7-10.

because winters are warming. I have also demonstrated that 30-year weather normal will increase the magnitude of WNA adjustments and surcharges. The Company has not challenged either of these conclusions directly. More frequent and large surcharges will decrease affordability. It is indisputable. It is a fact supported with the quantitative data and analysis in the record.

Q. On a related note, how did the Company respond to OSBA witness Ewen's recommendation to modify the WNA to reduce customer-level surcharges?

A. The Company stated that "Mr. Ewen has not provided any evidence that the WNA will produce large multipliers and bills for PECO's customers."[56]

Q. How do you respond?

A. I disagree with the Company. Witness Ewen provided an example of how the WNA could produce a large multiplier in his direct testimony.[57] The fact that the WNA could produce large multipliers is a mathematical fact, completely indisputable based on the equation the Company uses. A more accurate critique from that Company could have been that OSBA did not demonstrate the frequency with which large multipliers will be applied to customers through the WNA. However, the only party in the proceeding that could answer that question is the Company, because PECO has the data, and the Company chose not to conduct any analysis on that topic. The Company's misplaced critique of OSBA exposes another example of the Company's own lack of analysis and support for the WNA.

[56] PECO-Gas Statement No. 3-R, Trzaska Rebuttal at 23, lines 13-15.
[57] OSBA Statement No. 1, Ewen Direct at 26, lines 7-11.

IV. Conclusion

Q. Please summarize your conclusions and recommendations.

A. The Company provided no tangible evidence in response to my direct testimony. Instead, the Company provided unsupported opinions and observations unrelated to my analysis. I continue to recommend that the WNA be rejected for the many reasons I explained in my direct testimony and that I highlighted in this surrebuttal testimony. Overall, PECO failed, and continues to fail on multiple fronts, to prove that the WNA would result in just and reasonable rates. My testimony and analysis demonstrates that the opposite conclusion is true.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 19

Response Date: July 29, 2024

OCA-19-2

Reference: PECO-Gas, Response to OCA-15-2. Provide a narrative of how the Company derives its 30-year normal period. Provide your response in a live, unlocked Excel spreadsheet with all links and formula intact. If the Excel spreadsheet references an external workbook, provide the workbook in the same format.

RESPONSE:

The Company updates its 30-year normals on an annual basis. The 30-year normal period is defined as the most recent 30 years where a full calendar year of weather data are available at the time of the update. 1993 to 2022 is the current 30-year normal period used by the Company.

Heating degree days (HDD) used by the company are based on 24-hour daily average temperatures sourced from DTN, a weather service company. For the Weather Normalization Adjustment, HDDs with a base temperature of 65 degrees will be used (daily HDD value increases above 0 as daily average temperature drops further below 65 degrees).

The 30-year weather normals for HDDs are derived by calculating a simple daily average of the 30 years and then applying a smoothing process to the simple averages to reduce the day-to-day volatility in the HDD normal result. The smoothing process is performed in MetrixND, proprietary load forecasting software, and includes use of moving averages and a regression model to achieve the final result.

Please refer to Attachment OCA-19-2(a), which includes in spreadsheet form, the daily 30-year history of temperature and HDD actuals from the current weather normal period, the calculation of daily normal simple averages, and the final weather normal result following the smoothing process applied in MetrixND.

Responsible Witness: Marissa Humphrey

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 19

Response Date: July 29, 2024

OCA-19-8

Reference PECO-Gas, Statement No. 3-R at 14, lines 7 through 9 stating the Company's "revenue analysis is reasonable and consistent with the level of analysis provided by other utilities to the Commission …" Please provide each and every revenue analysis the Company is referring to including line citations to the referenced testimonies and/or orders.

RESPONSE:

Based on PECO's review of publicly available rate case filings, the Commission approved a weather normalization adjustment ("WNA") mechanism in the following dockets where a customer-level revenue analysis was not presented in the testimony addressing the WNA:

Columbia Gas of Pennsylvania, Inc. – Docket No. R-2012-2321748, Statement No. 15, Section 6.

UGI Utilities, Inc. – Gas Division – Docket No. R-2021-3030218, Statement No. 11, Section IV.

National Fuel Gas Distribution Corporation Pennsylvania Division – Docket No. R-2022-3035730, Statement No. 19, Section VII, VIII and IX.

Responsible Witness: Michael J. Trzaska

normal basis. The 30-year weather normal period has lower HDDs than the 10-year weather normal period. The 30-year weather normal period has almost identical HDDs as the 20-year weather normal period.

Responsible Witness: Michael J. Trzaska

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 19

Response Date: July 29, 2024

OCA-19-4

Please explain whether the Company includes electrification assumptions into its gas sales forecast process, including, but not limited to, the impacts of the Inflation Reduction Act. Where applicable, provide your response in a live, unlocked Excel spreadsheet with all links and formula intact. If the spreadsheet(s) references external Excel workbooks, provide those as well in the same format.

RESPONSE:

Existing building electrification trends are implicitly captured by PECO's models in the historical gas sales data and applied to gas sales in the forecast period. The Company does not include any assumptions regarding the Inflation Reduction Act's impact on gas sales in its gas sales forecast process.

Responsible Witness: Marissa Humphrey

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set 19

Response Date: July 29, 2024

OCA-19-5

Reference: PECO-Gas, Statement No. 3-R, at 13 where witness Trzaska testified that PECO's weather normals take into account the most recent climate data in forecasting. Please explain all the steps that PECO is taking to address climate change risk through its forecasting and planning methods and processes. Provide a detailed process complemented by internal company documents that support your claims.

RESPONSE:

PECO's weather normal assumptions are updated annually utilizing the most recent 30-years of data. Refer to the Company's response to OCA-19-2. Therefore, the Company's weather normal assumptions will take into account the most recent calendar year of weather data available to the Company.

Responsible Witness: Michael J. Trzaska

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No.: R-2024-3046932
v.	:	
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Ron Nelson, hereby state that the facts above set forth in my Surrebuttal Testimony, OCA Statement 6SR, are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: August 2, 2024

Signature: RON Nelson
Ron Nelson

Address: Volt-Watt Consulting LLC
1311 SE 53rd Avenue
Portland, OR 97215

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	**:**	
	:	
v.	**:**	**Docket No. R-2024-3046932**
	:	
PECO Energy Company– Gas Division	**:**	

TESTIMONY AND EXHIBITS
OF THE
OFFICE OF SMALL BUSINESS ADVOCATE
TO BE ADMITTED INTO THE EVIDENTIARY RECORD

The Office of Small Business Advocate ("OSBA") intends to admit the attached testimony and exhibits as evidence into the evidentiary record at the Evidentiary Hearings scheduled on August 7, 2024, August 8, 2024, August 12, 2024, and August 13, 2024, in the above-captioned proceeding:

- Direct Testimony, labelled OSBA Statement No. 1 and associated Exhibits IEc-1 and IEc-2 with signed Verification of Mark D. Ewen
- Rebuttal Testimony, labelled OSBA Statement No. 1-R, with signed Verification of Mark D. Ewen
- Surrebuttal Testimony, Statement No. 1-S and associated Exhibit IEc-S1 with signed Verification of Mark D. Ewen

Date: August 6, 2024

COMMONWEALTH OF PENNSYLVANIA

June 17, 2024

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

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

Re: Pennsylvania Public Utility Commission v. PECO Energy Company-Gas Division / Docket No. R-2024-3046932

Dear Judge Heep and Judge Guhl:

Enclosed please find the Direct Testimony of Mark D. Ewen, labelled OSBA Statement No. 1 and associated Exhibits IEc-1 and IEc-2, on behalf of the Office of Small Business Advocate ("OSBA"), in the above-captioned proceeding.

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

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

Sincerely,

/s/ Steven C. Gray

Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
Attorney ID No. 77538

Enclosures
cc: PA PUC, Secretary, Rosemary Chiavetta (Cover Letter and Certificate of Service Only)
Mark D. Ewen
Parties of Record

OSBA Statement No. 1

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	**Docket No. R-2024-3046932**
PECO Energy Company (Gas Division)	:	

Direct Testimony and Exhibits of

MARK D. EWEN

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Cost Allocation
Revenue Allocation
Rate Design
Weather Normalization Adjustment Mechanism

Date Served: June 17, 2022

Date Submitted for the Record: _____

DIRECT TESTIMONY OF MARK D. EWEN

1. Introduction and Context

Q. Please state your name and briefly describe your qualifications.

A. My name is Mark D. Ewen. I am a Principal and President of Industrial Economics, Incorporated ("IEc"), a consultancy of 165 professionals headquartered at 2067 Massachusetts Avenue, Cambridge, MA 02140. My consulting practice focuses on regulatory and environmental economics, expert case management and economic damages estimation in a variety of litigation contexts, and financial analysis. I obtained a B.A degree in Economics and Political Science from the University of North Dakota, and a Master of Public Policy degree from the University of Michigan. I have participated and provided testimony in a variety of proceedings before the PA Public Utilities Commission, including electric and gas base rates cases, 1307(f) purchased gas cost filings, energy efficiency and conservation cases, merger and acquisition cases, and default service provider ("DSP") petitions. My résumé and a listing of the expert testimony that I have filed in various litigation and utility regulatory proceedings are attached in Exhibit IEc-1.

Q. What is the purpose of this testimony?.

A. I was retained by the OSBA to review certain aspects of the PECO Gas base rates filing, and to evaluate whether the Company's proposed rate increases and tariff changes for small businesses are consistent with sound regulatory and economic principles. In preparing this testimony, I relied in substantial part on analyses that my colleague Robert D. Knecht prepared as part of his direct testimony for the Company's prior two base rate proceedings (Docket No R-2022-3031113 and Docket No R-2020-3018929), particularly with respect to the intra-class customer consumption patterns that influence rate design. Because the load patterns for rate classes with many customers will change only gradually over time, Mr. Knecht's analyses remain relevant to this proceeding. I also utilize portions of the contextual detail and background information from Mr. Knecht's previous testimonies.

Q. Please summarize your current conclusions and recommendations.

A. As detailed herein, I conclude the following:

- The Company's class cost of service study ("COSS") relies on an allocation method for mains that is consistent with the Commission's decision in the Company's 2020 base rates case.[1]

- The Company's revenue allocation proposal is broadly consistent with its cost allocation methodology, as evaluated using an unbiased revenue-cost metric. However, the Company's indexed rate of return metric overstates progress toward cost-based rates for the Rate GC customer class. I propose an alternative revenue allocation in this testimony that results in a slightly lower rate increase for Rate GC customers.

- The Company proposes to eliminate its declining block commodity charges for Rate GC and implement a differentiated customer charge for larger and smaller Rate GC customers. I support the Company's proposed changes.

- Per the settlement agreement of the last base rate case, the Company has prepared an analysis of the cost justification for the volumetric rate differentials in Rates TS-F and TS-I between larger and smaller customers. Based on this analysis, the Company proposes to lower the differential from 1.88 to 1.67. I find the Company's analysis and proposed differential reasonable.

- The Company proposes a weather normalization adjustment mechanism for Rates GR and GC. Given Commission precedent regarding such rate decoupling mechanisms, I conditionally support the Company's proposal, pending resolution of key issues outlined in my testimony.

Q. How is your testimony organized?

A. Sections 2 through 5 address cost allocation, revenue allocation, rate design, and the weather normalization adjustment respectively. Appendix A provides an explanation as to why the indexed rate of return can be an unreliable metric for evaluating progress toward cost-based rates.

[1] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2020-3018929 et al., Order Entered June 17, 2021.

2. Cost Allocation

Q. What is a utility cost allocation study?

A. A utility cost allocation study, in this case the Company's gas class cost of service study ("COSS"), is an analytical tool that assigns the utility's test year total costs (i.e., the "revenue requirement") among the various utility rate classes. Pennsylvania electric and gas utilities generally use an "embedded cost" approach to cost allocation, in which accounting book costs are directly assigned among the rate classes, rather than a marginal cost approach. It is generally agreed that costs should, to the extent practicable, be assigned among rate classes based on "cost causation," such that costs caused by a particular class of customers are assigned to that class. A cost allocation study generally involves a three-step process, in which costs are (a) segregated by function ("functionalization"), (b) further segregated by cost causation factor, notably throughput, peak demand, "excess" demand, and customer count ("classification"), and (c) allocated among the rate classes based on each class's contribution to the cost causation factor ("allocation").

Q. What purpose does the COSS serve in a utility rate proceeding?

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

Q. Please describe the various rate classes used in the Company's COSS.

A. The Company's COSS includes the following rate classes:

Rate GR, General Service Residential: Eligible customers include single-family residences, and multi-family master-metered residences of up to five units. Customers can choose between utility sales service and retail "Gas Choice" transportation service.

Rate GC, General Service Commercial and Industrial: Service is provided to commercial and industrial ("C&I") customers, where "commercial" includes a variety of entities including but not limited to commercial businesses, multi-family master-metered residences

(over five units), government entities, institutions and office buildings.[2] For cost and revenue allocation purposes, the Company includes Rate OL Outdoor Lighting Service in the GC class. Rate GC also includes a small number of transportation customers who purchase backup gas supplies through "Standby Sales Service." GC customers can take utility sales or retail "Gas Choice" supply service. This is an extremely diverse class, in terms of the size of customers. As of December 31, 2023, there are about 44,960 customers in the class.

Rate L, Large High Load Factor Service: This tariff category appears to have been originally aimed at C&I customers who use gas at a high load factor, implying that the gas is used for process applications rather than for space heating.[3] In practice, however, there appear to be only eight "regular service" customers remaining on this tariff, while the balance of the load relates to be Rate TS-F and TS-I transportation service customers who use Rate L for their Standby Sales Service volumes.

Rate MV-F, Motor Vehicle Service - Firm: This tariff provides service to customers who use gas "exclusively as fuel for motor vehicles."[4] The Company forecasts that there will be 15 of these customers in the test year, with relatively high average annual volume of some 33,500 mcf. Because these loads are not temperature sensitive, the class load factor is high and the unit cost to serve is relatively low. MV-F customers can take utility gas supply or Gas Choice service.

Rate MV-I, Motor Vehicle Service – Interruptible: Service is provided to customers whose sole use of gas is for motor vehicles and who maintain alternative fuel capability. The Company forecasts that there is only one of these customers remaining in the test year, with relatively low volumes. The service is priced at "flex" rates, which are reportedly based on the cost of unleaded gasoline and diesel, but the rates are capped at the tail block volumetric

[2] See PECO Gas tariff page 18.

[3] "Load factor" is industry jargon for the ratio of average demand to peak demand. If a customer uses the same amount of gas on every day of the year, its average demand and peak demand are the same, and the load factor is 1.0 (or 100.0%). Customers who use gas primarily for space heating have relatively low load factors, since the demand on extremely cold days tends to be 4 to 5 times the customer's use on the average day of the year, implying load factors of 0.20 to 0.25 (20 to 25 percent).

[4] PECO Gas tariff page 63.

cost for Rate GC inclusive of purchased gas costs. Because prices are bundled, MV-I customers must take utility gas supply.

Rate IS, Interruptible Service: This tariff provides interruptible gas sales service to customers with alternative fuel capability whose summer month gas consumption is at least 3,000 mcf (or who also take service under another tariff). The Company forecasts that there is only one remaining customer for this service, with average annual use of some 16,400 mcf.

Rate TCS, (Interruptible) Temperature Controlled Service: This tariff provides interruptible service to customers with dual-fuel equipment with rated input of at least 2.1 million BTU per hour and estimated fuel usage of 5,000 mcf during the winter months of December through March. The Company forecasts that 20 customers will take service under this tariff in the fully projected future test year ("FPFTY") (down from 22 in the Company's last base rates case). Like MV-I and IS, the tariff rate is a flex rate based on the market price of alternative fuels, and customers take utility sales service.

Rate TS-F, Transportation Service – Firm: This tariff offers firm service to non-Choice transportation customers. These customers may also take standby gas supply service, for which they pay Rate GC or Rate L delivery rates. In addition, some customers who would otherwise take Rate TS-F service take negotiated rate service under Rate NGS, if they can "document a viable, currently available competitive alternative" to regular rate service. These volumes and revenues are included with TS-F for cost and revenue allocation purposes. This class also includes customers in a wide range of sizes. Based on Mr. Knecht's analysis in the last base rates case, roughly 20 percent of the customers have annual usage below 2,000 mcf, while the largest customers have loads in excess of 100,000 mcf.

Rate TS-I, Transportation Service – Interruptible: This tariff provides basic interruptible transportation service to a customer who arranges for its own gas supply and is willing to accept being interrupted. A showing of alternative fuel capability does not appear to be required. The Company does not consider the peak demands for these customers in its gas supply planning, nor (presumably) does it consider the peak demands of this class in distribution system planning. Rate TS-I customers may obtain standby gas supply service

from the Company and are required to pay regular rate tariff delivery charges (Rate L or Rate GC) to deliver those standby supplies. However, standby gas supplies (even delivered at the firm tariff rates) are considered to be interruptible.

Q. Do you have any issues with the Company's definition of rate classes for cost allocation purposes?

A. The Company's COSS has nine rate class categories, four of which represent over 99.8 of costs, and five of which represent only 47 customers and less than 0.2 percent of costs. The Company may consider consolidating its rate classes, given the above cost distribution and the small (and decreasing) number of customers in the five specialty rate classes.

Q. Turning to the issues of cost allocation methodology, what are the most important cost allocation issues for a natural gas distribution company ("NGDC") like PECO Gas?

A. A COSS allocates rate base and associated capital costs, distribution expense, customer accounts/service expense, expense, administrative/general ("A&G") expense and taxes.[5] Often, costs are allocated on a derivative basis, based on costs already allocated. For example, depreciation, income taxes and return are often allocated in the same manner as, or in proportion to, rate base. General plant and A&G costs are typically allocated based on some combination of overall plant allocations or O&M expense or labor allocations. Thus, the overall results of a COSS are substantially driven by the allocation of a few large asset accounts. These "big ticket" issues for cost allocation are generally:

- Classification of mains costs, potentially into peak demand, throughput and/or customer components. For PECO Gas, mains represent approximately 50 percent of the Company's gross plant.

- Definition and derivation of the peak-demand allocation factor, including the treatment of interruptible load in the allocator.

- Allocation of meters and services costs.

[5] Distribution, customer accounts/service and A&G expenses are collectively called operating and maintenance ("O&M") expense.

Q. Please describe the basic issues involved in gas utility mains cost causation.

A. Gas distribution mains are installed to meet two basic objectives: (a) to interconnect the customer with the interstate pipeline system (or other gas supply sources), and (b) to be able to transport sufficient gas to meet the demand of customers downstream under extreme peak conditions.

However, having stated that, it is not easy to develop an analytical model capable of reflecting these cost causation factors. Ideally, the cost of any particular segment of mains would only be allocated to those specific customers who are served downstream from that segment. In practice, undertaking such an analysis can be detailed, costly and time consuming. Nevertheless, with the significant improvements in computer modeling of gas distribution systems, one would expect that this approach could be implemented in 2024. To my knowledge, no Pennsylvania natural gas utility has recently attempted such an approach. And without significant efforts on the part of the utility, it is impossible for outsiders to conduct this type of analysis.

Q. What are the more traditional approaches to mains cost classification?

A. In place of the detailed modeling approaches various analytical models are used. These methods attempt to address the following questions:

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

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

arithmetic, a throughput allocation factor is equivalent to an "energy" allocator, a "commodity" allocator, a "volumetric" allocator, and an "average demand" allocator.[6]

Regarding the second question, one argument is that more footage of mains must be installed to interconnect many small customers than to connect one larger customer with the same aggregate load. This approach is particularly appealing for small to medium business customers who are often more geographically concentrated in commercial areas, thereby requiring less mains footage. This conceptual argument is supported by aggregate industry statistical analysis.[7]

Commission precedent indicates that the Commission has rejected the use of a customer component for gas distribution utilities in Pennsylvania, in the most recent cases of which I am aware. However, recent Commission precedent for electric distribution utilities, where the conceptual arguments regarding cost causation are similar, supports the recognition of a customer component for joint-use distribution plant allocation.[8]

In this proceeding, the Company's COSS does not include a customer component for mains costs.

Q. Have you incorporated a customer component into your mains cost allocation in this proceeding?

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

[7] See, for example, a report prepared by Black & Veatch for Gaz Métropolitain, at https://www.regie-energie.qc.ca/fr/participants/dossiers/R-3867-2013/doc/R-3867-2013-B-0005-Demande-Piece-2013_11_15.pdf, pages 12-16.

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

A. No. I have not done so in this proceeding for reasons of relatively recent Commission precedent for PECO Gas.[9].

Q. If there are no customer component mains costs, what methods are in general use for allocating these cost?

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

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

The A&E allocation factor is a weighted average of average demand (i.e., throughput) and "excess" demand. Excess demand is measured as the difference between peak demand and average demand. Because this allocation factor consists of an average demand component and a "peak minus average" demand component, it is typically more similar in magnitude to a peak demand allocator than to a P&A allocator. However, this observation depends on the weighting factor used to derive the A&E factor. Under specific conditions, namely when the

[9] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2020-3018929 et al., Order Entered June 17, 2021.

weighting factor is based on the system load factor and there is no diversity of demand across classes, the P&A allocator is arithmetically identical to the A&E factor.

In this proceeding, the Company uses the A&E allocation method (denoted average and extra), and it generally relies on a system load factor weighting of the average and the excess components. As such, the A&E allocator used by the Company produces results that are nearly identical to those that would result from a peak demand allocator.

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

A. In the Columbia Gas proceeding at Docket No. R-2022-3031211, the Commission reaffirmed that the terms and conditions of settlements are not relied upon as precedential and that cost of service studies should be evaluated on a case-by-case basis:

> We note that even in cases in which the revenue allocation methodology is litigated, a determination regarding which ACCOSS should be used should be determined on a case-by-case basis. We have observed that "the inherent distinctions between utilities and rate cases may result in different methodologies to be reasonable for different reasons. In other words, the best-suited ACCOSS may depend on the circumstances of the situation on a case-by-case basis."[10]

In the PECO Gas's 2020 base rates proceeding, the Commission approved the Company's proposed A&E allocation method, that produced allocation factors substantially similar to a peak demand allocator.[11]

Q. Has the Company adopted the same method for allocating mains costs in this proceeding as in the 2020 and 2022 base rates cases?

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[10] Opinion and Order, Pennsylvania Public Utility Commission, Docket Nos. No. R-2022-3031211et al., Order Entered December 8, 2022, at 107.

[11] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2020-3018929 et al., Order Entered June 17, 2021, at 228-231.

Joint Petition for Settlement of Rate Investigation, Pennsylvania Public Utility Commission, Docket No. R-2022-3031113 et al., Order Entered September 19, 2022.

A. It has. Thus, for reasons of Commission precedent, I take no exception to that method. In so doing, I recognize that this method is probably the least favorable approach for small businesses, because it fails to recognize the economies of scale of serving larger customers (particularly in more geographically concentrated commercial areas) and because it does not provide the cost-avoidance benefits to weather-sensitive customers associated with the P&A approach.

Q. Please explain how the Company quantitatively develops the A&E allocation factor.

A. The A&E factor consists of three components: class average day demands, class excess day demands, and the weighting factor.

Average day demands are simply the total test year forecast volume divided by 365 days. The average demand allocator is arithmetically equivalent to an annual volume commodity allocator.

The excess demand allocator is based on peak demand minus average demand. Thus, the Company must develop a peak demand measure for each class. And it must do so for firm service and interruptible service customer classes. For firm service customers, the Company uses design day demands, which reflect the Company's estimate of the load level under design weather conditions. For interruptible service customers, the Company simply uses the average day demands as the peak, meaning that the excess demand factor in the A&E is zero.

The weighting factor determines how much the A&E allocator relies on average demand and how much relies on excess demand. Weighting the A&E with system coincident peak ("CP") load factor is the traditional approach. The Company uses an approach that includes all rate classes in the average day demand and only the firm peak design day demands, producing a 24.22 percent load factor for weighting.

Q. Please explain how the Company allocates meters and services costs.

A. Regarding the allocation of meters and services costs, the Company uses a modified direct assignment approach, which is consistent with sound utility cost allocation practice.

To allocate meters costs, the Company has compiled the number of meters by size for each rate class and applied the unit cost for each sized meter (inclusive of installation cost), to develop an average cost per meter for each rate class. This unit cost is then applied to the number of customers for the rate class in the COSS, to derive a meters allocation factor that applies to both meters plant (account 381) and meters installation plant (account 382).

For services, consistent with the 2022 base rates case, the Company uses the actual services costs incurred during the past five years to allocate the cost for a single service line by rate category (the Company's records do not track actual service costs by rate class). The Company then multiplies the cost per line by the number of customers in the class to develop the allocation factor.

Q. Do you have any concerns regarding the Company's COSS?

A. At this time, I have no identified concerns based upon my review of the Company's COSS. The Company's cost allocation model is consistent with the methods which the Commission has previously accepted. Table IEc-1 below reports revenue-cost ratios at the Company's current and proposed rates for those rate classes subject to cost-based rates. (MV-I, IS and TCS are excluded because rates are market-based). At both current and proposed rates, the Residential Class is modestly under-recovering costs, while other rate classes are over-recovering costs. As I discuss below, a smaller rate increase for Rate GC customers, offset by a modest rate increase for Residential customers, is justified to move revenues more in line with costs for both classes.

Table IEc-1 Summary of PECO Gas COSS: Revenue-Cost Ratios		
	Current Rates	Proposed Rates
GR	97.9%	98.6%
GC	103.0%	103.0%
L	213.7%	173.6%
MV-F	111.5%	103.3%
TS-I	129.4%	105.1%
TS-F	101.0%	100.1%
Total	**100.0%**	**100.0%**
Source: IEc WP1		

3. Revenue Allocation

Q. What is revenue allocation?

A. Revenue allocation is the assignment of the dollar net increase or decrease to each of the Company's rate classes in a base rates proceeding. In contrast, rate design determines how the allocated revenue is recovered from individual ratepayers within each class. From a cost recovery standpoint, revenue allocation addresses inter-class cross-subsidization issues, while rate design addresses intra-class cross-subsidization issues.

Q. What are the primary economic and regulatory criteria for revenue allocation?

A. In general, allocated cost is the primary criterion used by regulators in the revenue allocation process. Most utilities and regulators adopt a policy in a base rates proceeding of attempting to move revenues more into line with allocated costs by varying the magnitude of the rate increases for the individual classes. However, regulators also subject the rate increases to other non-cost criteria of ratemaking. Of the traditional rate design criteria, the most common non-cost considerations in the revenue allocation process are:

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

- The *value of service* principle, which is often used to mitigate rate increases for customers or customer classes with relatively elastic demand.[12]

Using these criteria, the utility will develop a proposal for assigning the increase in the revenue requirement among the classes that reflects both cost and non-cost considerations. With this proposal, the COSS can be simulated at both present and proposed rates to evaluate the magnitude of "progress" that has been made toward the policy of achieving cost-based rates.

Q. Are there customers or customer classes for which revenue allocation does not reflect allocated cost?

A. Yes. Where rates are set at alternative fuel market prices, or where discounted rates are set based on the need to meet a competitive threat, the results of the cost allocation study have little relevance to revenue allocation. In general, because these rates are not set based on allocated cost, the revenues produced by these rate classes at current rates already reflect the market and competitive circumstances, and thus the revenues at proposed rates are either equal to or little different from the revenues at current rates.

For this proceeding, this implies that no increases should be assigned to the MV-I, IS and TCS rate classes because rates are set based on market conditions. Thus, for three of the rate classes in the Company's COSS, the cost allocation study provides little useful information for rate setting. In addition, the rates paid by the Rate NGS customers within the TS-F and TS-I classes are not subjected to the rate increase. Thus, the revenue reported for those two rate classes reflects the competitive discounts for the Rate NGS customers.

Q. What does the Company propose for revenue allocation in this case?

A. The Company's revenue allocation approach is presented in Statement No. 7. The Company generally indicates a desire to move rates more into line with allocated costs, while limiting

[12] 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.

the rate increase for any particular class to no more than 2.0 times the system average increase.

The Company evaluates its revenue allocation proposal using an indexed rate of return methodology. Because the indexed rate of return methodology can provide misleading signals for revenue allocation, I evaluate progress toward cost-based rates using a revenue-cost ratio methodology.[13] This method is simply the ratio of class revenues to the fully allocated costs for each class (inclusive of return and income taxes).[14] In this case, because the Company proposes to move most of the major rate classes fully into line with allocated cost, the index rate of return method does not produce unreasonable results.

Q. Is the Company's proposal reasonable?

A. I conclude that the Company's proposal is directionally consistent both with the results of its COSS and with the principles of rate gradualism. However, the Company could adjust its revenue allocation such that rates for Residential and Rate GC customers are more in line with allocated costs. Table IEc-2 below summarizes the Company's proposed revenue allocation at present and proposed rates for those rate classes subject to cost-based rates. (MV-I, IS and TCS are excluded because rates are market-based.)

As shown, for most rate classes the Company's revenue allocation proposal either moves rates nearly into line with allocated costs (Rates GR, MV-F, and TS-F) or makes material progress toward cost-based rates by applying a zero rate increase (Rates L and TS-I). The Rate GC class shows minimal progress toward cost-based rates of just one percent; the Company's indexed rate of return metric is overstating alleged progress for the Rate GC class.

[13] See Appendix A for an explanation.

[14] At current rates, the R/C ratio is calculated as if an across-the-board increase is assigned to all rate classes. See Appendix A.

Table IEc-2 Summary of PECO Gas Proposed Revenue Allocation					
	Increase $000	Increase %	R/C Current	R/C Proposed	"Progress"
GR	$78,623	24.07%	97.91%	98.64%	35.08%
GC	$28,251	23.03%	103.00%	102.97%	1.04%
L	$0	0.00%	213.66%	173.61%	35.23%
MV-F	$86	14.04%	111.46%	103.32%	71.05%
TS-I	$0	0.00%	129.39%	105.14%	82.51%
TS-F	$4,208	22.01%	100.95%	100.08%	91.41%
Total	**$111,168**	**23.12%**	**100.0%**	**100.0%**	
Source: IEc WP1					

Q. What is your alternative revenue allocation proposal?

A. The results of my alternative revenue allocation proposal are summarized in Table IEc-3 below. I applied a smaller revenue increase to the Rate GC class of $23.9 million, which represents a 19.5 percent increase relative to current rates. This change brings Rate GC revenues fully in line with allocated costs for the class. To offset the revenue loss, I adjust Residential revenues upwards to $83 million (relative to the Company's proposed $78.6 million increase). My proposal results in more progress toward cost-based rates than the proposal put forward by the Company for the Rate GR and GC classes. Further, my analysis is consistent with the Company's own policies regarding rate gradualism; the Residential class rate increase is 25.4 percent, only modestly above the system average of 23.1 percent.

Table IEc-3 Summary of IEc Alternative Revenue Allocation Proposal					
	Increase $000	Increase %	R/C Current	R/C Proposed	"Progress"
GR	$82,974	25.40%	97.91%	99.70%	85.62%
GC	$23,900	19.49%	103.00%	100.00%	100.00%
L	$0	0.00%	213.66%	173.61%	35.23%
MV-F	$86	14.04%	111.46%	103.32%	71.05%
TS-I	$0	0.00%	129.39%	105.14%	82.51%
TS-F	$4,208	22.01%	100.95%	100.08%	91.41%
Total	**$111,168**	**23.12%**	**100.0%**	**100.0%**	
Source: IEc WP1					

4. Rate Design for Non-Residential Customers

Q. What issues do you address regarding rate design for non-residential customers?

A. I address the following:

- Rate GC tariff design, notably the Company's proposals to implement differentiated customer charges for large and small customers and to eliminate the declining block structure.

- Rate differentials in the TS-F and TS-I tariffs above and below 18 million cubic feet ("mmcf") per year.

4.1 Rate Design for GC

Q. Please describe the Company's proposal for the Rate GC tariff?

A. Under the terms of the 2022 Joint Petition, for the current bates rates case the Company agreed to present a cost analysis and rate design proposal for Rate GC that evaluates (a) the potential for differentiated customer charges and (b) the cost basis for any declining block commodity charge differentials.

Regarding differentiated customer charges, effective January 1, 2026 the Company proposes to implement two customer charges for Rate GC that will collectively recover the same amount of revenue as a single customer charge. PECO Gas proposes to place Rate GC customers into one of two GC tiers, "Small" and "Large", based on the size of their gas meter.[15] The Company also proposes an interim period in 2025 in which PECO Gas would maintain the single Rate GC customer charge of $36.38 per month for all Rate GC customers.

Q. Do you agree with the Company's proposed changes regarding differentiated customer charges?

A. Yes. As my colleague Mr. Knecht explained in the 2022 base rates case, the Company's existing Rate GC charge results in smaller customers subsidizing larger customers within the rate class. This is because the smaller customers in the class have less expensive meters and services than the average customer in the class. Setting a single customer charge for utility general service rate classes is difficult due to the heterogeneous nature of the customers in the class. Rate GC customers come in a wide range of sizes and load patterns, particularly for PECO Gas. Thus, the Company's proposal to differentiate the customer charge between smaller and larger customers is reasonable in theory, as Mr. Knecht explained in the previous proceeding.[16]

In terms of the specifics of the Company's proposal, I evaluated the Company's methodology to determine differentiated Rate CG charges by tier, outlined in Exhibit JAB-5. The steps to derive the charges are as follows:

- PECO Gas first collected data on meter counts and costs by meter size (small diaphragm vs. all other sizes). Small diaphragm meters represent 34 percent of all

[15] Per Exhibit JAB-5: The "Small" Rate GC tier includes all Rate GC customers with exactly one Company-owned "Small Diaphragm" gas meter at their premises. Meter sizes considered "Small Diaphragm" include Sizes 6, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 33.

The "Large" Rate GC tier includes all Rate GC customers with a meter of any other size and all Rate GC customers with more than one gas meter at their premises, regardless of gas meter size. (For example, a customer served by two Small Diaphragm gas meters is considered "Large".)

[16] OSBA Statement 1, Pennsylvania Public Utility Commission, Docket No. R-2022- R-2022-3031113.

Rate GC meters, and small diaphragm meter costs represent 8.7 percent of total Rate GC meter costs.

- The Company then determined the number of Rate GC accounts qualifying for each tier based on the size of the gas meter(s) at their premises.

- PECO Gas calculated the average cost per meter per customer by tier by multiplying the total Rate GC meter investment by the respective percentage of Rate GC meter costs for small and large customers, then dividing by the adjusted number of fully projected future test year ("FPFTY") bills.

- Using the average cost per meter per customer data, the Company simulated COSS customer-related costs for each GC tier.

- The Company determined the "Small GC Tier" customer charge by reducing PECO's proposed "single" customer charge based on the ratio of the "Small GC Tier" to "Overall GC" customer-based costs.

- Finally, the Company calculated the "Large GC Tier" customer charge so that it recovers the remaining customer-related revenues.

The Company's methodology appears sound. I continue to evaluate the Company's proposal for the Large GC tier, to ensure that the customer charge is not excessive. The proposed rate increase for Large Rate GC customers is 36 percent, while Small customers will experience a slight rate *decrease* from $29.86 to $29.36. I understand that the Company will need to maintain a single Rate GC charge during an interim period to allow it to implement the necessary billing system enhancements, assign existing Rate GC customers to the appropriate tier, and notify Rate GC customers of both their tier and the modified customer charge prior to enactment of new rates. At this time, it is unclear if January 1, 2026 is an appropriate effective date to implement the differentiated Rate CG charges. The Company should provide additional detail on how it will proceed with the aforementioned actions in the interim period.

Q. Please explain the Company's proposal to eliminate the current declining block structure for the Rate GC variable distribution charge.

A. By way of background, declining block volumetric charges result in lower average unit rates for larger customers within the class. This tariff design has traditionally been used by utilities for three alternative purposes. First, it is often argued that because the customer charge does not fully recover customer costs, it is appropriate to include that recovery in the first block volumetric charge. Second, it is argued that because larger customers tend to have higher load factors, the volumetric unit distribution cost is lower for larger high load factor customers than for smaller low load factor customers, because distribution costs are substantially allocated based on peak demand. Third, the declining block tariff was designed such that the tail block reflected system marginal costs (particularly in the electric industry), recognizing that the incremental cost of service was often than the average cost.

In the 2022 base rates case, Mr. Knecht raised the concern that the Company offered no evidence in support of any of these propositions. The Company's customer charge fully recovered the customer-related costs for smaller customers, thus obviating the need to provide a volumetric rate discount to larger customers. In addition, PECO Gas did not demonstrate that larger customers in the Rate GC class had a higher load factor than smaller customers or that the incremental cost of service is lower than the average cost.

Rather than attempting to develop a cost basis for the Rate GC declining block commodity charge differential, in this proceeding the Company proposes to eliminate current declining block structure for the Rate GC variable distribution charge and implement a single variable distribution charge with no declining block charge differentials or thresholds. This single charge would apply to all Rate GC distribution customers regardless of their proposed GC tier assignment (Statement No. 7).

Q. Do you agree with the Company's proposal to eliminate the declining commodity charges for the Rate GC class?

A. I generally support the Company's proposal to eliminate block charge differentials and thresholds entirely, given the Company has not provided evidence to support them in any

prior base rates cases. However, I also provide an alternative analysis for the Commission's and the Company's consideration.

In the 2022 base rates case, Mr. Knecht conducted a bill impact analysis and proposed that the Company reduce the volumetric charge differential by applying a larger percentage rate increase to the tail block charge.[17] I conducted a similar bill impact analysis (using 2020 data) for this proceeding and calculated a "halfway" differential phaseout alternative for the Rate GC block differentials. Instead of eliminating the block charge differential, my alternative design reduces the differential by 50 percent from $0.90 (at current rates) to $0.45. My analysis is presented in IEc WP1 ("GC Rate – PECO" and "GC Rate – Alternative" tabs) and is summarized in Table IEc-4 below. Under the Company's proposal, rate increases for customers with at least 1,000 mcf per month would increase by between 40 and 45 percent. In contrast, my analysis results in rate increases of between 34 and 37 percent of such customers.

Table IEc-4
Rate GC Design Alternative

	Current Rates	PECO Proposed Rates	Percent*	IEc Alternative Rates	Percent*
Customer Charge Small	$29.86	$29.36	-1.7%	$29.36	-1.7%
Customer Charge Large	$29.86	$40.61	36.0%	$40.61	36.0%
First 200 mcf ($/mcf)	$4.4248	$5.4413	23.0%	$5.5589	25.6%
Over 200 mcf ($/mcf)	$3.5201	$5.4413	54.6%	$5.1066	45.1%
$/mcf Charge	**$0.9047**	**$0**		**$0.4524**	

*Represents percent change relative to the Company's current rates.

Source: IEc WP1, "GC Rate – PECO" and "GC Rate – Alternative" tabs.

4.2 Rate Differentials for Rate TS-F and Rate TS-I

Q. Please review the issues involving rate differentials for the Company's transportation service classes.

A. Both Rate TS-F and Rate TS-I have separate base rate charges for customers whose annual volume is below 18 mmcf and customers whose annual volume is at or above 18 mmcf. For

[17] OSBA Statement 1, Pennsylvania Public Utility Commission, Docket No. R-2022- R-2022-3031113.

both classes, the larger customers represent a significant majority of both throughput and base rate revenues, and the rates for the smaller customers are materially higher than those for the larger customers.

Per the 2022 rate case settlement, the Company has undertaken a load factor analysis for TS-F customers, following the methodology proposed by Mr. Knecht in OSBA Statement 1. As shown in the 2022 case, the Company's current TS-F volumetric charge differential between customers above and below 18 mmcf is excessive and inconsistent with load factor differences between the two groups. In this proceeding, PECO Gas calculated the differential between the groups using weighted average load factors. The Company concluded that load factors for the larger customers were higher than those of the smaller customers below 18,000 mmcf (the differential is 1.49), though not to a level that supports the existing Rate TS-F volumetric rate differential of over two to one. The Company proposes rate increases to levels consistent with its evaluation of weighted load factors, with a charge differential of 1.49.

Q. Do you have any concerns regarding the Company's load factor analysis or proposed rate increases for TS-F customers?

A. Not at this time. The Company has generally relied on OSBA's methodology and incorporated recent customer gas data (November 2022 through October 2023) to conduct the analysis. The proposed tariff charges set a differential for rates for the smaller and larger customers in the class that is consistent with the relative load factors for those customer groups.

Q. Please address the tariff charge differentials within Rate TS-I for customers above and below 18 mmcf per year.

A. The Company's current tariff design for Rate TS-I is similar to that for Rate TS-F, in that it has bifurcated customer and volumetric charges for customers above and below 18 mmcf per year. Unlike Rate TS-F, however, there is no load factor justification for a volumetric rate differential. Under the Company's cost allocation philosophy, demand-related costs are assigned to this class almost entirely on the basis of average annual volumes. Thus, there is no difference in allocated distribution plant costs between small and large customers. In this

proceeding, the Company acknowledges this and proposes to phase out the Rate TS-I volumetric rate differentials over multiple proceedings, beginning with the current proceeding.

In the 2022 base rates case, Mr. Knecht conducted an analysis to narrow the unjustified TS-I volumetric charge differential. His approach resulted in a zero rate increase for smaller customers within the class and a reduction in the volumetric charge ratio from 1.88 to 1.71. In this proceeding, PECO Gas proposes to follow that approach and reduce the differential from 1.88 to 1.67 in this proceeding, by applying a zero increase to the volumetric charge for the smaller customers in the class. I agree that this is a reasonable approach.

5. Weather Normalization Adjustment Mechanism

Q. What is the Company's proposal for a weather normalization adjustment ("WNA") mechanism in this proceeding?

A. Some Pennsylvania NGDCs have adopted WNA mechanisms, which are quite similar in their structure.[18] A WNA is a form of rate decoupling mechanism, in which the Company is permitted to reconcile its revenues between those approved in the base rates case and those actually earned. A WNA mechanism permits this reconciliation for reasons related to weather variances. If the weather is warmer than normal, the NGDC is permitted to earn supplemental revenues to make up the shortfall; if weather is colder than normal, the NGDC credits the ratepayer with a lower bill for base rates.[19]

PECO Gas proposes to implement a WNA mechanism for its Rate GR and Rate GC classes, for the October to May hearing season. Like the mechanisms at other Pennsylvania NGDCs, the PECO Gas WNA would segregate the metered load for each customer in each billing period into a base load component and a heat sensitive load component. The heat sensitive load component would then be adjusted by the ratio of normal heating degree days ("HDDs")

[18] Reference National Fuel Gas ("NFG"), Columbia Gas of Pennsylvania ("Columbia"), Philadelphia Gas Works ("PGW"), and UGI Utilities, Inc. – Gas Division ("UGI") mechanisms.

[19] Gas supply charges are not subject to the WNA. Thus, weather fluctuations will continue to cause bill fluctuations with respect to gas supply.

for that period to actual HDDs for that period.[20] The billed amount in effect, would then be the sum of the base load and the adjusted heat sensitive load. It will adjust the amount billed to each customer to offset the impact of actual heating degree day ("AHDD") variations from normal heating degree days ("NHDD"), adjusted for a one percent deadband. No adjustment will apply to customer bills if weather falls within the one percent deadband, and the WNA mechanism will only apply for variation of actual weather from normal weather outside of the deadband.

Q. Pursuant to Act 58 of 2018, the Commission's Policy Statement at Docket No. M-2015-2518883 contemplates the consideration of full and partial rate decoupling mechanisms in Pennsylvania.[21] How does the WNA compare to broader rate decoupling mechanisms?

A. The WNA mechanism as used in Pennsylvania is a partial rate decoupling mechanism, which has at least three advantages over broader rate decoupling mechanisms. First, the WNA provides mutual risk reduction benefits to both NGDC and ratepayer, in the form of revenue/bill stability. The NGDC gets more stable revenues; the ratepayer gets a more stable bill. In theory, the more stable NGDC revenues should reduce its risk, and thus its allowed rate of return. In extremely cold conditions, the ratepayer gets a lower base rates bill under the WNA than it would without a WNA. In contrast, revenue decoupling mechanisms for non-weather variances generally involve an increase in risk for ratepayers and reduced risk for the NGDC. Consider economic fluctuations. In an unexpected economic downturn, a broad rate decoupling mechanism will impose higher charges on ratepayers to make up for the overall downturn in load, at the same time that the ratepayers are suffering the effects of the economic downturn. The NGDC, by contrast, is insulated from the effects of the economic downturn. Thus, as rate decoupling mechanisms go, the WNA is more balanced than broader mechanisms.

[20] HDDs reflect average temperature for a particular period and are measured as the difference between 65 degrees Fahrenheit and the actual average temperature for the day.

[21] See also Commission Order at Docket No. M-2018-3003269.

The second advantage is that the WNA mechanism can be adopted in "real time". WNAs can be calculated within the billing period in which the variance between actual and normal weather occurs. This avoids the intergeneration inequity problems of broader rate decoupling mechanisms.

The third advantage is that the WNA mechanism can be customer-specific. Weather normalization adjustment mechanisms can be designed to specifically reflect the weather-related usage of the individual customer. As such, it is a fairer mechanism than broader rate decoupling mechanisms, which have little or no linkage between the cause of the revenue variance and the recovery mechanism.

Q. Are there general concerns about the working of WNA mechanisms.

A. Yes, there are several.

First, use of a WNA mechanism means that a customer is being billed for a level of gas consumption that is not metered, but is only estimated. As such, it is often difficult to explain to customers why their rates appear to fluctuate up and down each month, or why there is a mysterious "WNA" charge/credit on their bills that is not related to any specific metered consumption amount.

Second, the WNA mechanism weakens price signals for energy conservation during extreme periods. Under the WNA, a ratepayer has a lower per-mcf incentive to reduce usage during unusually cold periods than it does under traditional volumetric rates. As gas distribution systems are designed, at least in part, to meet extreme weather demands, the traditional rate approach is more consistent with cost causation and with how costs are allocated in the allocated cost of service study.

Third, the "heat sensitive load" that is subject to the WNA adjustment is not necessarily heat sensitive load. It is the difference between an arbitrary baseload and the customer's actual consumption in the month. Thus, the "heat sensitive load" could include many forms of consumption that are not heating related. First, the base load amount may be estimated incorrectly. The baseload is derived from load in the prior two summers, which may be understated due to customer vacations, or may simply not be a representative period. If it is

set too low, the "heat sensitive load" derived by difference is overstated, and the adjustments from the WNA are similarly overstated. In addition, any fluctuation in loads from normal will be ascribed to heat sensitive load and subject to WNA multipliers, regardless as to whether that load is related to space heating. Consider houseguests, which may serve to increase hot water and cooking loads, all of which would be considered heat sensitive load in the difference-based WNA mechanism.

Fourth, problems can be exacerbated in periods where actual HDDs are low, such as a warm spell in the spring. Unless protections are in place, an unadjusted WNA might produce very large multipliers, if, say, the normal HDDs are 300 and the actual HDDs are 30. For customers who happen to have an unusual load in that period, the WNA would charge that load at a factor of 10:1.[22]

Q. Has the Company adopted mechanisms to minimize any of these problems.

A. In Statement No. 3, the Company briefly addresses the first and second issues mentioned above.

Q. Are there more general concerns about WNA mechanisms that the Commission should consider in evaluating the PECO Gas proposal?

A. I have two concerns. First, while a WNA mechanism reduces utility risk and therefore should reduce the utility cost of capital, it is difficult to identify any reduction in allowed utility rates of return associated with adoption of WNA mechanisms in Pennsylvania.

Second, I am advised by OSBA counsel that customer reaction in public input hearings to WNA mechanisms in Pennsylvania has been substantially negative.

Q. What is your recommendation regarding the proposed WNA Mechanism?

A. From both a regulatory and ratepayer perspective, WNA mechanisms have advantages and disadvantages. At a minimum, I do not believe that the Company's WNA should be adopted unless and until the following operating concerns cited above are resolved.

[22] The PGW mechanism did, in fact, produce such anomalous results in the spring of 2022.

- To avoid problems similar to those experienced by PGW's WNA in 2022, the WNA should be modified such that the WNA not apply when actual HDDs for a billing period are below 100 HDDs. This will avoid the potential for the extreme multipliers exhibited in PGW.

- The Company should develop a process for monitoring customers' implied heating usage per degree day, to determine whether the Company's use of a residual approach for deriving the heat sensitive load is producing wide variations in assumed heat sensitive load per degree day.

I also recommend that the Commission carefully consider the risk reduction benefits of any WNA it approves in evaluating the Company's cost of capital claim in this proceeding. Finally, in light of customer complaints, I encourage the Company to adopt communication strategies that explain how the mechanism works, and its impact on ratepayers in unusually cold and unusually warm months, and on unusually cold years and unusually warm years.

In general, however, because rate decoupling mechanisms are explicitly contemplated in the Commission's policy statement, and the Commission has approved similar mechanisms at other NGDCs, I take no general exception to the Company's adoption of a WNA in this proceeding subject to resolution of the specific issues detailed above.

Q. Does this conclude your direct testimony?

A. Yes, it does.

APPENDIX A

MEASURES OF PROGRESS TOWARD COST BASED RATES

PENNSYLVANIA UTILITY COST AND REVENUE ALLOCATION

Introduction

The Pennsylvania Commonwealth Court held that cost of service is "the polestar" criterion for assigning a utility rate increase among the various rate classes.[23] Parties to Pennsylvania base rates proceedings generally agree that this criterion implies that the revenues for each class at the rates approved by the Commission should be closer to allocated costs than the rates in place when the rate case is filed. Thus, parties to the proceeding will typically compare some metric for cost recovery under "proposed rates" with that same metric for cost recovery under "current rates." This comparison can show (a) *whether* the proposed rates result in class revenues that are closer to allocated costs, and (b) *how much* progress the proposed rates make toward moving class revenues toward allocated costs.

While different metrics are used for this analysis, the most common metric in Pennsylvania is the "indexed rate of return" metric (also called the "relative rate of return" or "unitized rate of return" metric). This appendix demonstrates why the indexed rate of return is not a reliable metric for identifying whether proposed rates are closer to allocate costs than current rates, and that even where the indexed rate of return correctly implies that there is progress toward cost-based rates, it is not a reliable indicator of the amount of progress that is achieved.[24] This appendix also compares the indexed rate of return to three other metrics for evaluating progress toward cost-based rates, namely the dollar subsidy, the rate of return differential, and revenue-cost ratio metrics.

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

[24] 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 flawed metric continues.

The Structure of the Cost Allocation Study

The indexed rate of return metric is derived from the method that is most often used for utility cost allocation in Pennsylvania. When a utility or regulator develops a revenue requirement for a test year, it simply sums all of the individual cost items for that year, including operating and maintenance ("O&M"), administrative and general ("A&G"), depreciation, taxes other than income, income taxes and allowed return on rate base. Thus, the objective of a cost allocation study should be to simply allocate each of these cost elements to the various rate classes. Because the allowed return and associated income tax are derived from rate base, the cost allocation study allocates all net plant and other rate base items to the various rate classes, and the return and income taxes can then be allocated in proportion to rate base.

Cost allocation studies in Pennsylvania, however, are most often conducted on a class rate of return basis. That is, the cost allocation study calculates a class rate of return by taking revenues, deducting the allocated O&M, A&G, depreciation and taxes other than income, to produce a pre-tax class net income. Income taxes are then most often allocated based on the calculated pre-tax class income, and a net income by class value is derived by difference. The allocated pre-tax and net income figures are thus not a cost of capital, but represent the implied return provided by each class under the revenues (current or proposed) used in the cost allocation study. These net income values are then divided by the allocated rate base, to produce percentage class rates of return.[25] Thus, with this approach to cost allocation, there is a desire by utilities and regulators to develop a metric for evaluating progress toward cost-based rates that is based on the class rates of return produced by the cost allocation study.

Defining Progress Toward Cost-Based Rates

It is not necessarily obvious what it means to "move rates more into line with allocated cost" between current and proposed rates. At the simplest level, one could argue that if the current rate revenues for a particular class are below the allocated cost for that class at the full proposed

[25] 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.

revenue requirement, any increase in rates will move that class's revenues closer to allocated cost. However, the objective of this exercise is to measure the progress toward cost-based rates for each rate class compared to that for all of the other classes. Thus, a revenue allocation proposal must be evaluated for its impact on all of the rate classes.

Also at the simplest level, of course, a proposed revenue allocation will by definition move rates more into line with allocated cost if each class's revenues are moved exactly to the full proposed allocated cost of service. Or, equivalently, rates are exactly cost-based when each class's revenues are set such that the class produces the system average rate of return. Therefore, there is no question that moving a class exactly to an indexed rate of return of unity (1.0) is necessarily consistent with making rates more cost-based.

In many base rate proceedings, however, moving rates fully into line with allocated costs cannot be achieved due to consideration of other rate design factors, most notably "rate gradualism," which serves to limit the increase for any particular class of customers in any rate proceeding, and has the aim of gradually moving rates into line with allocated cost.

Thus, in terms of determining whether a particular rate proposal moves rates into line with allocated cost, this appendix takes the position that there is progress toward cost-based rates if the proposed relative rate increases across the various classes, when followed for a number of base rates proceedings (in which there is no change in the relative cost structure), will eventually result in cost-based rates. Thus, for any particular metric, it is important to consider not only the difference between the metric and current rates and proposed rates in one base rates case, but also what that metric will imply going into the next base rates case.

As shown further in the numerical example below, this standard for defining progress implies that for classes with revenues below allocated cost at current rates (or, equivalently, with a class rate of return below system average), progress can only be achieved by assigning that class a rate increase above the system average increase. This, of course, is just plain common sense. If a class is under-recovering costs, it should be assigned an above average increase. As shown below, however, the indexed rate of return metric fails at common sense.

The Numerical Example

This appendix takes the approach of defining a specific numerical example, and showing the implications of various different metrics on different rate increase scenarios. The calculations associated with this example are also provided in MS Excel electronic format (WP2), and parties are able to simulate alternative examples to evaluate the rigor of this analysis.

The example attached to this appendix shows the arithmetic impacts of a single two-class utility example under four different rate increase proposals. Each page shows the implications of a different revenue-cost metric, namely the indexed rate of return, dollar subsidy, differential rate of return, the revenue-cost ratio and the normalized revenue-cost ratio.

The example involves two rate classes, A and B, in which each generates the same revenue at current rates, but in which Class A has a moderately higher cost to serve. The four rate increase scenarios are (I) an across-the-board increase in which both classes get the same percentage increase, (II) a scenario with a moderately higher percentage increase for Class B, and (III) a slightly higher percentage increase for Class A, and (IV) a moderately higher percentage increase for Class B.

The common-sense answer is that the across-the-board scenario (I) should show no progress toward cost-based rates, Scenario II should indicate that revenues are moving farther away from costs, and Scenarios III and IV should show that revenues are moving slightly and modestly closer to allocated costs. The discussion of each metric below highlights where the metric produces results that are at odds with these expectations.

To evaluate the question as to whether there is consistent progress toward cost-based rates, the metrics are evaluated at both proposed rates in the "current" base rates proceeding, and for what the values would imply going into the next base rates case after a uniform increase in costs.

The Indexed Rate of Return Metric

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

of return moves from 0.625 to 0.781, which appears to imply that the class has moved 42 percent of the way to cost-based rates.[26]

The fallacy of this logic is shown in the implications for the next rate case. When costs increase, the system average rate of return falls back to its lower level and the indexed rate of return metrics all shift farther away from unity. Thus, as shown, an across-the-board increase in the current rate case followed by an across-the-board cost increase for the next case will demonstrate that, in fact, there is no progress toward cost-based rates and the indexed rates of return are right back where they started.

The other revenue increase scenarios show similar problems with the indexed rate of return metric. In Scenario II, despite a smaller percentage increase for the higher-cost Class A, the indexed rate of return again implies that there is progress toward cost-based rates, which is obviously nonsense. This is again demonstrated by the implications for the next base rates case, which understandably show that rates are farther out of line than they were going into the current rate case. It is simply unreasonable to believe that assigning larger percentage increases to the rate class that is already over-recovering costs will somehow reduce inter-class subsidies. And yet that is the implication of the indexed rate of return metric.

In Scenarios III and IV, the indexed rate of return does produce the correct directional answer, namely that rates are moving more into line with allocated cost. But the indexed rate of return metric implies that both scenarios result in enormous progress toward cost-based rates, when in fact there is relatively little progress, particularly in Scenario III. As shown in the example, despite a small differential in the rate increases, the indexed rate of return implies that revenues have moved 50 percent of the way toward allocated cost. Realistically, however, as shown in the implications for the next base rates case, the actual progress is much lower.

Thus, the indexed rate of return metric is a wholly unreliable guide for evaluating progress toward cost-based rates in a utility rate proceeding, because it (a) may show progress toward cost-

[26] "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.

based rates when in fact revenues are moving farther away from costs, and (b) will overstate the magnitude of progress toward cost-based rates when progress is occurring.

The Dollar Subsidy Method

While the indexed rate of return metric is the most common approach used by Pennsylvania utilities, the Commission has also supported the use of the dollar subsidy metric. In an order involving the City of Bethlehem – Water Department, the Commission concluded:

> "As noted by the OSBA, the proper yardstick for measuring the degree of movement toward cost of service is the change in the absolute level of class subsidies at present and proposed rates."[27]

In the dollar subsidy method, the total cost to provide service is calculated using the method described above, in which each component to cost, including return and income taxes, is allocated to each cost. The difference between current rate revenues and the allocated cost is the dollar subsidy.[28]

In allocating the return and income tax costs under the "current rates" evaluation, the values used represent only the return that the utility would achieve and the income taxes that it would incur if it were assigned no rate increase. These values therefore do not represent the utility cost of capital, but simply residual values of what is left from current rate revenues after O&M, A&G, depreciation and other taxes are deducted.

When the dollar subsidy metric is applied to the four alternative revenue allocation proposals in the attached example, it implies the following:

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

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

[28] 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.

The Differential Rate of Return

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's revenue-cost performance will be going into the next base rates case if there is no change in the underlying cost structure.

Summary

The indexed rate of return is a metric that has intuitive appeal, in that cost-based rates are achieved when the index is at unity (1.0), and that it would seem therefore that moving the index closer to 1.0 would represent progress toward cost-based rates.

Alas, it is not that simple. As shown in the examples attached, and as evidenced in hundreds of utility rate proceedings in Pennsylvania, the indexed rate of return is not a reliable metric for gauging progress toward cost-based rates for any particular revenue allocation proposal. It may give a directionally correct answer, and it may not. And even when it does correctly show progress, it implies that there is much more progress toward cost-based rates than actually exists.

Of the five metrics evaluated in this review, the indexed rate of return is the only metric to fail the test and imply that there is progress toward cost-based rates when there is none, and even when rates are moving substantially away from allocated cost.

All the other metrics evaluated in this review are superior to the indexed rate of return approach. The dollar subsidy and differential rate of return have a modest disadvantage in that they may imply that there is no progress toward cost-based rates when in fact some small progress is occurring. This is a relatively modest disadvantage since the distortion is much smaller than that in the indexed rate of return, and more so because it will encourage Pennsylvania utilities and regulators to adopt revenue allocation proposals that are more aggressive in moving revenues into line with allocated cost, consistent with the legal standard that cost of service be the polestar criterion.

Overall, however, the revenue-cost metric, particularly the normalized revenue-cost metric, does not suffer from the distortions of any of the other methods, and is the most reliable of the methods on offer.

EXHIBIT IEc-1

RÉSUMÉ AND EXPERT TESTIMONY LIST

FOR

MARK D. EWEN

IEc

MARK D. EWEN **PRINCIPAL AND PRESIDENT**

Overview

Mr. Ewen has a strong background in applied economics, empirical methodologies, and financial analysis. As a Principal at Industrial Economics, Incorporated (IEc), he focuses on expert case management and economic damages estimation in a variety of litigation contexts, regulatory and environmental economics, and financial analysis. Within his areas of expertise, Mr. Ewen has been qualified as an expert witness before judicial and regulatory bodies (see schedule of testimony and appearances). He has also served as a Managing Director of the firm.

Education

Master of Public Policy, University of Michigan

Bachelor of Arts, summa cum laude in Economics and Political Science, University of North Dakota

Project Experience

Examples of his project work include the following:

Mr. Ewen has participated in various proceedings concerning energy markets and regulated utilities. These efforts, which focus on issues related to cost allocation and rate design, include working on behalf of industry and consumer intervenor groups in rate-making cases before the public utility commissions in Pennsylvania and Alberta, Canada, and the U.S. Postal Rate Commission. For example, for the **PENNSYLVANIA OFFICE OF SMALL BUSINESS ADVOCATE**, he has provided consulting and analytic support relating to electricity and natural gas tariff design, revenue requirements, and other regulatory initiatives concerning electrical and natural gas distribution utilities. For the **RHODE ISLAND ATTORNEY GENERAL,** Mr. Ewen conducted a due diligence review of PPL's proposed acquisition of Narragansett Electric Company and its potential impacts on the state's ratepayers.

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

For the **NYSERDA AND NEW YORK DPS,** Mr. Ewen directed the development of a Generic Environmental Impact Statement (GEIS), pursuant to the requirement of the State Environmental Quality Review Act (SEQRA) that assessed the environmental and economic impacts of the "Reforming the Energy Vision" and "Clean Energy

Fund" initiatives within the state. He also directed the preparation of a Supplemental EIS to assess the environmental and economic impacts of the newly proposed Clean Energy Standard (CES). The CES is being developed to support the state's goal of supplying 50 percent of electricity demand with renewable generation resources by the year 2030. More recently, he directed the development of a model to assess the financial viability of various waste-to-energy technologies, and related social welfare benefits. This model uses detailed capital budgeting scenarios for specific facilities to generate forecast scenarios.

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

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

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

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

Mr. Ewen's analytic work includes expert financial analysis and economic damages estimation in the context of general litigation and environmental enforcement actions. These efforts include assessing damages in breach of contract, nuisance, and cost recovery actions, and assessing the financial capabilities and economic benefit of noncompliance of firms accused of environmental violations. Clients in this area of his practice include the **U.S. DEPARTMENT OF JUSTICE**, **U.S. COAST GUARD**, **U.S. ENVIRONMENTAL PROTECTION AGENCY, STATES,** and private parties.

Testimony and Appearances

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

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

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

On behalf of Pennsylvania's Office of Small Business Advocate, submitting testimony before the Pennsylvania Public Utility Commission, concerning the Default Service Plan for Pike County Light and Power Company (Docket No. P-2023-3039927, July 2023).

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

On behalf of Attorney General of the State of Rhode Island, submitted testimony before the Rhode Island Division of Public Utilities and Carriers concerning due diligence and related reviews of PPL Corporation's proposed acquisition of Narragansett Electric Company from National Grid USA (Docket No. D-21-09, November 2021).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2024

EXHIBIT IEc-2

IEc ELECTRONIC WORKPAPERS

IEc WP1: Cost and Revenue Allocation**
IEc WP2: Metrics for Progress Toward Cost-Based Rates**

The above referenced workpapers, IEc WP1 and IEc WP2; will be served electronically in excel format only, simultaneous to service of OSBA's Direct Testimony

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	**Docket No. R-2024-3046932**
PECO Energy Company (Gas Division)	:	

VERIFICATION

I, Mark D. Ewen, hereby state that the facts set forth in the Direct Testimony labelled OSBA Statement No. 1 and associated Exhibits 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: June 14, 2022

Mark Ewen

Mark D. Ewen

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	**Docket No. R-2024-3046932**
	:	
PECO Energy Company – Gas Division	:	

CERTIFICATE OF SERVICE

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

The Honorable Darlene Heep
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The Honorable Marta Guhl
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DATE: June 17, 2024

/s/ Steven C. Gray

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Attorney I.D. No. 77538

COMMONWEALTH OF PENNSYLVANIA

July 16, 2024

The Honorable Darlene Heep
Administrative Law Judge
Pennsylvania Public Utility Commission
801 Market Street, Suite 4063
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The Honorable Marta Guhl
Administrative Law Judge
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Re: Pennsylvania Public Utility Commission v. PECO Energy Company-Gas Division / Docket No. R-2024-3046932

Dear Judge Heep and Judge Guhl:

Enclosed please find the Rebuttal Testimony of Mark D. Ewen, labelled OSBA Statement No. 1-R and associated Exhibit IEc-R1, on behalf of the Office of Small Business Advocate ("OSBA"), in the above-captioned proceeding.

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

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

Sincerely,

/s/ Steven C. Gray

Steven C. Gray
Senior Attorney
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Attorney ID No. 77538

Enclosures
cc: PA PUC, Secretary, Rosemary Chiavetta (Cover Letter and Certificate of Service Only)
Mark D. Ewen
Parties of Record

OSBA Statement No. 1-R

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	**Docket No. R-2024-3046932**
	:	
PECO Energy Company (Gas Division)	:	
	:	

Rebuttal Testimony and Exhibit of

MARK D. EWEN

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Cost Allocation
Revenue Allocation
Rate Design

Date Served: July 16, 2024

Date Submitted for the Record: _____

REBUTTAL TESTIMONY OF MARK D. EWEN

1. Introduction and Context

Q. Please state your name and briefly describe your qualifications.

A. My name is Mark D. Ewen. I submitted direct testimony and associated exhibits on behalf of the Pennsylvania Office of Small Business Advocate earlier in these proceedings and my qualifications were presented therein.

Q. What is the purpose of this rebuttal testimony?

A. This rebuttal testimony responds to the following witnesses/topics:

Pennsylvania Office of Consumer Advocate ("OCA") witness Clarence L. Johnson on matters of cost allocation and revenue allocation.

Philadelphia Area Industrial Energy Users Group ("PAIEUG") witness Billie S. LaConte on matters of cost allocation, revenue allocation and rate design.

2. Cost Allocation

Q. What are the positions of the various parties regarding the appropriate mains cost allocation method for this proceeding?

A. The parties' positions are as follows:

- PECO Gas ("the Company"): Proposes to use a load-factor weighted average-and-excess ("A&E") methodology for allocating mains costs, with zero excess demand costs for the interruptible service rate classes (MV-I, IS, TCS and TS-I). This method results in an allocation that is virtually identical to a non-coincident peak ("NCP") demand allocation method, where interruptible class NCP is set equal to average demand. This approach is consistent with the Company's approach in the last two base rates cases.

- OCA: Witness Johnson states that the Company's claimed recognition of average demand in the A&E formulation is "illusory" and recommends that the Commission should reject the Company's proposed A&E cost of service study ("COSS"). Witness

Johnson prepared an alternative COSS for the Company using the Peak & Average ("P&A") method weighting peak demand and average demand equally. In addition, if the Commission accepts the Company's proposed COSS, Witness Johnson recommends use of an adjusted A&E method which weights excess demand and average demand on a 50/50 basis.

- PAIEUG: Witness LaConte generally supports the Company's COSS but asserts a flaw exists in the Company's calculation of peak design day ("PDD") demand for the TS-F class. As a result, Witness LaConte contends that the Company understates the cost of serving "sales customers" and overstates the cost of serving TS-F customers.

- OSBA: I supported the Company's use of the A&E method in this case, consistent with the Company's 2022 base rates case at Docket No. R-2022-3031113 and the Commission's decision for PECO Gas in the 2020 base rates proceeding at Docket No. R-2020-3019829.

Q. Please comment on Witness Johnson's analysis.

A. Witness Johnson proposed that a 50/50 P&A method be applied to mains costs in this proceeding because (a) the P&A methodology is more effective in recognizing average demand and giving it equal weighting to peak demand; and (b) the Commission has accepted the method in other base rates cases. Witness Johnson cites specifically to the Columbia Gas case Docket at No. R-2020-3018835. Witness Johnson also recommends that if the Commission were to accept the A&E method, the Company should use a 50% equally weighted A&E formula instead of its 24% weighting of average demand, citing as Commission precedent the Philadelphia Gas Works ("PGW") proceeding at R-2023-3037933.

As a matter of Commission precedent, Witness Johnson's reliance on the Commission's 2021 Columbia Gas decision is puzzling. First, the Commission expressly rejected the 50/50 P&A proposal put forward by OCA Witness Watkins in the 2020 PECO Gas base rates case, which is surely more relevant than the Columbia Gas matter. Second, in that 2020 PECO Gas case, the Commission was well-aware of its approval of the P&A method in Columbia

Gas, but declined to accept it for PECO Gas, citing to the purported double-counting of average demand in the P&A allocator.[1] As I note in my direct testimony, in both the Commission's 2021 and 2022 decisions for Columbia Gas, the Commission reaffirmed that the terms and conditions of settlements are not relied upon as precedential and that cost of service studies should be evaluated on a case-by-case basis:

> "We note that even in cases in which the revenue allocation methodology is litigated, a determination regarding which ACCOSS should be used should be determined on a case-by-case basis. We have observed that "the inherent distinctions between utilities and rate cases may result in different methodologies to be reasonable for different reasons. In other words, the best-suited ACCOSS may depend on the circumstances of the situation on a case-by-case basis."[2]

In the PECO Gas 2020 base rates proceeding, the Commission approved the Company's proposed A&E allocation method knowing full well that the Company's method produced allocation factors substantially similar to a peak demand allocator.[3] Moreover, in making its determination, the Commission considered and rejected proposals for PECO Gas to allocate distribution mains costs based on 50% average demand and 50% peak demand. Witness Johnson's approach is intended to weight average demand more heavily than PECO Gas does. As the fully litigated case demonstrated, however, PECO Gas's methodology is consistent with cost causation principles because peak demand, rather than average demand, is the primary driver of the Company's distribution main costs. The Commission agreed with the Company's arguments that its distribution mains system is designed to meet the demands of its system on a design day that all customers can be served and that it is

[1] Opinion and Order, Pennsylvania Public Utility Commission, Docket No,. R-2020-3018929, Order entered June 22, 2021, at 229-230. Note that in the Columbia matter, no party advanced an A&E methodology, and thus A&E was not explicitly rejected in that case.

[2] Opinion and Order, Pennsylvania Public Utility Commission, Docket Nos. No. R-2022-3031211 et al., Order Entered December 8, 2022, at 107.

[3] Opinion and Order, Pennsylvania Public Utility Commission, Docket No. R-2020-3018929 et al., Order Entered June 17, 2021, at 228-231.

Joint Petition for Settlement of Rate Investigation, Pennsylvania Public Utility Commission, Docket No. R-2022-3031113 et al., Order Entered September 19, 2022.

inappropriate and in conflict with cost causation principles to treat the cost of excess capacity as an incremental cost instead of the primary cost driver:

> "Therefore, we conclude that the excess demand component of PECO's distribution mains system garners considerable weight in the balance of mains costs. Accordingly, we find that the Company's proposed A&E methodology most closely aligns with the principles of cost causation in this instance."[4]

Thus, not only did the Commission explicitly reject Witness Johnson's proposed P&A and A&E methodologies in the 2020 PECO Gas case, but it also appears to have rejected reliance on the Columbia case or decisions for other natural gas distribution companies ("NGDCs") for establishing the appropriate cost allocation method in this proceeding.

Q. Turning to the issue of the peak demand value for the TS-F class, please summarize Witness LaConte's position regarding that value.

A. PECO Gas uses 75,000 mcf per day as the NCP demand for the TS-F class in developing its A&E demand allocation factor. PECO Gas reports that this value is based on its Transportation Contract Quantity ("TCQ") demand value for the customers in the class.

Witness LaConte argues that (a) peak demands for sales customers are coincident peak ("CP") demands (or PDD demands), (b) peak demands for the TS-F class are based on NCP TCQ contract demands, and (c) actual TS-F peak demand has not exceeded 53,364 mcf per day over the last five years, which is below the 75,000 mcf per day TCQ demand. Actual peak demands were well below TCQ demand in each of the past five years. Witness LaConte therefore uses 54,000 mcf per day as the peak demand measure in an alternative COSS.

Q. Do you agree with this modification?

A. I do not, for the following reasons:

[4] Opinion and Order, Pennsylvania Public Utility Commission, Docket No,. R-2020-3018929, Order entered June 22, 2021, at 229.

- As described in the AGA's Gas Rate Fundamentals, the A&E allocator is designed to rely on class NCP and not on class CP.[5] Witness LaConte is therefore incorrect that CP demand is appropriate for developing the Rate TS-F A&E demand allocator.

- The peak demands used for the GR and GC classes in the PECO Gas COSS are based on extreme weather conditions, and do not reflect any actual coincident peak demands. Because the demands for these classes are based on extreme design weather conditions, the peak demands for the GR and GC customer classes occur at the same time, yielding no diversity and CP equals NCP. Thus, the PECO Gas approach uses NCP demands for both the GR and GC classes with smaller customers, as well as for the larger customers in the TS-F class.

- While CP demands may be causally relevant for electric generation and gas transmission assets, they are much less relevant for a gas distribution system, where many of the gas mains serve a relatively small number of customers. Mains serving residential neighborhoods must be sized to meet the specific demands of customers in that neighborhood under extreme weather conditions. Similarly, mains serving larger industrial customers must be sized to the peak demands of the individual large industrial customers served by those mains, and not diversified CP demands. As such, the contract demands for the individual large industrial customers is often a more appropriate measure of peak demand for gas distribution mains than class-wide diversified CP.

- Even if the Commission determines that TCQ is inappropriate, Witness LaConte's proposal to rely on actual peak TS-F demands is not reasonable. As Witness LaConte acknowledges, the peak demands for the GR and GC classes are based on extrapolations of demand to extreme weather conditions and not actual peak demands. If an alternative approach for deriving TS-F peak demands is needed, it should rely on the same approach as that applied to the smaller customer classes, namely the derivation of design demands based on extreme weather conditions. I

[5] Gas Rate Fundamentals, Fourth Edition, American Gas Association, © 1987, at 143-145.

refer to my colleague Bob Knecht's analysis in the 2022 base rate case (resubmitted here as IEc WP2-R) which showed that TS-F demands also have a significant weather component and that TS-F demand under design conditions would therefore exceed actual historical peak demands. Mr. Knecht's regression analysis of monthly TS-F loads also indicated that the Company's use of TCQ demand is reasonable.

- Witness LaConte provides no evidence to support the claim that the Company's COSS "understates the cost of serving sales customers and overstates the cost of serving TS-F customers." It is not reasonable for Witness LaConte to implicitly assume that PECO Gas plans its gas distribution system based on a historical actual value for the TS-F class, while using extreme weather design day demands for its GR and GC classes.

I therefore conclude that Witness LaConte's proposal to adjust the TS-F peak day demand down to an actual historical value is inconsistent with both cost causation and with Witness LaConte's agreement with the Company's practice of using design day weather conditions for deriving peak demands for the other firm service rate classes.

3. Revenue Allocation

Q. What are the positions of the various parties with respect to revenue allocation in this proceeding?

A. OCA Witness Johnson provides a revenue allocation based on OCA's alternative COSS using the 50/50 P&A method. Witness Johnson proposes rate increases for all classes, including those for which rates are market-based (MV-I, IS and TCS). Relative to the Company's proposal, OCA's revenue allocation assigns lower rate increases for the GR and GC customers, and higher rate increases for all other classes.

PAIEUG Witness LaConte proposes no rate increase for the TS-F class, and a materially lower rate increase for the MV-F class, to reflect the proposed change to the Rate TS-F demand allocator, with an offsetting higher increase for the GR class. Witness LaConte recommends a rate increase for the GC class that is lower than the Company's proposal but higher than the rate increase I recommended in my direct testimony.

Q. Please address Witness Johnson's proposal.

A. As I indicated earlier, I disagree that the P&A mains cost allocation approach advocated by Witness Johnson is consistent with Commission precedent. Therefore, I disagree with the cost basis for Witness Johnson's revenue allocation proposal.

If the Commission reverses its prior decision and adopts the P&A method for mains allocation, my IEc WP1-R shows the implications of Witness Johnson's revenue allocation at the full revenue requirement. As shown, that approach would result in the revenue-cost ratio for the GR, MV-F, TS-I, and TS-F classes moving away from allocated cost, and the GC rate moving more in line with allocated cost (from 103.0% to 102.20%). In my direct testimony, I prepared a revenue allocation that results in more progress toward cost-based rates than the proposals put forward by the Company or OCA for the Rate GR and GC classes. Further, my analysis is consistent with the Company's own policies regarding rate gradualism.

Q. Please address Witness LaConte's proposal.

A. Witness LaConte's proposed revenue allocation is consistent with the results of the PAIEUG COSS. For the reasons detailed above, I do not agree with the proposed change to the Rate TS-F demand allocator. For that reason, I do not believe that Witness LaConte's revenue allocation proposal should be adopted.

4. <u>Rate Design</u>

Q. Please summarize the Company's proposal for volumetric charges for the TS-F class.

A. Per the 2022 rate case settlement, the Company conducted a load factor analysis for TS-F customers to determine an appropriate rate differential, if any, between customers whose annual volume is below 18 million cubic feet ("mmcf") and customers whose annual volume is at or above 18 mmcf. The Company concluded that load factors for the larger customers were higher than those of the smaller customers below 18,000 mmcf (the ratio of load factors is 1.49), though not to a level that supports the existing Rate TS-F volumetric rate differential of over two to one. The Company proposes rate increases to levels consistent with its evaluation of weighted load factors, with a charge differential of 1.49.

Q. **Please address Witness LaConte's position regarding TS-F rate differentials.**

A. Witness LaConte recommends that the Commission should reject the Company's proposal because the analysis is not based on the COSS. In a discovery response, PECO Gas stated that "it does not have the allocators for TS-F and TS-I separated between customers above and below 18,000 Mcf [mmcf] per year."[6] Witness LaConte also claims that the Company's proposal to increase the volumetric rate for large TS-F customers by 44%, "which is almost twice the system average" would result in rate shock. If the Commission approves the Company's revenue allocation, Witness LaConte proposes that any rate increase for the TS-F class should be spread evenly between large and small TS-F customers.

Q. **Please respond to Witness LaConte's claim that the Company's proposed increase in the volumetric charge for larger TS-F customers of 44% constitutes rate shock, because it is almost twice the system average (22.9%).**

A. I respectfully disagree with Witness LaConte, for the following reasons.

- The Company's proposed limit for a class increase is 2.0 times system average. Its proposal for the volumetric charge increase for the larger TS-F customers is below that value, which would be 44.8 percent.

- The rate shock "rule of thumb" of 1.5 or 2.0 times system average usually applies to class average increases, not to the impact on any particular charge within the tariff. The Company's proposed overall rate impact for the TS-F class is 22%, below the system average. This includes the overall average rate impact for both the small customer group and the large customer group of all changes in the base rates charges, including the customer charge and the commodity charge.

Q. Do you have any other issues with Witness LaConte's analysis?

A. Yes, I do. Witness LaConte claims that the TS-F rate differential is not based on the Company's COSS and should therefore be rejected. Although I support Witness LaConte's efforts to collect data from the Company regarding allocators for TS-F customers separated

[6] PAIEUG Statement No.1, Exhibit BSL-9 at 4.

by size (above and below 18,000 mmcf per year)[7], I do not agree that the Company's existing rate differential is justified based on the available data. Per the 2022 case settlement, PECO Gas was required to, at a minimum, undertake a load factor analysis for smaller and larger TS-F customers. In light of the Company's refusal to provide detailed cost information for these sub-classes or to conduct its own analysis, the only justification for the Company to maintain the existing rate differential (2.1) would be to show that the ratio of the large customer load factor to the small customer load factor is 2.1.[8] The Company rightly proposes rate increases for smaller and larger TS-F customers to levels consistent with its evaluation of weighted load factors, with a charge differential of 1.49.

Finally, should the Commission determine that the Company's proposed 44% rate increase for TS-F customers above 18,000 mmcf per year constitutes rate shock, I recommend that the Commission accept a rate increase for larger TS-F customers that still makes progress in reducing the arbitrary volumetric rate differential between smaller and larger TS-F customers. In future proceedings, cost analysis of the sub-groups of TS-F customers would be best performed within the COSS by defining separate rate classes, thereby recognizing not only load factor differences, but also meters/services costs, direct assignment impacts, any of the other cost factors.

Q. Turning to TS-I customers, in this proceeding PECO Gas proposes to phase out the Rate TS-I volumetric differentials between customers above and below 18 mmcf per year over multiple proceedings. Please address Witness LaConte's views on the issue.

A. Witness LaConte recommends that the Company's proposal should be rejected because the "proposed volumetric rate adjustment for large TS-I customers is not cost based and should not be used to determine the rate differential for TS-I customers." Witness LaConte maintains that any authorized rate increase for the TS-I class should be applied evenly to all customers' volumetric rates.

[7] OSBA requested the same data in the 2022 PECO Gas base rates case.

[8] Customers with a lower load factor are more expensive to serve on a per-mcf basis.

Q. What is your response?

A. I agree with Witness LaConte that the Company's proposed volumetric rate adjustment is not based on a COSS that separates smaller and larger TS-I customers; however, neither is the Company's *existing* volumetric rate differential between customer groups. This is the very reason PECO Gas is proposing to phase out the volumetric rate differential between smaller and larger customers entirely over multiple proceedings, beginning with this proceeding. Unlike Rate TS-F, there is no load factor justification for a volumetric rate differential in the TS-I class. Under the Company's cost allocation philosophy, demand-related costs are assigned to this class almost entirely on the basis of average annual volumes. Thus, there is no difference in allocated distribution plant costs between small and large customers, and in turn no cost-based justification for any volumetric rate differential.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

EXHIBIT IEc-R1

IEc ELECTRONIC WORKPAPERS

IEc WP1-R*

IEc WP2-R*

*** The above referenced Excel Workbooks, "IEc WP1-R & IEcWP2-R", will be served electronically only, as it is available in excel format only and will be served simultaneous to the OSBA's Rebuttal Testimony***

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	**Docket No. R-2024-3046932**
	:	
PECO Energy Company (Gas Division)	:	
	:	

VERIFICATION

I, Mark D. Ewen, hereby state that the facts set forth in the Rebuttal Testimony labelled OSBA Statement No. 1-R and associated Exhibit IEc-R1 are true and correct to the best of my knowledge, information, and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 19 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Mark Ewen

Date: July 12, 2024

Mark D. Ewen

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	**Docket Nos. R-2024-3046932**
v.	:	**C-2024-3048456**
	:	
PECO Energy Company – Gas Division	:	

CERTIFICATE OF SERVICE

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DATE: July 16, 2024

/s/ Steven C. Gray
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Senior Attorney
Assistant Small Business Advocate
Attorney I.D. No. 77538

COMMONWEALTH OF PENNSYLVANIA

August 2, 2024

The Honorable Darlene Heep
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Pennsylvania Public Utility Commission
801 Market Street, Suite 4063
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Re: Pennsylvania Public Utility Commission v. PECO Energy Company-Gas Division / Docket No. R-2024-3046932

Dear Judge Heep and Judge Guhl:

Enclosed please find the Surrebuttal Testimony of Mark D. Ewen, labelled OSBA Statement No. 1-S and associated Exhibit IEc WP1-S, on behalf of the Office of Small Business Advocate ("OSBA"), in the above-captioned proceeding.

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

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

Sincerely,

/s/ Steven C. Gray

Steven C. Gray
Senior Attorney
Assistant Small Business Advocate
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Enclosures
cc: PA PUC, Secretary, Rosemary Chiavetta (Cover Letter and Certificate of Service Only)
Mark D. Ewen
Parties of Record

OSBA Statement No. 1-S

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	**Docket No. R-2024-3046932**
PECO Energy Company (Gas Division)	:	

Surrebuttal Testimony and Exhibit of

MARK D. EWEN

On Behalf of the

Pennsylvania Office of Small Business Advocate

Topics:

Revenue Allocation

Date Served: August 2, 2024

Date Submitted for the Record: _____

SURREBUTTAL TESTIMONY OF MARK D. EWEN

1. Introduction and Context

Q. Please state your name and briefly describe your qualifications.

A. My name is Mark D. Ewen. I submitted my direct testimony, rebuttal testimony and associated exhibits on behalf of the Pennsylvania Office of Small Business Advocate earlier in these proceedings and my qualifications were presented therein.

Q. What is the purpose of this surrebuttal testimony?

A. This surrebuttal testimony responds to the rebuttal testimony of PECO Gas (the "Company") witness Joseph A. Bisti and Pennsylvania Office of Consumer Advocate ("OCA") witness Clarence L. Johnson.

Specifically, I describe the Company's revisions to its filed revenue requirement and revenue allocation, update my proposed alternative revenue allocation to reflect the Company's revisions, and respond to Witness Johnson's critiques of my direct testimony.

2. Revenue Allocation

Q. Please summarize the Company's rebuttal testimony with respect to the proposed revisions to its filed revenue requirement and revenue allocation?

A. The Company has reduced its Fully Projected Future Test Year ("FPFTY") revenue requirement to $110.0 million, which represents an approximate $1.1 million reduction to PECO Gas's initial increase request of $111.2 million.

Table IEc-S1 summarizes the company's revised revenue allocation at present and proposed rates for those rate classes subject to rate cost-based rates. (MV-I, IS and TCS are excluded because rates are market-based.) The Company evaluates its revenue allocation proposal using an indexed rate of return methodology. As I explained in my direct testimony, because the indexed rate of return methodology can provide misleading signals for revenue allocation, I evaluate progress toward cost-based rates using a revenue-cost ratio

methodology.[1] This method is simply the ratio of class revenues to the fully allocated costs for each class (inclusive of return and income taxes).[2] As shown, the Company's rebuttal revenue allocation proposal results in material progress toward cost-based rates for all rate classes except Rate GC.

Table IEc-S1
Summary of PECO Gas Revised Revenue Allocation

	Increase $000	Increase %	R/C Current	R/C Proposed	"Progress"
GR	$77,959	23.86%	97.91%	98.67%	36.45%
GC	$27,796	22.66%	103.01%	102.87%	4.71%
L	$0	0.00%	213.62%	173.92%	34.94%
MV-F	$85	13.87%	111.47%	103.38%	70.54%
TS-I	$0	0.00%	129.39%	105.35%	81.81%
TS-F	$4,176	21.84%	100.96%	100.15%	84.42%
Total	**$110,016**	**22.88%**	**100.00%**	**100.00%**	

Source: IEc WP1-S

Q. What is your alternative revenue allocation proposal?

The results of my alternative revenue allocation proposal are summarized in Table IEc-S2 below. My recommendation is similar to what I proposed in my direct testimony and only differs because it is based the Company's revised revenue requirement. I applied a smaller revenue increase to the Rate GC class of $23.6 million, which represents a 19.2 percent increase relative to current rates. This change brings Rate GC revenues fully into line with allocated costs for the class. To offset the revenue loss, I adjust Residential (Rate GR) revenues upwards to $82.2 million (relative to the Company's proposed $78.0 million increase). My proposal results in more progress toward cost-based rates than the proposal put forward by the Company for the Rate GR and GC classes. Further, my analysis is

[1] See Appendix A of my direct testimony for an explanation.

[2] At current rates, the R/C ratio is calculated as if an across-the-board increase is assigned to all rate classes.

consistent with the Company's own policies regarding rate gradualism; the Residential class rate increase is 25.2 percent, only modestly above the system average of 22.9 percent.

Table IEc-S2
Summary of IEc Alternative Revenue Allocation Proposal

	Increase $000	Increase %	R/C Current	R/C Proposed	"Progress"
GR	$82,157	25.15%	97.91%	99.69%	85.20%
GC	$23,598	19.24%	103.01%	100.00%	100.00%
L	$0	0.00%	213.62%	173.92%	34.94%
MV-F	$85	13.87%	111.47%	103.38%	70.54%
TS-I	$0	0.00%	129.39%	105.35%	81.81%
TS-F	$4,176	21.84%	100.96%	100.15%	84.42%
Total	**$110,016**	**22.88%**	**100.00%**	**100.00%**	

Source: IEc WP1-S

Q. Is your revenue allocation proposal reasonable if the indexed rates of return metric is used for evaluation?

A. Yes. As I explained in my direct testimony, the indexed rate of return metric has the flaws that it can imply that progress is being made toward cost-based rates when there is none, and it will almost always overstate progress toward cost-based rates. Nevertheless, the indexed rate of return metric can demonstrate where *additional progress* toward cost-based rates can be achieved.

In this case, the Company's calculated relative rates of return support a lower rate increase for the Rate GC class and a slightly higher rate increase for the Rate GR class. At proposed rates, PECO Gas calculates an indexed rate of return of 0.98 for the Rate GR class and an indexed rate of return of 1.04 for the Rate GC class.[3] These values indicate that further progress toward cost-based rates can be achieved, by increasing the GR class value and lowering the GC class value. Further, the Company's proposed rate increase for Rate GR is

[3] PECO Statement 7-R at 4.

23.9%, only slightly above the system average (a factor of 1.04:1). As such, there is plenty of room within the rule-of-thumb gradualism constraints to further increase the Rate GR indexed rate of return. Granting a larger rate increase to the Rate GR class (e.g., 25.2% per my proposal), while reducing the rate increase for Rate GC customers, would be consistent with rate gradualism and would result in additional progress toward cost-based rates as measured using the indexed rate of return.

Q. Please comment on Witness Johnson's rebuttal testimony regarding your proposed revenue allocation.

A. As I indicated in my rebuttal testimony, I disagree with the cost basis for Witness Johnson's revenue allocation proposal and thus reject the revenue allocation proposal entirely. Witness Johnson used the Peak & Average ("P&A") for mains allocation in OCA's cost of service study ("COSS").

` Similarly, Witness Johnson in rebuttal testimony rejected my revenue allocation proposal because I based it on the Company's proposed Average & Excess ("A&E") COSS. Witness Johnson also discusses two alleged flaws in my direct testimony. First, I agreed with OCA in that the Company's A&E method in this case "produces results which are nearly identical to those that would result from a peak demand allocator." Second, I acknowledged that the Company's COSS was the least favorable approach for small businesses because "it fails to recognize the economies of scale of serving larger customers." As I explained in my direct and rebuttal testimonies, I accept the Company's COSS methodology due to Commission precedent, namely the fully litigated PECO Gas 2020 base rates proceeding. The above statements are not "flaws" in my testimony, but rather recognition of some pertinent issues concerning the Company's COSS methodology that the Commission was fully aware of when it litigated and accepted the Company's A&E method.

Witness Johnson concludes that if I considered a COSS that corrected these two "flaws", both the GR and GC classes would receive rate increases that were less than the system average percentage increase, as both classes would have rates of return below the system average. I did not consider such a COSS because I do not expect the Commission to approve

one in this proceeding. As a result, I reaffirm that my proposed revenue allocation results in significant progress toward cost-based rates for both the GR and GC classes.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

EXHIBIT IEc-S1

IEc ELECTRONIC WORKPAPERS

IEc WP1-S**

**** The above referenced Excel Workbook, "IEc WP1-S**", will be served electronically only, as it is available in excel format only and will be served simultaneous to the OSBA's Surrebuttal Testimony****

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	**Docket No. R-2024-3046932**
	:	
PECO Energy Company (Gas Division)	:	

VERIFICATION

I, Mark D. Ewen, hereby state that the facts set forth in the Surrebuttal Testimony labelled OSBA Statement No. 1-S and associated Exhibit IEc WP1-S are true and correct to the best of my knowledge, information, and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 19 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: July 26, 2024

Mark Ewen

Mark D. Ewen

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	**Docket Nos. R-2024-3046932**
v.	:	**C-2024-3048456**
	:	
PECO Energy Company – Gas Division	:	

CERTIFICATE OF SERVICE

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

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DATE: August 2, 2024

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

Docket No. R-2024-3046932

PECO Energy Company – Gas Division

Direct Testimony and Exhibits

of

BILLIE S. LACONTE

On Behalf of

Philadelphia Area Industrial Energy Users Group

June 17, 2024

J. POLLOCK
INCORPORATED

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

Docket No. R-2024-3046932

PECO Energy Company – Gas Division

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GLOSSARY OF ACRONYMS

Term	Definition
A&E	Average and Excess
CCOSS	Class Cost-of-Service Study
Commission	Pennsylvania Public Utility Commission
PAIEUG	Philadelphia Area Industrial Energy Users Group
PDD	Peak Design Day
PECO	PECO Energy Company – Gas Division
PGC	Purchase Gas Cost
ROR	Rate of Return
RROR	Relative Rate of Return
TCQ	Transportation Contract Quantity
TS-F	Gas Transportation Service - Firm
TS-I	Gas Transportation Service - Interruptible

DIRECT TESTIMONY OF BILLIE S. LACONTE

Introduction and Qualifications

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Billie LaConte. My business address is 14323 South Outer 40 Rd., Suite 206N, St. Louis, Missouri 63017.

Q WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?

A I am an energy advisor and Associate Consultant at J. Pollock, Incorporated.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I have a Bachelor of Arts degree in Mathematics from Boston University and a Master's degree in Business Administration from Washington University. Since graduating in 1995, I have been engaged in a variety of consulting assignments, including energy procurement and regulatory matters in both the United States and several Canadian provinces. More details are provided in **Exhibit ___(BSL-1)**. A list of my appearances is provided in **Exhibit ___ (BSL-2)**.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of Philadelphia Area Industrial Energy Users Group (PAIEUG). PAIEUG is an ad hoc group of large volume customers receiving natural gas delivery service from PECO Energy Company - Gas Division (PECO or Company) under the Gas Transportation Service – Firm (TS-F) and Gas Transportation Interruptible (TS-I) Rate Schedules. PAIEUG members require substantial volumes of natural gas in their operations, and the proposed rate increase and tariff modifications may have an adverse impact upon their operations.

Q WHAT ISSUES ARE YOU ADDRESSING IN YOUR TESTIMONY?

A I am addressing PECO's class cost-of-service study (CCOSS), its proposed class revenue allocation, and its TS-F and TS-I rate design.

Q ARE YOU SPONSORING ANY EXHIBITS WITH YOUR TESTIMONY?

A Yes. I am sponsoring **Exhibit ___ (BSL-1)** through **Exhibit ___ (BSL-9)**. These exhibits were prepared by me or under my supervision and direction.

Q ARE YOU ENDORSING PECO'S POSITIONS ON ISSUES NOT ADDRESSED IN YOUR DIRECT TESTIMONY?

A No. Throughout my testimony I use PECO's proposed revenue requirement to illustrate various concepts. These illustrations should not be interpreted as an endorsement of PECO's proposed revenue requirement. Additionally, any issue not addressed herein should not be construed as an endorsement thereof.

Summary

Q PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A My findings and recommendations are as follows:

Class Cost-of-Service Study

- Except for one flaw regarding the calculation of the TS-F class's peak design day (PDD) demand, PECO's CCOSS generally comports with industry practice. This includes use of the Average and Excess (A&E) method, which was used in PECO's last rate case (in 2022) as it was approved by this Commission in PECO's 2020 rate case.
- PECO overstated the allocation of demand-related costs to the TS-F class because it used the Transportation Contract Quantity (TCQ) to determine the average and excess demand for this class. The TCQ is the highest demand of each TS-F customer (*i.e.,* customer non-coincident peak), irrespective of when it occurs. The TCQ is not a measure of the TS-F class's actual demand coincident with the system PDD demand or its average demand. Further, the TCQ is not representative of the class's actual peak demand, which has historically been, and is projected to be, below the TCQ.

- In lieu of the TCQ, the TS-F class's share of demand-related costs should be based on the class's actual PDD demand. Replacing the TCQ with the actual PDD demand reveals the TS-F class is currently above cost.

Class Revenue Allocation

- PECO's proposed revenue allocation is based, in part, on the results of its CCOSS. Because of the aforementioned error in the CCOSS, the proposed revenue allocation should be rejected. Consistent with this Commission's long-standing practice, any delivery revenue change should be allocated to customer classes in a manner that moves all rates toward cost as closely as practicable, while also recognizing the principle of gradualism.
- If the Commission authorizes a lower delivery rate increase than PECO is proposing, the cost-based revenue requirements in PAEIUG's recommend class revenue allocation should be scaled-back proportionally.

Rate Design

- PECO has adjusted the TS-F volumetric rate differential between large (using more than 18,000 Mcf) TS-F customers and small (using less than 18,000 Mcf) TS-F customers. The rate differential is based on a load factor ratio of 1.49.
- PECO adjusted the large TS-F customers' volumetric rate by 44% as it claims that a rate differential for this class is not necessary.[1] The adjustment to the large TS-F customers is not cost based, would result in rate shock, and should be rejected.
- PECO further proposes to phase out the TS-I customers' volumetric rate differentials over multiple proceedings, beginning with this matter. The proposed rate differential adjustment for the TS-I class is not cost-based and should be rejected.
- The current rate differentials for TS-F and TS-I should be maintained.

Class Cost-of-Service Study

Q WHAT IS A CLASS COST-OF-SERVICE STUDY?

A A CCOSS is an analysis used to determine each class's responsibility for a utility's costs. Thus, it determines whether the revenue generated by a class covers the utility's cost of providing service to that class. A CCOSS separates a utility's total costs

[1] PECO Statement No. 7, Direct Testimony of Joseph A. Bisti, Exhibit JAB-4 at 11.

into portions incurred on behalf of each customer class. Most of a utility's costs are incurred jointly to serve many customers. For purposes of revenue allocation and rate design, customers are grouped into homogenous classes according to their usage patterns and service characteristics. A more in-depth discussion of the procedures for conducting a CCOSS is provided in **Exhibit___(BSL-3)**.

Q HAS PECO CONDUCTED A CLASS COST-OF-SERVICE STUDY IN THIS PROCEEDING?

A Yes. PECO witness, Ms. Jiang Ding, summitted PECO's CCOSS.

Q DOES PECO'S CLASS COST-OF-SERVICE STUDY GENERALLY COMPORT WITH ACCEPTED PRACTICES?

A Yes. As previously noted, except for a flaw regarding its calculation of the TS-F class's PDD demand, PECO's CCOSS generally comports with accepted practices, including use of the A&E methodology as was approved in its 2020 rate case (Docket No. 2020-3018929) and used in its last rate case (R-2022-3031113).

Q PLEASE EXPLAIN THE FLAW YOU NOTED IN PECO'S CLASS COST-OF-SERVICE STUDY.

A PECO overstated the TS-F class's PDD demand. Accordingly, PECO's CCOSS understates the cost of serving sales customers and overstates the cost of serving TS-F customers.

Q HOW DID THE COMPANY ESTIMATE THE PEAK DESIGN DAY DEMAND FOR THE SALES CUSTOMERS?

A The PDD demand for sales customers is calculated using the same methodology that PECO used in its last base rate case. Specifically, PECO calculated the correlation

for each rate class between customers' temperature-sensitive usage and heating degree days. The correlation relationship was used to determine each rate classes' peak day demand based on heating degree days for the system peak design day. The design day is the 24-hour period of demand that PECO uses in its Purchased Gas Cost (PGC) filings as a basis for planning its gas supply capacity requirement, historical load factors, and projected sales. PDD demand measures each sales class's gas usage on the system peak design day demand.

Q IS THE PEAK DESIGN DAY DEMAND AN APPROPRIATE METRIC FOR DETERMINING THE ALLOCATION OF DEMAND-RELATED COSTS?

A Yes. PDD demand is the computed quantity of gas which would be supplied on a day when the mean temperature of PECO's service territory is zero degrees Fahrenheit. Thus, it measures the demand during the most critical times of the year that a gas distribution system must be designed to meet. Therefore, PDD demand is consistent with cost causation.

Q HOW DID THE COMPANY OVERSTATE THE COST OF SERVING THE TS-F CLASS IN ITS CLASS COST-OF-SERVICE STUDY?

A As previously stated, PECO is using the A&E method to allocate demand-related costs. The A&E method is the sum of (1) the product of each class's average demand and the annual system load factor and (2) the product of each class's excess demand and one minus the annual system load factor. Excess demand is the difference between PDD demand and average demand.

In determining the excess demand for purposes of applying the A&E methodology, PECO used different demand metrics for the sales and TS-F customer classes. For the sales classes, it appropriately used the PDD demand and average demand to derive the excess demand — however, for the TS-F class, it used the TCQ as a proxy for this class's PDD demand.

Q WHAT DAILY TRANSPORTATION CONTRACT QUANTITY DID PECO USE TO DERIVE THE TS-F CLASS'S SHARE OF DEMAND-RELATED COSTS?

A PECO notes that the TCQ amount (75,000 Mcf) is from its 2024-2025 PGC filing 1307(f).[2]

Q IS THE DAILY TRANSPORTATION CONTRACT QUANTITY OF EACH TS-F CUSTOMER REASONABLY REPRESENTATIVE OF THE TS-F CUSTOMER'S ACTUAL DEMAND?

A No. First, the TCQ does not reflect the amount of gas actually transported by each TS-F customer. Second, PECO summed each customer's TCQ to determine the total TS-F class demand. This assumes that each TS-F customer would transport its maximum contract quantity each and every day, including on the system peak design day. It would be sheer coincidence that TS-F customers use their maximum daily contract quantity on each and every day, including on the system peak design day. By using the sum of each TS-F customer's TCQ, PECO is assuming (without any factual evidence) that there is zero diversity within the TS-F class, which is highly unlikely. Therefore, it is reasonable to expect that the PDD demand would be significantly below the corresponding TCQ for the TS-F class.

[2] PECO Statement No. 6, Direct Testimony of Jiang Ding, Exhibit JD-6 at 18.

Q HAS THE TS-F CLASS ACTUALLY USED 100% OF ITS DAILY CONTRACT QUANTITY ON THE SYSTEM PEAK DESIGN DAYS?

A No. Table 1 shows the peak daily throughput of the TS-F class.

Table 1
TS-F Peak Day Throughput and TCQ
(Mcf)

Year	Peak	TCQ
2019	46,513	64,000
2020	51,174	75,000
2021	53,364	68,000
2022	47,922	69,000
2023	49,354	75,000

Source: PECO Response to PAIEUG 1-10(d), a copy of which is provided in **Exhibit (BSL-9);** Docket No. R-2022-3031113, PECO Response to OCA-III-7, a copy of which is provided in **Exhibit__(BSL-9)**; Exhibit JD-6 at 18.

As demonstrated above, the TS-F class's historical peak day usage has been significantly below the sum of the class's daily TCQ. Thus, contrary to PECO's assumption, there is considerable diversity of demand within the TS-F class. To ignore that diversity by using TCQ as a proxy for the TS-F class's share of system peak design day demand is both contrary to the facts and results in over-allocating costs to the TS-F class.

Q WHY ELSE WOULD IT BE INAPPROPRIATE TO USE TRANSPORTATION CONTRACT QUANTITY TO APPROXIMATE THE PEAK DESIGN DAY DEMAND FOR THE TS-F CLASS?

A The customary and appropriate practice is to use the same metric to allocate demand-related costs for all classes. PDD demand and TCQ are not the same metric. It is just

as inappropriate to assume TCQ as a proxy for peak demand in a gas CCOSS as it would be to use non-coincident peak as a proxy for coincident peak demand in an electric CCOSS.

Further, using the TCQ treats the TS-F class differently than the sales classes. That difference results in significantly over-allocating demand-related costs to the former. An over-allocation occurs because PECO assumes, inaccurately, that each TS-F customer would transport 100% of its TCQ on the PDD. As demonstrated above, TS-F customers transport significantly less than 100% of their respective TCQs — as such, PECO's approach substantially overstates the demand-related costs allocated to this class.

Q WHAT DO YOU RECOMMEND?

A I recommend using the historical peak demand for purposes of applying the A&E method to the TS-F class, just as PECO is using for the sales classes. Thus, I used the TS-F class's peak demand from 2021, which is the highest demand for the period 2019-2023. The peak demand for the TS-F class is 53,364 Mcf, as shown in **Exhibit___(BSL-4)**. I have rounded the peak demand up to 54,000 Mcf.

Q HAVE YOU REVISED THE AVERAGE AND EXCESS DEMAND ALLOCATION FACTORS?

A Yes. **Exhibit ___(BSL-5)** provides the derivation of the revised A&E demand allocation factors using the TS-F class's estimated PDD demand for the test year, less average demand. A summary of **Exhibit ___(BSL-5)** is shown in Table 2.

Table 2 Derivation of the Revised Excess Demand Allocation Factors		
Rate Class	**PECO**	**PAIEUG**
Residential	64.58%	66.58%
General Service	30.16%	30.93%
Large High Load Factor	0.01%	0.02%
Motor Vehicle Service Firm	0.05%	0.25%
Motor Vehicle Service Interruptible	0.00%	0.00%
Interruptible Service	0.00%	0.00%
Temperature Controlled Service	0.00%	0.00%
Gas Transportation Firm	5.199%	2.21%
Gas Transportation Interruptible	0.00%	0.00%
Source: Exhibit__(BSL-5).		

Q HAVE YOU REVISED THE CLASS COST-OF-SERVICE STUDY TO REFLECT YOUR PROPOSED ALLOCATION FACTORS?

A Yes. **Exhibit___(BSL-6)** provides the results of my revised CCOSS.

Q ARE TS-F CUSTOMERS ABOVE THEIR COST TO SERVE BASED ON YOUR REVISED DEMAND ALLOCATORS AND CLASS COST-OF-SERVICE STUDY?

A Yes. Table 3 on the following page compares the current relative rate of return (RROR) using PECO's CCOSS and my revised CCOSS for each rate class, as compared to the overall rate of return (ROR).

Table 3 Current Relative Rates of Return		
Rate Class	**PECO**	**PAIEUG**
Residential	0.95	0.93
General Service	1.07	1.05
Large High Load Factor	3.20	3.13
Motor Vehicle Service Firm	1.21	1.20
Motor Vehicle Service Interruptible	3.01	3.01
Interruptible Service	8.75	8.75
Temperature Controlled Service	8.31	8.31
Gas Transportation Firm	1.03	1.62
Gas Transportation Interruptible	1.53	1.53
Sources: Exhibit JAB-1 at 1; **Exhibit__(BSL-6)**.		

Q PLEASE EXPLAIN THE TERMS RATE OF RETURN AND RELATIVE RATE OF RETURN.

A The ROR measures the return on rate base for each customer class using their proposed revenues, allocated expenses, and allocated rate base. The RROR is each class's ROR relative to the overall system average ROR. If a class's RROR is one, then its ROR is equal to the overall system average ROR. If a customer class's RROR is above the overall system average ROR, its RROR will be above one, which means a class is subsiding the service provided to the below-cost classes. Similarly, if a class's ROR is below the overall system average ROR, its RROR will be below one, which means the class is being subsidized by the other classes.

Q WHAT ARE THE PROPOSED RATE INCREASES USING YOUR REVISED DEMAND ALLOCATORS?

The rate increases required for each rate class to immediately be moved to its cost of service based upon my revised CCOSS presented in **Exhibit ___(BSL-6)** is summarized in Table 4.

Table 4
Increase Required to Move All Classes Immediately to Cost Using Revised CCOSS

Rate Class	Percent
Residential	26.9%
General Service	20.7%
Large High Load Factor	-43.6%
Motor Vehicle Service Firm	10.6%
Motor Vehicle Service Interruptible	-45.3%
Interruptible Service	-78.7%
Temperature Controlled Service	-79.4%
Gas Transportation Firm	-10.4%
Gas Transportation Interruptible	-6.3%
System Average Increase	22.9%

Source: Exhibit__(BSL-6).

Although the TS-F class is above its cost to serve under PECO's CCOSS, PECO is still proposing that TS-F receive approximately a system average increase. The revised PDD demands demonstrate that the TS-F class is providing an even greater subsidy to other rate classes. Thus, TS-F should, at a minimum, receive an increase that is significantly below the system average increase, but more reasonably, receive no increase at all.

Class Revenue Allocation

Q WHAT IS CLASS REVENUE ALLOCATION?

A Class revenue allocation is the process of determining how any base revenue change (*i.e.*, rate increase or decrease) the Commission approves should be spread to each customer class the utility serves.

Q HAVE YOU REVIEWED PECO'S PROPOSED REVENUE ALLOCATION AND RATES OF RETURN BY RATE CLASS?

A Yes. I reviewed Exhibit JAB-1, which shows the proposed revenue allocation, and resulting ROR and RRORs by rate class.

Q WHAT IS THE BASIS FOR PECO'S PROPOSED CLASS REVENUE ALLOCATION?

A PECO states its class revenue allocation proposal is designed to produce reasonable movement toward the cost of service as indicated in its CCOSS and moderated by two times the proposed system average increase.[3]

Q DO YOU AGREE WITH USING A CLASS COST-OF-SERVICE STUDY TO DETERMINE THE APPROPRIATE INCREASE TO EACH CUSTOMER CLASS?

A Yes. A CCOSS results in cost-based rates that are equitable, provide proper price signals, promote efficiency, and provide greater financial stability.

Q ARE COST-BASED RATES ALSO CONSISTENT WITH THIS COMMISSION'S POLICY?

A Yes. In a prior PPL Electric Utilities Corporation rate case, the Commission reaffirmed its policy of setting distribution rates primarily to reflect cost. The Order stated:

> Based upon our prior determination and discussion, *supra*, with respect to the rejection of the OCA COSS, we are in agreement with the ALJ that PPL's proposed revenue allocation should be approved. As the OCA's revenue allocation recommendation is based upon its COSS, which we have rejected, we conclude that its allocation proposal should similarly be denied. ***Additionally, we find that PPL's revenue allocation proposal is consistent with Lloyd, moves all rate classes closer to cost of service in a reasonable manner and considers the principle of gradualism.*** Accordingly, we shall adopt

[3] PECO Statement No. 7, Direct Testimony of Joseph A. Bisti at 3.

> the recommendation of the ALJ and deny the OCA Exceptions on this issue.[4] (emphasis added).

Thus, moving rates reasonably closer to cost is consistent with this Commission's policy.

Q HAS THE COMMISSION ALSO RECOGNIZED GRADUALISM IN APPORTIONING A RATE INCREASE?

A Yes. As noted in the PPL Electric Utilities Corporation Order quoted above, among numerous other instances, this Commission (and many state Commissions) has relied on the Commonwealth Court's decision in *Lloyd v. Pa. Public Utility Commission*, recognizing gradualism as one of the factors to be considered and weighed by the Commission in determining rate design.[5]

Q DO YOU HAVE ANY CONCERNS WITH EXHIBIT JAB-1?

A Yes. As I have already discussed, although PECO's proposed revenue allocation is appropriately based on an A&E CCOSS methodology, it contains a flaw regarding the calculation of the TS-F class's peak day demand. Accordingly, PECO's calculated class rates of return at proposed rates are not appropriate and should be rejected.

Q HAVE YOU PREPARED A RECOMMENDED REVENUE ALLOCATION BASED ON THE RESULTS OF YOUR REVISED CLASS COST-OF-SERVICE STUDY?

A Yes. The proposed revenue allocation based on the results of my revised CCOSS is shown in **Exhibit ___(BSL-7)**. A summary of my recommended revenue allocation is shown in Table 5.

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[4] *Pennsylvania Public Utility Commission, Office of Consumer Advocate et al v. PPL Electric Utilities Corporation*; Docket Nos. R-2012-2290597, C-2012-2300266, *et al*; Opinion and Order at 118-119 (Dec. 28, 2012).

[5] *Lloyd v. Pa. Public Utility Commission*, 904 A.2d 1010 (Pa. Cmwlth. 2006).

Table 5 **PAIUG Proposed Revenue Allocation**	
Rate Class	**Increase**
Residential	26.0%
General Service	20.5%
Large High Load Factor	0.0%
Motor Vehicle Service Firm	2.4%
Motor Vehicle Service Interruptible	0.0%
Interruptible Service	0.0%
Temperature Controlled Service	0.0%
Gas Transportation Firm	0.0%
Gas Transportation Interruptible	0.0%
System Average Increase	22.9%
Sources: Exhibit__(BSL-7).	

Exhibit___(BSL-7) develops the revenue allocation based on my recommended parameters. It shows how my proposed increase should be allocated to the rate classes to move each class closer to cost, while also respecting gradualism. Specifically, I assigned target increases for the classes with RRORs below 1.0. Their increases are set to 1.15 times the system average increase. The corresponding target increases for classes with RRORs above 1.0 and lower than 1.15 were set to the increase prescribed by my revised CCOSS. Classes with a zero increase represent classes that should receive a decrease per the results of my CCOSS. However, while these classes should receive a decrease per the results of my revised CCOSS, for purposes of this proceeding, I am recommending no change in the rates for these classes.

Q WOULD YOUR RECOMMENDED CLASS REVENUE ALLOCATION ALSO ACHIEVE THE OBJECTIVE OF MOVING ALL RATES TOWARD COST?

A Yes. This is shown in **Exhibit ___ (BSL-8)**. As can be seen, my recommendation will move rates closer to cost, while also recognizing the principle of gradualism.

Q IF THE COMMISSION WERE TO APPROVE A LOWER INCREASE FOR PECO, HOW WOULD THIS AFFECT YOUR RECOMMENDATION?

A If the Commission approves a lower revenue increase than PECO has proposed, the delivery revenues shown in **Exhibit ___ (BSL-7)**, column 7, should be scaled-back proportionately. Classes that require a reduction should receive a proportional decrease in their rates.

Rate TS-F and TS-I Volumetric Rate Differential

Q PLEASE DESCRIBE PECO'S PROPOSED ADJUSTMENT TO THE VOLUMETRIC RATE FOR LARGE AND SMALL TS-F CUSTOMERS.

A PECO proposes to adjust the volumetric rates for the large and small TS-F customers to match the rate differential between the large and small customers' volumetric rates to their load factor differential. Per the Settlement in PECO's 2022 base rate case, the Company agreed to review the load factor differential for TS-F customers in its next base rate case (ergo, this case). The purpose is to evaluate whether the differentials between PECO's proposed variable distribution charges for TS-F customers with annual usage above and below 18,000 Mcf per year correlates with the load factor and customer size, considering that demand-related costs for higher load factor customers should be lower on a per Mcf basis compared to lower load factor customers.

Q HOW WAS THE RATE DIFFERENTIAL DETERMINED?

A PECO adjusted the volumetric charge for TS-F customers using more than 18,000 Mcf per year based on a load factor/volumetric analysis. Specifically, PECO compared the ratio of the load factor for large TS-F customers to the load factor for small TS-F customers. PECO considers small customers to be those that use less than 18,000 Mcf per year. PECO determined that the load factor differential is 1.49.

Q WHAT ARE THE RESULTS OF PECO'S ANALYSIS?

A Based on PECO's analysis, the volumetric rate for large TS-F customers would increase by 44%, which is almost twice the system average and would result in rate shock.[6] PECO increased the volumetric rate for small TS-F customers by only 2.5%.[7]

Q DID PECO ADJUST ITS COST-OF-SERVICE STUDY TO SEPARATE THE LARGE AND SMALL TS-F CUSTOMERS TO DETERMINE THE RATE DIFFERENTIAL?

A No. In a discovery response, PECO admitted that "it does not have the allocators for TS-F and TS-I separated between customers above and below 18,000 Mcf per year."[8] PECO's analysis is based on the same analysis performed by the Office of Small Business Advocate in PECO's 2022 rate case, which is based on the ratio of the load factor between small and large customers, rather than the actual costs incurred to serve these customers. PECO's cost differential is not based upon the results of its CCOSS and should be rejected.

[6] PECO Statement No. 7, Direct Testimony of Joseph A. Bisti, Exhibit JAB-4 at 11.

[7] *Id.*

[8] PECO Response to PAIEUG I-9, a copy of which is provided in **Exhibit__(BSL-9)**.

Q HAS THE COMMISSION COMMENTED ON THE PROPOSED RATE DIFFERENTIAL ADJUSTMENT?

A Yes. In PECO's 2020 rate case, the Opinion and Order states:

> [T]he ALJ was persuaded by PAIEUG's determination that there was a 56.2% increase in volumetric rates. The ALJ agreed with PAIEUG that this would constitute rate shock and conflicts with the principle of gradualism…[T]he ALJ recommended that the Company's proposal to reduce the volumetric differentials for rates TS-F and TS-I be denied. We agree with the ALJ that the Company's argument that TS-F customers will not experience rate shock because they have enjoyed the benefit of no rate increase since new rates went into effect after the Company's 2010 base rate case is not persuasive. We also agree with the ALJ that PAIEUG's determination that a 56.2% increase in volumetric rates is persuasive and constitutes rate shock, contrary to the principles of gradualism.[9]

Although PECO's proposed increase is not as high in this proceeding, an increase of 44% is significant and almost twice the system average, as well as twice PECO's proposed revenue increase for TS-F (22%).[10]

Q WHAT DO YOU RECOMMEND?

A I recommend that PECO's proposed rate differential adjustment for TS-F be rejected. The analysis is not based on PECO's CCOSS and, therefore, the proposed rate design for this class is not cost based and should be rejected. I recommend that PECO's current rate differentials for TS-F be maintained. Moreover, assuming arguendo that PECO's rate allocation for TS-F is approved, any rate increase should be spread evenly between the large and small TS-F customers.

[9] *Pennsylvania Public Utility Commission v. PECO Energy Company – Gas Division*, Docket No. R-2020-3018929 et. al., *Opinion and Order* at 281, 288 (Jun. 22, 2021).

[10] PECO Statement No. 7, Direct Testimony of Joseph A. Bisti, Exhibit JAB-1.

Q IS PECO MODIFYING THE RATE DESIGN OF THE TS-I CLASS?

A Yes. PECO proposes to phase out the volumetric rate differential for TS-I customers over multiple proceedings, whereby it will maintain the existing TS-I volumetric rate for customers using less than 18,000 Mcf per year and increase the variable base rate for customers using above 18,000 Mcf to maintain the required TS-I rate revenues.

Q WHY IS PECO PROPOSING TO MODIFY RATE TS-I'S RATE DESIGN?

A PECO claims that because its CCOSS assigns demand-related costs to the TS-I class based entirely on average volumes rather than peak demand, a load factor rate differential only applies to the TS-F class and not the TS-I class. Therefore, PECO recommends there should be no rate differential between large and small TS-I customers. PECO proposes to phase out the volumetric rate differential between large and small TS-I customers.

Q DO YOU AGREE WITH PECO'S PROPOSAL TO REDUCE THE RATE DIFFERENTIAL BETWEEN LARGE AND SMALL TS-I CUSTOMERS?

A No. Based on PECO's CCOSS, TS-I is *above* cost and should receive a rate *decrease.* In PECO's proposed revenue allocation, TS-I's total revenue would not increase. However, under PECO's proposed rate design for TS-I customers, large TS-I customers would receive a 12% increase in in their volumetric rate, despite the fact that the class as a whole is significantly above cost and should receive a decrease.[11] Furthermore, the proposed adjustment is not based on PECO's CCOSS and, therefore, is not cost-based. PECO did not modify its CCOSS to determine the rate differential between large and small TS-I customers.

[11] *Id.*, Exhibit JAB-4 at 9.

Q WHAT DO YOU RECOMMEND?

A I recommend that PECO maintain the current rate differential between large and small TS-I customers. PECO's proposed volumetric rate adjustment for large TS-I customers is not cost based and should not be used to determine the rate differential for TS-I customers. In other words, based on PECO's proposed rate allocation of 0% to TS-I, no customers under TS-I should receive a rate increase. If the Commission authorizes a rate increase for TS-I, it should be applied evenly to the large and small TS-I volumetric rates.

Conclusion

Q WHAT FINDINGS SHOULD THE COMMISSION MAKE BASED ON THE RECOMMENDATIONS DISCUSSED IN YOUR TESTIMONY?

A The Commission should make the following findings:

- Reject PECO's proposed calculation of the PDD demand for the TS-F class;
- Adopt my proposed CCOSS modification using the TS-F class's actual PDD demand rather than its TCQ.;
- Adopt the class revenue allocation methodology illustrated in **Exhibit___ (BSL-7)**; and
- Scale-back the delivery revenues under my recommended class revenue allocation methodology shown in **Exhibit___ (BSL-7)**, column 7, proportionally, in the event that PECO is awarded a lower delivery rate increase than it has requested. Classes that require a reduction under my revised CCOSS should receive a proportional decrease.
- Reject PECO's proposed rate differential between large and small TS-F customers.
- Reject PECO's proposed phase out of the volumetric rate differential between large and small TS-I customers.
- If a rate increase is authorized by the Commission for the TS-F or TS-I classes, the increase should be applied equally to the customer and volumetric charges.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

Docket No. R-2024-3046932

PECO Energy Company – Gas Division

Direct Exhibits

of

BILLIE S. LACONTE

On Behalf of

Philadelphia Area Industrial Energy Users Group

June 17, 2024

J. POLLOCK
INCORPORATED

QUALIFICATIONS OF BILLIE S. LACONTE

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Billie S. LaConte. My business mailing address is 12647 Olive Blvd., Suite 585, St. Louis, Missouri 63141.

Q WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?

A I am an energy advisor and am currently employed by J. Pollock, Incorporated as Associate Consultant.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I have a Bachelor of Arts Degree in Mathematics from Boston University and a Master's degree in Business Administration from Washington University.

Upon graduation in May 1995, I joined Drazen Consulting Group, Inc. (DCGI). DCGI was incorporated in 1995 assuming the utility rate and economic consulting activities of Drazen Associates, Inc., active since 1937. I joined J.Pollock in May 2015.

During my tenure at DCGI and J.Pollock my work has focused on revenue requirement issues, cost of capital (return on equity and capital structure), cost allocation, rate design, sales and price forecasts, power cost forecasting, electric restructuring issues, integrated resource plans, formula rate plans, asset management agreements and contract interpretation.

I have been engaged in a wide range of consulting assignments including energy and regulatory matters in both the United States and several Canadian provinces. This has included advising clients on economic and strategic issues concerning the natural gas pipeline, oil pipeline, electric, wastewater and water utilities. I have testified on cost of capital issues, including return on equity, cost of debt, and capital structure, as well as revenue requirement issues. I have prepared

cost allocation and rate design studies to provide timely support to clients engaged in settlement negotiations in electric and gas utilities, provided power cost forecasting studies to assist clients in project planning and negotiated contracts with electric utilities for standby services and interruptible rates. I have also prepared studies on electric and gas utilities' performance-based rates (PBR) and benchmarking programs to evaluate their success and to provide recommendations on methods to be used. I worked on contract interpretation to resolve contract disputes for several clients. I have provided financial and cost of service analysis for natural gas pipelines certificate approval from the Federal Energy and Regulatory Commission (FERC) and the Canadian National Energy Board (NEB). Additionally, I completed the Corporate Credit Rating Analysis course presented by Moody's Analytics.

I have worked on various projects located in many states and several Canadian provinces including Alberta, British Columbia, Saskatchewan, Nova Scotia and Quebec. I have testified before the state regulatory commissions of Arkansas, Florida, Georgia, Iowa, Louisiana, Michigan, Minnesota, Missouri, New Mexico, North Carolina, Pennsylvania, Texas and South Carolina, and the provincial regulatory boards of Alberta and Nova Scotia. I similarly have appeared before the St. Louis Metropolitan Sewer District Commission and the City of Philadelphia Water, Sewer and Storm Water Rate Board.

Q PLEASE DESCRIBE J. POLLOCK, INCORPORATED.

A J. Pollock assists clients to procure and manage energy in both regulated and competitive markets. The J. Pollock team also advises clients on energy and regulatory issues. Our clients include commercial, industrial and institutional energy consumers. J. Pollock is a registered Class I aggregator in the State of Texas.

TESTIMONY FILED IN REGULATORY PROCEEDINGS
BY BILLIE S. LACONTE

UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
DOMINION ENERGY SOUTH CAROLINA, INC.	South Carolina Utility Energy Users Committee	2024-34-E	Direct	SC	Return on Equity; Capital Structure	6/5/2024
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-21490	Direct	MI	Proposed Trackers; Return on Equity; Capital Structure; Home Products Program Sale	4/22/2024
MINNESOTA POWER	Large Power Intervenors	E-015/GR-23-155	Direct	MN	Return on Equity; Capital Structure; Adjustment Clauses; Incentive Compensation; Prepaid Pension Asset	3/18/2024
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2023-3043189 R-2023-3043190	Surrebuttal	PA	Class Cost-of-Service Study; Allocation of Subsidy; Environmental Compliance Investment Charge; Revenue Decoupling and Return on Equity; Industrial Rate Design; Deferral Mechanism; Arrearage Management Plan Cost Allocation	3/4/2024
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2023-3043189 R-2023-3043190	Rebuttal	PA	Cost-of-Service Study; Revenue Allocation; Rate Design; Riders DIS and DRS; Revenue Decoupling Mechanism	2/21/2024
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2023-3043189 R-2023-3043190	Direct	PA	Return on Equity; Incentive Compensation; Alternative Ratemaking Mechanisms; Class Cost-of-Service Study; Wastewater Subsidy and Allocation; Rate Design; Reveue Requirement Scale-Back	2/1/2024
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	10/31/2023
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Projected Year FLIP Investment; Solar Plant Capital Additions; Power Through Program; Legal Fees	10/4/2023
DUKE ENERGY CAROLINAS, LLC	Carolina Utility Customers Assocation, Inc.	E-7, Sub 1276	Direct	NC	Return on Equity; Capital Structure; Performance Incentive Mechanisms	7/19/2023
PHILADELPHIA GAS WORKS	Philadelphia Industrial and Commercial Gas Users Group PICGUG	2023-3037933	Surrebuttal	PA	Class Cost-of-Service Study; Class Revenue Allocation; Universal Service Plan Costs	7/7/2023
PHILADELPHIA GAS WORKS	Philadelphia Industrial and Commercial Gas Users Group PICGUG	2023-3037933	Rebuttal	PA	Class Cost-of-Service Study; Class Revenue Allocation; Universal Service Plan Costs	6/26/2023
PHILADELPHIA GAS WORKS	Philadelphia Industrial and Commercial Gas Users Group PICGUG	2023-3037933	Direct	PA	Class Cost-of-Service Study; Class Revenue Allocation	6/2/2023
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	22-00286-UT	Settlement Support	NM	Support of Settlement	5/26/2023
PHILADELPHIA WATER DEPARTMENT	Philadelphia Large Users Group	2023 General Rate Proceeding	Rebuttal	Philadelphia Rate Board	Class Cost-of-Service Study; Stormwater Incentive Program; Late Payment Fee Allocation; TAP Enrollment; Retroactive Arrearage Forgiveness	4/27/2023
SOUTHWESTERN PUBLIC SERVICE COMPANY	Texas Industrial Energy Consumers	22-00286-UT	Direct	NM	Future Test Year; Revenue Requirement Issues	4/21/2023
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-21308	Direct	MI	Projected Test-Year Adjustments; Proposed Trackers; Return on Equity; Capital Structure	4/17/2023
PHILADELPHIA WATER DEPARTMENT	Philadelphia Large Users Group	2023 General Rate Proceeding	Direct	Philadelphia Rate Board	Class Cost-of-Service Study	4/12/2023
DUKE ENERGY PROGRESS, LLC	Nucor Steel - South Carolina	2022-254-E	Surrebuttal	SC	Regulatory Asset Amortization Periods	12/22/2022

TESTIMONY FILED IN REGULATORY PROCEEDINGS
BY BILLIE S. LACONTE

UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
NORTHERN STATES POWER	Xcel Large Industrials	E002/GR-21-630	Surrebuttal	MN	Return on Equity; Prepaid Pension Asset; Incentive Compensation; Coal Plant Amortization	12/6/2022
DUKE ENERGY PROGRESS, LLC	Nucor Steel - South Carolina	2022-254-E	Direct	SC	Coal Combustion Residual Amortization; Other Regulatory Asset Amortization	12/1/2022
NORTHERN STATES POWER	Xcel Large Industrials	E002/GR-21-630	Rebuttal	MN	Incentive Compensation; Prepaid Pension Asset	11/8/2022
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	11/2/2022
GEORGIA POWER COMPANY	Georgia Association of Manufacturers	44280	Direct	GA	Return on Equity; Capital Structure	10/20/2022
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Projected Year Feeder Level Investment Plan; Power Through Program	10/5/2022
NORTHERN STATES POWER	Xcel Large Industrials	E002/GR-21-630	Direct	MN	Return on Equity; Incentive Compensation; Pre-Paid Pension Asset	10/3/2022
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2022-3031672/73	Rejoinder	PA	Class Cost-of-Service Study	9/6/2022
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2022-3031672/73	Surrebuttal	PA	Wastewater Subsidy Allocation; Revenue Stabilization Mechanism; Customer Reclassification	9/1/2022
ONCOR ELECTRIC DELIVERY COMPANY LLC	Texas Industrial Energy Consumers	53601	Direct	TX	Self-Insurance Reserve; Annual Storm Expense; Regulatory Asset Amortization	8/26/2022
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2022-3031672/73	Rebuttal	PA	Revenue Requirement Allocation; Class Cost-of-Service Study	8/19/2022
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	R-2022-3031113	Surrebuttal	PA	Design Day Demand; Rate Differentials	8/4/2022
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	R-2022-3031672/73	Direct	PA	Wasterwater Subsidy and Allocation; Revenue Stabilization Mechanism; Customer Classification; Revenue Requirement Scale Back	7/29/2022
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	R-2022-3031113	Rebuttal	PA	Class Cost-of-Service Study; Scale Back of Rates; Design Day Demand; Rate Differentials; Universal Service Programs	7/21/2022
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	R-2022-3031113	Direct	PA	Class Cost-of-Service Study; Class Revenue Allocation	6/22/2022
AUSTIN ENERGY	Texas Industrial Energy Consumers	None	Direct	TX	Cash Flow Method; Financial Metrics; General Fund Transfer; Internally Generated Funds	6/22/2022
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-21148	Rebuttal	MI	Uncollectible Expense; Rate Stability Target	4/29/2022
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-21148	Direct	MI	Return on Equity, Capital Structure; Renewable Natural Gas Plant; Incentive Compensation; Transportation Demand Charge; Gas Curtailment and Requirements for Plant Protection; Unauthorized Gas Usage Charge	4/8/2022
SEMCO ENERGY GAS COMPANY	Association of Businesses Advocating Tariff Equity	U-21169	Direct	MI	Facilities Improvement Demand Surcharge	3/18/2022
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	10/27/2021
EL PASO ELECTRIC COMPANY	Freeport-McMoRan Copper & Gold, Inc.	52195	Direct	TX	Return on Equity; Nuclear Non-Fuel Operation and Maintenance; Rate Case Expense; Retiring Generating Units	10/22/2021

TESTIMONY FILED IN REGULATORY PROCEEDINGS
BY BILLIE S. LACONTE

UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Projected Year Capital Additions; Projected Year O&M expense	10/5/2021
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	R-2021-3024601	Surrebuttal	PA	Return on Equity; Post-Test Year Adjustment	8/5/2021
CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Gas Consumers, Inc.	21-044-U	Direct	AR	Formula Rate Plan Extension; Return on Equity; Class Cost-of-Service Study	7/19/2021
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	R-2021-3024601	Direct	PA	Return on Equity; Post-Test Year Adjustment	6/28/2021
FLORIDA LIGHT & POWER COMPANY	Florida Inudstrial Power Users Group	20210015-EI	Direct	FL	Cost of Capital; Early Plant Retirement; Rate Case Expense Amortization; Income Tax Change Mechanism	6/21/2021
DTE GAS COMPANY	Association of Businesses Advocating Tariff Equity	U-20940	Direct	MI	Return on Equity; Operation and Maintenance Expenses; Incentive Compensation	6/3/2021
SOUTHWESTERN PUBLIC SERVICE COMPANY	Occidental Permian Ltd.	20-00238-UT	Direct	NM	Rate Design, Retired Plant, Expense Amortization	5/17/2021
PHILADELPHIA WATER DEPARTMENT	Philadelphia Large Users Group	Fiscal Years 2022-2023	Rebuttal	Philadelphia Rate Board	Class Cost-of-Service Study; Stormwater Incentive Program	4/7/2021
SOUTHWESTERN ELECTRIC POWER COMPANY	Texas Industrial Energy Consumers	51415	Direct	TX	Early Plant Retirement; Excess Accumulated Deferred Federal Income Taxes; Self-Insurance Reserve; Imputed Capacity	3/31/2021
SHARYLAND UTILITIES, L.L.C.	Texas Industrial Energy Consumers	51611	Direct	TX	Rate-Case Expenses; Operation and Maintenance Expense; Transmission Cost of Service Refund Rider	3/8/2021
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2020-3018929	Surrebuttal	PA	Revenue Allocation; Rate Design	2/9/2021
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2020-3018929	Rebuttal	PA	Allocation of Distribution Mains; Revenue Allocation; Rate Design; Universal Service Fund Charge	1/19/2021
PECO ENERGY COMPANY	Philadelphia Area Industrial Energy Users Group	2020-3018929	Direct	PA	Class Cost-of-Service Study; Class Revenue Allocation	12/22/2020
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Surrebuttal (FRP Extension)	AR	FRP Extension; Return on Equity; Capital Structure; Class Cost-of-Service Study; Industrial Rate Design	11/17/2020
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	2020-3019369 2020-3019371	Surrebuttal	PA	Rate Design; Regionalization and Consolidation Surcharge; Return on Equity	10/20/2020
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct (FRP Extension)	AR	FRP Extension; Return on Equity; Capital Structure; Class Cost-of-Service Study; Industrial Rate Design	10/19/2020
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct (2020 Eval. Report)	AR	Historical Year Netting Adjustment; :Long-Term Debt Costs	10/5/2020
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	2020-3019369 2020-3019371	Rebuttal	PA	Rate Design	9/29/2020
PENNSYLVANIA-AMERICAN WATER COMPANY	Pennsylvania-American Large Water Users Group	2020-3019369 2020-3019371	Direct	PA	Regionalization and Consolidation Surcharges; Commercial Rate Design	9/8/2020
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20697	Rebuttal	MI	Financial Compensation Mechanism; Deferred Capital Spending Recovery Mechanism; Karn 1 & 2 Retention and Separation costs, return on equity, storm restoration deferral; PowerMIFleet Pilot Foundational Infrastructure Program; Conservation Voltage Reduction	7/14/2020
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Direct	AR	Projected Year Capital Expenditures; Capitalization Policy; Projected Year Adjustments	7/2/2020

TESTIMONY FILED IN REGULATORY PROCEEDINGS
BY BILLIE S. LACONTE

UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20697	Direct	MI	Return on Equity; Capital Structure; Debt Cost; Additional Surcharges and Deferred Regulatory Accounts	6/24/2020
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20650	Rebuttal	MI	Return on Equity; Statistical Analysis of Distribution Mains Allocation	5/5/2020
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20650	Direct	MI	Return on Equity; Capital Structure; Long-Term Debt Cost	4/14/2020
DTE GAS COMPANY	Association of Businesses Advocating Tariff Equity	U-20642	Rebuttal	MI	Return on Equity	4/14/2020
DTE GAS COMPANY	Association of Businesses Advocating Tariff Equity	U-20642	Direct	MI	Return on Equity; Operation and Maintenance Expenses	3/24/2020
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20618	Direct	MI	Certificate of Convenience and Necessity	1/17/2020
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	10/30/2019
GEORGIA POWER COMPANY	Georgia Association of Manufacturers and Georgia Industrial Group	42516	Direct	GA	Alternate Rate Plan; Coal Combustion Residual Cost Recovery; Amortization of Retired Plant	10/17/2019
ENTERGY ARKANSAS, LLC	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Tax Cuts and Jobs Act Impact; Projected Year Revenues; Projected Year BRORB; Grid Modernization; Advanced Metering Infrastructure Expense	10/4/2019
SOUTHWESTERN ELECTRIC POWER COMPANY	Western Arkansas Large Energy Consumers	19-008-U	Surrebuttal	AR	SWEPCO's Formula Rate Review; Energy Cost Recovery Rider; Distribution Reliability Rider	9/24/2019
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Settlement Support	AR	Support of Settlement	7/31/2019
SOUTHWESTERN ELECTRIC POWER COMPANY	Western Arkansas Large Energy Consumers	19-008-U	Direct	AR	SWEPCO's Formula Rate Review; Capital Structure; Distribution Reliability Rider; Arkansas Formula Rate Plans	7/16/2019
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Direct	AR	Formula Rate Plan, Capital Additions, Operation and Maintenance Expenses	7/2/2019
ENTERGY LOUISIANA, LLC	Occidential Chemical Corporation	U-35130	Cross-Answering	LA	Fuel Tracking Mechanism	7/1/2019
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC	Texas Industrial Energy Consumers	49421	Direct	TX	Unprotected Excess Deferred Income Tax Rider; Incentive Compensation	6/6/2019
ENTERGY LOUISIANA, LLC	Occidential Chemical Corporation	U-35130	Direct	LA	Fuel Tracking Mechanism	5/10/2019
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20322	Rebuttal	MI	Return on Equity	4/29/2019
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	18-057	Supplemental Surrebuttal	AR	Gas Distribution Uprstream Services Contracting Process	4/23/2019
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	18-057	Surrebuttal	AR	Gas Distribution Uprstream Services Contracting Process	4/12/2019
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20322	Direct	MI	Return on Equity; Capital Structure; Project vs. Historical Test Year; Earnings Sharing Mechanism	4/5/2019
DUKE ENERGY PROGRESS, LLC	Nucor Steel - South Carolina	2018-318-E	Direct	SC	Excess Deferred Income Tax Rider; Post-Test Year Adjustments; Coal Ash Pond Closure Expense; End-of-Life Nuclear Costs; Regulatory Assets; Return on Equity and Equity Ratio	3/4/2019
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	18-057	Direct	AR	Gas Distribution Uprstream Services Contracting Process	2/12/2019

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UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	10/30/2018
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Formula Rate Plan Tariff; Long-Term Debt Cost and Preferred Equity; Projeced Year Capital Additions; Historical Year Capital Additions	10/4/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20134	Rebuttal	MI	Return on Equity	10/1/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-20134	Direct	MI	Return on Equity, Capital Structure and Long-Term Debt Cost, Investment Recovery Mechanism Excess Sharing Mechanism	9/10/2018
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Opposition	AR	Opposition to Settlement Agreement	8/3/2018
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Direct	AR	Impact of Tax Cuts and Jobs Act of 2017; Forecast Revenues; Uncollectible Expense; Pipeline Integrity Assessment and Remediation Expense	7/2/2018
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	17-052	Surrebuttal	AR	Utility Restructuring Costs and Tax Effects	5/31/2018
PUBLIC SERVICE COMPANY OF NEW MEXICO	City of Farmington, New Mexico; Board of County Commissioners for San Juan County	17-00174	Direct	NM	Integrated Resource Plan; Future of San Juan Generation Station	5/4/2018
ENTERGY ARKANSAS, INC. and CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Electric Energy Consumers, Inc. and Arkansas Gas Consumers, Inc.	18-006	Direct	AR	Effect on Revenue Requirement due to 2017 Tax Cuts and Jobs Act	3/29/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U18424	Rebuttal	MI	Rate of Return	3/21/2018
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	18-014-TF	Direct	AR	Impact of Tax Cuts and Jobs Act of 2017 and Tax Adjustment Rider	3/19/2018
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-18424	Direct	MI	Rate of Return, Capital Structure	2/28/2018
CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Gas Consumers, Inc.	17-050-U	Surrebuttal	AR	Asset Management Agreement Proposal	1/12/2018
CENTERPOINT ENERGY ARKANSAS GAS	Arkansas Gas Consumers, Inc.	17-050-U	Direct	AR	Asset Management Agreement Proposal	12/8/2017
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	10/31/2017
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Forecast Revenues, Cost of Debt, Revenue Requirement and Capital Additions	10/4/2017
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-18322	Rebuttal	MI	Return on Equity	9/7/2017
CONSUMERS ENERGY COMPANY	Association of Businesses Advocating Tariff Equity	U-18322	Direct	MI	Return on Equity, Capital Structure	8/10/2017
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Settlement Support	AR	Support of Settlement	7/31/2017
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Gas Consumers, Inc.	17-010-FR	Direct	AR	Rate of Return, Capital Structure, Labor Expense	7/3/2017
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Settlement Support	AR	Support of Settlement	10/24/2016
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	16-036-FR	Direct	AR	Rate of Return, Forecast Revenue, Capitalization	9/30/2016

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UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
METROPOLITAN EDISON COMPANY; PENNSYLVANIA ELECTRIC COMPANY AND WEST PENN POWER	MEIUG, PICA and WPPII	2016-2537349, 2016-2537352, 2016-2537359	Surrebuttal	PA	Return on Equity	8/31/2016
METROPOLITAN EDISON COMPANY; PENNSYLVANIA ELECTRIC COMPANY AND WEST PENN POWER	MEIUG, PICA and WPPII	2016-2537349, 2016-2537352, 2016-2537359	Direct	PA	Return on Equity	7/22/2016
NORTHERN STATES POWER	Xcel Large Industrials	15-826	Direct	MN	Return on Equity, Multi-Year Rate Plan	6/14/2016
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Electric Energy Consumers, Inc.	15-098-U	Surrebuttal	AR	Return on Equity, Formula Rate Plan, Capital Structure	6/7/2016
CENTERPOINT ENERGY RESOURCES CORP	Arkansas Electric Energy Consumers, Inc.	15-098-U	Direct	AR	Return on Equity, Captial Structure	4/14/2016
MISSOURI-AMERICAN WATER COMPANY	BJC Healthcare	WR-2011-0337	Rebuttal	MO	Return on Equity	1/19/2012
MISSOURI-AMERICAN WATER COMPANY	BJC Healthcare	WR-2011-0337	Direct	MO	Return on Equity	11/17/2011
METROPOLITAN ST. LOUIS SEWER DISTRICT	Barnes-Jewish Hospital	N/A	Supplemental	MO	Rate Model	9/16/2011
METROPOLITAN ST. LOUIS SEWER DISTRICT	Barnes-Jewish Hospital	N/A	Surrebuttal	MO	Rate Increase, CIRP, Consent Decree	8/19/2011
METROPOLITAN ST. LOUIS SEWER DISTRICT	Barnes-Jewish Hospital	N/A	Rebuttal	MO	Rate Increase, CIRP, Consent Decree	7/18/2011
AMEREN UE	Missouri Energy Group	ER-2011-0028	Surrebuttal	MO	Return on Equity, Energy Efficiency Cost Recovery	4/15/2011
AMEREN UE	Missouri Energy Group	ER-2011-0028	Rebuttal	MO	Return on Equity, Energy Efficiency Cost Recovery	3/25/2011
AMEREN UE	Missouri Energy Group	ER-2011-0028	Direct	MO	Return on Equity	2/8/2011
AMEREN UE	Missouri Energy Group	EO-2010-0255	Direct	MO	Prudence Audit of FAC Periods 1 and 2	11/22/2010
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	09-084-U	Direct - In Support	AR	Supporting the Proposed Settlement Agreement	5/11/2010
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	09-084-U	Surrebuttal	AR	Return on Equity	4/14/2010
ENTERGY ARKANSAS, INC.	Arkansas Electric Energy Consumers, Inc.	09-084-U	Direct	AR	Return on Equity	2/26/2010
AMEREN UE	Missouri Energy Group	ER-2010-0036	Direct	MO	Energy Efficiency Costs	12/18/2009
AMEREN UE	Missouri Energy Group	ER-2008-0318	Surrebuttal	MO	Return on Equity	11/5/2008
AMEREN UE	Missouri Energy Group	ER-2008-0318	Direct	MO	Return on Equity, Off-System Sales	8/28/2008
METROPOLITAN ST. LOUIS SEWER DISTRICT	Missouri Energy Group	N/A	Rebuttal	MO	Long-Term Financial Plan, Capital Financing	5/2/2007
AMEREN UE	Missouri Energy Group	ER-2007-0002	Surrebuttal	MO	Return on Equity, Interruptible Demand, Response Pilot	2/27/2007
AMEREN UE	Missouri Energy Group	ER-2007-0002	Direct	MO	Interruptible Rate	12/29/2006
AMEREN UE	Missouri Energy Group	ER-2007-0002	Direct	MO	Return on Equity, Off-System Sales, Sharing Mechanism, 10% Cap on Residentials	12/15/2006

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UTILITY	ON BEHALF OF	DOCKET	TYPE	REGULATORY JURISDICTION	SUBJECT	DATE
AMEREN UE	Missouri Energy Group	EA-2005-0180	Rebuttal	MO	Economic Analysis	1/31/2005
NOVA SCOTIA POWER INC.	Avon Valley Greenhouses	NSUARB-P-881	Direct	NS	Cost of Capital	10/12/2004
MISSOURI-AMERICAN WATER COMPANY	Missouri Energy Group	WR-2003-0500	Surrebuttal	MO	Working Capital, Return on Equity, Cost Allocation	12/5/2003
MISSOURI-AMERICAN WATER COMPANY	Missouri Energy Group	WR-2003-0500	Rebuttal	MO	Rate Design	11/10/2003
MISSOURI-AMERICAN WATER COMPANY	Missouri Energy Group	WR-2003-0500	Direct	MO	Return on Equity, Acquisition Adjustment, Cash Working Capital	10/3/2003
METROPOLITAN ST. LOUIS SEWER DISTRICT	Missouri Energy Group	N/A	Direct	MO	Revenue Requirement, Financial Planning	4/22/2003
INTERSTATE POWER AND LIGHT COMPANY	Lee County Energy Users Group- Direct	RPU-02-3	Surrebuttal	IA	Revenue Requirement, Return on Equity	9/19/2002
METROPOLITAN ST. LOUIS SEWER DISTRICT	Missouri Energy Group	N/A	Surrebuttal	MO	Revenue Requirement, Capital Financing	8/13/2002
METROPOLITAN ST. LOUIS SEWER DISTRICT	Missouri Energy Group	N/A	Surrebuttal	MO	Revenue Requirement, Captial Financiaing, Cost Allocation	7/28/2002
INTERSTATE POWER AND LIGHT COMPANY	Lee County Energy Users Group- Direct	RPU-02-3	Direct	IA	Revenue Requirement, Return on Equity	7/26/2002
METROPOLITAN ST. LOUIS SEWER DISTRICT	Missouri Energy Group	N/A	Rebuttal	MO	Revenue Requirement, Capital Financing	7/10/2002

PROCEDURE FOR CONDUCTING A CLASS COST-OF-SERVICE STUDY

Q WHAT PROCEDURES ARE USED IN A CLASS COST-OF-SERVICE STUDY?

A The basic procedure for conducting a class cost-of-service study (CCOSS) is fairly simple. First, we identify the different types of costs (functionalization), determine their primary causative factors (classification), and then apportion each item of cost among the various service classes (allocation). Adding up the individual pieces gives the total cost for each class.

Identifying the utility's different levels of operation is a process referred to as functionalization. The utility's investments and expenses are separated into production, storage, transmission, distribution, and other functions. To a large extent, this is done in accordance with the Uniform System of Accounts developed by the FERC.

Once costs have been functionalized, the next step is to identify the primary causative factor (or factors). This step is referred to as classification. Costs are classified as demand-related, energy- (or commodity-) related or customer-related. Demand (or capacity) related costs vary with peak demand, which is measured in kilowatts or peak day send out. This includes production, transmission, and some distribution investment and related fixed operation and maintenance (O&M) expenses. As explained later, peak demand determines the amount of capacity needed for reliable service. Energy-related costs vary with natural gas throughput, which is measured in dekatherms. Energy-related costs include purchased gas and variable O&M expense. Customer-related costs vary directly with the number of customers such as meters, service laterals, billing, and customer service, and they may also include a portion of distribution mains.

Each functionalized and classified cost must then be allocated to the various customer classes. This is accomplished by developing allocation factors that reflect the percentage of the total cost that should be paid by each class. The allocation factors should reflect cost-causation; that is, the degree to which each class caused the utility to incur the cost.

Further, each customer class should be comprised of customers having similar characteristics. The relevant characteristics include the type of end-use customer (*e.g.,* residential, general service sales, transportation), average size and how delivery service is provided. Allocating costs to homogeneous customer classes will ensure that the rates derived from a class cost-of-service study are just and reasonable and reflect the actual cost to serve.

Q WHAT KEY PRINCIPLES ARE RECOGNIZED IN A CLASS COST-OF-SERVICE STUDY FOR NATURAL GAS DELIVERY SERVICE?

A A properly conducted CCOSS recognizes two key cost-causation principles. First, not all gas customers purchase gas supplied by a local distribution company (LDC). Some customers purchase and transport their own gas to the city gate. Thus, the LDC does not incur purchased gas and other related costs to serve a transportation customer. Second, not all customers take the same delivery service. Larger transportation customers may take delivery service directly from either the transmission system or high-pressure distribution mains. Third, the use of storage services will depend on the tolerances between actual and nominated gas deliveries. The smaller the tolerances, the lower the amount of storage services. Fourth, since cost causation is also related to how natural gas is used, both the timing and rate of gas consumption (*i.e.*, demand) are critical. Consistent with the obligation to serve and to ensure reliability, the LDC must purchase sufficient gas supply to meet the maximum needs of its sales

customers. The LDC must also construct the required distribution mains and other facilities to attach customers to the system, and these facilities must be sized to meet the expected contribution to the peak day design, which is the maximum expected demand on the delivery system.

PECO Energy Company (Gas)
Cost of Service Study
Design Day Demand

	Historical_2019-2023	**Residential**	**GC**	**Large**	**Motor Vehicles- Firm**	**Transport- Firm**	**Total**	**Calibration Factor**
1	Calendar Sales Jan & Feb (Ccf/Cust/Day)	4.9	27.0	236.0	893.7			
2	Non-Heating Usage Jul & Aug (Ccf/Cust/Day)	0.5	4.1	59.6	765.2			
3	Heating Usage (Ccf/Cust/Day) = Line 1 - Line 2	4.4	22.9	176.4	128.5			
4	Jan & Feb Degree Day Deficient (DDD/Day)	27.0	27.0	27.0	27.0			
5	Design Day DDD	65.0	65.0	65.0	65.0			
6	Heating Use per Degree Day (Ccf/Cust) = Line 3 / Line 4	0.2	0.8	6.5	4.8			
7	Peak Day Heating Usage (Ccf/Cust) = Line 5 * Line 6	10.7	55.1	424.6	309.3			
8	Peak Day Non-Heating Usage (Ccf/Cust) = Line 2	0.5	4.1	59.6	765.2			
9	Peak Day Usage (Ccf/Cust) = Line7 + Line 8	11.2	59.2	484.2	1,074.6			
10	Average Day Usage (Ccf/Cust/Day)	2.2	13.1	119.1	816.4			
11	Historical Load Factor = Line 10 / Line 9	19.5%	22.1%	24.6%	76.0%			
12								
13	FPFTY_2025							
14	Annual Usage (Mcf)	43,867,240	23,852,516	21,000	502,606			
15	Annual Number of Customers (Average)	512,659	45,589	8	15			
16	Jan & Feb Number of Customers (Average)	511,780	45,688	8	15			
17	Average Day Usage (Ccf/Cust/Day) = Line 14 * 10 / Line 15 / 365	2.3	14.3	71.9	918.0			
18	Historical Load Factor = Line 11	19.5%	22.1%	24.6%	76.0%			
19	Average Peak Day Usage (Ccf/Cust) = Line 17 / Line 18	12.1	64.8	292.4	1,208.3			
20	Peak Day Usage (Mcf) = Line 16 * Line 19 / 10	616,843	296,094	234	1,812		914,984	
21	System Losses (2.1448%) = Line 20 * 2.1448% (a)	13,230	6,351	5	39		19,625	
22	Peak Day Usage including Loss (Mcf) = Line 20 + Line 21	630,073	302,445	239	1,851		934,609	
23								
24	Calibration to 1307(f) Filing (b)							
25	Design Day Peak Demand Requirement in 2025 in 1307(f) Filing (c)						912,000	
26	Calibration Factor = Line 25 / Line 22 Total							0.98
27	Calibrated Design Day Peak Demand (Mcf) = Line 22 * Line 26	614,831	295,129	233	1,807		912,000	
28								
29	Transportation Service							
30	Transportation Firm in 2025 in 1307(f) Filing (Mcf) (d)					54,000	54,000	
31								
32	Design Day Peak Demand (Mcf) = Line 27 + Line 30	**614,831**	**295,129**	**233**	**1,807**	**54,000**	**966,000**	

PECO Energy Company
PAIEUG Derivation of the Revised Excess Demand Mains Allocation Factors
For Fully Projected Future Test Year Ended December 31, 2025

		Proposed		Revised	
Line	Service Classification	Amount (Mcf)	Percent	Amount (Mcf)	Percent
		(1)	(2)	(3)	(4)
1	Residential	479,108	64.58%	478,668	66.58%
2	GC	222,561	30.16%	222,357	30.93%
3	Large	170	0.01%	170	0.02%
4	MotorVehicle Firm	416	0.05%	416	0.25%
5	MotorVehicle Inter	0	0.00%	0	0.00%
6	InterServ	0	0.00%	0	0.00%
7	TempControl	0	0.00%	0	0.00%
8	TranspServFirm	36,881	5.19%	16,525	2.21%
9	TranspServInter	0	0.00%	0	0.00%
10	Total	718,136	100.00%	718,136	100.00%

PECO Energy Company
PAIEUG Gas Class Cost of Service Study Results
For Fully Projected Future Test Year Ended December 31, 2025 ($000'S)

Line	Description	Total Gas Division	Resid	GC	Large	Motor Vehicle Firm	Motor Vehicle Inter	Inter Serv	Temp Control	Transp Serv Firm	Transp Serv Inter
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Development of Return										
1	Rate Base Excluding Purchased Gas	$3,513,974	$2,405,963	$933,542	$571	$4,205	$12	$99	$993	$107,004	$61,585
2	**Change in Operating Income (Rate Base * 8.08% - ROR (Present)))**	79,618	63,688	18,316	(58)	47	(1)	(42)	(399)	(1,440)	(491)
3	**OPERATING REVENUES**										
4	**Change in Revenue (Change in Return * 1.383)**	$110,103	$88,073	$25,329	($80)	$64	($2)	($59)	($552)	($1,992)	($678)
5	Distribution Base Rate Revenue (Present Rates)	481,982	327,766	122,676	184	611	4	75	697	19,121	10,848
6	**Total Dist Base Rate Revenue (Proposed Rate)**	$592,085	$415,839	$148,005	$104	$675	$2	$16	$145	$17,129	$10,170
7	Forfeited Discounts Revenues	$179	$143	$41	($0)	$0	($0)	($0)	($1)	($3)	($1)
8	Other Operating Revenue (Present Rates)	3,549	2,421	926	1	4	0	0	3	121	72
9	**TOTAL OPERATING REVENUES**	$595,813	$418,403	$148,973	$105	$680	$2	$16	$147	$17,247	$10,241
10	**OPERATING EXPENSES**										
11	Operation and Maintenance Expense Excl Pur Gas	$167,687	$124,017	$35,998	$39	$167	$1	$7	$47	$4,636	$2,776
12	Depreciation and Amortization Expense	118,763	81,783	31,211	19	144	0	3	35	3,371	2,194
13	Additional Bad Debt Expense	406	325	94	(0)	0	(0)	(0)	(2)	(7)	(3)
14	Additional PUC / OTS & SBA Fee Expense	340	272	78	(0)	0	(0)	(0)	(2)	(6)	(2)
15	Taxes Other Than Income Taxes-General	9,067	6,434	2,213	2	11	0	0	3	252	153
16	Taxes Other Than Income Taxes-Distribution GRT	0	0	0	0	0	0	0	0	0	0
17	**TOTAL OPERATING EXPENSES BEFORE TAXES**	$296,263	$212,832	$69,593	$59	$323	$1	$10	$82	$8,245	$5,118
18	State and Federal Income Taxes @ Effective Tax Rate	(14,297)	(12,762)	(2,933)	21	(0)	0	14	134	897	331
19	State and Federal Income Taxes @ Statutory Rates	29,917	23,931	6,882	(22)	18	(0)	(16)	(150)	(541)	(184)
20	**TOTAL OPERATING EXPENSES**	$311,883	$224,000	$73,543	$59	$340	$1	$8	$66	$8,601	$5,265
21	**NET OPERATING INCOME EXCL PURCHASED GAS**	$283,930	$194,403	$75,430	$46	$340	$1	$8	$80	$8,646	$4,976
22	**BASE RATE SALES EXCL PUR GAS @ EQUALIZED ROR 8.08%**	$592,085	$415,839	$148,005	$104	$675	$2	$16	$145	$17,129	$10,170
23											
24	**TOTAL REVENUE EXCL PUR GAS INCREASE/DECREASE**	$110,283	$88,216	$25,370	-$80	$65	-$2	-$59	-$553	-$1,995	-$679
25	REVENUE INCREASE(DECREASE) TO RETAIL EXCL PUR GAS REVENUES (%)	22.9%	26.9%	20.7%	-43.6%	10.6%	-45.3%	-78.7%	-79.4%	-10.4%	-6.3%
26	**CURRENT RETURN**	5.81%	5.43%	6.12%	18.23%	6.97%	17.52%	50.89%	48.30%	9.43%	8.88%
27	**CURRENT RELATIVE RATE OF RETURN**	1.00	0.93	1.05	3.13	1.20	3.01	8.75	8.31	1.62	1.53

PECO ENERGY COMPANY

PAIEUG Recommended Class Revenue Allocation
For the Fully Projected Future Test Year Ended December 31, 2025
(Dollar Amounts in Thousands)

Line	Rate Class	Present RROR	Target Increase Percent	Target Increase Amount	Adjustment	Increase	Adjusted Increase	Adjusted Delivery Revenues	Gross Revenue Conversion Factor	PAIEUG Recommended Rates Operating Income	PAIEUG Recommended Rates Rate of Return	PAIEUG Recommended Rates Relative ROR
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Residential	0.93	26.3%	85,917	(747)	85,170	26.0%	415,839	1.383	192,298	7.99%	0.99
2	General Service	1.05	20.7%	25,365	(267)	25,098	20.5%	148,005	1.383	75,262	8.06%	1.00
3	Large High Load Factor	3.13	0.0%	-	-	-	0.0%	104	1.383	104	18.23%	2.25
4	Motor Vehicle Service Firm	1.20	10.6%	15	-	15	2.4%	675	1.383	304	7.22%	0.89
5	Motor Vehicle Service Interruptible	3.01	0.0%	-	-	-	0.0%	2	1.383	2	17.52%	2.17
6	Interruptible Service	8.75	0.0%	-	-	-	0.0%	16	1.383	50	50.89%	6.30
7	Temperature Controlled Service	8.31	0.0%	-	-	-	0.0%	145	1.383	480	48.30%	5.97
8	Gas Transportation Interruptible	1.53	0.0%	-	-	-	0.0%	10,170	1.383	5,467	8.88%	1.10
9	Gas Transportation Firm	1.62	0.0%	-	-	-	0.0%	17,129	1.383	10,086	9.43%	1.17
10	Total Gas Division	1.00	22.8%	$111,297	($1,014)	$110,283	22.9%	592,085	1.383	$284,053	8.08%	1.00

PECO ENERGY COMPANY

Movement to Cost Under PAIEUG's Proposed Class Revenue Allocation
For the Fully Projected Future Test Year Ended December 31, 2025
(Dollar Amounts in Thousands)

Line	Rate Class	Rate of Return at: Present Rates	Rate of Return at: Proposed Rates	Relative Rate of Return at: Present Rates	Relative Rate of Return at: Proposed Rates	Gross Revenue Conversion Factor	Interclass Subsidy at: Present Rates	Interclass Subsidy at: PAIEUG Rates	Movement To Cost
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Residential	5.43%	7.99%	0.93	0.99	1.383	(12,688)	(3,027)	Towards
2	General Service	6.12%	8.06%	1.05	1.00	1.383	3,922	(279)	Towards
3	Large High Load Factor	18.23%	18.23%	3.13	2.25	1.383	98	80	Towards
4	Motor Vehicle Service Firm	6.97%	7.22%	1.20	0.89	1.383	67	(50)	Towards
5	Motor Vehicle Service Interruptible	17.52%	17.52%	3.01	2.17	1.383	2	2	Towards
6	Interruptible Service	50.89%	50.89%	8.75	6.30	1.383	62	59	Towards
7	Temperature Controlled Service	48.30%	48.30%	8.31	5.97	1.383	584	552	Towards
8	Gas Transportation Interruptible	8.88%	8.88%	1.53	1.10	1.383	2,608	675	Towards
9	Gas Transportation Firm	9.43%	9.43%	1.62	1.17	1.383	5,345	1,987	Towards
10	Total Gas Division	5.81%	8.08%	1.00	1.00				

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Philadelphia Area Industrial Energy Users Group
PAIEUG Set I

Response Date: May 24, 2024

PAIEUG-I-10

Regarding the Direct Testimony of Jiang Ding, Exhibit JD-6, page 18:

a. Provide the historical usage (in Mcf) by month, for the TS-F class, for the period January 1, 2019 through December 31, 2023, in Excel format with all formulas and links intact.
b. Provide the Transportation Contract Quantity for TS-F customers in 2023.
c. Provide the historical load factor (for the period January 1, 2019 through December 31, 2023) for the TS-F class.
d. Provide the annual peak demand for the TS-F class for the years 2019-2023.

RESPONSE:

a. Refer to the Attachment PAIEUG-I-10(a).
b. The average Transportation Contract Quantity for TS-F customers in 2023 was 74,732 MCF.
c. The historical load factor (for the period January 1, 2019 through December 31, 2023) for the TS-F class was 44.3%.

d. See the table below. PECO's send out year begins September 1 and ends August 31 of the following year.

Date	TSF Peak Usage (Mcf)
12/19/2019	46,513
1/29/2021	51,174
1/29/2022	53,364
12/23/2022	47,922
1/17/2024	49,354

Responsible Witness: Jiang Ding

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2022-3031113

Response of PECO Energy Company
To Interrogatories of the
Office of Consumer Advocate
OCA Set III

Response Date: May 20, 2022

OCA-III-7

Please refer to the Direct Testimony of Jiang Ding (Statement No. 6), page 13, line 20 to page 14, line2. Please provide PECO's system design day peak demand for each of the years 2017 – 2022.

RESPONSE:

PECO did not experience design day demand during the years 2017 through 2022. The table below provides PECO's projected design day demand for those years.

		Peak Day Demand Requirements (MMcf)	
Year PGC Filed	Year Forecast	Non-Transportation	Transportation
2021	2022	859	69
2020	2021	841	68
2019	2020	835	75
2018	2019	820	64
2017	2018	811	64
2016	2017	803	64

Responsible Witness: Jiang Ding

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Philadelphia Area Industrial Energy Users Group
PAIEUG Set I

Response Date: May 24, 2024

PAIEUG-I-9

Provide the allocators for TS-F and TS-I between customers above and below 18,000 Mcf per year, in Excel format with all formulas and links intact.

RESPONSE:

The Company includes TS-F and TS-I customers above and below 18,000 Mcf per year in respective TS-F and TS-I rate classes in its cost-of-service study. Therefore, it does not have the allocators for TS-F and TS-I separated between customers above and below 18,000 Mcf per year.

Responsible Witness: Jiang Ding

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

Docket No. R-2024-3046932

PECO Energy Company – Gas Division

Rebuttal Testimony

of

BILLIE S. LACONTE

On Behalf of

Philadelphia Area Industrial Energy Users Group

July 16, 2024

J. POLLOCK
INCORPORATED

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

Docket No. R-2024-3046932

PECO Energy Company – Gas Division

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GLOSSARY OF ACRONYMS

Term	Definition
A&E	Average and Excess
CCOSS	Class Cost-of-Service Study
LF	Load Factor
OCA	Office of Consumer Advocate
OSBA	Office of Small Business Advocate
P&A	Peak and Average
PAIEUG	Philadelphia Area Industrial Energy Users Group
PECO	PECO Energy Company – Gas Division
RROR	Relative Rate of Return
TS-F	Gas Transmission Service - Firm
Walmart	Walmart Incorporated

REBUTTAL TESTIMONY OF BILLIE S. LACONTE

Introduction

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Billie S. LaConte. My business address is 14323 South Outer 40 Rd., Suite 206N, St. Louis, Missouri 63017.

Q ARE YOU THE SAME BILLIE S. LACONTE WHO PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING ON BEHALF OF THE PHILADELPHIA AREA INDUSTRIAL ENERGY USERS GROUP (PAIEUG)?

A Yes.

Q WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A I am responding to recommendations made as follows:

- Clarence Johnson on behalf of the Office of Consumer Advocate (OCA) regarding his proposed Class Cost-of-Service Study, allocation of certain FERC accounts, and revenue allocation (CCOSS);
- Mark Ewen on behalf of the Office of Small Business Advocate (OSBA) regarding PECO's proposed adjustments to the volumetric rates for large and small Gas Transmission Service-Firm (TS-F) customers; and
- Lisa Perry on behalf of Walmart, Inc. (Walmart) regarding her scale-back proposal.

Q DOES THE FACT THAT YOU ARE NOT ADDRESSING EVERY ISSUE RAISED BY THESE AND OTHER PARTIES CONSTITUTE AN ENDORSEMENT OF THEIR RECOMMENDATIONS?

A No.

OCA – Class Cost-of-Service Study and Revenue Allocation

Q HOW IS MR. JOHNSON PROPOSING TO ALLOCATE DISTRIBUTION MAINS?

A Although PECO Energy Company – Gas Division (PECO) utilized the Average and Excess (A&E) methodology previously approved by the Commission, and, as discussed more thoroughly later, Mr. Johnson recommends utilizing the Peak and Average (P&A) methodology for the allocation of mains in PECO's CCOSS.[1] If however, the PUC approves the use of the A&E methodology, Mr. Johnson supports weighting average annual throughput by 50% and peak demand by 50%, suggesting that PECO's load factor is close to 50%.[2] PECO, by contrast, uses the annual system load factor (24.22%) to weight average annual throughput with the remaining 75.78% allocated to excess peak demand.[3] As discussed later, using load factor to weight average annual throughput is consistent with accepted practice; however, Mr. Johnson's proposed 50/50 weighting is inconsistent with the proper derivation of load factor and should be rejected.

Q MR. JOHNSON CLAIMS THAT PECO'S APPLICATION OF THE AVERAGE AND EXCESS METHODOLOGY DOES NOT FULLY CONSIDER AVERAGE DEMAND. DO YOU AGREE?

A No. Mr. Johnson claims that PECO's A&E methodology "…gives the appearance of including a 24.22% weighting of average demand."[4] He provides an equation whereupon he calculates the weighting factors for the A&E factor for the Residential

[1] OCA Statement No. 3, Direct Testimony of Clarence L. Johnson at 3.

[2] *Id.*

[3] PECO Statement No. 6, Direct Testimony of Jiang Ding, Exhibit JP-6 at 5.

[4] OCA Statement No. 3, Direct Testimony of Clarence L. Johnson at 11.

class and estimates that the average demand is weighted by 1.7%, rather than the load factor.[5] However, review of the Residential class's A&E factor (61.4%) demonstrates that PECO's CCOSS properly weights the average demand by the system load factor.[6] Table 1R provides the derivation of the Residential class's A&E factor, which incorporates PECO's system load factor.

Table 1R
Calculation of Residential A&E Factor

Line	Description	Factor
1	**Average Demand Ratio**	50.90%
2	**Load Factor**	24.22%
3	**Average Demand Factor (ln. 1 * ln. 2)**	12.33%
4	**Excess Demand Ratio**	64.82%
5	**1-Load Factor**	75.78%
6	**Excess Demand Factor (ln. 4 * ln. 5)**	49.11%
7	**Average & Excess Demand Factor (ln.3 + ln. 6)**	61.44%

Source: Exhibit JD-6 at 5.

Mr. Johnson's claim that the A&E methodology does not properly weight average demand is unfounded and should be rejected.

Q DO YOU AGREE WITH MR. JOHNSON'S LOAD FACTOR CALULATIONS?

A No. Mr. Johnson states that, in his opinion, PECO's load factor should be calculated using actual maximum day demand and average demand, with data from 2019-2023. Therefore, he recommends a 33% load factor, stating that "[a] higher load factor input into the A&E formula results in greater recognition of the average demand

[5] *Id.*

[6] PECO Statement No. 6, Direct Testimony of Jiang Ding, Exhibit JP-6 at 5.

component."[7] However, Mr. Johnson's calculation is incorrect because PECO uses design day demand in its CCOSS, which represents the *maximum* demand on the system, not *actual* demand. Therefore, a proper load factor calculation would use design day demand, which supports PECO's system planning, and not actual maximum day demand. Furthermore, the load factor should not be adjusted solely to more heavily weight average demand. That is an outcome-based analysis.

Q ARE THERE ANY OTHER REASONS WHY THE DESIGN DAY DEMAND SHOULD BE USED TO ESTIMATE THE LOAD FACTOR?

A Yes. The A&E methodology recognizes not only average demand, but the individual demands of the various classes in excess of their average demand, *i.e*., design day demand, which is similar to non-coincident peak. The A&E methodology does not use actual maximum day demand.

Q DO YOU AGREE WITH MR. JOHNSON'S ADDITIONAL LOAD FACTOR ADJUSTMENT TO RECOGNIZE "ECONOMIES OF SCALE"?

A No. Mr. Johnson claims that the load factor weighting should recognize economies of scale because "[i]ncreasing the main size to accommodate demand over and above average demand produces a lower per unit cost."[8] He then applies an "economy of scale factor" of 0.5-to 0.6, concluding that the appropriate ratio for weighting average day demand is 49%-51%.[9]

[7] OCA Statement 3, Direct Testimony of Clarence L. Johnson at 11.

[8] *Id*. at 13.

[9] *Id*.

Q HOW DID MR. JOHNSON DETERMINE THE ECONOMY OF SCALE FACTOR?

A Mr. Johnson's scale factor is ",,,based on the relationship between surface area and volume for tanks and pipelines,,," which is 0.66 and 0.5, respectively.[10] He applies these scale factors as an exponent to his 33% load factor and PECO's load factor, which results in load factors of 49% and 51%, respectively.[11] Based on his analysis, he recommends a 50% weighting factor for average and excess demand.

Q IS AN ECONOMIES OF SCALE FACTOR ADJUSTMENT APPROPRIATE?

A No, an economies of scale factor is unnecessary and not appropriate. It serves to inflate the system average load factor and the weighting of average demand. Furthermore, economies of scale are recognized when sizing the distribution main, but not in allocating their costs.

Q WHAT DOES MR. JOHNSON PROPOSE IF THE COMMISSION AUTHORIZES THE AVERAGE AND EXCESS METHOD?

A If the Commission authorizes the A&E method, Mr. Johnson recommends a 50/50 weighting factor. As described above, the derivation of Mr. Johnson's 50/50 weighting factor is flawed and should be rejected. If the Commission authorizes the A&E methodology, the average demand component should be weighted by PECO's calculated load factor and one minus the load factor for the excess portion of demand.

Q IS MR. JOHNSON ALSO PROPOSING A NEW ALLOCATION METHODOLOGY IN PECO'S CLASS COST-OF-SERVICE STUDY?

A Yes. Although PECO utilized the A&E methodology previously approved by the

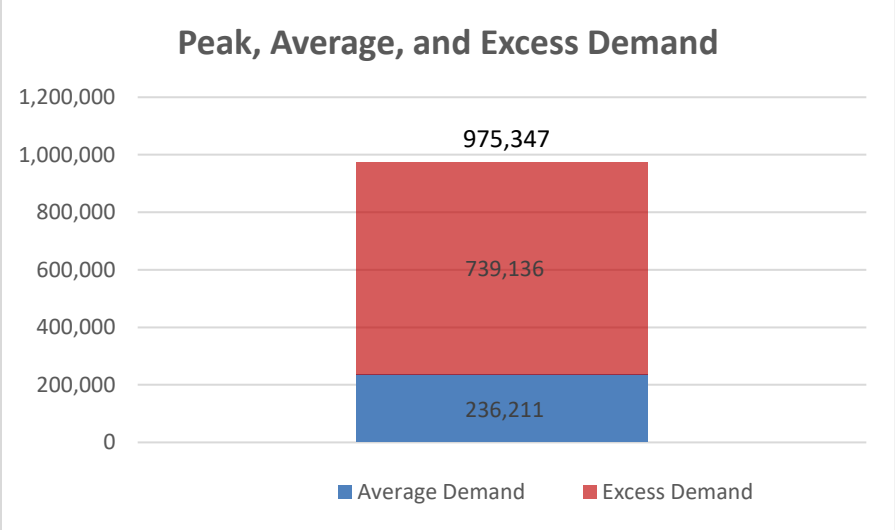
[10] *Id.* at footnote 9.

[11] *Id.* at 13.

Commission as discussed more thoroughly later, Mr. Johnson recommends utilizing the P&A methodology for the allocation of mains in PECO's CCOSS.

Q WHY DO YOU ASSERT THAT THE PEAK AND AVERAGE METHOD IS FLAWED?

A The P&A method uses two metrics: average annual throughput and peak demand. Average annual throughput is the annual throughput divided by the number of days in the year. Peak demand is each class's usage on the peak (or design) day. Thus, peak demand includes the average day demand, thereby double counting the average day demand. The illustration below demonstrates how the P&A method double counts the average demand.



Peak demand is 975,347 Mcf. It is composed of 236,211 Mcf of average demand (the blue area) and 739,136 Mcf of excess demand (the red area).[12] Allocating 50% of costs on average demand and 50% on peak demand double-counts average demand. The A&E method, by contrast, avoids double counting because it uses excess (rather than peak) demand. Therefore, the P&A method should be rejected.

[12] PECO Statement No. 6, Direct Testimony of Jiang Ding, Exhibit JD-6 at 5. The source data is for illustrative purposes only.

Q HAS THE COMMISSION PREVIOUSLY APPROVED THE AVERAGE AND EXCESS METHODOLOGY?

A Yes. In PECO's 2020 gas base rate case, the Commission approved the utility's A&E allocation method. Specifically, the Commission noted:

> [W]e believe that the Company's proposed A&E methodology is reasonable and best suited for this proceeding. We agree with the ALJ and PECO that the A&E methodology is reasonable and acceptable for an NGDC because it aligns with cost causation principles and the design of PECO's distribution system.[13]

The Commission also agreed that the P&A methodology implicitly double counts average demand and, therefore, should be rejected. The Commission stated:

> Moreover, we are also persuaded by PECO's argument regarding the implicit double counting of average demand in the P&A methodology. Again, the A&E methodology allocates mains costs based, in part, on average demand, and, in part, on the portion of peak demand that exceeds average demand. Alternatively, mains costs are allocated under the P&A methodology based, in part, on average demand and, in part, on the total peak demand. Consequently, average demand is included in the average demand component and in the peak demand component, which includes average demand. Accordingly, due to residential customers having temperature-sensitive demand and corresponding low-load factors, double-counting average demand understates the residential cost of service while overstating the cost of service of more efficient gas users….Based on the above, we find that the Company's proposed A&E methodology is more reflective of an accurate representation of PECO's mains distribution system.[14]

Q MR. JOHNSON CLAIMS THAT THE AVERAGE AND EXCESS METHODOLOGY IS SIMILAR TO THE PEAK DEMAND METHODOLOGY. DO YOU AGREE?

A No. Mr. Johnson provides an example of the A&E methodology, using a 50/50 weighting factor and compares this to a peak demand methodology, which results in

[13] PA PUC *et al*. v. PECO Energy Company – Gas Division, R-2020-3018929 *et al*., Opinion and Order at 228-229 (Jun. 22, 2021).

[14] *Id.* at 229-230.

the same weighting factor. However, using PECO's system load factor (24.22%), rather than Mr. Johnson's improperly derived 50% weighting factor, demonstrates that PECO's A&E methodology is not equivalent to the peak demand methodology. Table 2R is an illustrative example which compares the derivation of the A&E factor and the peak demand factor, using Mr. Johnson's Exhibit CJ-1 as a starting point.

Table 2R
Comparison of Average and Excess and Peak Demand Factors

Description	Max Demand	%	Avg. Demand	%	ADX LF
Class A	60	37.5%	25	50%	12.11%
Class B	100	62.5%	25	50%	12.11%
Total Demand	160	100%	50	100%	

Description	Excess Demand	%	Excess Demand * (1-24.22%)
Class A	35	31.8%	24.1%
Class B	75	68.2%	51.7%
Total	110	100%	

	Avg. Demand * LF	Excess Demand * (1-LF)	Total Factor	Max Demand %
Class A	12.11%	24.1%	36.2%	37.5%
Class B	12.11%	51.7%	63.8%	62.5%

Source: Exhibit JC-1.

As demonstrated above, the A&E total factor is not equivalent to the Peak Demand factor when using the proper load factor.

Q WHAT DO YOU RECOMMEND?

A The Commission should reject the P&A CCOSS methodology proposed by Mr. Johnson. Rather, the Commission should adopt PECO's proposed A&E methodology using the annual system load factor, albeit with my revised peak design day demand for TS-F, as set forth in my Direct Testimony. The P&A method suffers from the double

counting problem — for this reason alone it should be rejected. Moreover, the derivation of the 50/50 weighting factor is incorrect and fails to accurately represent PECO's mains distribution system.

Allocation of FERC Account Nos. 908 through 916

Q WHAT ARE FERC ACCOUNT NOS. 908 THROUGH 916?

A These accounts represent customer assistance expense, advertising expense, miscellaneous customer expense and sales expense.

Q HOW DOES PECO ALLOCATE THESE EXPENSES?

A PECO allocates 80% of these expenses based on direct assignment and 20% based on the number of customers.

Q DOES MR. JOHNSON PROPOSE AN ALTERNATIVE ALLOCATION OF THESE EXPENSES?

A Yes. Mr. Johnson proposes to allocate the 20% of expenses based on the number of customers to a demand-based allocator, as he claims that the allocation of the 20% balance is "…too narrow to equitably reflect the benefits which accrue to non-participants in the programs."[15]

Q DO YOU AGREE WITH MR. JOHNSON'S PROPOSED ALLOCATION METHODOLOGY?

A No. The 20% of these expenses is properly allocated based on the number of customers as it is a better representation of who *caused* the expense. Mr. Johnson's claim of a "non-participants benefit" is vague and difficult to measure. Furthermore,

[15] OCA Statement 3, Direct Testimony of Clarence L. Johnson at 24.

demand does not properly measure which customer class caused the expense for these programs.

Q WHAT DO YOU RECOMMEND?

A I recommend that the Commission reject Mr. Johnson's proposed allocation of FERC Account Nos. 908 through 916.

Revenue Allocation

Q DO YOU AGREE WITH MR. JOHNSON'S REVENUE ALLOCATION?

A No. Mr. Johnson's recommended revenue allocation is based on his flawed CCOSS results and should be rejected.

Q DO YOU AGREE WITH MR. JOHNSON'S SCALE-BACK PROPOSAL?

A Not exactly. Mr. Johnson recommends a proportionate scale-back of class revenue distribution if the Commission authorizes a lower revenue requirement for PECO. While I agree that a proportionate scale-back is appropriate, I object to a scale-back using Mr. Johnson's proposed CCOSS and revenue allocation.

Q WHAT DO YOU RECOMMEND?

A Mr. Johnson's proposed CCOSS is flawed as discussed herein and therefore his revenue allocation and any scale-back thereto are incorrect. The revenue allocation and any scale-back, if required, should be based on my revised CCOSS set forth in my Direct Testimony.

OSBA - TS-F Rate Differentials

Q DO YOU HAVE ANY COMMENTS REGARDING MR. EWEN'S SUPPORT FOR THE RATE DIFFERENTIAL ANALYSIS FOR RATE TS-F?

A Yes. As stated in my Direct Testimony, PECO's proposed rate differentials for Rate

TS-F volumetric charges are not cost based. PECO does not separate the small and large TS-F customers in its CCOSS based on consumption capability above or below 18,000 Mcf per year. PECO's analysis is based on the ratio of the load factor between small and large customers, rather than the actual costs incurred to serve these customers. PECO's cost differential is not based upon the results of its CCOSS and should be rejected.

Walmart – Scale-Back of Revenue Allocation

Q DOES WALMART SUPPORT PECO'S PROPOSED REVENUE ALLOCATION?

A Yes, Walmart supports PECO's proposed revenue allocation if PECO receives 100% of its requested increase in its revenue requirement.

Q WHAT IS WALMART'S PROPOSAL IF THE COMMISSION AUTHORIZES A LOWER REVENUE REQUIREMENT FOR PECO?

A Walmart proposes to allocate 50% of the decrease to customers with relative rates-of-return (RROR) above one, but in no event should a class with a RROR above one (subsidizing) receive a decrease such that its RROR becomes below one (subsidized).[16] The remaining 50% would be allocated to all rate classes on an equal percentage basis.[17]

Q DO YOU AGREE WITH WALMART'S SCALE-BACK PROPOSAL?

A No. First, it is based on PECO's flawed CCOSS results. Any scale-back in the revenue requirement should be based on the results of my revised CCOSS. Second, as noted in my Direct Testimony, 100% of any decrease in the revenue requirement

[16] Walmart Statement No. 1, Direct Testimony of Lisa V. Perry at 5-6.

[17] *Id*.

should be scaled back proportionately. While the Commission has exempted customer classes from scale-backs when a scale-back would result in a rate decrease, limiting scale-backs to customer classes above a 1.0 RROR serves to distort the revenue allocation such that certain customer classes may end up with rate increases far in excess of the system average. Ms. Perry's scale-back proposal unfairly benefits customers with a RROR above one and penalizes classes with a RROR below one. Therefore, her scale-back proposal should be rejected.

Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A Yes.

PAIEUG Statement No. 1S

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Surrebuttal Testimony and Exhibit

of

BILLIE LACONTE

On Behalf of

Philadelphia Area Industrial Energy Users Group

August 2, 2024

J. POLLOCK
INCORPORATED

BEFORE THE

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

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PECO Energy Company – Gas Division

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GLOSSARY OF ACRONYMS

Term	Definition
CCOSS	Class Cost-of-Service Study
Commission	Pennsylvania Public Utility Commission
OCA	Office of Consumer Advocate
OSBA	Office of Small Business
PAIEUG	Philadelphia Area Industrial Energy Users Group
PDD	Peak Design Day
PECO	PECO Energy Company – Gas Division
TCQ	Transportation Contract Quantity
TS-F	Gas Transportation Service - Firm

SURREBUTTAL TESTIMONY OF BILLIE S. LACONTE

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is Billie LaConte. My business address is 14323 South Outer 40 Rd., Suite 206N, St. Louis, Missouri 63017.

Q ARE YOU THE SAME BILLIE S. LACONTE WHO PREVIOUSLY SUBMITTED DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING ON BEHALF OF THE PHILADELPHIA AREA INDUSTRIAL ENERGY USERS GROUP (PAIEUG)?

A Yes.

Q TO WHICH REBUTTAL TESTIMONY WITNESSES ARE YOU RESPONDING?

A I am responding to the rebuttal testimonies of the following witnesses:

- Jiang Ding on behalf of PECO Energy Company – Gas Division (PECO);
- Clarence L. Johnson on behalf of the Office of Consumer Advocate (OCA);
- Mark D. Ewen, on behalf of the Office of Small Business Advocate (OSBA); and
- Joseph A. Bisti on behalf of PECO.

Q ON WHAT ISSUES DO YOU WISH TO GENERALLY RESPOND?

A I will address the rejection of the peak design day for the Gas Transportation Service – Firm (TS-F) by Ms. Ding, Mr. Ewen and Mr. Johnson, as well as Mr. Johnson's position on the load factor weightings. In addition, I will respond to Mr. Bisti's revised revenue allocation and discussion regarding the proposed rate differentials for rate TS-F.

Q ARE YOU SPONSORING ANY EXHIBITS WITH YOUR TESTIMONY?

A Yes. I am sponsoring **Exhibit___(BSL-1S)**. This exhibit was prepared by me or under my supervision and direction.

Q DOES THE FACT THAT YOU ARE NOT ADDRESSING EVERY ISSUE RAISED BY THESE AND OTHER PARTIES CONSTITUTE AN ENDORSEMENT OF THEIR RECOMMENDATIONS?

A No.

Jiang Ding

Q DOES MS. DING AGREE WITH YOUR PROPOSED PEAK DESIGN DAY DEMAND FOR TRANSPORTATION CUSTOMERS?

A No. Ms. Ding claims that my revised PDD demand for transportation customers should be rejected because it does not represent the total demand that TS-F customers may use on the system. Ms. Ding states that the transportation contract quantity (TCQ) should be used because PECO builds its system to meet the sum of the TCQs for TS-F customers and, therefore, the actual demand on the peak day should not be used. Further, Ms. Ding states that the PDD demand for non-transportation customers is derived similarly to the TCQ and, as such, PECO should use the sum of the TCQs for the PDD demand for the TS-F class.

Q DO YOU AGREE WITH MS. DINGS'S ASSESSMENT?

A No. The PDD demand for TS-F customers is a known quantity. The TCQ is a theoretical contract amount and does not represent the actual demand placed on the system by TS-F customers. PECO estimates the PDD demand for sales customers based on historical usage data and weather because the exact demand data on the peak day is not available. The estimated PDD demand for sales customers is not a proxy for the sum of each individual customer's demand on the system, but rather the demand placed on the system on the peak design day. The estimated PDD demand for sales customers recognizes that there is diversity on the system. PECO has the

ability to measure the TS-F customers' PDD demand and, therefore, does not need to employ the TCQ or any other means of estimating PDD demand for TS-F customers. Using the TCQ assumes that each TS-F customer would transport its maximum contract quantity each and every day, on the peak design day, and assumes there is no diversity within the TS-F class, which is highly unlikely. As a result, using the TCQ would overstate the PDD demand for the TS-F class. The actual demand on the peak design day is the correct representation of the PDD demand for the TS-F class.

Q HAS THE TS-F CUSTOMER CLASS DEMAND EXCEEDED ITS TRANSPORTATION CONTRACT QUANTITY?

A No. As demonstrated in my direct testimony, the PDD demand for the TS-F customers has been significantly below the sum of the class's TCQ since 2019.

Q DID PECO ESTIMATE THE PEAK DESIGN DAY DEMAND FOR THE TS-F CLASS USING THE SAME METHODOLOGY IT USES FOR OTHER CUSTOMER CLASSES?

A Yes. In a discovery response PECO estimated the PDD for the TS-F class as 68,897 Mcf, which is 8% less than the 75,000 Mcf PECO uses in its CCOSS.[1] This further supports my position that the TCQ overstates the PDD demand for the TS-F class.

Q WHAT DO YOU RECOMMEND?

A I recommend that the Commission reject Ms. Ding's recommendation to use a theoretical PDD demand for the TS-F class and instead use the actual PDD demand for the TS-F customer class in PECO's class cost-of-service model (CCOSS) as set forth more fully in my direct testimony.

[1] PECO Response to PAIEUG II-1(b), a copy of which is provided in **Exhibit ___(BSL-1S)**.

Clarence L. Johnson

Q WHAT ARE MR. JOHNSON'S COMMENTS REGARDING THE PEAK DESIGN DAY DEMAND FOR TS-F CUSTOMERS?

A Mr. Johnson states that my proposed design day demand for TS-F customers is incorrect because it is not consistent with the peak demand used for other classes. The sales classes' peak day demand is based on the projected design day demand, not the actual peak day demand. Mr. Johnson supports PECO's recommended TCQ as the PDD for TS-F customers.

Q WHAT IS YOUR POSITION ON MR. JOHNSON'S COMMENTS?

A For the same reasons as explained above in response to Ms. Ding, using TCQ is improper.

Q PLEASE COMMENT ON MR. JOHNSON'S POSITION REGARDING THE LOAD FACTOR WEIGHTING IN PECO'S CLASS COST-OF-SERVICE STUDY.

A Mr. Johnson continues to support a 50/50 weighting of the Average and Excess factors in PECO's CCOSS. As discussed in my rebuttal testimony, Mr. Johnson's proposed weighting factors are based on an incorrect load factor calculation that uses actual maximum day demand, rather than the PDD demand, which supports PECO's planning. Furthermore, his misguided economies of scale adjustment, which is recognized when sizing the distribution main but not in allocating the cost, is unnecessary, inappropriate and serves to inflate the system average load factor and the weighting of average demand. Therefore, Mr. Johnson's proposed weighting factors should be rejected.

Mark D. Ewen

Q WHAT ARE MR. EWEN'S COMMENTS REGARDING THE PEAK DESIGN DAY DEMAND FOR TS-F CUSTOMERS?

A Mr. Ewen disagrees with my recommendation to use the actual peak design day demand for TS-F customers and recommends that PECO use the sum of the TCQs for TS-F customers in its CCOSS.

Q MR. EWEN STATES SEVERAL REASONS WHY HE DISAGREES WITH USING ACTUAL PEAK DAY USAGE FOR TS-F CUSTOMERS. WHAT IS YOUR RESPONSE TO HIS ASSERTIONS?

A I will discuss the following reasons Mr. Ewen provides as reason for his disagreement:

- Non-coincident peaks should be used rather than the coincident peak;
- The PDD demand for the General Service – Residential and General Service – Commercial and Industrial classes is based on extreme weather conditions and does not reflect actual coincident peak demand;
- PECO plans its gas distribution system based on the need to provide capacity to meet individual contract demands of its larger customers; and
- TS-F usage is weather sensitive and thus, TS-F demand under peak design conditions would exceed actual historical peak demands.[2]

Q DO YOU AGREE WITH MR. EWEN THAT NON-COINCIDENT PEAK DEMAND SHOULD BE USED RATHER THAN COINCIDENT DEMAND?

A Yes. However, Mr. Ewen's assertion, that the sum of the TCQs for TS-F customers is the non-coincident peak, is incorrect. The sum of the TCQs is a theoretical measurement and does not represent the actual non-coincident peak for TS-F customers. The peak usage shown in PECO's 1307(f) filing is actually a better

[2] OSBA Statement No. 1-R, Rebuttal Testimony and Exhibit of Mark D. Ewen at 5-6.

measurement of the TS-F class's non-coincident demand. As demonstrated in my direct testimony, the highest peak design day demand for the TS-F class for the past five years was 53,364 Mcf —this is substantially below the sum of the TS-F class's TCQs (*i.e.*, 75,000 Mcf) used by PECO in its CCOSS. Therefore, the actual, measured demand shown in PECO's 1307(f) filing (*i.e.,* 53,364 Mcf) is the correct PDD demand for the TS-F class and represents the class's actual non-coincident peak on the design day.

Q IS MR. EWEN CORRECT THAT THE ESTIMATED PEAK DESIGN DAY DEMAND FOR RESIDENTIAL AND COMMERCIAL CUSTOMERS REPRESENTS EXTREME WEATHER CONDITIONS AND DOES NOT REPRESENT ACTUAL COINCIDENT DEMANDS?

A Yes. I agree that the estimated PDD demand for residential and commercial customers is based on weather extremes. On an extreme weather day, PECO assumes that customer demand is at its highest, and, because PECO does not have the ability to measure the actual demand on the design day for residential and commercial customers, it must estimate the PDD demands for these classes.

Q DOES MR. EWEN'S SAME ARGUMENT APPLY TO TS-F CUSTOMERS?

A No. In its 1307(f) filing, PECO provides the actual peak usage for TS-F on peak days. Thus, it is not necessary to estimate the TS-F class's PDD demand based on extreme weather or the sum of its TCQ, as the actual peak usage provided for TS-F already accounts for any extreme weather that results in a peak day.

Q DO YOU AGREE WITH MR. EWEN'S SUGGESTION THAT PECO PLANS ITS GAS DISTRIBUTION SYSTEM BASED ON THE NEED TO PROVIDE CAPACITY FOR INDIVIDUAL CONTRACT DEMANDS OF ITS LARGER CUSTOMERS?

A No. If PECO built its system to meet the individual contract demands of larger customers (*i.e.*, the sum of all TS-F customers' TCQs), it would result in a system that is significantly overbuilt. In the same vein, if PECO built its system to meet the sum of demands for the non-transportation customers, it would also result in a system that is overbuilt. PECO designs its system to the PDD demand, not the sum of demand for every customer.

Q DO YOU AGREE WITH MR. EWEN'S ASSERTION THAT TS-F IS WEATHER SENSITIVE BASED ON HIS REVIEW OF FORMER OSBA WITNESS ROBERT KNECHT'S PEAK DEMAND FOR TS-F CUSTOMERS?

A No. Mr. Ewen is incorrect because Mr. Knecht's analysis is based on the highest demand for each TS-F customer on separate days. Similar to using the sum of the TCQs, using the sum of each TS-F customer's peak demand on separate days does not reflect how PECO's system is used by the TS-F class on the PDD.

Joseph A. Bisti

Q DO YOU AGREE WITH MR. BISTI'S REVISED REVENUE ALLOCATION?

A No. Mr. Bisti's proposal is still based on the results of PECO's flawed CCOSS and should be rejected. PECO's CCOSS uses TCQ for the TS-F customer class which, as described above, is incorrect and overstates the costs attributable to the TS-F class. Therefore, Mr. Bisti's revised revenue allocation should be rejected.

Q DO YOU HAVE ANY FURTHER COMMENTS WITH REGARD TO MR. BISTI'S REBUTTAL TESTIMONY?

A Yes. Mr. Bisti continues to support the proposal to reduce the rate differential between small (below 18,000 Mcf/year) and large (at or above 18,000 Mcf/year) transportation customers, despite the fact that the calculation of the rate differential is not cost based. Mr. Bisti's testimony indicates PECO misunderstands its obligations under the prior rate case settlement, as Mr. Bisti states that "PECO's proposal to reduce the Rate TS-F differentials is based on its commitment to revise those differentials based on a load factor analysis as part of the Commission-approved settlement of PECO's 2022 gas base rate case."[3] Mr. Bisti's recollection is incorrect, as PECO committed only to conduct the load factor analysis and present the results to the parties in its next base rate case.[4] Because PECO's proposal was not compelled by the 2022 Settlement, the Commission should consider whether adopting a rate design proposal that Mr. Bisti primarily justifies as simply being "no more or less cost-based" than the existing rate differentials is appropriate considering the proposal would result in an increase that is two times the system average rate increase for large rate TS-F customers.[5]

Conclusion

Q WHAT ADDITIONAL FINDINGS SHOULD THE COMMISSION MAKE BASED ON YOUR SURREBUTTAL TESTIMONY?

A The Commission should reject the recommendations of Ms. Ding, Mr. Johnson, and Mr. Ewen to employ the sum of the TCQ for the TS-F class's PDD demand in PECO's

[3] PECO Statement No. 7-R, Rebuttal Testimony of Joseph A. Bisti at 16.

[4] *Pennsylvania Public Utility Commission v. PECO Energy Company – Gas Division*, Docket No. R-2022-3031113, Joint Petition for Settlement of Rate Investigation at 6-7 (Sep. 19, 2022).

[5] PECO Statement No. 7-R, Rebuttal Testimony of Joseph A. Bisti at 16.

CCOSS, as well as the recommendations by Mr. Johnson regarding the load factor weightings. In addition, the Commission should reject PECO's proposal regarding the differentials within the TS-F rate. Finally, the Commission should reject Mr. Bisti's revised revenue allocation and allocate the revenue, and any scale-back thereto, based on my revised CCOSS as set forth in my direct testimony.

Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A Yes.

PAIEUG Statement No. 1S

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission

v.

PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Surrebuttal Exhibit

of

BILLIE LACONTE

On Behalf of

Philadelphia Area Industrial Energy Users Group

August 2, 2024

J. POLLOCK
INCORPORATED

Pennsylvania Public Utility Commission
v.
PECO Energy Company – Gas Division

Docket No. R-2024-3046932

Response of PECO Energy Company
To Interrogatories of the
Philadelphia Area Industrial Energy Users Group
PAIEUG Set II

Response Date: July 31, 2024

PAIEUG-II-1

Referring to the Rebuttal Testimony of Jiang Ding at 14:

a. Provide the actual NCP demand for each TS-F customer for the years 2019 - 2023, in Excel format with all formulas and links intact.
b. Provide a calculation of the design day demand for the TS-F class using the same methodology as used for non-transportation customers. Provide in Excel format with all formulas and links intact.
c. Identify any natural gas utilities in Pennsylvania or other jurisdictions that use TCQ for transportation customers in their class cost-of-service studies.
d. Explain why PECO Gas does not use the same methodology to estimate the TS-F peak design day as used for non-transportation customers.

RESPONSE:

a. Refer to Attachment PAIEUG-II-1(a).

b. Refer to Attachment PAIEUG-II-1(b).

c. The Company is aware that OSBA witness Mr. Robert D. Knecht in 2022 PECO's Gas Rate Case proceeding stated that "some NGDCs use contract demands for deriving peak demand in cost allocation analyses for larger customers (e.g. UGI Gas)" (Footnote Docket No. R-2022-3031113, OSBA Rebuttal Testimony of Robert D. Knecht, OSBA Statement No. 1-R, page 9). For larger C&I rate classes, Delmarva

Power & Light Company (an Exelon Company) uses the aggregated maximum daily quantity as design day demand for customers which have a maximum daily quantity in their individual contracts. Larger C&I rate classes include Medium Volume Gas Sales Service, Large Volume Gas Sales Service, Medium Volume Transportation Service, Large Volume Transportation Service and Large Volume Gas Sales Service – Qualified Fuel Cell Provider.

d. PECO's Mains are built to ensure that all firm customers' peak demand can be served on a design day. Different methodologies to estimated design day demand are used because firm customers include non-transportation customers that do not have a designated contract quantity and transportation customer that have a designated contract quantity.

   For non-transportation firm customers, PECO estimates class peak day demands based on the correlation, for each rate class, between customers' temperature-sensitive usage and heating degree days. The correlation is used to determine each rate class' share of the total demand estimated for the system design day. The Company uses TCQ for design day demand for TS-F customers because Mains are designed to meet the aggregate TCQ requirement and the TCQ represents the highest potentially achievable peak design day demand for the TS-F class. See PECO Statement No. 6-R, pages 12 and 14.

   PECO calibrated the aggregate class peak demands to the system design day peak demand it employs for gas supply capacity planning in its PGC filing for non-transportation firm customers. As shown in Attachment OCA-I-1-Ding(a.6), the design day demand for non-transportation customers is 912,000 Mmcf and the design day demand for TS-F customers is 75,000 Mmcf in 2025. 912,000 and 75,000 are applied in the Company's COSS as design day demand for non-transportation customers and TS-F customers respectively. The methodologies of design day demand calculation properly align the allocation of maximum load requirements used to allocate distribution system costs with the maximum load requirements used for supply capacity planning, and the methodologies reflect how PECO sizes its Mains.

Responsible Witness: Jiang Ding

PECO Exhibit JD-6
External Allocation Factors
Page 1 of 1

Attachment PAIEUG-II-1(b

	Historical_2019-2023	**Transport- Firm**	**Calibration Factor**
1	Calendar Sales Jan & Feb (Ccf/Cust/Day)	875.7	
2	Non-Heating Usage Jul & Aug (Ccf/Cust/Day)	508.8	
3	Heating Usage (Ccf/Cust/Day) = Line 1 - Line 2	366.9	
4	Jan & Feb Degree Day Deficient (DDD/Day)	27.0	
5	Design Day DDD	65.0	
6	Heating Use per Degree Day (Ccf/Cust) = Line 3 / Line 4	13.6	
7	Peak Day Heating Usage (Ccf/Cust) = Line 5 * Line 6	883.1	
8	Peak Day Non-Heating Usage (Ccf/Cust) = Line 2	508.8	
9	Peak Day Usage (Ccf/Cust) = Line7 + Line 8	1,391.9	
10	Average Day Usage (Ccf/Cust/Day)	672.2	
11	Historical Load Factor = Line 10 / Line 9	48.3%	
12			
13	FPFTY_2025		
14	Annual Usage (Mcf)	11,873,807	
15	Annual Number of Customers (Average)	400	
16	Jan & Feb Number of Customers (Average)	401	
17	Average Day Usage (Ccf/Cust/Day) = Line 14 * 10 / Line 15 / 365	813.3	
18	Historical Load Factor = Line 11	48.3%	
19	Average Peak Day Usage (Ccf/Cust) = Line 17 / Line 18	1,684.1	
20	Peak Day Usage (Mcf) = Line 16 * Line 19 / 10	67,450	
21	System Losses (2.1448%) = Line 20 * 2.1448% (a)	1,447	
22	Peak Day Usage including Loss (Mcf) = Line 20 + Line 21	68,897	
23			
24	Calibration to 1307(f) Filing (b)		
25	Design Day Peak Demand Requirement in 2025 in 1307(f) Filing (c)	75,000	
26	Calibration Factor = Line 25 / Line 22 Total		1.09
27	Calibrated Design Day Peak Demand (Mcf) = Line 22 * Line 26	75,000	
28			
29			
30			
31			
32	Design Day Peak Demand (Mcf) = Line 27	**75,000**	
33			
34	(a) Average system losses from 2019 to 2023		
35	(b) Purchased Gas Cost (PGC) filing under Section 1307(f) on April 30, 2023		
36	(c) Section 19 in PGC filing on April 30, 2023		

VERIFICATION

I, Billie S. LaConte, Energy Advisor and Associate Consultant at J. Pollock, Incorporated, hereby state that the facts set forth in PAIEUG Statement Nos. 1, 1R, and 1S are true and correct to the best of my knowledge, information and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

8-6-24
Date


Signature

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August 5, 2024

VIA ELECTRONIC MAIL
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Administrative Law Judge Darlene Heep
Administrative Law Judge Marta Guhl
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
801 Market Street, Suite 4063
Philadelphia, PA 19107

RE: Pennsylvania Public Utility Commission v. PECO Energy Company (Electric); Docket No. R-2024-3046931; Pennsylvania Public Utility Commission v. PECO Energy Company (Gas); Docket No. R-2024-3046932; **TESTIMONY AND EXHIBITS OF SEPTA**

Dear Judges Heep and Guhl:

Southeastern Pennsylvania Transportation Authority ("SEPTA") intends to admit the attached testimony and exhibits as evidence into the evidentiary record at the Evidentiary Hearings scheduled on August 7, 2024 and August 8, 2024, in the above-captioned proceedings:

1. SEPTA Statement No. 1, Direct Testimony and Exhibits JC-1 and JC-2 of James L. Crist; and

2. SEPTA Statement No. 1-R, Rebuttal Testimony of James L. Crist.

Very truly yours,

Todd S. Stewart
Counsel for the Southeastern Pennsylvania Transportation Authority

TSS/jld
Enclosure
cc: Athena Devillar, Legal Assistant (via electronic mail – sdevillar@pa.gov)
Per Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the parties, listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a party)

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DATED: August 5, 2024

Todd S. Stewart

BEFORE
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046931
	:	
PECO Energy Company (Electric)	:	
	:	
	:	
Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company (Gas)	:	

DIRECT TESTIMONY OF JAMES L. CRIST, P.E.
ON BEHALF OF
SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY

SEPTA Statement No. 1
June 17, 2024

I. WITNESS QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS, AND ON WHOSE BEHALF, YOU ARE TESTIFYING.

A. I am James L. Crist, President of Lumen Group, Inc. a consulting firm focused on regulatory and market issues. My business address is 4226 Yarmouth Drive, Suite 101, Allison Park, Pennsylvania 15101. I am presenting testimony on behalf of The Southeastern Pennsylvania Transportation Authority ("SEPTA").

Q. DO YOU HAVE ANY QUALIFICATIONS OR OTHER SPECIALIZED KNOWLEDGE THAT WOULD ASSIST THE PENNSYLVANIA PUBLIC UTILITY COMMISSION ("COMMISSION") IN ITS DELIBERATIONS IN THIS CASE?

A. Yes. I have a B.S. in Chemical Engineering from Carnegie Mellon University and an M.B.A. from the University of Pittsburgh. Additionally, I am a Registered Professional Engineer in the Commonwealth of Pennsylvania. I have attached a copy of my CV and Regulatory Experience as **Exhibits JC-1** and **JC-2** respectively.

Q. BRIEFLY DESCRIBE YOUR RELEVANT BUSINESS QUALIFICATIONS.

A. I have run a consulting practice for the past 25 years focused on regulated and deregulated energy company strategy, market strategy, and regulatory issues. During 2004 and 2005, I undertook a consulting assignment as the Vice President of Consumer Markets for ACN Energy. ACN is a gas and electric marketer that is active in eight states. Prior to my consulting practice, I worked at three major energy companies for a

total of 19 years. Most recently I was Vice President of Marketing for Equitable Resources. In that function I was responsible for the development of the company's deregulated business strategy.

Prior to that I was Vice President of Marketing for Citizens Utilities, responsible for gas, electric, water and wastewater marketing activities in several service territories within the United States. The gas and electric utility operations were in Vermont, Louisiana, Arizona, Colorado, and Hawaii. Under my direction, Citizens initiated commercial and industrial transportation and supply services at its gas operation in Arizona. I also directed significant gas supply contracting activities with large industrial and commercial customers in Citizens' gas operation in Louisiana.

Before that, during 1988 through 1994, I was the Marketing Director at the Peoples Natural Gas Company where I was actively involved in many gas transportation programs as the company relaxed transportation requirements so that customers would have supply choices.

In summary, I have considerable experience in several states involving residential, commercial, and industrial customer energy procurement, regulatory issues and industry restructuring programs.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION?

A. Yes, I have appeared before the Commission in numerous gas and electric regulatory proceedings. I presented testimony in Pennsylvania in recent cases involving the Philadelphia Gas Works, Columbia Gas of Pennsylvania, Duquesne Light Company, the

Peoples Natural Gas Company, and First Energy. Additionally, I have provided testimony on a variety of issues relating to energy procurement, industry restructuring, and demand response before regulatory Commissions in Arizona, Kentucky, Tennessee, Maryland, New Mexico, Illinois, Ohio, Wyoming, and the U.S. Virgin Islands.

II. PECO SERVICE TO SEPTA

Q. WHAT SERVICES DOES SEPTA RECEIVE FROM PECO?

A. SEPTA is a customer of PECO for both electric and natural gas distribution services. More specifically, SEPTA is a major generation, transmission, and distribution service customer of PECO receiving service under Rates EP, HT, GS and TLCL. SEPTA also receives natural gas distribution service from PECO under rate GC.

III. ISSUES

Q. WHAT ARE THE ISSUES YOU WILL DISCUSS IN THIS TESTIMONY?

A. After reviewing both the electric and natural gas rate increase requests I have several concerns. The most significant one is the overall magnitude of the revenue request. Such an increase is excessive and not merited by the level of service provided. While SEPTA is a customer of PECO for both electric distribution and gas distribution services, the majority of costs to SEPTA arise from the electric distribution billings of PECO and my comments will focus on those costs. Because I have not addressed PECO's natural gas distribution rate requested increase it should not be interpreted that I condone PECO's proposed increase of those rates. This testimony focuses on the major costs to SEPTA, that are the high voltage rate categories of Rate HT and Rate EP. I have concerns about the revenue distribution to the customer classes and the major impact the request has on

Rates EP and HT. In addition to the cost and revenue issues I also have concerns about PECO's low level of customer service. The Company testimony refers to the "premier customer service" the Company provides, and I am shocked that PECO portrays its level of service as superior, for SEPTA's actual experience shows otherwise.

PECO's recent rate increase was fully effective in October 2021. The current net increase of $399 million represents a net base rate revenue increase of 29.16%[1]. Although the news media have discussed the inflation rate frequently and referred to inflation in recent years as higher than historic, the recent Bureau of Labor Statistics data show the 2023 inflation rate, as measured by the Consumer Price Index ("CPI") was 4.1%.

Last year's inflation rate was 4.1%, the recent rolling 12-month inflation rate is 3.1%, the Federal Reserve policy strives to achieve a 2% rate. Using the Bureau of Labor Statistics inflation calculator[2] shows the Consumer Price Index increased 14.0% from October 2021 to May 2024, and PECO's filing requests a 29.16% increase. PECO's large request should be rejected or substantially reduced not to exceed inflation.

Q. WHAT ARE THE DEMOGRAPHICS OF THE RIDERSHIP OF SEPTA?

A. SEPTA's ridership is representative of the mix of residential customers of PECO. SEPTA is a large public transit system that serves five counties in southeastern Pennsylvania, its ridership is a diverse mix of working individuals commuting to work, students

[1] PECO Exhibit TJJ-1, Page 2, Line 72.
[2] https://data.bls.gov/cgi-bin/cpicalc.pl.

commuting to school, senior citizens, and low-income residents that do not own a car. The median income of SEPTA's riders in 2022 was under $34,000 per year.

Q. WHAT WILL BE THE IMPACT OF THE LARGE REVENUE INCREASE ON SEPTA'S RIDERSHIP?

A. SEPTA's financial condition would be negatively impacted by this large increase. Any significant increase to SEPTA's costs will put additional pressure on an already severely constrained budget, which could ultimately trigger increases to fares and/or cuts to service in order to balance the budget. This poses a great challenge for the ridership of SEPTA, most of whom have no other alternative.

IV. REVENUE ISSUES

Q. WHAT DID THE COMPANY'S COSS RECOMMEND FOR RATES HT AND EP?

A. PECO requested an overall revenue increase of 29.2% in electric rates yet proposed that Rate HT increase by 38.0% and Rate EP increase by 39.2%. (Source PECO Exhibit JAB-1).

While PECO's requested system average increase of 29.2% is extreme enough, it is unconscionable to increase Rate HT by 38.0% and Rate EP by 39.2%. While some customers receiving service under Rate HT may be industrial manufacturers or large commercial businesses, SEPTA's electric use under Rate HT provides power to the many train, subway, and bus station facilities, along with the transit system garages and repair shops. PECO indicates Rate EP has five customers, although that really is five accounts. Two of those accounts are SEPTA, and the other accounts are Amtrak. Power through

Rate EP is used for electric propulsion, that is moving the trains, subways, and streetcars through and around Southeastern Pennsylvania.

Q. WHAT DRIVES THE COST OF AN ELECTRIC DISTRIBUTION SYSTEM?

A. Electric distribution systems are designed to meet the peak needs of its customers. Consequently, the cost drivers of electric distribution systems are the design of the physical plant items such as transformers, poles, towers, stations, conduit, and conductors.

Q. WHAT IS LOAD PROFILE?

A. A load profile is an illustration of the pattern of electricity usage over a specific period of time, typically a day, month or a year. It represents how much electricity a customer consumes at different times throughout the day or year. Load profiles can vary widely depending on factors such as the type of customer (residential, commercial, industrial, transit), the time of day, the season, and specific usage patterns. For example, residential customers might have higher electricity usage in the evenings when they're cooking dinner and using appliances, while commercial customers might have higher usage during business hours. Transit authorities such as SEPTA use power over the entire day. Although some transit services are reduced during the night hours there are maintenance, repair, cleaning, and charging activities that are undertaken during that time. Load profiles illustrate the efficiency of usage of a distribution system through the customer or class load factor.

Q. WHAT IS PEAK DEMAND AND HOW DOES IT IMPACT DISTRIBUTION SYSTEM COSTS?

A. The customer's maximum power usage during the time period, commonly a day, month, or year is the peak demand. In the cost allocation process of the COSS several of the allocation factors are based on the peak demand. Peak demand is classified as either coincident peak demand, meaning the customer's demand at the same time (coincident) that the utility experiences its peak demand, or non-coincident, which is the customer's peak demand at any point in the time period.

Q. HOW DOES PEAK DEMAND IMPACT THE COST TO RENDER SERVICE?

A. Because electric distribution systems must be designed to meet the maximum aggregate customer demand, the customer's peak demand is a cost driver of distribution system construction. Coincident customer demands are the most significant factor driving costs of the electric distribution system as they represent that maximum instantaneous demand on the electrical system.

Q. HOW DID THE COMPANY'S COSS ACCOUNT FOR CUSTOMERS' PEAK DEMANDS?

A. The main allocation factor in PECO's COSS that is used to allocate the majority of the capital costs of the primary/high tension system is the Demand Distribution Primary High Tension (Non-Coincident Peak) or "DDISPHT." Because approximately 95% of SEPTA's electric use is under Rate HT and Rate EP, the majority of the costs allocated to SEPTA are calculated using the allocation factor DDISPHT. This however creates an

overstatement of costs allocated to SEPTA. The DDISPHT is based on non-coincident peak demand. While this is important in the design of electric distribution systems, it is the coincident peak demand that determines the overall design capacity of the electric distribution system, and that cannot be ignored in the allocation of distribution system costs, yet PECO has done that. PECO's proposed cost allocation is inconsistent with standard cost causation principles, which makeup the foundation of regulated rate design.

Q. WHEN DOES SEPTA'S NON-COINCIDENT PEAK OCCUR?

A. For SEPTA's two largest EP accounts, which together represent about 70% of SEPTA's total usage, the NCP this year occurred on January 18 at 8:00 AM and was 45.7 MW. The aggregate NCP billing demand for these two accounts, one in January 2024 and the other in March 2023, was 50.6 MW. SEPTA is invariably a winter peaking operation. Such seasonal use in the winter period is beneficial to PECO, a summer-peaking utility.

Q. WHAT WAS SEPTA'S COINCIDENT PEAK?

A. PECO is a summer peaking utility and much of its cost of service is building around meeting summer demand. During the summer season when PECO last experienced its peak sendout in the afternoon of September 7, 2023, the Coincident Peak for these same two SEPTA accounts was just 29.2 MW, 36% lower than the Non-Coincident Peak and 42% lower than the annual billed peak. For this reason, the cost allocations that PECO performed in its COSS grossly over allocate costs to SEPTA through rates HT (a 38.0% increase) and EP (a 39.2% increase).

Q. WHAT ADJUSTMENTS MUST BE MADE IN THE COSS TO PROPERLY ACCOUNT FOR LOAD PROFILE?

A. Allocations to Rate HT and Rate EP should be reduced to no greater than the overall increase percentage that PECO is ultimately granted.

V. SERVICE ISSUES

Q. HOW DOES THE COMPANY DESCRIBE THE QUALITY OF SERVICE IT RENDERS?

A. In her testimony, PECO Statement No. 1, 28:6-8, Ms. Levine opines, "PECO recognizes its responsibilities to customers and seeks to invest in maintaining and improving how the Company provides premier customer service and how it interfaces with customers." As a major customer of PECO, SEPTA is hopeful that PECO will move toward providing premier customer service, however the current level of service does not meet minimal acceptable standards. In the past few years PECO has made major changes to its billing system and customer portal, and the result is that some of those changes have caused disruptions to SEPTA's access to timely and accurate billing, and availability of operational data necessary to manage SEPTA's operations. Despite repeated notifications and discussions with PECO, there are still significant limitations on access to correct bills and customer data. This should be considered in the decision on the amount of requested revenue increase that will be granted.

Q. WHAT CHANGES DID THE COMPANY IMPLEMENT IN ITS BILLING SYSTEM?

A. PECO provided a notification email in October 2023. The email explained:

> "We will be upgrading our customer billing system in January of next year. As a result of this upgrade, we wanted to make you aware of impacts this change may have on our customers.
>
> We will be changing your electric and gas account number. This change will take place in mid-January, and you will be able to see the new account number on your first bill after Monday January 16th. This change may require customer action.
>
> Notifying your bank if you are an electronic payment customer.
>
> Make certain your accounts payable team is aware of the change and they have updated their systems accordingly.
>
> Moving forward any new supplier enrollment will require your Choice ID number which can be found on your bill. The Choice ID is different from your account number and is only used If you shop for a third-party supplier of electric and gas. If you have both electric and gas service you will have two unique Choice IDs, one for electric and one for gas.
>
> To make this process as easy as possible for our customers PECO will be contacting your electric and gas suppliers and making them aware of your new account number and Choice ID number. If you are currently enrolled with an alternative supplier, that enrollment will carryover, and no action is required.
>
> PECO has created a tool on our website (www.peco.com) that will allow our customers to learn what their new account number is by converting the old account number into the new account number. This account number conversion tool will be available on or after January 16th. We will provide the link to the tool in a future communication.
>
> We will be providing additional communication as we get closer to the conversion date. I would encourage you to reach out to me, your account manager, if you have any questions."

Q. WHAT ISSUES EXIST WITH THE BILLING SYSTEM?

A. Various issues that are related to the integration of PECOs new billing system this year are causing significant problems for SEPTA. These have all been relayed to PECO but there has been no follow up on confirmation of the timing for resolution.

For example, many PECO electric and gas accounts have been removed from the PECO customer billing website with the update to the new billing system in January of this year. SEPTA is receiving paper invoices for hundreds of invoices with the bulk of them in summary invoice format, which are consolidated paper copies, but there is no digital invoice for every account. Because larger customers with many accounts often use data and billing management systems that integrate with the PECO customer portal, this has resulted in significant gaps in data provision.

Similarly, SEPTA no longer has access to interval data (hourly electric data) for many of these accounts that have disappeared from the digital record. This includes some larger accounts on Rate HT. SEPTA has 30 HT accounts and 2 EP accounts and only six of those accounts are accessible on the PECO portal to SEPTA to obtain interval data.

There have been instances involving the same account where the invoice was mailed to the wrong address twice. One of the summary paper invoices is now sent via FedEx to a different address than is listed in the PECO billing system. PECO has not corrected the issues SEPTA has reported, claiming that the correct address is in its billing system, however the bill was mailed to a different address.

Often SEPTA has to monitor and remove residential accounts that PECO has assigned to SEPTA's portfolio. There should be vetting of on-boarded residential accounts that are not related to SEPTA at all. There were two cases where the non-SEPTA account showed

up on the SEPTA login of the PECO portal, even though the customer's name was different, i.e. not "SEPTA." It is a concern when working with the number of accounts SEPTA has, that the bills received from PECO might include accounts that are wrongly attributed to SEPTA.

Q. WHAT IMPORTANT SYSTEM DATA HAS THE CUSTOMER PORTAL FAILED TO PROVIDE?

A. There has been removal of important account billing variables. Installed Capacity (ICAP) is a coincident peak account-level billing variable associated with a customer's allocation of fixed cost generation charges. Network Integration Transmission Service (NITS) is a transmission service that allows electric generation supply customers to efficiently and economically utilize their network resources as well as other non-designated generation resources to serve their load. Such data formerly was provided, but the account-level ICAP and NITS transmission tags were removed from the customer portal when PECO transitioned to a new customer portal in 2022. That change is different from the billing system change discussed previously. ICAP and NITS are account-level billing variables prominent in PECOs tariff for customers that receive generation service from PECO.

They are also important data for customers that receive electric commodities from third party suppliers. ICAP and NITS related demand charges can account for approximately half of electrical supply costs. PECO is ultimately responsible for calculating these account-level billing variables, which customers pay. PECO does in fact provide this data access to third party suppliers -- so it does record and retain it – however PECO

customers are no longer provided access to current or upcoming demand values. Removal of these critical billing variables impacts price transparency and overall usefulness of the billing portal because customers have no means to verify if they are being invoiced correctly and with the correct billing variables. It makes bill audits virtually impossible for as much as 50% of commodity cost. ICAP and NITS tags are also heavily time dependent and represent SEPTA's consumption patterns during key hours on the electricity grid. Because SEPTA also has gaps in the availability of hourly data, as previously discussed, SEPTA is not able to plan and assess its operational performance as it relates to the very billing factors that determine a large portion of its electrical operating costs. It is a bit like throwing a dart at a dartboard, while wearing a blindfold, only to find your competitor will dictate your score back to you. This is a significant disadvantage to customers.

Q. HOW DO THE BILLING SYSTEM ISSUES IMPACT SEPTA'S ABILITY TO PRUDENTLY MANAGE ITS ENERGY USAGE?

A. SEPTA relies on timely and accurate energy data, particularly billing data, to provide transparent cost accounting for a public service. Gaps in data and invoices contribute to inaccurate budgeting, missed opportunities to mitigate or manage costs, and additional administrative burden.

Q. WHAT IS YOUR RECOMMENDATION TO ADDRESS THE BILLING SYSTEM ISSUES?

A. PECO should resume providing SEPTA access to the PECO portal, including interval data, for all of SEPTA's accounts that were previously available online as well as all new accounts. PECO should also provide customers with access to the billing variables that drive their energy costs, namely ICAP and NITS tags. PECO should put measures in place to ensure invoices are being sent to the correct locations, and PECO should confirm with SEPTA when it adds or removes an account from SEPTA's billing, as it should do for any multi-account customer.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

EXHIBIT JC-1

JAMES L. CRIST

PRESIDENT, LUMEN GROUP, INC.

Suite 101, 4226 Yarmouth Drive ● Allison Park, PA 15101

Phone: 412.487.9708 ● Cell: 412.613.8886 ● E-mail: JLCrist@aol.com

DEMONSTRATED AREAS OF EXPERTISE

- **GENERAL MANAGEMENT** — Proven executive-level management expertise with excellent capabilities in developing, implementing, and supervising corporate-wide policies and procedures in areas including sales, marketing, customer service, public relations, rates, regulatory affairs, and administration. Possess a unique combination of abilities to set goals, develop winning business strategies, organize structures and work methods, and train the right people for the right positions to make it all work. Skilled in strategic short and long-term planning and budgeting with effective abilities in reducing the "fat" and increasing organizational efficiency. A creative, decisive leader who can successfully meet challenges and overcome obstacles to achieve profit objectives.

- **REGULATORY STRATEGY** — A thorough strategist with an extensive background in utility business unit operation (electric, natural gas, water/wastewater) the full range of rate and regulatory functions, from tariff development and special contract negotiation. Proven personal testifying skills with an outstanding record of developing and presenting successful written and oral testimony, along with settlement negotiations.

- **PERSONNEL MANAGEMENT** — Effective interpersonal communications skills support outstanding capabilities in recruiting, training, motivating, and directing staff at all levels. Proven ability to build productive, highly motivated teams of sales/marketing, operations, technical, and customer service personnel who contribute to top organizational performance.

- **PERSONAL ATTRIBUTES** — A determined, hardworking, challenge-driven executive with the skills and experience to bring excellence to any business organization. A high-energy mover and shaper ... experienced in successful start-ups and turn-arounds. An excellent communicator - written and verbal. A frequent speaker at professional symposiums, able to interpret and communicate complex concepts for diverse audiences. An engineering/technical specialist and a management generalist. Active in civic and community affairs.

EMPLOYMENT HISTORY

LUMEN GROUP, INC., Pittsburgh, PA — 1996 - Present

President - A consulting practice specializing in strategic planning, business planning, regulatory strategy, marketing and venture development in the electric, natural gas and energy services industries. Please see Addendum for amplification of consulting assignments.

ACN ENERGY, Farmington Hills, MI — 2004-2005

Vice President, Consumer Markets

OPTIRON, Pittsburgh, PA — 2003-2004

Vice President, Marketing

E R I SERVICES, Pittsburgh, PA — 1996

Vice President, Marketing & Product Development

CITIZENS UTILITIES, Harvey, LA & Stamford, CT — 1994 - 1995

Vice President, Marketing

CONSOLIDATED NATURAL GAS, Pittsburgh, PA — 1977 - 1994

Director, Residential & Commercial Marketing (1988 - 1994)
Manager, Technical Sales/Market Development (1985 - 1988)
Market Development Specialist (1982 - 1985)
Project Engineer (1979 - 1982) ... promoted from ... **Process Engineer** (1977 - 1979)

OCCIDENTIAL CHEMICAL CORP., Niagara Falls, NY — 1975 - 1977

Research Engineer

PENNSYLVANIA STATE UNIVERSITY, State College, PA — 1988

CLEVELAND STATE UNIVERSITY, Cleveland, OH — 1984

Instructor (Evening Division) - Economics, Engineering Economics

SELECTED ACCOMPLISHMENTS

VICE PRESIDENT, CONSUMER MARKETS - ACN ENERGY

Retained for a turnaround assignment with an independent energy marketing company. Participated on the executive management team and directed a decentralized 3-person market management staff responsible for sales to 85,000 customers. Worked directly with the parent company executives and business unit management to create market-driven strategies for the corporation. Sharpened marketing and sales efforts of an energy marketing company operating in seven states and packaged company for eventual sale to Commerce Energy.

- Primary executive responsible for sales. Directed a team of market managers that was responsible for all aspects of 11 different markets (electric and natural gas) around the country. Provided direction and support to sales channel organization of commissioned representatives. Turned around five-year annual loss to significant gain in 2004. Tightened focus on market decisions.
- Directed regulatory involvement to insure compliance with market rules. Focused on maintaining positive relationships with state utility regulators to avoid penalties.
- Led weekly operations meetings during absence of COO. This involved direction of call center, provisioning, billing, credit & collection, and marketing.
- Worked in a team setting with other executives (VP Finance, VP Supply, COO) to provide consistent, professional focus to workforce experiencing changing environment.
- Directed development of annual business plan and budget with targets resulting in both goal achievements and income improvements.
- During transition period working with merger partner Commerce Energy's executive team to train and advise incoming executives.
- Directed customer service improvements in the customer acquisition process which resulting in replacing outdated paper/fax process with phone order process.
- Organized and directed trade show presence at national sales convention for alliance sales channel to create awareness of new product and market focus.

VICE PRESIDENT, MARKETING - OPTIRON

Retained as part of executive team in venture capital startup company developing new CIS/CRM software for the energy industry. Worked closely with CEO, COO, and Director of Sales to determine business strategy and develop marketing strategy to create market awareness and brand attributes in medium and small energy companies.

- Added in-house marketing communications function and personnel and revamped all marketing materials.
- Added new website functionality and content.
- Implemented first print advertising campaign in industry publications.
- Using industry contacts, positioned Option as expert presenter at several conferences and trade shows.
- Developed business plan to identify sales prospects and created competitive database of CIS/CRM vendors.
- Participated in development of exit strategy plan resulting in the successful sale to large software company.

VICE PRESIDENT, MARKETING & PRODUCT DEVELOPMENT - ERI Services

Assumed responsibility for creating a new corporate marketing vision and strategy to facilitate entry into new deregulated energy markets nationally.

- Recruited and selected an exceptional management team and integrated marketing and sales activities into one functional operating unit.
- Established the product innovation process to identify and create new and profitable market-driven service offerings.
- Directed strategic branding to launch the new corporate identity; managed a $2 million national advertising campaign; and developed over $1 million of new sales/marketing collateral materials.
- Instituted financial controls that reduced costs 60% in the Iowa market rollout while maintaining 80% market share and high customer satisfaction.

VICE PRESIDENT, MARKETING - Citizens Utilities

Directed a decentralized 20-person sales staff and a five person marketing staff. Worked directly with the Board of Directors, Corporate President, and Sector Vice President to create market-driven sales strategies for the corporation. Revamped and redirected sales efforts of a five-state energy utility with 440,000 customers.

- Increased industrial sales revenues by reorganizing unregulated gas marketing effort.
- Revamped merchandising utilizing inbound telemarketing in Louisiana Gas.
- Revised training programs for entire sales force, identifying and correcting missing technical and equipment training, adding a greater competency in the commercial and industrial sectors.
- Developed first business plan in sales and marketing organization with monthly budget monitoring and

targets resulting in both goal achievements and cost improvements.
- ¨ Launched an aggressive direct marketing program that increased sales 500% over previous year.
- ¨ Increased share of gas transportation business in Arizona by 15% in first year of operation through marketing efforts.
- ¨ Created a telephone long distance business in Louisiana that captured a 20% share (2nd to AT & T).

DIRECTOR, RESIDENTIAL & COMMERCIAL MARKETING - Consolidated Natural Gas

Managed a marketing staff of 12 and a "dotted-line" 24-person field sales force. Directed marketing and sales efforts in consumer, business, and manufacturing markets with $154 million revenue.

- ¨ Added $6 million in revenue by developing new products in gas transportation, supply, and agency.
- \- Directed sales activities in residential, commercial, institutional and governmental accounts for both product sales and technology sales.
- ¨ Produced $600,000 annual revenue and doubled competitive project wins by revamping market approaches to residential and commercial new construction.
- ¨ Secured 50% increase in customer decisions over 5 gas companies and 4 electric companies.
- ¨ Experienced in PUC and Legislature lobbying. Increased revenues $2.3 million through regulatory strategy/testifying and received major competitive program approval.

MANAGER, TECHNICAL SALES / MARKET DEVELOPMENT - Consolidated Natural Gas

Directed new market development and competitive market support.

- ¨ Focused on commercial and industrial accounts and increased the depth of relationship beyond the typical utility provider of service to a rich full service information provider and business partner.
- \- Captured $150,000 in new business annually by competitive pricing analysis, sales tool development, and market approach.
- ¨ Developed total advertising and promotional plan launching new market programs.
- ¨ Compiled extensive technical database and developed economic model for project analysis, eliminating a $100,000 operating budget expense.
- ¨ Led statewide coalition with customers and government agencies for fair treatment of new technology.

EDUCATION - PROFESSIONAL

UNIVERSITY OF PITTSBURGH, Pittsburgh, PA 1982
M.B.A. Degree

CARNEGIE - MELLON UNIVERSITY, Pittsburgh, PA 1975
B.S. Degree in Chemical Engineering

Registered Professional Engineer AGA Hall of Fame, 4/1991

JAMES L. CRIST

Lumen Group, Inc.
Suite 101, 4226 Yarmouth Drive ● Allison Park, PA 15101
Phone: 412.487.9708 ●Cell: 412.613.8886 ●E-mail: JLCrist@AOL.com

AMPLIFICATION OF LUMEN GROUP CONSULTING ASSIGNMENTS

A consulting practice specializing in strategic planning, business planning, marketing and venture development in the telecommunications, energy, and services industries.

REGULATORY

Represented the National Energy Marketers Association and their members in Equitable-Dominion Peoples merger case. Developed strategy, presented written and oral testimony and negotiated on behalf of clients. Worked with other interveners and FTC on anti-competitive issues.

UTILITY RATE NEGOTIATION

Represented large client group seeking to obtain rate reduction from electric utility. Prepared strategy, wrote testimony, and exceeded expectations by achieving a 40% reduction in charges, producing a $2 million annual reduction.

STRATEGIC PLANNING FOR ON-SITE POWER GENERATION

Participated in proposal development for a 27-MW power plant on Kauai. Handled critical customer needs assessment in rapid turnaround fashion to meet proposal deadline. Maintained relationships with clients, vendors and proposal partners. Our proposal was selected as the preferred bidder out of five strong competitors.

NEW BUSINESS START-UP / TARIFF NEGOTIATIONS

Participated in the development of a new gas distribution utility in New York. Handled tariff development, pricing structure, transportation contracting, and operations, maintenance, and emergency manual preparation.

SALES STRATEGY/BUSINESS DEVELOPMENT

Developed sales strategy to focus on profitable accounts and markets. Developed sales training and account management plans and provided consulting to energy marketing organizations to improve overall sales.

BUSINESS STRATEGY/BUSINESS DEVELOPMENT

Developed business strategy to verticalize eCommerce/Customer Relationship Management product for the energy/utility industry. Produced sales training for global applications, product promotion presentations, developed alliance relationships with system integrators and software partners, developed business. Client is market leader in North America.

JOINT VENTURE/PRODUCT DEVELOPMENT

Assembled joint ventures resulting in sales to offer new hedge-based weather risk management retail product. Identified venture partners, and developed business arrangements and closed million-dollar deals

ENERGY PROCUREMENT

Served as energy expert on project team that obtained long-term natural gas supply for major government facilities. Prepared project specifications, negotiated with suppliers, prepared RFP, negotiated major reduction in delivery charges. This project resulted in annual cost reduction of $2.5 million.

NEW BUSINESS DEVELOPMENT - TELECOMMUNICATIONS

Analyzed use of electric utility assets for possible telecommunications business venture. Wrote the business plan that identifies regulatory and non-regulatory issues, marketing plans, financial analysis, and organizational requirements. Launched the new non-regulated business unit in 1996.

JOINT VENTURE DEVELOPMENT - TELECOMMUNICATIONS

Conducted analysis of potential joint venture partners for new unregulated telecommunications venture, bypassing the Bell operating company. Held screening discussions with potential partners and selected lead candidate for venture. Developed working agreement with partners along with business case to launch venture.

JOINT VENTURE DEVELOPMENT - TELECOMMUNICATIONS & ENERGY

Developed strategic plan for joint venture involving gas, electric, and telecommunications partners. Screened potential business partners and held discussions with lead candidates. Assembled justification for top management approval.

PRODUCT DEVELOPMENT - UNREGULATED ENERGY SERVICES

Developed energy products for start-up subsidiary of major energy utility. Identified potential products and selected most likely candidates for further development. Developed market plans and sales plans for products.

MARKET PLAN - DIRECT MARKETING

Developed the market plan for large, global direct marketing agency to enter the energy industry. Identified strategies, strengths, weaknesses, and target prospects. Initiated sales effort and developed new business.

CORPORATE IMAGE DEVELOPMENT

Developed complete business unit identity for a new operations and services company. Produced capabilities brochure for use with prospects.

MARKET RESEARCH

Conducted market research to identify new customer/new business opportunities for major energy utility. Comprehensive project with two additional similar projects were completed. Entailed determination of goals, development of research methodology, script preparation, vendor selection, data analysis, and development of action plan.

MARKET DEVELOPMENT

Organized intervener group in Illinois consisting of retail marketers and intervened in three rate proceedings (Nicor Gas base case, WPS-Peoples merger case, Peoples Gas base case) and secured significant improvements in rules and procedures enabling marketers to increase their business and profitability. Developed strategy and presented written and oral testimony.

EXHIBIT JC-2

PARTIAL LIST OF REGULATORY EXPERIENCE OF JAMES L. CRIST

1. Philadelphia Gas Works, Base Rate Case, Docket R-2023-3037933, Representing Grays Ferry Cogeneration Partnership
2. Columbia Gas of Kentucky, Tariff Filing of Columbia Gas of Kentucky to Extend Its Small Volume Gas Transportation Service, Case No. 2021-00386, Representing Interstate Gas Supply, Inc, Constellation New Energy Gas Division, LLC, Xoom Energy Kentucky, LLC
3. Chattanooga Gas Company, Petition for Approval of Tariff Amendments, Docket No. 22-00004, Representing Chattanooga Regional Manufacturers Association
4. Chattanooga Gas Company, Petition for Approval of its 2021 Annual Rate Review Filing, Docket No. 22-0032, Representing Chattanooga Regional Manufacturers Association
5. Duke Energy Ohio, Application for Tariff Approval, Case No. 20-0054-GA-ATA, Representing Retail Energy Supply Association
6. Black Hills Wyoming Gas, Application for Authority to Revise Certain Tariff Provisions, Docket 30026-GA-21, Representing Wyoming Community Gas
7. West Penn Power Company, Default Service Program, Docket P-2021-3030021, Representing the Pennsylvania State University
8. Columbia of PA General Base Rate Increase, Docket R-2021-3025775, Representing the Pennsylvania State University
9. Columbia of PA General Base Rate Increase, Docket R-2020-3018835, Representing the Pennsylvania State University
10. Dominion Energy Ohio Motion, Case No. 18-1419-GA-EXM, Representing Retail Energy Supply Association
11. Aqua America/Peoples Natural Gas Merger, Docket R-2018-3006061, Representing Natural Gas Supplier Parties and Retail Energy Supply Association
12. Peoples Natural Gas General Base Rate Increase, Docket R-2018-3006818, Representing Peoples Industrial Intervenors
13. Duquesne Light Company General Base Rate Increase, Docket R-2018-3000124, Representing the Duquesne Industrial Intervenors
14. Columbia of PA General Base Rate Increase, Docket R-2018-2647577, Representing the Pennsylvania State University
15. West Penn Power Company, Default Service Program, Docket R-2017-2637866, Representing the Pennsylvania State University
16. Vectren Energy Delivery Ohio, Alternative Rate Plan, Case No. 18-0049-GA-ALT, Representing Retail Energy Supply Association
17. Columbia of PA Gas Cost Increase, Docket R-2017-2591326, Representing the Pennsylvania State University
18. West Penn Power Company, General Base Rate Increase, Docket R-2016-2537359, Representing the Pennsylvania State University
19. Columbia of PA General Base Rate Increase, Docket R-2016-2529660, Representing the Pennsylvania State University
20. UGI Utilities General Base Rate Increase, Docket R-2015-2518438, Representing Dominion Retail, Inc., Shipley, Choice, LLC, Interstate Gas Supply, Inc., Amerigreen Energy, and Rhoads Energy
21. Columbia of PA General Base Rate Increase, Docket R-2015-2468056, Representing the Pennsylvania State University
22. West Penn Power Company, General Base Rate Increase, Docket R-2014-2428742, Representing the Pennsylvania State University
23. Herman Oil & Gas Company, General Base Rate Increase, R-2014-2414379, Representing Herman Oil & Gas Company
24. Columbia of PA General Base Rate Increase, Docket R-2014-2406274, Representing the Pennsylvania State University
25. Ameren Gas- General Base Rate Increase, Docket No. 13-0192, Representing Dominion Retail and Interstate Gas Supply of Illinois
26. Columbia of PA General Base Rate Increase, Docket R-2012-2321748, Representing the Pennsylvania State University, Dominion Retail, Interstate Gas Supply, and Shipley Energy
27. Columbia of PA Petition for Approval of a Distribution System Improvement Charge Docket R-2012-2338282, Representing the Pennsylvania State University
28. PUC PA Generic Investigation Regarding Gas-On-Gas Competition, Docket No. P-2011-2277868, Representing the Pennsylvania State University
29. Ameren Gas- General Base Rate Increase, Docket 11-0282 (Cons.), Representing Dominion Retail and Interstate Gas Supply of Illinois
30. Water and Power Authority (USVI)- Electric Base Rate Case, Docket 575, June 2009, Representing Frenchman's Reef Marriott
31. Water and Power Authority (USVI)- Water Base Rate Case, Docket 576, June 2009, Representing Frenchman's Reef Marriott

32. Public Service of New Mexico 2010 Base Rate Case, Informal rate design workshops pursuant to the stipulation in NMPRC Case No. 08-00273-UT, Representing City of Albuquerque
33. Public Service of New Mexico, Electric base case at Case No. 08-00273-UT, Representing City of Albuquerque
34. Public Service of New Mexico 2009 Renewable Energy Procurement Plan for 2010, Case No. 09-00260-UT, Representing City of Albuquerque and Santa Fe County
35. Public Service of New Mexico, Gas sale case at Case No. 08-00078-UT, Representing City of Albuquerque
36. UGI Utilities, Central Penn Gas, Penn Natural Gas, Gas Cost Increase, Docket No. R-2011-2238953, Representing Shipley Energy, Rhodes Energy, and CenterPoint Energy
37. UGI Utilities- Gas Division, Gas Cost Increase, Docket No. R-2010-2172933, Representing Shipley Energy
38. Columbia of PA General Base Rate Increase, Docket R-2010-2215623, Representing the Pennsylvania State University, Dominion Retail, Interstate Gas Supply, and Shipley Energy
39. Columbia of PA General Base Rate Increase, Docket R-2009-2149262, Representing the Pennsylvania State University, Dominion Retail, Interstate Gas Supply, and Shipley Energy
40. Columbia of PA General Base Rate Increase, Docket R-2008-2011621, Representing Hess Energy, Dominion Retail, Interstate Gas Supply, and Shipley Energy
41. Columbia of PA Gas Cost Increase, Docket R-2008-2028039, Representing Dominion Retail, Interstate Gas Supply, and Shipley Energy
42. PPL Electric Utilities Voluntary Purchase of Accounts Receivables Program and Merchant Function Charge, Docket No. P-2009-2129502
43. Nicor Gas Company, Provision of facilities and services and the transfer of assets between Nicor Gas Company and Nicor Inc., Docket No. 09-0301, Representing Dominion Retail
44. North Shore Gas and Peoples Gas Light and Coke Company, General Base Rate Increase, Dockets 09-0166 and 09-0167, Representing Dominion Retail, Interstate Gas Supply and Nicor Advanced Energy
45. Nicor Gas Company, Base Rate Increase, Docket No. 08-0363, Representing Interstate Gas Supply and Dominion Retail
46. North Shore Gas and Peoples Gas Light and Coke Company, General Base Rate Increase, Dockets 07-0241 and 07-0242, Representing Dominion Retail, Interstate Gas Supply and U.S. Energy Savings
47. WPS Resources, Peoples Energy, Peoples Gas Light and Coke Company, North Shore Gas Company, Application pursuant to Section 7-204 of the Public Utilities Act for authority to engage in a Reorganization, Docket 06-0540, Representing Dominion Retail, Interstate Gas Supply, US Energy Savings, MxEnergy, and Direct Energy Services.
48. Allegheny Energy, Approval of Retail Electric Default Service Program and Competitive Procurement Plan, Docket No. P-2008-2021608, Representing the Pennsylvania State University
49. Allegheny Energy, Generation Rate Cap, Docket No. P-2007-2001828, Representing the Pennsylvania State University
50. Equitable Gas Company, Rate Increase, Docket R-2008-2029325, Representing Independent Oil & Gas Association and Hess Corp.
51. Equitable Gas Company and Peoples Gas, Merger Case, Docket A-122250F5000, Representing National Energy Marketers, Hess Corporation, and Constellation New Energy.

BEFORE
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046931
	:	
PECO Energy Company (Electric)	:	
	:	
	:	
Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company (Gas)	:	

REBUTTAL TESTIMONY OF JAMES L. CRIST, P.E.
ON BEHALF OF
SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY

SEPTA Statement No. 1-R
July 16, 2024

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS, AND ON WHOSE BEHALF, YOU ARE TESTIFYING.

A. I am James L. Crist, President of Lumen Group, Inc. I am presenting rebuttal testimony on behalf of The Southeastern Pennsylvania Transportation Authority ("SEPTA").

Q. WHAT ARE THE ISSUES YOU WILL DISCUSS IN THIS REBUTTAL TESTIMONY?

A. Specifically, in my rebuttal testimony I will address issues in the electric proceeding. I will review several allocated cost of service study ("CCOS" or "COSS"[1]) recommendations made by OCA witness Mr. Johnson and OSBA witness Mr. Higgins, and the revenue scaleback recommendation of I&E witness Mr. Sakaya. I will also discuss statements made by PAIEUG witness Ms. LaConte. Because some of the opinions presented by some of the witnesses are not based on cost causation, they skew the revenue responsibility, which is unacceptable.

Q. WHAT OBSERVATIONS DID MR. JOHNSON HAVE?

A. Mr. Johnson opined that the secondary distribution system for PECO Electric should be allocated based on demand, not on customers. Naturally since he represents the OCA and is primarily concerned with the Residential class, the shift from customers to demand as a basis for allocation of costs significantly improves the COSS relative rate of return at present rates for that class from 116% to 139%, which Mr. Johnson illustrates on page 17. Mr. Johnson then proposes to change the revenue requirement allocation made by PECO

[1] Both Class Cost of Service Study ("CCOSS") and Cost of Service Study ("COSS") refer to the same thing. Both terms have been used in the testimony of other witnesses, and myself, and in previous Commission recommendations and orders.

and distribute more revenue requirement to other classes. His chart CJ-2 on page 23 shows the difference between the Company's allocation and Mr. Johnson's proposal.

Q. WHY IS MR. JOHNSON'S PROPOSAL TO REALLOCATE REVIEW TO CERTAIN LARGE CUSTOMER CLASSES INAPPROPRIATE?

A. Mr. Johnson's modification to PECO's COSS dealt with the assignment of costs of the secondary distribution system. Three of the classes that Mr. Johnson wishes to allocate more revenue to are the Primary Distribution (PD), High Tension (HT), and Electric Propulsion (EP). None of those classes use the secondary distribution system that Mr. Johnson examined. His recommendation to reallocate revenue requirement of the secondary distribution system to classes that do not use the secondary distribution system will result in a cross-class subsidy, and that violated the principles of Cost Causation. His recommendation should be rejected.

Q. WHAT OBSERVATIONS DID MR. SAKAYA HAVE?

A. Mr. Sakaya first observes the Company requested an increase of $464 million. He did not dispute the amount of the request or conduct any analysis of the allocation of the requested revenue increase, but he did make a unique proposal regarding a scaleback methodology if the Commission decides not to grant the entire rate request made by the Company. His Exhibit (I&E Exhibit No. 3, Tables 2 and 3) proposes to assign the first $50,000,000 of rate reduction to a single customer class, then assign the next 45,700,000 of rate reduction across four customer classes. There is no analysis presented regarding the appropriateness of this skewed scaleback.

Q. WHY SHOULD MR. SAKAYA'S RECOMMENDATION BE DISREGUARDED?

A. Evidence of record should be the basis of any revenue scaleback; evidence on cost causation in particular, not some arbitrary assignment methodology.

Q. WHAT SCALEBACK METHOD SHOULD BE USED?

A. Considering all the details that will be weighed by the Commission in reaching a decision on the revenue increase, once that amount has been determined, then a proportional scaleback should be applied to all customer classes.

Q. WHAT OBSERVATIONS DID MR. HIGGINS HAVE?

A. Mr. Higgins agrees with the proportional scaleback recommendation I made[2] so on that point we are in agreement. He reviews several other cost allocation items which I am not addressing in this testimony. My absence of comment is not an endorsement or opposition of his view.

Q. WHAT OBSERVATIONS DID MS. LACONTE HAVE?

A. Ms. LaConte made accurate observations regarding the relative rate of return of the individual customer classes, specifically that the data for some of the classes was significantly different than the data in the 2021 base rate case. She then examined the data that cost allocators are based on and found that non coincident peak ("NCP") load factor data also to not conform to what would be expected based on history. I share her

[2] OSBA Statement No. 1, 5:11-15 "If the Commission approves a lower electric revenue requirement increase than requested by PECO, I recommend scaling each class's base distribution revenues in proportion to each class's share of total proposed base distribution revenues at PECO's requested revenue requirement increase."

concerns. The COSS she presented as Exhibit BSL-4 is a more appropriate COSS however that does not address all of the concerns that SEPTA has.

Q. HOW HAVE SEPTA'S OPERATIONS CHANGED SINCE PECO'S 2021 BASE RATE CASE?

A. SEPTA has experienced higher costs and considerably lower ridership/revenue levels since the COVID pandemic. Inflation has impacted all aspects of its operations. Materials, fuel, and labor are all considerably more expensive than in 2021. This, along with lower revenues from an evolving hybrid work environment with fewer commuters traveling to offices, has created a significant (presumably permanent) structural budget deficit of $240,000,000 annually.

Q. WHAT IS YOUR FORECAST REGARDING SEPTA'S OPERATIONS GOING FORWARD?

A. The lower ridership coupled with higher, inflation-driven operating costs will drive SEPTA to plan for potential service cuts and/or fare increases. Any further utility cost increases would only add to the deficit and hamper SEPTA's ability to provide reliable service in the Philadelphia region.

Q. BASED ON YOUR FORECAST, WHAT IS YOUR RECOMMONDATION FOR THE REVENUE REQUIREMENT ALLOCATED TO THE HT AND EP CLASSES?

A. The revenue responsibility allocated to Rate HT and Rate EP must be tempered to avoid further negative financial impact on SEPTA. It should be recognized that customers of SEPTA are residential customers, not business or industrial customers. Any increase assigned to the HT and EP rate classes should not exceed the overall increase realized by the Residential customer class.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

WALMART STATEMENT NO. 1

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company – Gas Division	:	

DIRECT TESTIMONY AND EXHIBITS OF

LISA V. PERRY

ON BEHALF OF

WALMART INC.

JUNE 17, 2024

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Exhibits:

Exhibit LVP-1: Witness Qualifications Statement

Exhibit LVP-2: Reported Authorized Returns on Equity, Gas Utility Rate Cases Completed, 2021 to Present

Exhibit LVP-3: Impact of PECO's Proposed Increase in Return on Equity Vs. National Average for Natural Gas Utilities, 2021 to Present

I. Introduction

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Lisa V. Perry. My business address is 2608 SE J Street, Bentonville, AR 72716-0550. I am employed by Walmart Inc. ("Walmart") as Director, Utility Partnerships - Regulatory.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS DOCKET?

A. I am testifying on behalf of Walmart.

Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.

A. I received a J.D. in 1999 and a LL.M. in Taxation in 2000 from the University of Florida Levin College of Law. From 2001 to 2019, I was in private practice with an emphasis from 2007 to 2019 in Energy Law. My practice included representing large commercial clients before the utility regulatory commissions in Colorado, Texas, New Mexico, Arkansas, and Louisiana in matters ranging from general rate cases to renewable energy programs. I joined the Energy Services department at Walmart in September 2019 as Senior Manager, Energy Services. My Witness Qualifications Statement is attached as Exhibit LVP-1.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION ("COMMISSION")?

A. Yes; I submitted testimony in Docket No. R-2024-3046523. I am also submitting Direct Testimony in Docket No. R-2024-3046931 today.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER STATE REGULATORY COMMISSIONS?

A. Yes, I have submitted testimony with State Regulatory Commissions for Arkansas, Colorado, Connecticut, Florida, Georgia, Iowa, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, North Carolina, New York, Ohio, Oklahoma, South Carolina, Texas, Virginia, and Wyoming. I have also provided legal representation for customer stakeholders before the State Regulatory Commissions for Colorado, Texas, Arkansas, Louisiana, and New Mexico in the cases listed under "Commission Dockets" in Exhibit LVP-1.

Q. ARE YOU SPONSORING EXHIBITS IN YOUR TESTIMONY?

A. Yes. I am sponsoring the Exhibits listed in the Table of Contents.

Q. PLEASE BRIEFLY DESCRIBE WALMART'S OPERATIONS IN PENNSYLVANIA.

A. As shown on Walmart's website, Walmart operates 159 retail units, six distribution centers, and four fulfillment centers, and employs over 57,000 associates within the Commonwealth of Pennsylvania.[1] In fiscal year ending 2024, Walmart purchased $16.2 billion worth of goods and services from Pennsylvania-based suppliers, supporting over 156,000 supplier jobs.[2]

[1] https://corporate.walmart.com/about/location-facts/united-states/pennsylvania
[2] *Id.*

Q. PLEASE BRIEFLY DESCRIBE WALMART'S OPERATIONS WITHIN THE PENNSYLVANIA SERVICE TERRITORY FOR PECO ENERGY COMPANY – GAS DIVISION ("PECO" OR "COMPANY").

A. Walmart has approximately 20 retail stores and related facilities in PECO's Pennsylvania gas service territory. Primarily, these facilities are served on the General Service – Commercial and Industrial ("GC") rate.

II. Purpose of Testimony and Summary of Recommendations

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to the Company's Tariff Gas – Pa. P.U.C. No. 6 filed in this docket on March 28, 2024, along with supporting testimony, in which the Company is proposing an increase in its gas rates and to provide recommendations to assist the Commission in its thorough and careful consideration of the Company's proposed rate increase, including the impact on customers. Specifically, my testimony addresses (i) the return on equity ("ROE") proposed by the Company; (ii) the cost of service study ("COSS") and revenue allocation proposed by the Company; and (iii) the Company's GC rate design.

Q. IN SETTING THE REVENUE REQUIREMENT AND ROE FOR THE COMPANY, SHOULD THE COMMISSION CONSIDER THE IMPACT OF THE ASSOCIATED RATE INCREASE ON BUSINESS CUSTOMERS?

A. Yes. Natural gas is a significant operating cost for retailers such as Walmart. When natural gas rates increase, the increased cost to retailers can put pressure on consumer prices and on the other expenses required by a business to operate. The

Commission should thoroughly and carefully consider the impact on customers, including business customers, in examining the requested revenue requirement and ROE, in addition to all other facets of this case, to ensure that any increase in the Company's natural gas rates is the minimum amount necessary to provide safe, adequate, and reliable service, while also providing PECO the opportunity to recover its reasonable and prudent costs and earn a reasonable return on its investment.

Q. PLEASE SUMMARIZE WALMART'S RECOMMENDATIONS TO THE COMMISSION.

A. Walmart's recommendations to the Commission are as follows:

(1) The Commission should reject the 11.15 percent ROE requested by the Company. When setting the ROE for the Company, the Commission should thoroughly and carefully consider the impact on customers associated with the approved ROE, in addition to all other facets of this case, to ensure that any increase in the Company's rates reflects the minimum amount necessary to compensate the Company for adequate and reliable service, while also providing the Company an opportunity to earn a reasonable return for its shareholders.

(2) The Commission should closely examine the Company's proposed revenue requirement increase and the associated ROE in light of:

(a) The customer impact of the resulting revenue requirement increase;

(b) The most recent ROEs approved by this Commission in fully litigated rate cases and ROEs approved by other utility regulatory

commissions nationwide, which do not support the Company's requested ROE; and

(c) The use of a fully projected future test year ("FPFTY"), which reduces the risk due to regulatory lag based on the inclusion of the most current information in its rates when they will be in effect.

(3) The Commission should reject the proposed 15 basis point performance adder.

(4) Walmart does not take a position on the Company's proposed COSS at this time. However, Walmart reserves the right to address any changes to the Company's COSS or alternative proposals from other parties, in accordance with the Commission's procedures for this docket.

(5) At the Company's proposed revenue requirement, Walmart does not oppose the Company's proposed revenue allocation methodology.

(6) If the Commission determines that the appropriate revenue requirement is less than the revenue requirement proposed by the Company, then the Commission should take steps to further reduce the interclass subsidy as reflected in Table 2 later in my testimony. Starting with the revenue allocation proposed by the Company, the Commission should apply 50 percent of the overall revenue reduction to those rate classes with a relative rate of return (defined later in my testimony and referred to as the "RROR") above 1.0, except that in no event should a subsidizing rate class (RROR above 1.0) be moved to a subsidized position (RROR below 1.0). The remaining 50 percent of the overall revenue reduction should be evenly

applied to mitigate the proposed increases for all rate classes on an equal percentage basis.

(7) Walmart does not take a position on the Company's proposed rate design for the GC rate at this time. However, to the extent that an alternative rate design for the GC rate or modifications to the Company's rate design is proposed by other parties, Walmart reserves the right to address any such changes in accordance with the Commission's procedures in this docket.

Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR POSITION ADVOCATED BY THE COMPANY INDICATE WALMART'S SUPPORT?

A. No. The fact that an issue is not addressed herein or in related filings should not be construed as an endorsement of, agreement with, or consent to any filed position.

III. Revenue Requirement and ROE

(A) Revenue Requirement and Requested ROE

Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED REVENUE REQUIREMENT INCREASE IN THIS DOCKET?

A. My understanding is that the Company proposes an annual increase in its operating revenues of approximately $111.2 million.[3] The Company provided in its filing data from three different time periods, being (i) Historical Test Year ("HTY") ended December 31, 2023; (ii) Future Test Year ("FTY") ending December 31,

[3] *See* PECO Statement No. 3, Direct Testimony of Michael J. Trzaska ("Trzaska Direct"), p. 14, lines 20-21.

2024; and (iii) FPFTY ending December 31, 2025, with its proposed rate increase being based on the adjusted FPFTY.[4]

Q. WHAT IS THE COMPANY'S PROPOSED ROE IN THIS DOCKET?

A. The Company proposes an ROE of 11.15 percent, which is comprised of a 11.00 percent cost of equity plus a 15 basis point performance adder.[5] The 11.00 percent cost of equity is based on a range of 10.57 percent to 11.50 percent.[6] For purposes of my testimony, I will analyze the effects of the 11.00 percent ROE and the 15 basis point adder separately.

Q. IS WALMART CONCERNED THAT THE COMPANY'S PROPOSED ROE IS EXCESSIVE?

A. Yes. Walmart is concerned that the Company's proposed total ROE of 11.15 percent is excessive, especially in light of:

1) The customer impact of the resulting revenue requirement increase, as discussed in more detail below;
2) The most recent ROEs approved by this Commission in fully litigated rate cases and ROEs approved by other utility regulatory commissions nationwide, as discussed more fully below, which do not support the Company's requested ROE; and
3) The use of a FPFTY, which reduces the risk due to regulatory lag based on the inclusion of the most current information in its rates when they will be in effect.

[4] *See id.* at 2, lines 5-12.
[5] *See* PECO Statement No. 5, Direct Testimony of Paul R. Moul ("Moul Direct"), p. 2, lines 3-7.
[6] *See id.* at 9, lines 16-18.

(B) Recent ROEs Approved by the Commission

Q. IS THE COMPANY'S PROPOSED ROE SIGNIFICANTLY HIGHER THAN THE ROEs PREVIOUSLY APPROVED BY THE COMMISSION FROM 2021 TO PRESENT?

A. Yes. The requested ROE of 11.00 percent exceeds the two cases listed below that were fully litigated and, as such, have a listed ROE authorized by the Commission:

1) Columbia Gas of Pennsylvania Docket No. R-2020-3018835 decided on February 19, 2021, in which the Commission approved an ROE of 9.86 percent;[7] and

2) The Company's 2020 gas rate case, Docket No. R-2020-3018929, was decided on June 17, 2021, in which the Commission approved an ROE of 10.24 percent.[8]

There has been no fully litigated gas utility base rate case with a Commission-authorized ROE since these two cases. However, the Company's requested ROE of 11.00 is 95 basis points higher than the 10.05 percent average ROE awarded by the Commission for the above-listed cases.

[7] *See* Exhibit LVP-2; *see also Pennsylvania Public Utility Commission, et al. v. Columbia Gas of Pennsylvania, Inc.*; Docket No. R-2020-3018835, *et al.*, Opinion and Order (entered Feb. 19, 2021), p. 143.
[8] *See* Exhibit LVP-2; *see also Pennsylvania Public Utility Commission, et al. v. PECO Energy Company – Gas Division*, Docket No. R-2020-3018929, *et al.*, Opinion and Order (entered June 22, 2021), p. 173.

(C) National Gas Industry ROE Trends

Q. IS THE COMPANY'S PROPOSED 11.00 PERCENT ROE SIGNIFICANTLY HIGHER THAN THE ROEs APPROVED BY OTHER UTILITY REGULATORY COMMISSIONS IN 2021, 2022, 2023, AND SO FAR IN 2024?

A. Yes. According to data from S&P Global Market Intelligence ("S&P Global"), a financial news and reporting company, the average of the 118 reported gas utility rate case ROEs authorized by commissions to investor-owned utilities in 2021, 2022, 2023, and so far in 2024, is 9.58 percent.[9] The range of reported authorized ROEs for the period is 8.80 percent to 11.88 percent, and the median authorized ROE is 9.59 percent.[10] The average and median values are significantly below the Company's proposed ROE of 11.00 percent. As such, the Company's proposed 11.00 percent ROE is counter to broader natural gas industry trends. In fact, as shown in Figure 1, the Company's proposed 11.00 percent ROE, if approved, would be the second highest approved ROE (out of 118) for a gas utility from 2021 to present.

[9] *See* Exhibit LVP-2.
[10] *See id.*

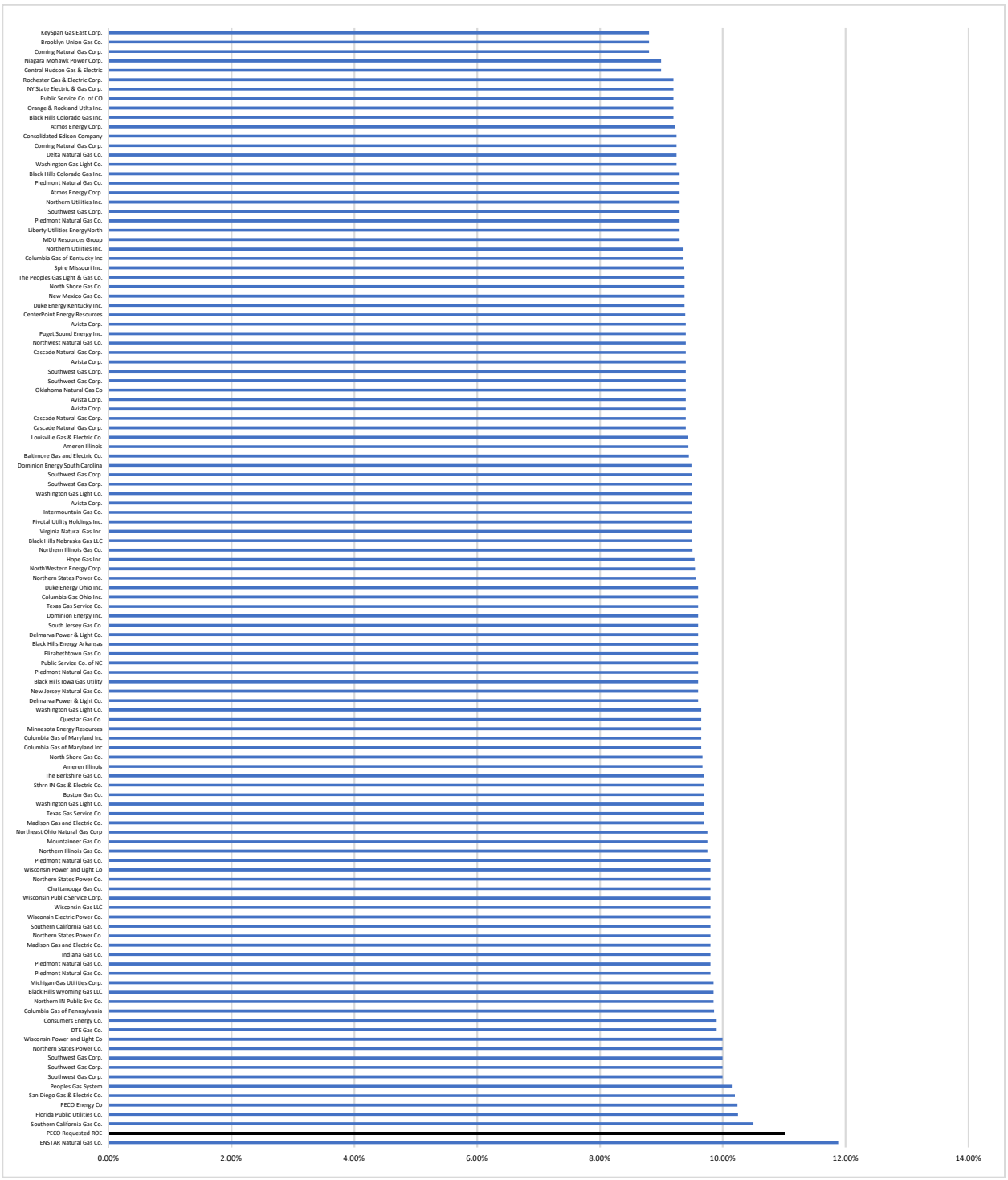


Figure 1. PECO's Proposed Gas ROE Versus Authorized ROEs for Natural Gas Utilities, 2021 to present. Source: Exhibit LVP-2.

Q. WHAT IS THE REVENUE REQUIREMENT IMPACT WERE THE COMMISSION TO APPROVE AN ROE FOR THE COMPANY EQUIVALENT TO 9.58 PERCENT, THE AVERAGE AUTHORIZED ROE NATIONWIDE IN 2021, 2022, 2023, AND SO FAR IN 2024 FOR NATURAL GAS UTILITIES?

A. If the Commission were to approve an ROE for the Company of 9.58 percent, versus the Company's proposal of 11.00 percent, it would result in a reduction in the Company's proposed revenue requirement, inclusive of taxes, of $36.9 million, or 33.1 percent.[11]

Q. IS WALMART RECOMMENDING THAT THE COMMISSION BE BOUND BY ROEs AUTHORIZED BY OTHER STATE REGULATORY COMMISSIONS?

A. No. Decisions of other state regulatory commissions are not binding on the Commission. Additionally, each state regulatory commission considers the specific circumstances in each case in its determination of the proper ROE. Walmart is providing this information to illustrate a national customer perspective on industry trends in authorized ROEs.

[11] *See* Exhibit LVP-3.

(D) Performance Adder as Part of ROE

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED PERFORMANCE ADDER.

A. It is my understanding that the Company is proposing a 15 basis point performance adder in order to recognize and encourage "exemplary performance."[12]

Q. DOES THE COMPANY PROPOSE ANY SPECIFIC MEASUREABLE OUTCOMES TO JUSTIFY THE ADDER?

A. No. The Company references testimonies from various witnesses, including Witness Hamilton, who discusses the Company's customer service technologies and programs.[13] However, there is no clear, specific measure provided that justifies the 15 basis point performance adder.

Q. SHOULD AN INCREASE TO ROE DUE TO PERFORMANCE REQUIRE SPECIFIC MEASURABLE OUTCOMES?

A. Yes. If the Commission determines that a performance adder is appropriate in this docket, it should only reward specified and measurable outcomes incremental to current outcomes and customer expectations – the utility should not receive a bonus for what it is already required to do, and what it has already done with current incentives in place. Additionally, any approval of a performance adder should require that the adder be reduced in the event the Company fails to meet the specified and measurable outcomes.

[12] *See* Moul Direct, p. 2, lines 4-7.
[13] *See id*. at 2, lines 12-14; *see also* PECO Statement No. 1, Direct Testimony of Amy E. Hamilton ("Hamilton Direct"), pp. 24-26.

Q. DOES WALMART HAVE ANY ADDITIONAL CONCERNS WITH THE PERFORMANCE ADDER?

A. Yes. The adder is essentially a non-cost factor proposed within the context of cost of service ratemaking. Traditionally, the purpose of an awarded ROE has been to compensate a company solely for its cost of capital, regardless of performance. That said, Walmart recognizes that the Commission has broad discretion over the constituent pieces of an appropriate ROE, including the extent to which performance should be rewarded or punished.

Q. WHAT IS THE IMPACT OF THE PERFORMANCE ADDER?

A. Adding the 15 basis point adder to the Company's proposed ROE increases costs to customers by roughly $2.8 million.[14] Each basis point of the performance adder adds approximately $259,515 to rates.[15]

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION REGARDING THE COMPANY'S PROPOSED PERFORMANCE ADDER?

A. The Commission should reject the Company's proposed performance adder.

(E) Walmart's Recommendation

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION IN REGARD TO THE COMPANY'S PROPOSED ROE?

A. The Commission should thoroughly and carefully consider the impact on customers in setting the ROE, in addition to all other facets of this case, to ensure that any

[14] *See* Exhibit LVP-3.
[15] *See id.*

increase in the Company's rates reflects the minimum amount necessary to compensate the Company for adequate and reliable service, while also providing PECO an opportunity to earn a reasonable return for its shareholders.

Specifically, the Commission should closely examine the Company's proposed revenue requirement increase and the associated ROE in light of:

1) The customer impact of the resulting revenue requirement increase;

2) The most recent ROEs approved by this Commission in fully litigated rate cases and ROEs approved by other utility regulatory commissions nationwide, which do not support the Company's requested ROE; and

3) The use of a FPFTY, which reduces the risk due to regulatory lag based on the inclusion of the most current information in its rates when they will be in effect.

Additionally, the Commission should reject the proposed performance adder for the reasons stated above.

IV. Cost of Service, Revenue Allocation, and Rate Design

(A) Cost of Service

Q. GENERALLY, WHAT IS WALMART'S POSITION ON SETTING RATES BASED ON THE UTILITY'S COST OF SERVICE?

A. Walmart advocates that rates be set based on the utility's cost of service for each rate class. This produces equitable rates that reflect cost causation, sends proper price signals, and minimizes price distortions.

Q. DOES WALMART TAKE A POSITION ON THE COMPANY'S PROPOSED COST OF SERVICE METHODOLOGY AT THIS TIME?

A. No. However, to the extent that alternative cost of service methodologies or modifications to the Company's methodology are proposed by other parties, Walmart reserves the right to address any such changes in accordance with the Commission's procedures in this docket.

(B) Revenue Allocation

Q. HOW DOES THE COMPANY REPRESENT IF RATES FOR A CUSTOMER CLASS ACCURATELY REFLECT THE UNDERLYING COST CAUSATION?

A. The Company reflects this relationship in their cost-of-service results through the use of class-specific rates of return. These rates of return can be converted into a "relative rate of return" or "RROR," which is an indexed measure of the relationship of the rate of return for an individual customer class to the total system rate of return. An RROR greater than 1.0 means that the customer class is paying rates in excess of costs incurred by the Company to serve that class. Conversely, an RROR less than 1.0 means that the customer class is paying rates less than the costs incurred by the Company to serve that class. As such, those rate classes with an RROR greater than 1.0 are subsidizing the classes with an RROR less than 1.0.

Q. HAS THE COMPANY CALCULATED CLASS RRORs BASED ON ITS PROPOSED COST OF SERVICE RESULTS?

A. Yes, as shown in Table 1 below.

Table 1. Class Rates of Return and RRORs, Current Rates, PECO's Proposed Allocated Cost of Service Results.

Customer Class	Rate of Return	RROR
Residential (GR)	5.53%	0.95
General Service (GS)	6.25%	1.07
Outdoor Lighting (OL)	6.25%	1.07
Large High Load Factor (L)	18.59%	3.2
Motor Vehicle – Firm (MV-F)	7.03%	1.21
Motor Vehicle – Inter (MV-I)	17.52%	3.01
Interruptible Service (IS)	50.89%	8.75
Temp Controlled Service (TCS)	48.30%	8.31
Gas Transportation - Inter (TS-I)	8.88%	1.53
Gas Transportation – Firm (TS-F)	5.99%	1.03
System Total	**5.81%**	**1.00**

Source: Exhibit JAB-1, p. 1

Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S REVENUE ALLOCATION PROPOSAL?

A. I understand that the Company's proposal to distribute the rate increase among customer classes aims to align each class more closely with its cost of service while also limiting any single class's increase to no more than twice the system average, thereby preventing rate shock.[16] According to the Company's proposed revenue allocation, the RROR for each class would be as follows:

[16] *See* PECO Statement No. 7, Direct Testimony of Joseph A. Bisti ("Bisti Direct"), p. 4, lines 5-14.

Table 2. Class RRORs, Current Rates v. PECO Proposed.

Customer Class	Current RROR	Proposed RROR
Residential (GR)	0.95	0.98
General Service (GS)	1.07	1.04
Outdoor Lighting (OL)	1.07	1.04
Large High Load Factor (L)	3.20	2.28
Motor Vehicle – Firm (MV-F)	1.21	1.04
Motor Vehicle – Inter (MV-I)	3.01	2.20
Interruptible Service (IS)	8.75	6.09
Temp Controlled Service (TCS)	8.31	5.83
Gas Transportation - Inter (TS-I)	1.53	1.10
Gas Transportation – Firm (TS-F)	1.03	1.00
System Total	**1.00**	**1.00**

Source: Exhibit JAB-1, p. 1

Q. DOES THE COMPANY'S PROPOSED REVENUE ALLOCATION BRING CUSTOMER CLASSES TO THEIR COST-BASED LEVELS?

A. No, it does not for the majority of the rate classes. As shown in Table 2 above, although the Company's proposed revenue allocation brings each class closer to its cost of service levels, most classes remain in either a subsidized or subsidizing position.

Q. WHAT IS WALMART'S REVENUE ALLOCATION RECOMMENDATION TO THE COMMISSION AT THE COMPANY'S PROPOSED REVENUE REQUIREMENT?

A. At the Company's proposed revenue requirement, Walmart does not oppose the Company's proposed revenue allocation.

Q. WHAT IS WALMART'S RECOMMENDATION TO THE COMMISSION IF THE COMMISSION DETERMINES THAT A LOWER REVENUE REQUIREMENT IS APPROPRIATE?

A. If the Commission determines that the appropriate revenue requirement is less than the revenue requirement proposed by the Company, then the Commission should take steps to further reduce the interclass subsidies as reflected in Table 2. Starting with the revenue allocation proposed by the Company, the Commission should apply 50 percent of the overall revenue reduction to those rate classes with an RROR above 1.0, except that in no event should a subsidizing rate class (RROR above 1.0) be moved to a subsidized position (RROR below 1.0). The remaining 50 percent of the overall revenue reduction should be evenly applied to mitigate the proposed increases for all rate classes on an equal percentage basis.

V. Rate Design – Rate Schedule GC (General Service - Commercial and Industrial)

Q. HOW IS THE RATE FOR GC CURRENTLY STRUCTURED?

A. The rate for the GC customer class is currently composed of the following components:

1) Fixed distribution charge billed at $/month; and

2) Variable distribution charge, calculated on a $/Mcf basis that utilizes a declining block structure where a higher rate is applied to the first 200 Mcf consumed. Beyond this initial threshold, a lower rate per Mcf is charged for any additional usage over 200 Mcf. [17]

[17] *See* Bisti Direct, Exhibit JAB-2, Gas-Pa. P.U.C. No. 6, Original Page No. 58.

Q. DOES THE COMPANY PROPOSE TO MAKE ANY STRUCTURAL CHANGES TO THE GC RATE STRUCTURE?

A. Yes, it does. The Company is dividing the fixed distribution charge into two tiers, (i) service provided through a single small diaphragm meter, and (ii) all other service.[18] The Company is also proposing to eliminate the current declining block structure for the variable distribution charge as described above and replace it with a single variable distribution charge, $/Mcf, that will continue to apply to all GC classes regardless of their new tier assignment.[19]

Q. WHAT JUSTIFICATION DOES THE COMPANY PROVIDE FOR SPLITTING THE GC FIXED DISTRIBUTION CHARGE INTO TWO SEPARATE TIERS?

A. According to the Company, its proposed changes to the customer charge is intended to more reasonably allocate the recovery of meter-related costs among small and large GC customers.[20] The Company claims that smaller GC customers, who incur similar meter-related expenses as residential users, end up disproportionately covering the costs that should also be borne by larger GC customers.[21]

Starting January 1, 2026, the Company plans to introduce two distinct fixed distribution charges for GC customer that will collectively generate the same revenue as the existing single charge, ensuring a revenue-neutral outcome.[22]

[18] *See id.* at Exhibit JAB-2, Gas-Pa. P.U.C. No. 6, Original Page No. 58a.
[19] *See id.* at 12, lines 9-13.
[20] *See id.* at 10, lines 16-20.
[21] *See id.*
[22] *See id.* at 10, line 21 to p. 11, line 2.

Customers under GC will be categorized into either "Small" or "Large" tiers based on their gas meter size, with the fixed distribution charge adjusted accordingly.[23]

Q. WHAT JUSTIFICATION DOES THE COMPANY PROVIDE FOR REPLACING THE DECLINING BLOCK VARIABLE DISTRIBUTION CHARGE WITH A SINGLE $/Mcf VARIABLE RATE?

A. Based on my understanding, the Company does not provide a specific justification for moving from a declining block structure to a single rate for its variable distribution charge other than to cite to what it agreed to in the settlement agreement from its 2022 gas base rate case, which includes presenting a cost analysis and rate design proposal in this case that would provide the cost basis for any declining block commodity charge differentials.[24]

Q. DOES WALMART TAKE A POSITION ON THE COMPANY'S PROPOSED RATE DESIGN FOR THE GC CUSTOMER CLASS AT THIS TIME?

A. No. However, to the extent that an alternative rate design for the GC rate or modifications to the Company's proposed rate design is proposed by other parties, Walmart reserves the right to address any such changes in accordance with the Commission's procedures in this docket.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

[23] *See id.* at 11, lines 2-4.
[24] *See id.* at 10, lines 7-11.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company – Gas Division	:	

VERIFICATION

I, Lisa V. Perry, hereby state that the facts in my Direct Testimony, 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 any hearing held in this matter. I understand the statements herein are made subject to the penalties of 18 Pa. C.S. §4904 (relating to falsification to authorities).

Date: 6/17/2024

L.V. Perry

Lisa V. Perry
Walmart Inc.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company – Gas Division	:	

EXHIBITS OF

LISA V. PERRY

ON BEHALF OF

WALMART INC.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company – Gas Division	:	

EXHIBIT LVP-1 OF

LISA V. PERRY

ON BEHALF OF

WALMART INC.

Lisa V. Perry

Director, Utility Partnerships - Regulatory
Walmart Inc.
Business Address: 2608 SE J Street, Bentonville, Arkansas 72716
Business Phone: (479) 274-0238

EXPERIENCE

September 2023 – Present
Walmart Inc., Bentonville, AR
Director, Utility Partnerships - Regulatory

September 2019 – September 2023
Walmart Inc., Bentonville, AR
Senior Manager, Energy Services

November 2017 – September 2019
Oram & Houghton PLLC, Round Rock, TX
Of Counsel, Energy Law

February 2016 – November 2017
Ray Quinney & Nebeker, P.C., Salt Lake City, UT
Of Counsel, Energy Law

September 2007 – February 2016
Welborn, Sullivan, Meck & Tooley, P.C., Denver, CO
Partner, Energy Law

EDUCATION

2000	University of Florida Levin College of Law	LL.M., Taxation
1999	University of Florida Levin College of Law	J.D.
1996	University of South Florida	B.A., Criminology
1993	University of South Florida	B.A., Psychology

FILED TESTIMONY

2024

Pennsylvania Public Utility Commission Docket No. R-2024-3046523: Pennsylvania Public Utility Commission v. Duquesne Light Company
Issue: General Rate Case.

Public Service Commission of South Carolina Docket No. 2024-34-E: In re: Application of Dominion Energy South Carolina, Inc. for Authority to Adjust and Increase Its Retail Electric Rate Schedules, Tariffs, and Terms and Conditions
Issue: General Rate Case.

North Carolina Utilities Commission Docket No. E-100, Sub 190: In the Matter of Biennial Consolidated Carbon Plan and Integrated Resource Plans of Duke Energy Carolinas, LLC, and Duke Energy Progress LLC, Pursuant to N.C.G.S. § 62-110.1(c).
Issue: Carbon Plan and Integrated Resource Plan.

Public Utility Commission of Texas Docket No. 56165, SOAH Docket No. 473-24-12812: Application of AEP Texas Inc. for Authority to Change Rates.
Issue: General Rate Case.

Illinois Commerce Commission Docket Nos. 22-0487 and 23-0082 (cons.) (reopen.): Illinois Commerce Commission on its Own Motion vs. Ameren Illinois Company d/b/a Ameren Illinois and Order Requiring Ameren Illinois Company to file an Initial Multi-Year Integrated Grid Plan and Initiating Proceeding to Determine Whether the Plan is Reasonable and Complies with the Public Utilities Act and Ameren Illinois Company d/b/a Ameren Illinois Petition for Approval of a Multi-Year Rate Plan pursuant to 220 ILCS 5/16-108.18.
Issue: Refiled Multi-Year Integrated Grid Plan.

Public Service Commission of South Carolina Docket No. 2022-326-E: In re: Joint Application of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC for Approval of Customer Renewable Programs
Issue: Seeking approval of new voluntary renewable programs.

Iowa Utilities Board Docket No. RPU-2023-0002: In re: Interstate Power and Light Company
Issue: General rate case.

Public Service Commission of South Carolina Docket No. 2023-388-E: In re: Application of Duke Energy Carolinas, LLC for Increase in Electric Rates, Adjustments in Electric Rate Schedules and Tariffs, and Request for an Accounting Order
Issue: General rate case.

Florida Public Service Commission Docket No. 20230020-EI: In re: Petition for limited proceeding for recovery of incremental storm restoration costs related to Hurricanes Elsa, Eta, Isaias, Ian, Nicole, and Tropical Storm Fred, by Duke Energy Florida, LLC.
Issue: Seeking approval of cost recovery for storm costs resulting from the named Hurricanes and Tropical Storm.

Public Utility Commission of Texas Docket No. 55176, SOAH Docket No. 473-24-06013: Application of El Paso Electric Company to Implement a Voluntary Texas Business Solar Power Program.
Issue: Approval of a voluntary renewable energy program.

Florida Public Service Commission Docket No. 20230019-EI: In re: Petition for recovery of costs associated with named tropical systems during the 2019-2022 hurricane seasons and replenishment of storm reserve, by Tampa Electric Company.
Issue: Seeking approval of cost recovery for storm costs incurred during the 2019-2022 hurricane seasons.

Georgia Public Service Commission Docket No. 55378: In Re: Georgia Power Company's 2023 Integrated Resource Plan Update, Certification of the Power Purchase Agreement Between Georgia Power Company and Mississippi Power Company and Santa Rosa Energy Center LLC, and Amended Certification of the Residential Thermostat Demand Response Demand Side Management Program.
Issue: Approval of an updated Integrated Resource Plan.

Public Service Commission of South Carolina Docket No. 2023-369-E: In re: S.C. Code Ann. Section 58-37-60 Independent Study to Evaluate the Integration of Renewable Energy and Emerging Energy Technologies into the Electric Grid for the Public Interest.
Issue: Evaluation of integrating renewable generation and related technologies into the grid.

2023
Public Service Commission for the State of Maryland Case No. 9702: In the Matter of the Application of Potomac Electric Power Company for Adjustments to its Retail Rates for the Distribution of Electric Energy
Issue: General rate case.

Public Service Commission for the State of New York Case No. 23-E-0418: Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Central Hudson Gas & Electric Corporation for Electric Service; and Case No. 23-G-0419: Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Central Hudson Gas and Electric Corporation for Gas Service.
Issue: General rate cast for electric and gas service.

Indiana Utility Regulatory Commission Cause No. 45933: Petition of Indiana Michigan Power Company, an Indiana Corporation, for Authority to Increase its Rates and Charges for Electric Utility Service Through a Phase In Rate Adjustment; and for Approval of Related Relief Including: (1) Revised Depreciation Rates, Including Cost of Removal Less Salvage, and Updated Depreciation Expense; (2) Accounting Relief, Including Deferrals and Amortizations; (3) Inclusion of Capital Investment; (4) Rate Adjustment Mechanism Proposals, Including New Grant Projects Rider and Modified Tax Rider; (5) a Voluntary Residential Customer Powerpay Program; (6) Waiver of Declination of Jurisdiction with Respect to Certain Rules to Facilitate Implementation of the Powerpay Program; (7) Cost Recovery for Cook Plant Subsequent License Renewal Evaluation Project; and (8) New Schedules of Rates, Rules and Regulations.
Issue: General rate case.

Public Utilities Commission of Ohio Case No. 23-301-EL-SSO: In the Matter of the Application of Ohio Edison Company, the Cleveland Electric Illuminating Company, and the Toledo Edison Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan.
Issue: Approval of the Company's proposed Electric Security Plan.

Louisiana Public Service Commission Docket No. U-36697: Application of Entergy Louisiana, LLC for Approval of an alternative market-based mechanism process seeking to secure up to 3,000 MW of solar resources, including certification of those resources, expansion of the Geaux Greem Option Rider, and approval of a new renewable tariff.
Issue: Approval of a voluntary renewable program backed by utility-owned solar assets.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2023-00101: Application of Virginia Electric and Power Company for a 2023 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia.
Issue: Biennial review of rates.

Commonwealth of Kentucky Public Service Commission Case No. 2023-00159: Electronic Application of Kentucky Power Company for (1) a General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) a Securitization Financing Order; and (5) all other Required Approvals and Relief.
Issue: General rate case.

Louisiana Public Service Commission Docket No. U-36625: Application of Entergy Louisiana, LLC for Approval of the Entergy Future Ready Resilience Plan (Phase I)
Issue: Recovery of costs to upgrade transmission and distribution systems.

Colorado Public Utilities Commission Proceeding No. 23A-0242E: In the Matter of the Application of Public Service Company of Colorado for Approval of its 2024-2026 Transportation Electrification Plan.
Issue: Seeking approval of utility's second transportation electrification plan.

Public Service Commission of South Carolina Docket No. 2023-121-E: Identification of Regulatory Challenges and Opportunities Associated with Electrification of Transportation Sector Pursuant to S.C. Code Ann. Section 58-27-265.
Issue: Electrification of the transportation sector.

Indiana Utility Regulatory Commission Cause No. 45919: In the Matter of the Petition of Indiana Michigan Power Company for Approval of (1) an Electric Vehicle Fast Charging Rate and Tariff and (2) Deferred Accounting Treatment for the Costs of Certain Company-Owned Electric Vehicle Fast Charging Stations and the Revenue from the Electric Vehicle Fast Charging Tariff.
Issue: Approval of an EV charging tariff for utility-owned public EV chargers.

Oklahoma Corporation Commission Cause No. PUD 2023000038: In the Matter of the Application of Oklahoma Gas and Electric Company for Commission Preapproval of New Generation Capacity Pursuant to 17 O.S. Section 286(C).
Issue: Approval to construct two CT units and recovery of costs through a rider.

State Corporation Commission of the State of Kansas Docket No. 23-EKCE-775-RTS: In the Matter of the Joint Application of Evergy Kansas Central, In., Evergy Kansas South, Inc., and Evergy Metro, Inc. for Approval to Make Certain Changes in their Charges for Electric Service.
Issue: General rate case.

Michigan Public Service Commission Case No. U-21389: In the matter of the application of CONSUMERS ENERGY COMPANY for authority to increase its rates for the generation and distribution of electricity and for other relief.
Issue: General rate case.

Public Service Commission of Wyoming Docket No. 20000-633-ER-23 (Record No. 17252): In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Service Rates by Approximately $140.2 Million Per Year or 21.6 Percent and to Revise the Energy Cost Adjustment Mechanism.
Issue: General Rate Case.

Public Utility Commission of Texas Docket No. 54634, SOAH Docket No. 473-23-14020: Application of Southwestern Public Service Company for Authority to Change Rates.
Issue: General Rate Case.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2023-00002: Application of Appalachian Power Company for a 2023 triennial review of its base rates, terms and conditions pursuant to § 56-585.1 of the Code of Virginia.
Issue: Triennial review of rates.

Michigan Public Service Commission Case No. U-21297: In the matter of the Application of DTE ELECTRIC COMPANY for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority.
Issue: General rate case.

Indiana Utility Regulatory Commission Cause No. 45816: Investigation of the Indiana Utility Regulatory Commission Regarding the Public Utility Regulatory Policies Act Section 111(d) Standards as Amended by the Infrastructure Investment and Jobs Act.
Issue: Electric vehicle charging programs and tariffs.

Illinois Commerce Commission Docket No. 23-0055: Commonwealth Edison Company Petition for Approval of a Multi-Year Rate Plan under Section 16-108.18 of the Public Utilities Act.
Issue: Multi-Year Rate Plan rate case.

Illinois Commerce Commission Docket No. 23-0082: Ameren Illinois Company d/b/a Ameren Illinois Petition for Approval of a Multi-Year Rate Plan pursuant to 220 ILCS 5/16-108.18.
Issue: Multi-Year Rate Plan rate case.

Illinois Commerce Commission Docket No. 23-0067: Ameren Illinois Company d/b/a Ameren Illinois Proposed General Increase in Rates and Revisions to Other Terms and Conditions of Service. (Tariff filed January 6, 2023).
Issue: Gas general rate case.

Illinois Commerce Commission Docket No. 23-0066: Northern Illinois Gas Company d/b/a Nicor Gas Company Proposed General Increase in Rates and Revisions to Other Terms and Conditions of Service. (Tariff filed January 3, 2023).
Issue: Gas general rate case.

Indiana Utility Regulatory Commission Cause No. 45843: Verified Petition of Indianapolis Power & Light Company d/b/a AES Indiana for Commission Approval of an Electric Vehicle Portfolio, Including: (1) A Public Use Electric Vehicle Pilot Program Pursuant to Ind. Code Ch. 8-1-43; and (2) Time-Varying and Other Alternative Pricing Structures and Tariffs Pursuant to Ind. Code §8-1-2.5-6(3); and for Approval of Associated Accounting and Ratemaking.
Issue: Electric vehicle charging programs and tariffs.

Arkansas Public Service Commission Docket No. 22-065-U: In the Matter of the Application of Southwestern Electric Power Company for a Certificate of Public Convenience and Necessity to Operate the John W. Turk, Jr. Power Plant to Supply a Public Service to its Arkansas Customers and for Approval of a Generation Cost Recovery Rider to Recover its Costs in Arkansas Rates.
Issue: Cost recovery from customers of an existing generation resource.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2022-00166: Petition of Appalachian Power Company for consideration of the appropriate framework for cost recovery, the allocation of costs net of benefits pursuant to Code § 56-585.5 F, and class and jurisdictional cost allocation.
Issue: Recovery methodology and cost allocation of VCEA-related costs.

Oklahoma Corporation Commission Cause No. PUD 202200093: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations and Conditions of Service for Electric Service in the State of Oklahoma and to Approve a Formula Base Rate Proposal.
Issue: General rate case.

Oklahoma Corporation Commission Cause No. PUD 202200121: Application of Public Service Company of Oklahoma (PSO) for Approval of the Cost Recovery of the Selected Wind and Solar Facilities (Renewable Resources); a Determination there is a Need for the Renewable Resources; Approval for Cost Recovery of Prudent Costs Incurred by PSO for the Renewable Resources; Approval of a Temporary Cost Recovery Rider; Approval of Certain Treatment of Federal Production Tax Credits; and Such Other Relief the Commission Deems PSO is Entitled.
Issue: Acquisition of renewable generation and recovery through a rider.

Arkansas Public Service Commission Docket No. 22-061-U: In the Matter of an Application into Potential Cost Shifting Associated with Net Metering.
Issue: Net metering tariff and any potential cost shifting between participating and non-participating customers.

2022

Commonwealth of Virginia State Corporation Commission Case No. PUR-2022-00124: Petition of Virginia Electric and Power Company for approval of its 2022 RPS Development Plan under § 56-585.5 D 4 of the Code of Virginia and related requests.
Issue: Approval of 2022 RPS Plan, new renewable projects, PPAs, and cost recovery mechanism, Rider CE, pursuant to the VCEA.

Public Service Commission of South Carolina Docket No. 2022-254-E: In re: Application of Duke Energy Progress, LLC for Increase in Electric Rates, Adjustments in Electric Rate Schedules and Tariffs, and Request for an Accounting Order.
Issue: General rate case.

Public Utility Commission of Texas Docket No. 53719, SOAH Docket No. 473-22-04394: Application of Entergy Texas, Inc. for Authority to Change Rates.
Issue: General rate case.

Louisiana Public Service Commission Docket No. U-36350: Application of Entergy Louisiana, LLC for Recovery in Rates of Costs Related to Hurricane Ida and Related Relief
Issue: Recovery costs related to Hurricane Ida.

Illinois Commerce Commission Docket Nos. 22-0432 and 22-0442 (cons.): Commonwealth Edison Company Petition for Approval of Beneficial Electrification Plan under the Electric Vehicle Act, 20 ILCS 627/45 and New EV Charging Delivery Classes under the Public Utilities Act, Article IX and Illinois Commerce Commission on its own Motion vs. Commonwealth Edison Company Investigation into Commonwealth Edison Company's Beneficial Electrification Plan Filing pursuant to 20 ILCS 627/45
Issue: Approval of Beneficial Electrification Plan.

Illinois Commerce Commission Docket Nos. 22-0431 and 22-0443 (cons.): Ameren Illinois Company d/b/a Ameren Illinois Petition for Approval of Beneficial Electrification Plan pursuant to Section 45 of the Electric Vehicle Act and Illinois Commerce Commission on its own Motion vs. Ameren Illinois Company d/b/a Ameren Illinois Investigation into Ameren Illinois Company's Beneficial Electrification Plan Filing pursuant to 20 ILCS 627/45
Issue: Approval of Beneficial Electrification Plan.

Florida Public Service Commission Docket No. 20220010-EI: In re: Storm protection plan cost recovery clause
Issue: Seeking approval of the cost allocation and recovery methodologies used for storm protection plan cost recovery clause.

Michigan Public Service Commission Case No. U-21224: In the matter of the application of CONSUMERS ENERGY COMPANY for authority to increase its rates for the generation and distribution of electricity and for other relief.
Issue: General rate case.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2021-00156: *Ex Parte*: Establishing a proceeding concerning the allocation of RPS-related costs and the determination of certain proxy values for Virginia Electric and Power Company.
Issue: Allocation methodology for VCEA-related costs and benefits.

Michigan Public Service Commission Case No. U-20836: In the matter of the Application of DTE Electric Company for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority.
Issue: General rate case.

Oklahoma Corporation Commission Cause No. PUD 202100164: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Authorizing Applicant to Modify its Rates, Charges, and Tariffs for Retail Electric Service in Oklahoma.
Issue: General Rate Case.

Louisiana Public Service Commission Docket No. U-36190: Application of Entergy Louisiana, LLC for Certification and Approval of the 2021 Solar Portfolio, Rider Geaux Green Option, Cost Recovery and Related Relief.
Issue: Approval of a voluntary renewable program backed by utility-owned solar assets.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2021-00206: Petition of Appalachian Power Company For approval of its 2021 RPS Plan under § 56-585.5 of the Code of Virginia and related requests.
Issue: Seeking approval of RPS Plan and recovery mechanisms for related costs.

Commonwealth of Kentucky Public Service Commission Case No. 2021-00481: Electronic Joint Application of American Electric Power Company, Inc., Kentucky Power Company and Liberty Utilities Co. for Approval of the Transfer of Ownership and Control of Kentucky Power Company.
Issue: Acquisition of Kentucky Power Company by Liberty Utilities Company.

Arkansas Public Service Commission Docket No. 21-070-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.
Issue: General rate case.

Arkansas Public Service Commission Docket No. 21-087-U: In the Matter of Oklahoma Gas and Electric Company's Request to Extend its Formula Rate Plan Rider.
Issue: Seeking extension of formula rate plan.

Public Utility Commission of Texas Docket No. 52451, SOAH Docket No. 473-22-0816: Application of Southwestern Public Service Company for Approval of Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fee.
Issue: Approval to implement AMS and recover costs through an additional surcharge.

2021

Louisiana Public Service Commission Docket No. U-36105: Application for Certification to Deploy Natural Gas-Fired Distributed Generation and Authorization to Implement Rider UODG.
Issue: Approval to implement a distributed generation program and rider recovery.

Public Utility Commission of Texas Docket No. 52389, SOAH Docket No. 473-22-0009: Application of Southwestern Electric Power Company for Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fees.
Issue: Approval to implement AMS and recover costs through an additional surcharge.

Louisiana Public Service Commission Docket No. U-35991: Application of Entergy Louisiana, LLC for Recovery in Rates of Costs Related to Hurricanes Laura, Delta, Zeta and Winter Storm Uri and for Related Relief.
Issue: Securitization of system restoration costs due to extreme weather conditions.

Oklahoma Corporation Commission Cause No. PUD 202100076: Application of Public Service Company of Oklahoma ("PSO") for Approval of a Financing Order for the Collection of Increased Costs Caused by the Extreme Winter Weather and Contained in the Regulatory Asset Authorized by Order 717625, Including an Appropriate Carrying Cost, and Such Other Relief as the Commission Deems PSO is Entitled.
Issue: Securitization of excessive fuel costs due to extreme weather conditions.

Colorado Public Utilities Commission Proceeding No. 21A-0141E: In the Matter of the Application of Public Service Company of Colorado for Approval of its 2021 Electric Resource Plan and Clean Energy Plan.
Issue: Seeking approval of utility's plan to meet legislative renewable and carbon reduction goals.

Arkansas Public Service Commission Docket No. 21-054-TF: In the Matter of the Application of Entergy Arkansas, LLC for a Proposed Tariff Revision Regarding a Green Promise Tariff.
Issue: Seeking approval for a voluntary renewable energy tariff.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2021-00058: Application of Virginia Electric and Power Company for a 2021 triennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia.
Issue: General Rate Case.

Public Utility Commission of Texas Docket No. 52040, SOAH Docket No. 473-21-2607: Application of El Paso Electric Company for Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fees.
Issue: Approval to implement AMS and recover costs through an additional surcharge.

Oklahoma Corporation Commission Cause No. PUD 202100072: In the Matter of the Application of Oklahoma Gas and Electric Company for a Financing Order Pursuant to the February 2021 Regulated Utility Consumer Protection Act Approving Securitization of Costs Arising from the Winter Weather Event of February 2021.
Issue: Securitization of excessive fuel costs due to extreme weather conditions.

Public Utility Commission of Texas Docket No. 51802, SOAH Docket No. 473-21-1892: Application of Southwestern Public Service Company for Authority to Change Rates.
Issue: General rate case.

Oklahoma Corporation Commission Cause No. PUD 202100055: Application of Public Service Company of Oklahoma, an Oklahoma Corporation, for an Adjustment in its Rates and Charges and the Electric Service Rules, Regulations and Conditions of Service for Electric Service in the State of Oklahoma.
Issue: General rate case.

Louisiana Public Service Commission Docket No. U-35441: Application of Southwestern Power Company (SWEPCO) for Approval of a Change in Rates, Extension of Formula Rate Plan and Other Related Relief.
Issue: General rate case and extension of formula rate plan.

Michigan Public Service Commission Case No. U-20963: In the matter of the application of Consumers Energy Company for authority to increase its rates for the generation and distribution of electricity and for other relief.
Issue: General rate case.

Florida Public Service Commission Docket No. 20210010-EI: In re: Storm protection plan cost recovery clause
Issue: Seeking approval of the cost allocation and recovery methodologies used for storm protection plan cost recovery clause.

Arkansas Public Service Commission Docket No. 19-008-U: In the Matter of the Application of Southwestern Electric Power Company for Approval of a General Change in Rates and Tariffs.
Issue: Seeking approval for amortization period and carrying costs for extraordinary fuel costs related to Winter Storm Uri.

Public Utility Regulatory Authority of Connecticut Docket No. 17-12-03RE11: PURA Investigation into Distribution System Planning of the Electric Distribution Companies – New Rate Designs and Rates Review.
Issue: Investigation into low-income rates and economic development rates.

Public Utility Commission of Texas Docket No. 51415, SOAH Docket No. 473-21-0538: Application of Southwestern Electric Power Company for Authority to Change Rates.
Issue: General rate case.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2020-00170: Petition of Virginia Electric and Power Company for approval of a rate adjustment clause, designated Rider RPS, under § 56-585.1 A 5 d of the Code of Virginia.
Issue: Seeking approval of a Rider RPS to recover costs associated with REC purchases made to comply with the Virginia Clean Economy Act.

Commonwealth of Kentucky Public Service Commission Case No. 2020-00350: Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit.
Issue: General rate case.

Commonwealth of Kentucky Public Service Commission Case No. 2020-00349: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit.
Issue: General rate case.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2020-00164: *Ex Parte*: Allocating RPS costs to certain customers of Virginia Electric and Power Company.
Issue: Determining which costs and benefits of Virginia Clean Economy Act-related assets should be allocated to non-utility customers and seeking approval of a Rider NBC to recover/credit some of those costs and/or benefits.

Oklahoma Corporation Commission Cause No. PUD 202000097: Application of Public Service Company of Oklahoma ("PSO") for Approval of the Cost Recovery of Facilities to be Located at Ft. Sill; a Determination there is a Need for the Facilities; Approval for Future Inclusion in Base Rates for Cost Recovery of Prudent Costs Incurred by PSO for the Facilities; Approval of a Temporary Cost Recovery Rider; and Such Other Relief the Commission Deems PSO is Entitled.
Issue: Seeking approval to acquire a solar facility and gas facility sited at Fort Sill.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2020-00134: *Ex Parte*: Establishing 2020 RPS Proceeding for Virginia Electric and Power Company.
Issue: Seeking approval of a Renewable Portfolio Standard Plan and rider pursuant to the Virginia Clean Economy Act (VCEA).

2020
Commonwealth of Virginia State Corporation Commission Case No. PUR-2020-00135: *Ex Parte*: Establishing 2020 RPS Proceeding for Appalachian Power Company.
Issue: Seeking approval of a Renewable Portfolio Standard Plan pursuant to the Virginia Clean Economy Act (VCEA).

Public Service Commission of South Carolina Docket No. 2019-209-E: In re: South Carolina Energy Freedom Act (House Bill 3659) Proceeding Related to Dominion Energy South Carolina, Incorporated and S.C. Code Ann. Section 58-41-30 Related to Electrical Utilities and Their Current Voluntary Renewable Energy Program, and Such Other Proceedings Required By the Commission.
Issue: Seeking approval of a Voluntary Renewable Energy Rider.

Public Service Commission of South Carolina Docket No. 2020-125-E: In re: Application of Dominion Energy South Carolina, Incorporated for Adjustment of Rates and Charges.
Issue: General rate case.

Arkansas Public Service Commission Docket No. 16-036-FR: In the Matter of Formula Rate Plan Filings of Entergy Arkansas, Inc., Pursuant to APSC Docket No. 15-015-U.
Issue: Seeking five-year extension of Formula Rate Plan.

Commonwealth of Kentucky Public Service Commission Case No. 2020-00174: Electronic Application of Kentucky Power Company for (1) a General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief.
Issue: General rate case.

Colorado Public Utilities Commission Proceeding No. 20A-0204E: In the Matter of the Application of Public Service Company of Colorado for Approval of its 2021-2023 Transportation Electrification Plan.
Issue: Seeking approval of utility's plan to encourage EV adoption in its service territory.

Oklahoma Corporation Commission Cause No. PUD 202000021: In the Matter of the Application of Oklahoma Gas and Electric Company for an Order of the Commission Approving a Recovery Mechanism for Expenditures Related to the Oklahoma Grid Enhancement Plan.
Issue: Seeking approval of a rider that allows for interim recovery of costs associated with expenditures made to enhance the grid.

Arkansas Public Service Commission Docket No. 20-027-U: In the Matter of the Application of Walmart Inc. for Approval to Bid Demand Response into Wholesale Electricity Markets Through an Aggregator of Retail Customers.
Issue: Seeking approval to bid demand response into MISO through a third-party aggregator.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2020-00015: Application of Appalachian Power Company For a 2020 Triennial Review of the Rates, Terms and Conditions for the Provision of Generation, Distribution and Transmission Services Pursuant to § 56-585.1 A of the Code of Virginia.
Issue: General Rate Case.

Michigan Public Service Commission Case No. U-20697: In the matter of the application of Consumers Energy Company for authority to increase its rates for the generation and distribution of electricity and for other relief.
Issue: General rate case.

Florida Public Service Commission Consolidated Docket Nos. 20200067-EI, 20200069-EI, 20200070-EI, 20200071-EI: In re: Review of 2020-2029 Storm Protection Plan pursuant to Rule 25-6.030, F.A.C., Tampa Electric Company *et al.*
Issue: Seeking approval of Storm Protection Plans submitted by Tampa Electric Company, Duke Energy Florida, LLC, Gulf Power Company, and Florida Power & Light Company.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2019-00201: Application of Virginia Electric and Power Company for approval of its 2019 DSM Update pursuant to § 56-585.1 A 5 of the Code of Virginia.
Issue: Seek approval to implement eleven new demand-side management programs, to extend existing programs - some with updated parameters and cost/benefit results, and to continue three rate adjustment clauses.

Public Utility Commission of Texas Docket No. 49737, SOAH Docket No. 473-19-6862: Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization and Related Relief for the Acquisition of Wind Generation Facilities.
Issue: Seeking approval to acquire a wind generation facility located in Oklahoma.

Louisiana Public Service Commission Docket No. U-35324: Application of Southwestern Power Company (SWEPCO) for Certification and Approval of the Acquisition of Certain Renewable Resources in Accordance with the MBM Order and the 1983 and 1994 General Orders.
Issue: Seeking approval to acquire a wind generation facility located in Oklahoma.

2019

Commonwealth of Virginia State Corporation Commission Case No. PUR-2019-00154: Petition of Virginia Electric and Power Company for approval of a plan for electric distribution grid transformation projects pursuant to § 56-585.1 A 6 of the Code of Virginia, and for approval of an addition to the terms and condition applicable to electric service.
Issue: Seeking approval of certain expenditures relating to grid improvement and grid hardening.

Commonwealth of Virginia State Corporation Commission Case No. PUR-2019-00094: Application of Virginia Electric and Power Company for Approval of a 100 Percent Renewable Energy Tariff, Designated Rider TRG, Pursuant to §§ 56-577 A 5 and 56-234 of the Code of Virginia.
Issue: Seek approval of a 100 percent renewable energy tariff.

Public Service Commission of South Carolina Docket No. 2019-239-E: In re: Dominion Energy South Carolina, Incorporated's Request for Approval of an Expanded Portfolio of Demand Side Management Programs, and a Modified Demand Side Management Rate Rider.
Issue: Seeking approval of an expanded Demand Side Management Plan and modified Demand Side Management Rate Rider.

Oklahoma Corporation Commission Cause No. PUD 201900048: Application of Public Service Company of Oklahoma for Approval of the Cost Recovery of the Selected Wind Facilities; A Determination there is a Need for the SWFs; Approval for Future Inclusion in Base Rates Cost Recovery of Prudent Costs Incurred by PSO for the SWFs; Approval of a Temporary Cost Recovery Rider; Approval of Certain Accounting Procedures Regarding Federal Production Tax Credits; and Such Other Relief the Commission Deems PSO in Entitled.
Issue: Seeking approval to acquire a wind generation facility located in Oklahoma and Wind Facility Asset Rider.

Arkansas Public Service Commission Docket No. 19-035-U: In the Matter of the Application of Southwestern Electric Power Company for Approval to Acquire Wind Generating Facilities Pursuant to the Arkansas Clean Energy Development Act.
Issue: Seeking approval to acquire a wind generation facility located in Oklahoma and Wind Facility Asset Rider.

COMMISSION DOCKETS (Appearing as Attorney of Record)
2019
Public Utility Commission of Texas Docket No. 49421: Application of CenterPoint Energy Houston Electric, LLC for Authority to Change Rates.
Issue: General rate case

Public Utility Commission of Texas Docket No. 49494: Application of AEP Texas Inc. for Authority to Change Rates.
Issue: General rate case

Public Utility Commission of Colorado Docket No. 19AL-0268E: In the Matter of Advice Letter No. 1797 Filed by Public Service Company of Colorado to Reset the Currently Effective General Rate Schedule Adjustment ("GRSA") as Applied to Base Rates for all Electric Rate Schedules as well as Implement a Base Rate kWh Charge, General Rate Schedule Adjustment-Energy ("GRSA-E") to Become Effective June 20, 2019.
Issue: General rate case, Phase I

2018

Public Utility Commission of Texas Docket No. 48371: Entergy Texas, Inc.'s Statement of Intent and Application for Authority to Change Rates.
Issue: General rate case

Public Utility Commission of Colorado Docket No. 18M-0074EG: In the Matter of the Commission's Consideration of the Impact of the Federal Tax Cuts and Jobs Act of 2017 on the Rates of Colorado Investor-Owned Electric and Natural Gas Utilities.
Issue: Commenced by the Commission to consider the impacts of the Tax Cut and Jobs Act of 2017 on the revenue requirements and rates of all Colorado investor-owned electric and natural gas utilities.

2017

Public Utility Commission of Texas Docket No. 47461: Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization and Related Relief for the Wind Catcher Energy Connection Project in Oklahoma.
Issue: Purchase of a wind generation facility and generation tie line.

Public Utility Commission of Texas Docket No. 47527: Application of Southwestern Public Service Company for Authority to Change Rates.
Issue: General rate case

Public Utility Commission of Colorado Docket No. 17A-0462EG: In the Matter of the Application of Public Service Company of Colorado for Approval of a Number of Strategic Issues Relating to its Electric and Gas Demand-Side Management Plan.
Issue: Seek Commission re-examination and approval of the overall objectives and structure of Public Service's DSM initiatives to guide the Company in designing future DSM plans.

Public Utility Commission of Colorado Docket No. 17AL-0649E: In the Matter of Advice Letter No. 1748-Electric Filed by Public Service Company of Colorado to Revise its PUC No. 8-Electric Tariff to Implement a General Rate Schedule Adjustment and Other Rate Changes Effective on Thirty Days' Notice.
Issue: General rate case, Phase I

Arkansas Public Service Commission Docket No. 17-038-U: In the Matter of the Application of Southwestern Electric Power Company for Approval to Acquire a Wind Generating Facility and to Construct a Dedicated Generation Tie Line.
Issue: Purchase of a wind generation facility and generation tie line.

Louisiana Public Service Commission Docket No. U-34619: Application for Expedited Certification and Approval of the Acquisition of Certain Renewable Resources and the Construction of a Generation Tie Pursuant to the 1983 and/or 1994 General Orders.
Issue: Purchase of a wind generation facility and generation tie line.

2016

Public Utility Commission of Colorado Docket No. 16AL-0048E: In the Matter of Advice Letter No. 1712-Electric Filed by Public Service Company of Colorado to Replace Colorado PUC No. 7-Electric Tariff with Colorado PUC No. 8-Electric Tariff.
Issue: General rate case, Phase II

Public Utility Commission of Colorado Docket No. 16A-0055E: In the Matter of the Application of Public Service Company of Colorado for Approval of its Solar*Connect Program.
Issue: Implement a voluntary solar program offering participating customers the ability to offset their current supply of energy from the Public Service system with solar energy produced at a dedicated facility or facilities.

New Mexico Public Regulation Commission Docket No. 16-00276-UT: In the Matter of the Application of Public Service Company of New Mexico for Revision of its Retail Electric Rates Pursuant to Advice Notice No. 533.
Issue: General rate case

INDUSTRY TRAINING

- 2020 Practical Regulatory Training for the Electric Industry, Center for Public Utilities, New Mexico State University College of Business
- 2020 IPU Accounting and Ratemaking Course, Michigan State University
- 2016 and 2022 Western NARUC Utility Rate School
- EUCI Courses on the utility industry, cost allocation, and rate design.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company – Gas Division	:	

EXHIBIT LVP-2 OF

LISA V. PERRY

ON BEHALF OF

WALMART INC.

Reported Authorized Returns on Equity, Gas Utility Rate Cases Completed, 2021 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Approved ROE	Difference	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) (7) - (5)	(10)	(11)	(12)	(13) (7) X (12)
Delaware	Delmarva Power & Light Co.	EXC	D-20-0150	10.30%	1/6/2021	9.60%	(70)	Settled	6.80%	50.37%	4.84%
Oregon	Cascade Natural Gas Corp.	MDU	D-UG 390	9.40%	1/6/2021	9.40%	-	Settled	7.07%	50.00%	4.70%
Illinois	Ameren Illinois	AEE	D-20-0308	10.50%	1/13/2021	9.67%	(83)	Fully Litigated	7.14%	52.00%	5.03%
Nebraska	Black Hills Nebraska Gas LLC	BKH	D-NG-109	10.00%	1/26/2021	9.50%	(50)	Settled	6.71%	50.00%	4.75%
Tennessee	Piedmont Natural Gas Co.	DUK	D-20-00086	10.30%	2/16/2021	9.80%	(50)	Settled	6.85%	50.50%	N/A
Pennsylvania	Columbia Gas of Pennsylvania	NI	D-R-2020-3018835	10.95%	2/19/2021	9.86%	(109)	Fully Litigated	7.41%	54.19%	5.34%
District of Columbia	Washington Gas Light Co.	ALA	FC-1162	10.40%	2/24/2021	9.25%	(115)	Settled	7.05%	52.10%	4.82%
California	Southwest Gas Corp.	SWX	A-19-08-015 (SoCal)	10.50%	3/25/2021	10.00%	(50)	Settled	7.11%	52.00%	5.20%
California	Southwest Gas Corp.	SWX	A-19-08-015 (NoCal)	10.50%	3/25/2021	10.00%	(50)	Settled	7.44%	52.00%	5.20%
California	Southwest Gas Corp.	SWX	A-19-08-015 (LkTah)	10.50%	3/25/2021	10.00%	(50)	Settled	7.44%	52.00%	5.20%
Maryland	Washington Gas Light Co.	ALA	C-9651	10.45%	4/9/2021	9.70%	(75)	Fully Litigated	7.09%	52.03%	5.05%
North Dakota	MDU Resources Group	MDU	C-PU-20-379	9.80%	5/5/2021	9.30%	(50)	Settled	6.85%	50.31%	4.68%
Washington	Cascade Natural Gas Corp.	MDU	D-UG-200568	9.80%	5/18/2021	9.40%	(40)	Fully Litigated	6.95%	49.10%	4.62%
New York	Corning Natural Gas Corp.	CNIG	C-20-G-0101	10.20%	5/19/2021	8.80%	(140)	Fully Litigated	6.28%	48.00%	4.22%
Pennsylvania	PECO Energy Co	EXC	D-R-2020-3018929	10.95%	6/17/2021	10.24%	(71)	Fully Litigated	7.26%	53.38%	5.47%
Kentucky	Louisville Gas & Electric Co.	PPL	C-2020-00350 (gas)	10.00%	6/30/2021	9.43%	(57)	Settled	N/A	N/A	NA
West Virginia	Hope Gas Inc.	D	C-20-0746-G-42T	10.25%	7/27/2021	9.54%	(71)	Fully Litigated	5.90%	46.26%	4.41%
New Hampshire	Liberty Utilities EnergyNorth	AQN	D-DG-20-105	10.51%	7/30/2021	9.30%	(121)	Settled	6.96%	52.00%	4.84%
New York	Brooklyn Union Gas Co.	NG.	C-19-G-0309	9.65%	8/12/2021	8.80%	(85)	Settled	6.34%	48.00%	4.22%
New York	KeySpan Gas East Corp.	NG.	C-19-G-0310	9.65%	8/12/2021	8.80%	(85)	Settled	6.32%	48.00%	N/A
Idaho	Avista Corp.	AVA	C-AVU-G-21-01	9.90%	9/1/2021	9.40%	(50)	Settled	7.05%	50.00%	4.70%
Illinois	North Shore Gas Co.	WEC	D-20-0810	10.00%	9/8/2021	9.67%	(33)	Fully Litigated	6.63%	51.58%	4.99%
Michigan	Michigan Gas Utilities Corp.	WEC	C-U-20718	10.20%	9/9/2021	9.85%	(35)	Settled	N/A	N/A	NA
Virginia	Virginia Natural Gas Inc.	SO	C-PUR-2020-00095	10.35%	9/14/2021	9.50%	(85)	Settled	7.05%	51.89%	4.93%
Washington	Avista Corp.	AVA	D-UG-200901	9.90%	9/27/2021	9.40%	(50)	Settled	7.12%	48.50%	4.56%
South Carolina	Piedmont Natural Gas Co.	DUK	D-2021-7-G	12.60%	9/29/2021	9.80%	(280)	Settled	7.07%	52.20%	5.12%
Massachusetts	Boston Gas Co.	NG.	DPU 20-120	10.50%	9/30/2021	9.70%	(80)	Fully Litigated	6.98%	53.44%	5.18%
Indiana	Sthrn IN Gas & Electric Co.	CNP	Ca-45447	10.15%	10/6/2021	9.70%	(45)	Settled	5.78%	45.74%	4.44%
Missouri	Spire Missouri Inc.	SR	C-GR-2021-0108	9.95%	10/27/2021	9.37%	(58)	Fully Litigated	6.37%	49.86%	4.67%
Indiana	Indiana Gas Co.	CNP	Ca-45468	10.15%	11/17/2021	9.80%	(35)	Settled	6.16%	46.21%	4.53%
New Jersey	New Jersey Natural Gas Co.	NJR	D-GR21030679	10.50%	11/17/2021	9.60%	(90)	Settled	6.84%	54.00%	5.18%
Illinois	Northern Illinois Gas Co.	SO	D-21-0098	10.35%	11/18/2021	9.75%	(60)	Fully Litigated	6.96%	54.46%	5.31%
New York	Central Hudson Gas & Electric	FTS	C-20-G-0429	9.10%	11/18/2021	9.00%	(10)	Settled	6.48%	50.00%	4.50%
Wisconsin	Northern States Power Co.	XEL	D- 4220-UR-125 (Gas)	10.00%	11/18/2021	10.00%	-	Settled	7.31%	52.50%	5.25%
Wisconsin	Wisconsin Power and Light Co	LNT	D-6680-UR-123 (Gas)	10.00%	11/18/2021	10.00%	-	Settled	7.44%	52.50%	5.25%
Wisconsin	Madison Gas and Electric Co.	MGEE	D-3270-UR-124 (Gas)	9.80%	11/23/2021	9.80%	-	Settled	N/A	55.00%	5.39%
Oklahoma	Oklahoma Natural Gas Co	OGS	Ca-PUD202100063	9.95%	11/30/2021	9.40%	(55)	Settled	7.20%	58.55%	5.50%
Maryland	Columbia Gas of Maryland Inc	NI	C-9664	10.85%	12/3/2021	9.65%	(120)	Fully Litigated	7.06%	52.95%	5.11%
Michigan	DTE Gas Co.	DTE	C-U-20940	10.25%	12/9/2021	9.90%	(35)	Fully Litigated	5.41%	39.23%	3.88%
Colorado	Black Hills Colorado Gas Inc.	BKH	D-21AL-0236G	9.95%	12/13/2021	9.20%	(75)	Settled	6.56%	50.26%	4.62%

Reported Authorized Returns on Equity, Gas Utility Rate Cases Completed, 2021 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Approved ROE	Difference	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) (7) - (5)	(10)	(11)	(12)	(13) (7) X (12)
Iowa	Black Hills Iowa Gas Utility	BKH	D-RPU-2021-0002	10.15%	12/28/2021	9.60%	(55)	Settled	6.75%	50.01%	4.80%
Kentucky	Columbia Gas of Kentucky Inc	NI	C-2021-00183	10.30%	12/28/2021	9.35%	(95)	Settled	6.89%	52.64%	4.92%
Kentucky	Duke Energy Kentucky Inc.	DUK	C-2021-00190	10.30%	12/28/2021	9.38%	(92)	Settled	6.54%	51.34%	4.82%
Kentucky	Delta Natural Gas Co.	WTRG	C-2021-00185	10.95%	1/3/2022	9.25%	(170)	Settled	N/A	N/A	NA
North Carolina	Piedmont Natural Gas Co.	DUK	D-G-9, Sub 781	10.25%	1/6/2022	9.60%	(65)	Settled	6.90%	51.60%	4.95%
New York	Niagara Mohawk Power Corp.	NG.	C-20-G-0381	9.50%	1/20/2022	9.00%	(50)	Settled	6.08%	48.00%	4.32%
North Carolina	Public Service Co. of NC	D	D-G-5 Sub 632	10.25%	1/21/2022	9.60%	(65)	Settled	7.07%	51.60%	4.95%
Nevada	Southwest Gas Corp.	SWX	D-21-09001 (Southern)	9.90%	3/22/2022	9.40%	(50)	Settled	N/A	50.00%	4.70%
Nevada	Southwest Gas Corp.	SWX	D-21-09001 (Northern)	9.90%	3/22/2022	9.40%	(50)	Settled	N/A	50.00%	4.70%
New York	Orange & Rockland Utlts Inc.	ED	C-21-G-0073	9.50%	4/14/2022	9.20%	(30)	Settled	6.77%	48.00%	4.42%
Kentucky	Atmos Energy Corp.	ATO	C-2021-00214	10.35%	5/19/2022	9.23%	(112)	Fully Litigated	6.82%	54.50%	5.03%
New York	Corning Natural Gas Corp.		C-21-G-0394	10.20%	6/16/2022	9.25%	(95)	Settled	6.53%	48.00%	4.44%
Michigan	Consumers Energy Co.	CMS	C-U-21148	10.25%	7/7/2022	9.90%	(35)	Settled	NA	NA	NA
New Hampshire	Northern Utilities Inc.	UTL	D-DG-21-104	10.30%	7/20/2022	9.30%	(100)	Settled	7.20%	52.00%	4.84%
Indiana	Northern IN Public Svc Co.	NI	Ca-45621	10.50%	7/27/2022	9.85%	(65)	Settled	6.55%	49.47%	4.87%
Oregon	Avista Corp.	AVA	D-UG 433	9.90%	8/2/2022	9.40%	(50)	Settled	7.05%	50.00%	4.70%
New Jersey	Elizabethtown Gas Co.	SJI	D-GR21121254	10.75%	8/17/2022	9.60%	(115)	Settled	6.85%	52.00%	4.99%
Minnesota	CenterPoint Energy Resources	CNP	D-G-008/GR-21-435	10.20%	8/18/2022	9.39%	(81)	Settled	6.65%	51.00%	4.79%
Washington	Cascade Natural Gas Corp.	MDU	D-UG-210755	9.40%	8/23/2022	9.40%	-	Settled	6.85%	47.00%	4.42%
South Carolina	Piedmont Natural Gas Co.	DUK	D-2022-89-G	9.90%	9/15/2022	9.30%	(60)	Settled	6.80%	52.20%	4.85%
Arkansas	Black Hills Energy Arkansas	BKH	D-21-097-U	10.20%	10/10/2022	9.60%	(60)	Fully Litigated	5.32%	45.00%	4.32%
Delaware	Delmarva Power & Light Co.	EXC	D-22-0002	10.30%	10/12/2022	9.60%	(70)	Settled	6.57%	49.94%	4.79%
Oregon	Northwest Natural Gas Co.	NWN	D-UG-435	9.50%	10/24/2022	9.40%	(10)	Settled	6.84%	50.00%	4.70%
Colorado	Public Service Co. of CO	XEL	D-22AL-0046G	10.25%	10/25/2022	9.20%	(105)	Fully Litigated	6.70%	53.78%	4.95%
North Dakota	Northern States Power Co.	XEL	C-PU-21-381	10.50%	10/27/2022	9.80%	(70)	Settled	N/A	52.54%	5.15%
Massachusetts	The Berkshire Gas Co.	IBE	DPU 22-20	10.50%	10/27/2022	9.70%	(80)	Settled	7.20%	54.00%	5.24%
California	San Diego Gas & Electric Co.	SRE	A-21-08-014 (Gas)	10.55%	11/3/2022	10.20%	(35)	Fully Litigated	7.55%	52.00%	5.30%
Maryland	Columbia Gas of Maryland Inc	NI	C-9680	10.95%	11/17/2022	9.65%	(130)	Settled	7.11%	52.97%	5.11%
New Mexico	New Mexico Gas Co.	EMA	C-21-00267-UT	10.10%	11/30/2022	9.38%	(72)	Settled	6.44%	52.00%	4.88%
California	Southern California Gas Co.	SRE	A-22-04-011	10.75%	12/15/2022	9.80%	(95)	Fully Litigated	7.10%	52.00%	5.10%
New Jersey	South Jersey Gas Co.	JPM	D-GR22040253	10.75%	12/21/2022	9.60%	(115)	Settled	6.93%	54.00%	5.18%
Washington	Puget Sound Energy Inc.		D-UG-220067	9.90%	12/22/2022	9.40%	(50)	Settled	7.16%	49.00%	4.61%
Utah	Dominion Energy Inc.	D	D-22-057-03	10.30%	12/23/2022	9.60%	(70)	Fully Litigated	6.86%	51.00%	4.90%
Wisconsin	Wisconsin Electric Power Co.	WEC	D-5-UR-110 (WEP-Gas)	10.00%	12/29/2022	9.80%	(20)	Fully Litigated	N/A	53.00%	5.19%
Wisconsin	Wisconsin Gas LLC	WEC	D-5-UR-110	10.20%	12/29/2022	9.80%	(40)	Fully Litigated	N/A	53.00%	5.19%
Wisconsin	Wisconsin Public Service Corp.	WEC	D-6690-UR-127 (Gas)	10.00%	12/22/2022	9.80%	(20)	Fully Litigated	N/A	53.00%	5.19%
Texas	Texas Gas Service Co.	OGS	D-OSS-22-00009896	10.25%	1/19/2023	9.60%	(65)	Fully Litigated	7.38%	59.74%	5.74%
Arizona	Southwest Gas Corp.	SWX	D-G-01551A-21-0368	9.90%	1/23/2023	9.30%	(60)	Settled	6.73%	50.00%	4.65%
Florida	Florida Public Utilities Co.	CPK	D-20220067-GU	11.25%	1/24/2023	10.25%	(100)	Fully Litigated	5.97%	45.16%	4.63%
Ohio	Columbia Gas Ohio Inc.	NI	C-21-0637-GA-AIR	10.95%	1/26/2023	9.60%	(135)	Settled	7.08%	50.60%	4.86%

Reported Authorized Returns on Equity, Gas Utility Rate Cases Completed, 2021 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Approved ROE	Difference	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) (7) - (5)	(10)	(11)	(12)	(13) (7) X (12)
Minnesota	Northern States Power Co.	XEL	D-G-002/GR-21-678	10.50%	3/23/2023	9.57%	(93)	Settled	6.97%	52.50%	5.02%
Florida	Pivotal Utility Holdings Inc.	NEE	20220069-GU	10.75%	3/28/2023	9.50%	(125)	Fully Litigated	6.44%	59.60%	5.66%
Colorado	Atmos Energy Corp.	ATO	D-22AL-0348G	10.95%	5/4/2023	9.30%	(165)	Settled	7.00%	58.00%	5.39%
Idaho	Intermountain Gas Co.	MDU	C-INT-G-22-07	10.30%	6/30/2023	9.50%	(80)	Settled	6.97%	50.00%	4.75%
New York	Consolidated Edison Company	ED	C-22-G-0065	10.00%	7/20/2023	9.25%	(75)	Settled	6.75%	48.00%	4.44%
Idaho	Avista Corp.	AVA	C-AVU-G-23-01	10.25%	8/31/2023	9.40%	(85)	Settled	7.19%	50.00%	4.70%
Maine	Northern Utilities Inc.	UTL	D-2023-00051	10.35%	9/20/2023	9.35%	(100)	Settled	7.22%	52.01%	4.86%
South Carolina	Dominion Energy South Carolina	D	D-2023-70-G	10.38%	9/20/2023	9.49%	(89)	Settled	7.74%	54.78%	5.20%
South Carolina	Piedmont Natural Gas Co.	DUK	D-2023-7-G	9.30%	10/5/2023	9.30%	-	Settled	6.90%	53.13%	4.94%
Tennessee	Chattanooga Gas Co.	SO	D-23-00029	9.80%	10/6/2023	9.80%	-	Settled	7.12%	49.23%	4.82%
New York	NY State Electric & Gas Corp.	IBE	C-22-G-0318	10.20%	10/12/2023	9.20%	(100)	Settled	6.40%	48.00%	4.42%
New York	Rochester Gas & Electric Corp.	IBE	C-22-G-0320	10.20%	10/12/2023	9.20%	(100)	Settled	6.67%	48.00%	4.42%
Montana	NorthWestern Energy Corp.	NEW	D-2022-7-78 (gas)	10.60%	10/25/2023	9.55%	(105)	Settled	6.67%	48.02%	4.59%
Minnesota	Minnesota Energy Resources	WEC	D-G-011/GR-22-504	10.30%	10/26/2023	9.65%	(65)	Settled	6.72%	9.65%	0.93%
Oregon	Avista Corp.	AVA	D-UG-461	10.25%	10/26/2023	9.50%	(75)	Settled	7.24%	50.00%	4.75%
Ohio	Duke Energy Ohio Inc.	DUK	C-22-0507-GA-AIR	10.30%	11/1/2023	9.60%	(70)	Settled	6.96%	52.32%	5.02%
Wisconsin	Madison Gas and Electric Co.	MGEE	D-3270-UR-125 (gas)	9.80%	11/3/2023	9.70%	(10)	Fully Litigated	7.80%	56.06%	5.44%
Wyoming	Questar Gas Co.		D-30010-215-GR-23	10.30%	11/7/2023	9.65%	(65)	Settled	6.95%	51.56%	4.98%
Florida	Peoples Gas System	EMA	D-20230023-GU	11.00%	11/9/2023	10.15%	(85)	Fully Litigated	7.02%	NA	NA
Wisconsin	Northern States Power Co.	XEL	D-4220-UR-126 (gas)	10.25%	11/9/2023	9.80%	(45)	Fully Litigated	7.58%	52.50%	5.15%
Wisconsin	Wisconsin Power and Light Co	LNT	D-6680-UR-124 (gas)	10.00%	11/9/2023	9.80%	(20)	Fully Litigated	7.42%	53.70%	5.26%
Illinois	Ameren Illinois	AEE	D-23-0067	10.30%	11/16/2023	9.44%	(86)	Fully Litigated	6.85%	50.00%	4.72%
Illinois	North Shore Gas Co.	WEC	D-23-0068	9.90%	11/16/2023	9.38%	(52)	Fully Litigated	6.96%	52.58%	4.93%
Illinois	Northern Illinois Gas Co.	SO	D-23-0066	10.35%	11/16/2023	9.51%	(84)	Fully Litigated	6.68%	50.00%	4.76%
Illinois	The Peoples Gas Light & Gas Co.	WEC	D-23-0069	9.90%	11/16/2023	9.38%	(52)	Fully Litigated	6.65%	50.79%	4.76%
Tennessee	Piedmont Natural Gas Co.	DUK	D-23-00035	9.80%	12/4/2023	9.80%	-	Settled	6.95%	50.09%	4.91%
Maryland	Baltimore Gas and Electric Co.	EXC	C-9692 (gas)	10.40%	12/14/2023	9.45%	(95)	Fully Litigated	6.74%	52.00%	4.91%
Maryland	Washington Gas Light Co.	ALA	C-9704	10.75%	12/14/2023	9.50%	(125)	Fully Litigated	7.04%	52.60%	5.00%
District of Columbia	Washington Gas Light Co.	ALA	FC-1169	10.40%	12/15/2023	9.65%	(75)	Fully Litigated	7.11%	52.00%	5.02%
West Virginia	Mountaineer Gas Co.	UGI	C-23-0280-G-42T	10.90%	12/21/2023	9.75%	(115)	Settled	7.24%	NA	NA
California	Southern California Gas Co.	SRE	Advice Letter No. 6207-G	10.50%	12/22/2023	10.50%	-	Fully Litigated	7.67%	52.00%	5.46%
Wyoming	Black Hills Wyoming Gas LLC	BKH	D-30026-78-GR-23	10.49%	1/17/2024	9.85%	(64)	Settled	7.33%	51.00%	5.02%
Texas	Texas Gas Service Co.	OGS	D-OSS-23-00014399	10.25%	1/31/2024	9.70%	(55)	Settled	7.42%	59.07%	5.73%
Colorado	Black Hills Colorado Gas Inc.	BKH	D-23AL-0231G	10.49%	3/24/2024	9.30%	(119)	Settled	6.90%	50.87%	4.73%
Alaska	ENSTAR Natural Gas Co.		D-U-22-081	12.95%	4/8/2024	11.88%	(107)	Fully Litigated	7.74%	54.11%	6.43%
Nevada	Southwest Gas Corp.	SWX	D-23-09012 (Northern)	10.00%	4/8/2024	9.50%	(50)	Settled	7.01%	50.00%	4.75%
Nevada	Southwest Gas Corp.	SWX	D-23-09012 (Southern)	10.00%	4/8/2024	9.50%	(50)	Settled	7.00%	50.00%	4.75%
Ohio	Northeast Ohio Natural Gas Corp		C-23-0154-GA-AIR	10.90%	4/17/2024	9.75%	(115)	Settled	7.64%	51.42%	5.01%

Reported Authorized Returns on Equity, Gas Utility Rate Cases Completed, 2021 to Present

State	Utility	Parent Company Ticker	Docket	Requested ROE	Order Date	Approved ROE	Difference	ROE Fully Litigated or Settled	Approved WACC	Approved Equity Ratio	Equity Contribution
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) (7) - (5)	(10)	(11)	(12)	(13) (7) X (12)
Entire Period											
# of Decisions			118								
Average	(All Utilities)			10.28%		9.58%	(70)		6.90%	50.88%	4.84%
Median	(All Utilities)			10.25%		9.59%			6.96%	51.57%	4.88%
Maximum	(All Utilities)			12.95%		11.88%			7.80%	59.74%	5.74%
Minimum	(All Utilities)			9.10%		8.80%			5.32%	9.65%	3.88%
Pennsylvania			2	10.95%		10.05%	(90)		7.34%	53.79%	5.40%
Settled				10.21%		9.51%	(70)		6.91%	50.43%	4.80%
Fully Litigated				10.43%		9.73%	(70)		6.88%	51.80%	5.04%
2021											
# of Decisions			43								
Average	(All Utilities)			10.23%		9.56%	(67)		6.82%	50.86%	4.88%
2022											
# of Decisions			33								
Average	(All Utilities)			10.20%		9.53%	(68)		6.80%	51.05%	4.86%
2023											
# of Decisions			35								
Average	(All Utilities)			10.32%		9.58%	(74)		6.99%	50.44%	4.82%
2024											
# of Decisions			7								
Average	(All Utilities)			10.73%		9.93%	(80)		7.29%	52.35%	5.20%

Source: S&P Global Market Intelligence
Last Updated: 6/16/2024

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2024-3046932
	:	
PECO Energy Company – Gas Division	:	

EXHIBIT LVP-3 OF

LISA V. PERRY

ON BEHALF OF

WALMART INC.

Impact of PECO's Proposed Increase in Return on Equity
Vs. National Average for Natural Gas Utilities, 2021 to Present

		National Average ROE for Natural Gas Utilities, 2021 to Present (9.58%)				
		Capital Component	**Ratio**	**Cost**		**Weighted Cost**
(1)	Moul Direct, pp. 23-24 and Ex. PRM-1, p. 1	Long Term Debt	46.60%	4.58%		2.13%
(2)	Moul Direct, p. 23 and Ex. PRM-1, p. 1	Common Equity	53.40%	9.58%		5.12%
			100.00%			
(3)	(1) + (2)	**WACC at National Average ROE (9.58%)**				**7.25%**
(4)	Ex. JD-1, p. 1, line 24	Total Rate Base (excl. purchased gas)			$	3,513,974,000
(5)	(3) x (4)	Net Opertaing Income, National Average ROE			$	254,763,115
		Proposed ROE - without Performance Adder (11.00%)				
		Capital Component	**Ratio**	**Cost**		**Weighted Cost**
(6)	Moul Direct, pp. 23-24 and Ex. PRM-1, p. 1	Long Term Debt	46.60%	4.58%		2.13%
(7)	Moul Direct, p. 23 and Ex. PRM-1, p. 1	Common Equity	53.40%	11.00%		5.87%
			100.00%			
(8)	(6) + (7)	**WACC at Proposed ROE - without Performance Adder (11.00%)**				**8.01%**
(9)	Ex. JD-1, p. 1, line 24	Total Rate Base (excl. purchased gas)			$	3,513,974,000
(10)	(8) x (9)	Net Operating Income, Proposed ROE - without Performance Adder			$	281,408,877
		Increase in Revenue Requirement from Increase in ROE - without Performance Adder				
(11)	(10) - (5)	Difference in Net Operating Income			$	26,645,762
(12)	Ex. MJT-1, p. 1, line 43	Gross Revenue Conversion Factor				1.38300
(13)	(11) x (12)	**Increase Related to Increase in ROE - without Performance Adder**			**$**	**36,851,089**
(14)	Ex. MJT-1, p. 1, line 45	Proposed Revenue Requirement Increase			$	111,168,000
(15)	(13)/(14)	**Percent Increase Related to Increase in ROE - without Performance Adder**				**33.1%**

		Proposed ROE - with Performance Adder (11.15%)				
		Capital Component	**Ratio**	**Cost**		**Weighted Cost**
(16)	Moul Direct, pp. 23-24 and Ex. PRM-1, p. 1	Long Term Debt	46.60%	4.58%		2.13%
(17)	Moul Direct, p. 23 and Ex. PRM-1, p. 1	Common Equity	53.40%	11.15%		5.95%
			100.00%			
(18)	(16) + (17)	**WACC at Proposed ROE - with Performance Adder (11.15%)**				**8.09%**
(19)	Ex. JD-1, p. 1, line 24	Total Rate Base (excl. purchased gas)			$	3,513,974,000
(20)	(18) x (19)	Net Operating Income, Proposed ROE - with Performance Adder			$	284,223,570
		Incremental Increase in Revenue Requirement from Performance Adder				
(21)	(20) - (10)	**Difference in Net Operating Income - without v. with Performance Adder**			**$**	**2,814,693**
(22)	Ex. MJT-1, p. 1, line 43	Gross Revenue Conversion Factor				1.38300
(23)	(21) x (22)	Difference in Revenue Requirement			$	3,892,721
(24)	Moul Direct, p. 2	Performance Adder Basis Points				15
(25)	(23) / (24)	**Value of One Basis Point**			**$**	**259,515**