

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF PECO ENERGY
COMPANY FOR APPROVAL OF
DEFAULT SERVICE PROGRAM**

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DOCKET NO. P-2020-3019290

DIRECT TESTIMONY

OF

STEVEN L. ESTOMIN

ON BEHALF OF THE

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

JUNE 16, 2020

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1 **I. QUALIFICATIONS**

2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3 A. My name is Steven L. Estomin. I am an independent economics consultant. My
4 office is located at 5821 Beaurivage Avenue, Sarasota, Florida 34243.

5 Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND.

6 A. I hold B.A., M.A., and Ph.D. degrees in economics from the University of Maryland.
7 My areas of academic concentration include industrial organization, environmental
8 economics, and econometrics.

9 Q. WHAT IS YOUR PROFESSIONAL BACKGROUND?

10 A. I have been employed in the area of energy, utility, and telecommunications
11 consulting for the past 38 years working on a wide range of issues. Most of my work
12 has focused on electric utility integrated planning, load forecasting, environmental
13 issues, power supply procurement, and renewable energy issues. I joined Exeter
14 Associates, Inc. ("Exeter"), an economics consulting firm specializing in the
15 economics of regulated industry, in 1981 and stayed with Exeter through 2018. At
16 that time, I was a Senior Economist, Principal, and Vice President in the firm. Since
17 January 2019, I have operated as an independent economics consultant. In recent
18 years, the focus of much of my professional work has been in the areas of electric
19 power supply procurement, renewable energy project analysis, and market analysis
20 related to electric energy, capacity, and renewable energy.

21 Prior to entering consulting, I served on the Economics Department faculty at
22 the University of Maryland (College Park) and worked at the U.S. Department of
23 Labor.

24 A complete description of my professional background is provided in
25 Appendix A.

1 Q. HAVE YOU PREVIOUSLY TESTIFIED AS AN EXPERT WITNESS
2 BEFORE UTILITY REGULATORY COMMISSIONS?

3 A. Yes, I have provided expert witness testimony in more than 50 regulatory
4 proceedings. I have testified before the utility commissions in Ohio, Maine,
5 Maryland, Vermont, New Mexico, New Jersey, Illinois, Rhode Island, Kentucky, and
6 the District of Columbia on issues related to load forecasting, weather normalization,
7 production planning, statistical analysis, electric utility industry restructuring, default
8 service supply procurement, and other issues. I have also testified in U.S. District
9 Court and before the Federal Energy Regulatory Commission (“FERC”) on issues
10 related to statistical estimation.

11 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

12 A. Yes. I testified in Docket Nos. P-2012-2301664, P-2014-2418242, and P-2016-
13 2543140 (Duquesne Light Company) in 2012, 2014, and 2016, respectively; Docket
14 Nos. P-2008-2022931, P-2009-2135496, and G-2009-2135510 (UGI Utilities) in
15 2008, 2009, and 2010, respectively; Docket No. P-2009-2094494 (PECO Electric
16 Company (“PECO”)) in 2009; Docket No. P-0072305 (Pennsylvania Power
17 Company) in 2007; Docket Nos. P-0062227 and M-2016-2578051 (PPL Electric
18 Utilities Corporation (“PPL”)) in 2006 and 2017, respectively; and Docket No. P-
19 00051288 (Pennsylvania Power Company) in 2005. I have also testified in Docket
20 Nos. P-2013-2391368, P-2013-2391372, P-2013-2391375, and P-2013-2391378
21 (collectively, the Pennsylvania FirstEnergy Companies) in 2013. The above-noted
22 testimonies were presented on behalf of the Pennsylvania Office of Consumer
23 Advocate (“OCA”) regarding proposed default service plans and certain related
24 issues. Additionally, I have testified on behalf of the OCA and the Office of Attorney
25 General, Bureau of Consumer Protection (“OAG”) in 2014 in Docket Nos. C-2014-

1 2427655 (*Commonwealth of Pennsylvania, et al. v. Blue Pilot Energy, LLC*); C-2014-
2 2427647 (*Commonwealth of Pennsylvania, et al. v. IDT Energy, Inc.*); and C-2014-
3 2438640 (*Commonwealth of Pennsylvania, et al. v. Respond Power, LLC*). A listing
4 of these cases is provided in Appendix A, accompanying my testimony.

5 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS
6 PROCEEDING?

7 A. My testimony addresses certain elements of PECO Energy Company's ("PECO's" or
8 the "Company's") proposed Default Service Plan V ("DSP V"). The specific issues
9 addressed include the procurement of wholesale Default Service supply products, the
10 Company's proposed voluntary time-of-use ("TOU") program, PECO's plan for
11 compliance with the Alternative Energy Portfolio Standards Act ("AEPS Act"), and
12 the reconciliation adjustment proposed by PECO. Issues related to consumer
13 protection are addressed by OCA witness Barbara Alexander.

14 Q. ARE YOU ADDRESSING ANY IMPLEMENTATION OR POLICY
15 ISSUES ASSOCIATED SPECIFICALLY WITH DEFAULT SERVICE FOR
16 COMMERCIAL OR INDUSTRIAL CUSTOMERS?

17 A. No. My testimony addresses issues related principally to the residential class.

1 **II. SUMMARY AND RECOMMENDATIONS**

2 **A. Overview of the PECO Petition**

3 Q. WHAT IS PECO REQUESTING IN THIS CASE?

4 A. PECO, a subsidiary of Exelon Corporation, provides regulated electric delivery
5 service to Philadelphia and all or parts of six surrounding counties and serves 1.6
6 million customers, making it the largest electric company in the state.¹ On March
7 13, 2020, PECO filed a plan for Default Service that covers the time period from June
8 1, 2021 through May 31, 2025. PECO’s filing includes supporting testimony and
9 exhibits, including draft supplier contracts and its proposed revised tariffs.

10 I have been asked by the OCA to review the proposed plan as it pertains to the
11 Company’s residential customers and to develop recommendations that would
12 provide improvements if those recommendations are adopted by the Pennsylvania
13 Public Utility Commission (“Commission”).

14 Q. WHAT ARE THE MAJOR FEATURES OF PECO’S PETITION AS IT
15 AFFECTS RESIDENTIAL CUSTOMERS?

16 A. The major areas of the proposed Default Service Plan that affect PECO’s residential
17 customers are: (1) the structure of the wholesale supply portfolio for Default Service,
18 including scheduling of the purchases and the wholesale products purchased to supply
19 residential customers taking Default Service; (2) the Company’s proposed method of
20 meeting the requirements of the AEPS Act; (3) the implementation of a voluntary
21 TOU program that would be available to residential Default Service customers; and
22 (4) the Company’s proposed method of reconciling Default Service Plan revenues
23 and costs.

¹ <http://peco.com/AboutUs/Pages/CompanyInformation.aspx>.

1 For wholesale supply, the residential Default Service load is proposed to be
2 supplied from four sources: 12-month fixed-price full-requirements contracts
3 (“FRCs”); 24-month FRCs; spot market purchases; and a small allocation of New
4 York Power Administration (“NYPA”) low-cost hydropower that is assigned to the
5 residential class. The FRCs make up the bulk of the power supply, with laddered
6 contracts procured every six months to replace prior contracts set to expire. The spot
7 market purchases represent approximately one percent of the residential Default
8 Service supply and the NYPA purchases represent approximately 0.2 percent. The
9 remainder of the residential Default Service requirement is met from 62 tranches of
10 FRCs, of which 38 (61 percent) are 24-month products and 24 (38 percent) are
11 12-month products.² Each residential tranche represents approximately 1.6 percent of
12 the residential Default Service load (the approximately 99 percent of the residential
13 load that is served by FRCs divided by 62 tranches), which means that if the Default
14 Service load shrinks or increases (e.g., shrinks due to customers migrating to
15 competitive retail supply or increases due to customers returning to Default Service),
16 the size of the tranches measured in kilowatt-hours (“kWh”) would correspondingly
17 change in size. Thus, the wholesale suppliers face the “volumetric risk” of an
18 uncertain load obligation.

19 The FRCs would be procured through an RFP process, which is consistent
20 with the procurement approach taken in DSP IV. Procurements would be conducted
21 every six months and would be held approximately two months prior to the
22 commencement of deliveries.

² Direct Testimony of John J. McCawley, PECO Energy Company Statement No. 1, p. 15, line 23 through p. 16, line 13.

1 With respect to meeting the requirements of the AEPS Act, the Company
2 proposes to have the Default Service wholesale suppliers transfer the appropriate
3 number and category of Alternative Energy Credits (“AECs”) to PECO to meet the
4 requirements, with the exception of a portion of the solar AECs, which the Company
5 proposes to procure through 10-year contracts totaling 16,000 solar AECs per year.
6 This AECs procurement mechanism serves as a replacement to, and augmentation of,
7 PECO’s current long-term contracts for the purchase of 8,000 solar AECs, some of
8 which expire on May 31, 2020 and some of which expire on May 31, 2021.³ Half of
9 the solar AECs to be procured would be required to come from resources located
10 within the PECO service area. The solar AECs procured under the long-term
11 contracts would be allocated among the three classes served under the Default Service
12 Plan.

13 The Company is proposing to offer a voluntary TOU rate to residential and
14 small commercial Default Service customers, which includes peak, off-peak, and
15 super off-peak prices. The Company has not offered a voluntary TOU rate to
16 residential customers under past Default Service plans.

17 PECO proposes to continue its practice of using a reconciliation mechanism
18 based on accumulated deviations between Default Service revenues and costs over a
19 six-month period, which are amortized and collected over the subsequent six-month
20 period.

21 **B. Review of Findings and Recommendations**

22 Q. WHAT ARE THE SPECIFIC TOPICS THAT YOU ADDRESS IN YOUR
23 DIRECT TESTIMONY?

³ Direct Testimony of John J. McCawley, PECO Energy Company Statement No. 1, p. 17, lines 1 through 6.

1 A. My testimony evaluates PECO's proposed residential Default Service portfolio and
2 recommends certain modifications that better meet the needs of residential customers.
3 I evaluate the Company's proposed voluntary residential TOU program and make
4 recommendations related to the proposed method of reconciling Default Service costs
5 and revenues.

6 Q. WHAT ARE YOUR PRINCIPAL CONCERNS WITH RESPECT TO
7 PECO'S PROPOSED DEFAULT SERVICE PLAN?

8 A. My principal concerns include the following: (1) the inclusion of a small spot market
9 component in the residential Default Service supply portfolio appears to be an
10 unnecessary complication that provides little if any benefit to residential Default
11 Service customers; (2) pricing under PECO's proposed voluntary TOU tariff does not
12 accommodate potential market changes in the TOU period pricing relationships; and
13 (3) PECO's proposed reconciliation method can be modified to result in greater rate
14 stability and potentially smaller E-Factors for residential customers.

15 Q. WHAT ARE YOUR RECOMMENDED MODIFICATIONS TO THE FILED
16 PLAN?

17 A. My principal recommendations are that: (1) the approximately one percent spot
18 market portion of residential Default Service load be eliminated from the residential
19 Default Service supply portfolio; (2) the reconciliation amounts calculated for each
20 six-month period be amortized over twelve months rather than the six months
21 proposed by the Company; and (3) the Company's TOU proposal with respect to
22 TOU period pricing be modified to better reflect market conditions that may emerge
23 over the course of the Default Service Plan period.

24 C. **Testimony Organization**

25 Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

1 A. Section III of my testimony addresses the Default Service supply portfolio and the
2 basis for my position that PECO's proposed portfolio be modified. Section IV
3 addresses the Company's voluntary residential TOU program, and in particular, the
4 establishment of the TOU prices. Section V addresses the Company's proposed
5 reconciliation mechanism.
6

1 **III. DEFAULT SERVICE SUPPLY PORTFOLIO**

2 **A. Background on PECO's Proposal**

3 Q. ARE THERE PENNSYLVANIA STATUTES THAT GOVERN AN
4 ELECTRIC DISTRIBUTION COMPANY'S ("EDC'S") PROVISION OF
5 DEFAULT SERVICE?

6 A. Yes. The provision of Default Service is required under Pennsylvania's Electricity
7 Generation Customer Choice and Competition Act, which was amended by Act 129
8 in 2008. Act 129 requires that the default generation supply for residential customers
9 reflect a prudent mix of spot, short- and long-term supply resources to ensure
10 adequate and reliable service to customers at least cost over time. Default service
11 also must comply with the AEPS Act. PECO states that its filed plan complies with
12 these requirements.

13 Q. HOW DOES PECO PROPOSE TO PROVIDE DEFAULT SERVICE TO
14 RESIDENTIAL CUSTOMERS DURING THE PLAN PERIOD, JUNE 1,
15 2021 TO MAY 31, 2025?

16 A. PECO will use a competitive RFP process to acquire a series of FRCs to provide
17 generation service for the Default Service load. Contracts will have terms of either
18 12 or 24 months and will cover the 4-year Default Service Plan period with some
19 overlap into the subsequent planning period. The FRCs would be procured using a
20 sealed bid/RFP approach, consistent with the approach used by PECO in the past.
21 Procurements are proposed to be conducted every six months so that the FRCs are
22 laddered, that is , the FRCs will expire at different times so that only a portion of the
23 overall residential supply is procured through any single procurement action.

1 Under the Company’s proposal, wholesale suppliers will bid to supply load
2 “tranches,” with each tranche representing approximately 1.6 percent of the
3 residential Default Service load.

4 The final price specified (\$/MWh) is fixed for the duration of the contract
5 term (either 12 or 24 months) and includes all generation products (with a few
6 exceptions) required to serve load (e.g., capacity, energy, ancillary services, and
7 AECs). However, approximately 1 percent of the energy would be procured at PJM
8 spot market prices and approximately 0.2 percent would be provided from a NYPA
9 hydropower allocation.

10 Q. PLEASE EXPLAIN THE TRANCHE STRUCTURE.

11 A. PECO has identified a total of 62 tranches of residential Default Service load. Each
12 tranche is a “slice” of load, meaning that each tranche incorporates the same
13 residential load “shape,” i.e., the hourly residential Default Service load profile over
14 the course of the year. Alternatively stated, each tranche represents 1.6 percent
15 (approximately) of load in each hour.

16 Q. THE COMPANY’S PROCUREMENT SCHEDULE IS BASED ON A
17 FOUR-YEAR DEFAULT SERVICE PLAN PERIOD. DO YOU AGREE
18 WITH PECO’S PROPOSAL TO RETAIN THE FOUR-YEAR PLAN
19 PERIOD?

20 A. Yes. The four-year Default Service Plan period reduces administrative costs relative
21 to the shorter Default Service plan periods that have been relied on historically and is
22 consistent with the Default Service planning periods for other EDCs in Pennsylvania.

23 Q. DO YOU OBJECT TO THE USE OF THE SEALED BID/RFP APPROACH
24 PROPOSED BY PECO OVER POSSIBLE ALTERNATIVE APPROACHES
25 TO PROCURE PECO’S RESIDENTIAL WHOLESAL POWER SUPPLY?

1 A. No. The RFP approach proposed by PECO has been successfully relied on by the
2 Company in the past, PECO is comfortable with this procurement method, and the
3 RFP approach has the advantage of being less administratively costly than many
4 alternative methods, such as the descending clock auction approach. Additionally, I
5 have not seen any persuasive evidence that alternatives to the RFP approach produce
6 more favorable bid results.

7 **B. Concerns with PECO's Residential Default Service Portfolio**

8 Q. WHAT ARE YOUR CONCERNS WITH PECO'S PROPOSED
9 RESIDENTIAL SUPPLY PORTFOLIO?

10 A. In general, I view the composition of the proposed residential Default Service supply
11 portfolio favorably. The mix of 12- and 24-month FRCs represent a reasonable
12 balance between rate stability, which is extremely important to residential customers,
13 and the charges reflecting competitive market conditions. I do have a concern
14 regarding the Company's inclusion of a small spot market component in the portfolio.
15 The spot market component represents approximately one percent of the residential
16 Default Service load. Because the spot market component is so small, its inclusion in
17 the residential Default Service portfolio has no practical importance in terms of price
18 or price stability. Nor does it have any practical impact on price risk reduction
19 through product diversification. I note that because the component is so small, it does
20 not cause any significant burden to residential Default Service customers, though it
21 may have the effect of marginally increasing the absolute magnitude of the
22 reconciliation adjustment (the E-Factor). In short, it does not appear to provide any
23 meaningful benefits or costs to residential Default Service customers.

1 Q. WHAT IS YOUR UNDERSTANDING AS TO WHY PECO INCLUDED
2 THE APPROXIMATELY ONE PERCENT SPOT MARKET COMPONENT
3 IN THE RESIDENTIAL DEFAULT SERVICE PORTFOLIO?

4 A. In response to an interrogatory addressing this question, the Company only indicated
5 that the spot market component in the residential Default Service supply portfolio was
6 included in the proposed DSP V because PECO "...is proposing to maintain the same
7 supply portfolio...as approved for DSP IV."⁴

8 Q. WHAT IS YOUR UNDERSTANDING OF PECO'S PROPOSAL TO
9 PURCHASE SOLAR AECs TO PARTIALLY MEET THE AEPS ACT
10 REQUIREMENTS FOR THE DEFAULT SERVICE LOAD?

11 A. The Company proposes to satisfy a portion of the AEPS Act requirement for the
12 residential Default Service power supply through the purchase of long-term (10-year)
13 contracts of solar AECs. In aggregate, the Company intends to procure 16,000 solar
14 AECs per year through four competitive acquisitions similar to the method by which
15 power supply is procured. The four competitive acquisitions would be held within
16 the first two years of the DSP V plan period. Unlike the power supply contracts,
17 which would be FRCs in which the number of kWh provided would vary based on
18 hourly variations in the size of the residential Default Service load, the long-term
19 solar AECs contracts would be for a fixed number of solar AECs per year. These
20 solar AECs would be used by PECO in partial satisfaction of the AEPS Act
21 obligations.

22 Q. HOW WOULD THE SOLICITATION FOR THE LOCAL SOLAR AECs BE
23 CONDUCTED?

⁴ Response of PECO Energy Company to Interrogatories of the Office of Consumer Advocate, OCA Set II, Interrogatory OCA-II-7. (Attached as OCA Exhibit SLE-1.)

1 A. PECO intends to use a two-stage process. Stage 1 will entail a competitive
2 procurement with the winning bids based on lowest price. Stage 2 will be a Standard
3 Offer to Purchase (“SOTP”) solar AECs at the Stage 1 weighted-average price, but
4 the resources to be acquired in Stage 2 will be required to be located within the PECO
5 service area. Each stage will be for 4,000 solar AECs.

6 Q. DO YOU SUPPORT THE COMPANY’S RELIANCE ON LONG-TERM
7 CONTRACTS FOR SOLAR AECs FOR THE SATISFACTION OF A
8 PORTION OF THE AEPS ACT OBLIGATION FOR RESIDENTIAL
9 DEFAULT SERVICE?

10 A. Yes. Solar Renewable Energy Certificates (“solar RECs”), which are the equivalent
11 of solar AECs in other PJM states having Renewable Energy Portfolio Standards
12 (“RPSs”), have exhibited prices that can rise significantly in response to tight market
13 conditions. These market conditions can arise from either supply constraints or from
14 increases in demand resulting from changes in the underlying legislative
15 requirements. Long-term contracts for the provision of solar AECs can help stabilize
16 prices for what would otherwise be a volatile component of the overall portfolio.
17 Solar AECs (or solar RECs) exhibit higher price volatility (and price levels) than Tier
18 1 AECs (or Tier 1 RECs) because the in-state requirement associated with solar
19 AECs dramatically reduces the size of the supply pool in comparison to non-solar
20 Tier 1 AECs (or RECs), which can draw from resources located not only in-state but
21 from resources outside the state.

22 Q. DO YOU SUPPORT THE COMPANY’S PLAN TO RETAIN AN RFP
23 MONITOR?

24 A. Yes. The Company intends to select an independent RFP monitor to evaluate the
25 bids, develop an opinion concerning the bid process and the results, and conduct a

1 market benchmarking exercise. The results of these analyses will be submitted to the
2 Commission for review.⁵ These types of analyses are imperative to ensure that
3 Default Service customers are protected given the absence of timely published market
4 data for contracts of this type and differing market expectations on the part of market
5 participants.

6 **C. Recommended Portfolio Changes**

7 Q. WHAT ARE YOU RECOMMENDING WITH RESPECT TO THE
8 COMPANY'S PROPOSED ONE-PERCENT SPOT MARKET
9 COMPONENT OF THE RESIDENTIAL DEFAULT SERVICE
10 PORTFOLIO?

11 A. My recommendation is to eliminate this portfolio component. It serves no practical
12 purpose and may have the effects of marginally increasing the volatility of the
13 reconciliation adjustment and (perhaps) imposing additional administrative costs on
14 the Company. Elimination of this component would entail slightly increasing the
15 number of kWh that each successful FRC bidder would be obligated to provide, that
16 is, there would be a slight increase in the percentage of load that each supplier would
17 need to meet in each hour.

18 **IV. TIME-OF-USE RATES**

19 Q. PLEASE EXPLAIN THE COMPANY'S PROPOSAL TO OFFER
20 VOLUNTARY TIME-OF-USE RATES TO RESIDENTIAL DEFAULT
21 SERVICE CUSTOMERS.

22 A. PECO proposes to offer a residential TOU rate on a voluntary basis. The power
23 supply for customers under this rate would be provided by the residential Default
24 Service power supply providers, who would receive payment on the same basis as

⁵ Direct Testimony of John J. McCawley, PECO Energy Company Statement No. 1, p. 32, lines 7 through 14.

1 payment received for service provided to residential Default Service customers not
2 served on the TOU rate. The Company proposes to offer three TOU periods: peak,
3 off-peak, and super off-peak. The prices for the peak and off-peak periods would be
4 calculated as the super off-peak price times a multiplier derived from market pricing
5 data for the PECO zone over the 2014 through 2018 period as well as capacity price
6 data over the same period. This peak period price would be 6.5 times the super off-
7 peak period price; the off-peak period would be 1.5 times the super off-peak period
8 price. These price multipliers and the TOU peak period allocators (the percentage of
9 kWh usage) for each of the three relevant time periods, are used in conjunction with
10 the GSA-1 price, which changes quarterly, to compute the quarterly TOU prices for
11 the residential class.⁶ Residential customers could opt into the TOU rate at any time
12 and exit at any time, though once leaving must wait a full 12 months before being
13 able to return to the rate. This restricted entry is designed to minimize the
14 opportunity for residential customers to game the rate.

15 Q. WOULD THE RATE PERIOD MULTIPLIERS CHANGE OVER THE
16 COURSE OF THE PLANNING PERIOD?

17 A. No, the rate period multipliers, which define the rate relationships among each of the
18 TOU rate periods, would remain constant over the proposed four-year DSP V
19 period—June 1, 2021 through May 31, 2025. Similarly, the TOU period allocators,
20 denoting the share of usage occurring in each period, would also be fixed through the
21 plan period.

22 Q. DO YOU ENVISION POTENTIAL PROBLEMS WITH THIS APPROACH?

23 A. There seems to be two issues that may emerge. First, residential Default Service
24 customers on the TOU rate offering either already use a greater proportion of energy

⁶ Direct Testimony of Joseph A. Bisti, PECO Energy Company Statement No. 2, p. 20, lines 10 through 12.

1 in off-peak and super off-peak hours than the average residential Default Service
2 customer or plan on modifying usage patterns to achieve that result. This suggests
3 that the amount of revenue received under the residential TOU rate will be lower than
4 the amount of revenue that would be obtained on the otherwise applicable residential
5 rate for the same number of kWh used. In fact, anticipations of achieving a lower
6 average rate under the voluntary TOU tariff is the reason that customers would switch
7 to that rate. The shortfall in revenue would need to be recovered through the
8 application of the reconciliation adjustment to all Default Service customers, not just
9 TOU customers. While this is an arithmetic issue, the number of customers expected
10 to participate in the voluntary TOU rate is small. As a consequence, the practical
11 importance of this concern is not likely to be large.

12 The second issue relates to the fixed-price relationships among the TOU rate
13 periods. The peak period is defined as the four hours ending 6:00 p.m. Monday
14 through Friday and excluding PJM holidays; the super off-peak period is defined as
15 the hours of midnight through 6:00 a.m. on all days; the off-peak period is defined by
16 PECO as all other hours.⁷ The price relationship leading to the price multipliers are
17 based on a five-year average—2014 through 2018. Because the inter-period price
18 relationships are proposed to be fixed for the four-year duration of DSP V (June 1,
19 2021 through May 31, 2025), by the end of the DSP V period, half of the basis of the
20 price relationships used to calculate the rate multipliers will be ten or eleven years
21 old. Over time, we would expect that with changing market conditions, for example,
22 reduced reliance on coal and nuclear generation and increased reliance on natural gas
23 and renewable resources, the market price relationships among the various rate

⁷ Direct Testimony of Joseph A. Bisti, PECO Energy Company Statement No. 2, p. 14.

1 periods would change and the data representing the 2014 through 2018 period would
2 no longer be as representative as more current costs would be.

3 Q. DO YOU HAVE A RECOMMENDATION FOR ADDRESSING THIS
4 CONCERN?

5 A. Yes. Rather than retain the same fixed multipliers for the duration of the four-year
6 DSP V period, I recommend that the Company retain the proposed multipliers for the
7 first year of the DSP period and apply a recalculated set of multipliers for each
8 successive year of the four-year period using an updated five-year rolling average.
9 The Company, therefore, would drop the oldest of the data relied upon and refresh the
10 data set with data of more recent vintage each year. That approach also has the
11 benefit of eliminating the data for 2014 by the second year of the DSP period. The
12 2014 data embody the market effects of the polar vortex occurring during the early
13 part of that year which cause those data elements to be unrepresentative of market
14 norms.
15

1 **V. PROPOSED RECONCILIATION**

2 Q. HOW IS PECO PROPOSING TO RECONCILE RESIDENTIAL DEFAULT
3 SERVICE REVENUES WITH COSTS?

4 A. PECO has proposed to retain the same reconciliation mechanism used in DSP IV for
5 DSP V, that is, a reconciliation balance is calculated over a six-month period and
6 collected (or refunded), with interest, over the following six-month period, with a lag
7 of approximately two months.

8 Q. HAVE THE RESIDENTIAL DEFAULT SERVICE RECONCILIATION
9 ADJUSTMENTS UNDER DSP IV BEEN LARGE?

10 A. The reconciliation adjustments applicable to residential Default Service in recent
11 years have tended to represent less than one percent of the GSA-1 rate net of gross
12 receipts tax. On occasion, however, the E-Factor could be higher, for example, the
13 E-Factor was approximately four percent for the December 2018 through February
14 2019 period.⁸ These adjustments tend not to be large because approximately 99
15 percent of the residential Default Service power supply is provided under FRCs, for
16 which the per-kWh price is known in advance of establishing the PTC. Additionally,
17 the price includes the major cost elements related to the provision of power to retail
18 customers, such as capacity costs, transmission costs to the PECO zone, ancillary
19 services, and AEPS Act compliance.

20 Q. CAN WE EXPECT THAT THE RECONCILIATION ADJUSTMENTS
21 WILL REMAIN RELATIVELY SMALL UNDER DSP V?

22 A. That is likely to be the case, but with the introduction of voluntary TOU rates
23 available to residential Default Service customers, an additional element requiring

⁸ Calculated from the Response of PECO Energy Company to Interrogatories of the Office of Consumer Advocate, OCA Set II, Interrogatory OCA-II-17, Attachment OCA II-17(a). (Attached as OCA Exhibit SLE-2.)

1 reconciliation is introduced. If TOU rate participation is low, for example, one
2 percent or less, which has often been the case under voluntary programs, the impact
3 on the reconciliation adjustment of TOU average rates deviating from the PTC can be
4 anticipated to be negligible. Higher levels of participation in TOU rates, however,
5 could result in higher reconciliation adjustments.

6 Q. ARE YOU RECOMMENDING ANY CHANGES TO THE
7 RECONCILIATION ADJUSTMENT TO ADDRESS THE POTENTIAL
8 FOR HIGHER RECONCILIATION LEVELS?

9 A. Yes. I recommend that the six-month reconciliation approach used by the Company
10 under DSP IV (and proposed by PECO to be retained under DSP V) be modified
11 slightly such that the cumulative amount to be collected (or refunded) be amortized
12 over 12 months rather than six months. This would serve to reduce the size and
13 variability of the E-Factor and make the PTC marginally more stable.

14 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

15 A. Yes, it does.

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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF PECO ENERGY
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DOCKET NO. P-2020-3019290

**EXHIBITS ACCOMPANYING THE
DIRECT TESTIMONY**

OF

STEVEN L. ESTOMIN

**ON BEHALF OF THE
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE**

JUNE 16, 2020

EXETER

ASSOCIATES, INC.

10480 Little Patuxent Parkway, Suite 300
Columbia, Maryland 21044

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Petition of PECO Energy Company for Approval of
Default Service Program

Docket No. P-2020-3019290

Response of PECO Energy Company

To Interrogatories of the

Office of Consumer Advocate

OCA Set II

Response Date: 05/22/2020

OCA-II-7

Referencing page 22:

- a. Please describe the basis for PECO's selection of approximately 3 percent and 1 percent for the shares of the two tranches of two-year fixed-price, full-requirements products (FPFRs) and spot purchases, respectively, as part of the proposed "prudent mix of products;"
- b. Please explain the reason for breaking out the 3 percent of two-year FPFRs in the second bullet of the Residential column from the 60 percent of two-year FPFRs shown in the first bullet; and
- c. Please explain the rationale underlying the use of one percent spot market purchases as part of the overall residential default service supply portfolio identified in the second bullet of the Residential column.

RESPONSE:

- a. Under PECO's first default service program (DSP I), seventy-five percent of the residential default service supply was obtained through FPFR contracts composed of 47 tranches, each of which corresponded to the obligation to service 1.6% of the residential default service load. The remaining 25% of the residential default service supply consisted of block and spot purchases. During DSP III, the last block of PECO's block and spot purchases initiated in DSP I (a five-year 50 MW baseload energy block) expired on December 31, 2015. This supply product was replaced by two tranches of a 17-month FPFR product (corresponding to 3.2% of the residential default service load) and residual

purchases directly from the energy and capacity markets operated by PJM (0.8%), which approximately equaled the percentage of residential default service load previously served by the 50 MW block. Pursuant to the Commission-approved settlement of PECO's DSP IV proceeding, PECO replaced the expiring 17-month FPFR product with a two-year FPFR product with the same proportionate share of the residential default service load (i.e., 0.8%) and continued the 0.8% spot purchase component of the residential portfolio from DSP III. For DSP V, PECO's proposing to maintain the same supply portfolio for all procurement classes as approved for DSP IV.

- b. Please see response in part a.
- c. Please see response in part a.

Responsible Witness: John J. McCawley

Pennsylvania Public Utility Commission

v.

PECO Energy Company

Petition of PECO Energy Company for Approval of
Default Service Program

Docket No. P-2020-3019290

Response of PECO Energy Company

To Interrogatories of the
Office of Consumer Advocate
OCA Set II

Response Date: 05/22/2020

OCA-II-17

Referencing page 6, lines 12 through 13. Please provide the semiannual reconciliation of over/under collection amounts (the E-Factors) for the residential class for each six-month period spanning at least some months in years 2017, 2018, and 2019.

RESPONSE:

Refer to Attachment OCA-II-17(a) for the semiannual reconciliation of over/under collection amounts (the E-Factors) for the residential class for each six-month period which were reflected in the Generation Supply Adjustment filings (E-factor Section) for the rates effective June 1 and December 1 in years 2017-2019.

Responsible Witness: Joseph A. Bisti

PECO Generation Supply Adjustment Rate-Procurement Class 1 (GSA 1)
Application Period: June 1, 2017 through August 31, 2017
cents/KWh

| | <u>Amount</u> | GSA Rate w/o GRT | Residential (Rates R and RH) | |
|---|--|------------------------|--|--|
| | | | w/o GRT Incl. Line <u>Loss Ratio</u> | w/GRT Incl. Line <u>Loss Ratio</u> |
| C Factor | | | | |
| -Cost (a) | \$ 152,059,452 page 2 | 5.992 | 5.992 | 6.368 |
| Total Cost | \$ 152,059,452 | 5.992 | 5.992 | 6.368 |
| AEPS Factor Additional AEPS | | | | |
| -Additional AEPS Cost | \$ 1,162,713 page 2 | 0.046 | 0.046 | 0.049 |
| Total Additional AEPS Cost | \$ 1,162,713 | 0.046 | 0.046 | 0.049 |
| A Administrative Cost Factor | | | | |
| -Administrative Cost (a) | \$ (12,208) page 2 | 0.000 | 0.000 | 0.000 |
| Total Administrative Cost | \$ (12,208) | 0.000 | 0.000 | 0.000 |
| E Factor Including Interest | | | | |
| -Over/(Under) Collection Jan 2011 to Dec 2016 (a) | 6 month sales recovery \$ (408,168) page 6 | -0.009 | -0.009 | -0.010 |
| -Net Interest Jan 2011 to Dec 2016 (a) | 6 month sales recovery \$ (18,199) page 7 | 0.000 | 0.000 | 0.000 |
| -Prior Period Over/Under Collection Revenue, Jan 2017 to Feb 2017 (a) | 6 month sales recovery \$ 1,690,620 page 6 | 0.039 | 0.039 | 0.041 |
| -Prior Period Interest Revenue, Jan 2017 to Feb 2017 (a) | 6 month sales recovery \$ 31,888 page 7 | 0.001 | 0.001 | 0.001 |
| Total E Factor Including Interest | \$ 1,296,152 | 0.031 | 0.031 | 0.032 |
| WC Working Capital Adjustment | | | | |
| Working Capital Adjustment (b) | | 0.032 | 0.032 | 0.034 |
| Total Working Capital Adjustment | | 0.032 | 0.032 | 0.034 |
| Total GSA Rate (C + AEPS + A - E + WC) | | 6.039 | 6.039 | 6.419 |
| S Sales for Application Period in kWh 2,537,578,800 page 4 | | | | |
| S1 E factor Sales for March 2017 through August 2017 in kWh 4,298,306,643 page 4 | | | | |
| Gross Receipts Tax (GRT) 6.90% | | | | |
| (a) Adjusted for overall line loss factor ratio | | | | |
| (b) Based on Settlement at Docket No. R-2015-2468981 | | | | |

PECO Generation Supply Adjustment Rate-Procurement Class 1 (GSA 1)
Application Period: December 1, 2017 through February 28, 2018
cents/kWh

| | Amount | GSA Rate w/o GRT | Residential (Rates R and RH) | |
|--|--|---------------------|-------------------------------------|-----------------------------------|
| | | | w/o GRT Incl. Line Loss Ratio | w/ORT Incl. Line Loss Ratio |
| C Factor | | | | |
| -Cost (a) | \$ 146,786,480 page 2 | 6.155 | 6.155 | 6.541 |
| Total Cost | \$ 146,786,480 | 6.155 | 6.155 | 6.541 |
| AEPS Factor Additional AEPS | | | | |
| -Additional AEPS Cost | \$ 29,057 page 2 | 0.001 | 0.001 | 0.001 |
| Total Additional AEPS Cost | \$ 29,057 | 0.001 | 0.001 | 0.001 |
| A Administrative Cost Factor | | | | |
| -Administrative Cost (a) | \$ 158,564 page 2 | 0.007 | 0.007 | 0.007 |
| Total Administrative Cost | \$ 158,564 | 0.007 | 0.007 | 0.007 |
| E Factor Including Interest | | | | |
| -Over/(Under) Collection Jan 2011 to Jun 2017 (a), (c) | 6 month sales recovery \$ 2,930,573 page 6 | 0.069 | 0.069 | 0.073 |
| -Net Interest Jan 2011 to Jun 2017 (a), (c) | 6 month sales recovery \$ 156,016 page 7 | 0.005 | 0.005 | 0.005 |
| -Prior Period Over/Under Collection Revenue, Jul 2017 to Aug 2017 (a) | 6 month sales recovery \$ (526,602) page 6 | -0.012 | -0.012 | -0.013 |
| -Prior Period Interest Revenue, Jul 2017 to Aug 2017 (a) | 6 month sales recovery \$ (17,554) page 7 | 0.000 | 0.000 | 0.000 |
| Total E Factor Including Interest | \$ 2,582,433 | 0.062 | 0.062 | 0.065 |
| WC Working Capital Adjustment | | | | |
| Working Capital Adjustment (b) | | 0.032 | 0.032 | 0.034 |
| Total Working Capital Adjustment | | 0.032 | 0.032 | 0.034 |
| Total GSA Rate (C + AEPS + A - E + WC) | | 6.133 | 6.133 | 6.518 |
| S Sales for Application Period in kWh | 2,284,863,795 page 4 | | | |
| S1 E factor Sales for September 2017 through February 2018 in kWh | 4,223,511,791 page 4 | | | |
| Gross Receipts Tax (GRT) | 5.90% | | | |
| (a) Adjusted for overall line loss factor ratio (b) Based on Settlement at Docket No. R-2015-2468981 (c) Reflects adjustment in June 2017 for PAPUC Audit Finding Overcollection of \$9,416 included in page 6, columns 14 and 15 Interest of \$3,663 included in page 7, columns 7 and 10 | | | | |

PECO Generation Supply Adjustment Rate-Procurement Class 1 (GSA 1)
Application Period: June 1, 2018 through August 31, 2018
cents/kWh

| | Amount | GSA Rate w/o GRT | Residential (Rates R and RH) | |
|---|--|---------------------|-------------------------------------|-------------------------------------|
| | | | w/o GRT Incl. Line Loss Ratio | w/o GRT Incl. Line Loss Ratio |
| C Factor | | | | |
| -Cost (a) | \$ 155,426,348 page 2 | 6.113 | 6.113 | 6.496 |
| Total Cost | \$ 155,426,348 | 6.113 | 6.113 | 6.496 |
| AEPS Factor Additional AEPS | | | | |
| -Additional AEPS Cost | \$ 1,360,616 page 2 | 0.054 | 0.054 | 0.057 |
| Total Additional AEPS Cost | \$ 1,360,616 | 0.054 | 0.054 | 0.057 |
| A Administrative Cost Factor | | | | |
| -Administrative Cost (a) | \$ 118,314 page 2 | 0.005 | 0.005 | 0.005 |
| Total Administrative Cost | \$ 118,314 | 0.005 | 0.005 | 0.005 |
| E Factor Including Interest | | | | |
| -Over/(Under) Collection Jan 2011 to Dec 2017 (a), (c) | 6 month sales recovery \$ 18,653 page 6 | 0.000 | 0.000 | 0.000 |
| -Net Interest Jan 2011 to Dec 2017 (a), (c) | 6 month sales recovery \$ 47,530 page 7 | 0.001 | 0.001 | 0.001 |
| -Prior Period Over/Under Collection Revenue, Jan 2018 to Feb 2018 (a) | 6 month sales recovery \$ (1,037,191) page 6 | -0.024 | -0.024 | -0.026 |
| -Prior Period Interest Revenue, Jan 2018 to Feb 2018 (a) | 6 month sales recovery \$ (90,982) page 7 | -0.002 | -0.002 | -0.002 |
| Total E Factor Including Interest | \$ (1,061,990) | -0.025 | -0.025 | -0.027 |
| WC Working Capital Adjustment | | | | |
| Working Capital Adjustment (b) | | 0.032 | 0.032 | 0.034 |
| Total Working Capital Adjustment | | 0.032 | 0.032 | 0.034 |
| Total GSA Rate (C + AEPS + A - E + WC) | | 6.229 | 6.229 | 6.619 |
| S Sales for Application Period in kWh | 2,542,360,220 page 4 | | | |
| S1 E factor Sales for March 2018 through August 2018 in kWh | 4,304,582,765 page 4 | | | |
| Gross Receipts Tax (GRT) | 5.90% | | | |
| <p>(a) Adjusted for overall line loss factor ratio (b) Based on Settlement at Docket No. R-2015-2468981 (c) Reflects adjustment in June 2017 for PAPUC Audit Finding Overcollection of \$9,416 included in page 6, columns 14 and 15 Interest of \$3,663 included in page 7, columns 7 and 10</p> | | | | |

PECO Generation Supply Adjustment Rate-Procurement Class 1 (GSA 1)
Application Period: December 1, 2018 through February 28, 2019
cents/kWh

| | Amount | GSA Rate w/o GRT | Residential (Rates R and RH) | |
|--|--|---------------------|-------------------------------------|-------------------------------------|
| | | | w/o GRT Incl. Line Loss Ratio | w/o GRT Incl. Line Loss Ratio |
| C Factor | | | | |
| -Cost (a) | \$ 153,717,528 page 2 | 6.080 | 6.080 | 6.461 |
| Total Cost | \$ 153,717,528 | 6.080 | 6.080 | 6.461 |
| AEPS Factor Additional AEPS | | | | |
| -Additional AEPS Cost | \$ 38,742 page 2 | 0.002 | 0.002 | 0.002 |
| Total Additional AEPS Cost | \$ 38,742 | 0.002 | 0.002 | 0.002 |
| A Administrative Cost Factor | | | | |
| -Administrative Cost (a) | \$ 151,849 page 2 | 0.006 | 0.006 | 0.006 |
| Total Administrative Cost | \$ 151,849 | 0.006 | 0.006 | 0.006 |
| E Factor Including Interest | | | | |
| -Over/(Under) Collection Jan 2011 to Jun 2018 (a), (c) | 6 month sales recovery \$ 9,845,351 page 6 | 0.212 | 0.212 | 0.225 |
| -Net Interest Jan 2011 to Jun 2018 (a), (c) | 6 month sales recovery \$ 469,355 page 7 | 0.010 | 0.010 | 0.011 |
| -Prior Period Over/Under Collection Revenue, Jul 2018 to Aug 2018 (a) | 6 month sales recovery \$ 450,393 page 6 | 0.010 | 0.010 | 0.011 |
| -Prior Period Interest Revenue, Jul 2018 to Aug 2018 (a) | 6 month sales recovery \$ 18,767 page 7 | 0.000 | 0.000 | 0.000 |
| Total E Factor Including Interest | \$ 10,783,866 | 0.232 | 0.232 | 0.247 |
| WC Working Capital Adjustment | | | | |
| Working Capital Adjustment (b) | | 0.032 | 0.032 | 0.034 |
| Total Working Capital Adjustment | | 0.032 | 0.032 | 0.034 |
| Total GSA Rate (C + AEPS + A - E + WC) | | 5.888 | 5.888 | 6.256 |
| S Sales for Application Period in kWh | 2,828,349,126 page 4 | | | |
| S1 E factor Sales for September 2018 through February 2019 in kWh | 4,663,385,353 page 4 | | | |
| Gross Receipts Tax (GRT) | 5.90% | | | |
| (a) Adjusted for overall line loss factor ratio (b) Based on Settlement at Docket No. R-2015-2468981 (c) Reflects adjustment in June 2017 for PAPUC Audit Finding Overcollection of \$9,416 included in page 6, columns 14 and 15 Interest of \$3,663 included in page 7, columns 7 and 10 | | | | |

PECO Generation Supply Adjustment Rate-Procurement Class 1 (GSA 1)
Application Period: June 1, 2019 through August 31, 2019
cents/kWh

| | Amount | GSA Rate w/o GRT | Residential (Rates R and RH) | |
|--|--|---------------------|-------------------------------------|-----------------------------------|
| | | | w/o GRT Incl. Line Loss Ratio | w/ORT Incl. Line Loss Ratio |
| C Factor | | | | |
| -Cost (a) | \$ 162,189,205 page 2 | 5.834 | 5.834 | 6.200 |
| Total Cost | \$ 162,189,205 | 5.834 | 5.834 | 6.200 |
| AEPS Factor Additional AEPS | | | | |
| -Additional AEPS Cost | \$ 46,456 page 2 | 0.002 | 0.002 | 0.002 |
| Total Additional AEPS Cost | \$ 46,456 | 0.002 | 0.002 | 0.002 |
| A Administrative Cost Factor | | | | |
| -Administrative Cost (a) | \$ 140,525 page 2 | 0.005 | 0.005 | 0.005 |
| Total Administrative Cost | \$ 140,525 | 0.005 | 0.005 | 0.005 |
| E Factor Including Interest | | | | |
| -Over/(Under) Collection Jan 2011 to Dec 2018 (a), (c), (d) | 6 month sales recovery \$ 4,661,321 page 6 | 0.098 | 0.098 | 0.104 |
| -Net Interest Jan 2011 to Dec 2018 (a), (c), (d) | 6 month sales recovery \$ 232,164 page 7 | 0.005 | 0.005 | 0.005 |
| -Prior Period Over/Under Collection Revenue, Jan 2019 to Feb 2019 (a) | 6 month sales recovery \$ (4,069,376) page 6 | -0.085 | -0.085 | -0.090 |
| -Prior Period Interest Revenue, Jan 2019 to Feb 2019 (a) | 6 month sales recovery \$ (182,854) page 7 | <u>-0.004</u> | <u>-0.004</u> | <u>-0.004</u> |
| Total E Factor Including Interest | \$ 651,255 | 0.014 | 0.014 | 0.015 |
| WC Working Capital Adjustment | | | | |
| Working Capital Adjustment (b) | | 0.018 | 0.018 | 0.019 |
| Total Working Capital Adjustment | | 0.018 | 0.018 | 0.019 |
| Total GSA Rate (C + AEPS + A - E + WC) | | 5.845 | 5.845 | 6.211 |
| S Sales for Application Period in kWh | 2,779,841,376 page 4 | | | |
| S1 E factor Sales for March 2019 through August 2019 in kWh | 4,767,196,017 page 4 | | | |
| Gross Receipts Tax (GRT) | 5.90% | | | |
| <p>(a) Adjusted for overall line loss factor ratio (b) Based on Settlement at Docket No. R-2018-3000164 (c) Reflects adjustment in June 2017 for PAPUC Audit Finding Overcollection of \$9,416 included in page 6, columns 14 and 15 Interest of \$3,663 included in page 7, columns 7 and 10 (d) Reflects adjustment in December 2018 for PAPUC Audit Finding Overcollection of \$172,104 included in page 6, columns 14 and 15</p> | | | | |

PECO Generation Supply Adjustment Rate-Procurement Class 1 (GSA 1)
Application Period: December 1, 2019 through February 29, 2020
cents/kWh

| Amount | GSA Rate w/o GRT | Residential (Rates R and RH) | |
|--|--|------------------------------------|----------------------------------|
| | | w/o GRT Incl. Line Less Rate | w/GRT Incl. Line Less Rate |
| C Factor | | | |
| -Cost (a) | \$ 147,942,753 page 2 | 5.686 | 6.043 |
| Total Cost | \$ 147,942,753 | 5.686 | 6.043 |
| AEPS Factor Additional AEPS | | | |
| -Additional AEPS Cost | \$ 47,417 page 2 | 0.002 | 0.002 |
| Total Additional AEPS Cost | \$ 47,417 | 0.002 | 0.002 |
| A Administrative Cost Factor | | | |
| -Administrative Cost (a) | \$ 179,159 page 2 | 0.007 | 0.007 |
| Total Administrative Cost | \$ 179,159 | 0.007 | 0.007 |
| E Factor Including Interest | | | |
| -Over(Under) Collection Jan 2011 to Jun 2019 (a), (c), (d) | 6 month sales recovery \$ (1,738,136) page 6 | -0.037 | -0.039 |
| -Net Interest Jan 2011 to Jun 2019 (a), (c), (d), (e) | 6 month sales recovery \$ 102,445 page 7 | 0.002 | 0.002 |
| -Prior Period Over(Under) Collection Revenue, Jul 2019 to Aug 2019 (a) | 6 month sales recovery \$ (265,903) page 6 | -0.006 | -0.006 |
| -Prior Period Interest Revenue, Jul 2019 to Aug 2019 (a) | 6 month sales recovery \$ (20,450) page 7 | 0.000 | 0.000 |
| Total E Factor Including Interest | \$ (1,922,048) | -0.041 | -0.043 |
| WC Working Capital Adjustment | | | |
| Working Capital Adjustment (b) | | 0.018 | 0.019 |
| Total Working Capital Adjustment | | 0.018 | 0.019 |
| Total GSA Rate (C + AEPS + A - E + WC) | | 5.754 | 6.114 |
| S Sales for Application Period in kWh | 2,801,716,851 page 4 | | |
| S1 E factor Sales for September 2019 through February 2020 in kWh | 4,715,516,292 page 4 | | |
| Gross Receipts Tax (GRT) | 5.90% | | |
| <p>(a) Adjusted for overall line loss factor rate (b) Based on Settlement at Docket No. R-2018-0000164 (c) Reflects adjustment in June 2017 for PAPUC Audit Finding Overcollection of \$9,416 included in page 6, columns 14 and 15 Interest of \$2,662 included in page 7, columns 7 and 10 (d) Reflects adjustment in December 2018 for PAPUC Audit Finding Overcollection of \$172,104 included in page 6, columns 14 and 15 Interest of \$10,700 included in page 7, columns 7 and 10 (e) Reflects additional interest adjustment in June 2019 for PAPUC Audit Interest of \$9,272 included in page 7, columns 7 and 10</p> | | | |

Appendix A

Statement of Qualifications of Steven L. Estomin

STEVEN L. ESTOMIN

Dr. Estomin has more than 35 years' experience managing and conducting consulting assignments related to public utility economics and regulation. In 1981, Dr. Estomin joined Exeter Associates, Inc. and served as a Senior Economist, Principal, and corporate officer of the firm through 2018. While at Exeter, he supervised multi-million dollar support contracts with the State of Maryland and the U.S. Air Force, and directed the technical work conducted by both Exeter professional staff and numerous subcontractors. Additionally, Dr. Estomin took a lead role at Exeter by consulting to the firm's other clients in the areas of electric utility industry restructuring, utility power purchase contracts, and renewable energy project evaluation. Dr. Estomin has testified on issues related to load forecasting, statistical analysis, economic damage analysis, class cost-of-service, rate design, power supply procurement, and default electric service. He has also provided technical support to federal agencies in utility contract negotiations and in the development of requests for proposals for competitive power supply procurement for U.S. military bases and large civilian government installations.

Education

B.A. (Economics) – University of Maryland, 1975

M.A. (Economics) – University of Maryland, 1978

Ph.D. (Economics) – University of Maryland, 1986

Previous Employment

1980-1981 Faculty Researcher
 Bureau of Business and Economic Research
 University of Maryland
 College Park, Maryland

1976-1980 Research/Teaching Assistant and Instructor
 University of Maryland, Department of Economics
 College Park, Maryland

1976-1978 Economist
 U.S. Department of Labor, Bureau of International Labor Affairs,
 Office of Trade Adjustment Assistance
 Washington, D.C.

Professional Experience

At the Bureau of Business and Economic Research, Dr. Estomin supervised the development of an environmental pollution forecasting model which he linked to a county level regional economic model. This task included developing submodels for industrial/commercial activity, municipal wastes generation, and transportation and energy-related emissions. Several reports and estimations using the model were provided to the Bureau of Land Management (U.S. Department of the Interior) and were used to develop analyses of future development of the outer-continental shelf.

As a Graduate Teaching Assistant for the Department of Economics at the University of Maryland, Dr. Estomin was initially engaged in aiding senior faculty members in a variety of teaching-related tasks and later autonomously taught micro and macroeconomic theory courses. As an Instructor for the University, he taught upper-level courses in the Economics of Poverty and Discrimination and the Economics of American Industry. As a Graduate Research Assistant, Dr. Estomin conducted extensive research in pollution abatement cost modeling.

At the U.S. Department of Labor, Dr. Estomin collected firm-specific data covering sales, inventory, employment, and production and used those data together with industry production, employment, and import data to analyze causes of employment reductions. Companies analyzed by Dr. Estomin include American Motors Corporation, Bethlehem Steel, and numerous smaller firms.

Major Publications and Reports

“Energy Storage in Maryland – Policy and Regulatory Options for Promoting Energy Storage and Its Benefits,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 2018 (with Kevin Porter and Rebecca Widiss of Exeter Associates, Inc.).

“Audit Report for Selected Electric Power Supply Accounts Served by Constellation NewEnergy and Constellation Energy Projects Services Group,” prepared for the U.S. General Services Administration, Pacific Rim Region, October 2017 (with Jerome Mierzwa of Exeter Associates, Inc.).

“Sommers Cove Marina Solar Power Options,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, June 2017.

“Long-term Electricity Report for Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 2016 (with Rebecca Widiss of Exeter Associates, Inc.).

“Assessment Report of the Potential Benefits of Electric Service Aggregation for Delmarva Power & Light Company’s Residential and Small Commercial Customers,” prepared for the Delaware Public Service Commission, May 2015.

- “Avoided Energy Costs in Maryland – Assessment of the Costs Avoided through Energy Efficiency and Conservation Measures in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, April 2014 (with Michael Buckley, Kevin Porter, and Rebecca Widiss of Exeter Associates, Inc.).
- “Management/Performance Audit of the Alternative Energy Resource Rider of the First Energy Ohio Utility Companies for October 2009 through December 2011,” prepared for the Public Utilities Commission of Ohio, June 2012.
- “Long-Term Electricity Report for Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 2011 (with Sari Fink, Christina Mudd, and Michael Buckley of Exeter Associates, Inc.).
- “Maryland Power Plants and the Environment: A Review of the Impacts of Power Plants and Transmission Lines on Maryland’s Natural Resources, Maryland Power Plant Research Program, PPRP-CEIR-15,” January 2010 (with Christina Mudd, Sari Fink, and Jennifer Rogers of Exeter Associates, Inc. and contributing authors from Versar, Inc. and Environmental Resources Management).
- “Guidance for the Development of Renewable Energy Projects at Air Education and Training Command Bases,” prepared for the U.S. Air Force, Air Force Civil Engineer Support Center (Tyndall AFB, Florida) and the Air Education and Training Command (Randolph AFB, Texas), January 2010 (with Christina Mudd and Sari Fink).
- “2009 Inventory of Renewable Energy Generators Eligible for the Maryland Renewable Energy Portfolio Standard,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, January 2010 (with Christina Mudd and Sari Fink of Exeter Associates, Inc. and contributing authors from BCS, Inc.)
- “Maryland Power Plants and the Environment: A Review of the Impacts of Power Plants and Transmission Lines on Maryland’s Natural Resources, Maryland Power Plant Research Program, PPRP-CEIR-14,” January 2008 (with Christina Mudd and Sari Fink of Exeter Associates, Inc. and contributing authors from Versar, Inc. and Environmental Resources Management).
- “Forecasted Electric Energy Consumption and Peak Demands in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, November 2006 (with David Chen and Michael P. Lee).
- “Maryland’s Options to Reduce and Stabilize Electric Power Prices Following Restructuring,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration, September 2006 (with Matthew I. Kahal).

- “The Potential for Biomass Co-Firing in Maryland,” prepared for the Maryland Department of Natural Resources, Power Plant Research Program, March 2006 (with Christina Mudd and Michael Lee).
- “Wind Power Options Assessment,” prepared for the Maryland Department of Natural Resources, Power Plant Research Program and the Maryland Energy Administration, January 2006 (with Matthew I. Kahal and Christina Mudd).
- “Electric Power Supply Options for Holloman Air Force Base, New Mexico,” prepared for the U.S. Air Force, Air Force Civil Engineer Support Agency, September 2005.
- “Forecast of Electric Energy Consumption and Peak Demands in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, May 2005.
- “Economic Analysis of a Power Plant Fueled by Poultry Litter to be Located on Maryland’s Eastern Shore,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, May 2005.
- “Yucca Mountain Project – Evaluating Alternative Electric Power Service Options,” prepared for the U.S. Department of Energy, Federal Energy Management Program, August 2004.
- “Short-term Steam Supply options for the Savannah River Site,” prepared for the U.S. Department of Energy, Federal Energy Management Program, June 2004.
- “Assessment of Economic Damages,” prepared for Supra Telecommunications and Information Systems, Inc., CPR Institute for Arbitral Tribunal, Supra Telecommunications and Information Systems v. BellSouth Telecommunications, Arbitration V, October 2003 (with Marvin H. Kahn).
- “Costs and Benefits for Overhead/Underground Utilities,” prepared for the Maryland State Highway Administration, October 2003 (with William H. Albeck).
- “Economic Assessment of Damages,” prepared for Supra Telecommunications and Information Systems, Inc., U.S. District Court, Southern District of Florida, Case No. 99-1706, March 2003 (with Marvin H. Kahn).
- “Forecasted Electric Energy Consumption and Peak Demand in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, October 2002.
- “The Technical Potential for Electric Energy Conservation in Maine,” prepared for the Maine Office of Consumer Advocate, September 2002.

- “Energy Conservation and Efficiency Baseline,” prepared for Governor Paris N. Glendening’s Task Force on Energy Conservation and Efficiency, the Maryland Energy Administration, and the Maryland Department of Natural Resources, December 2001 (with Allan R. Evans and Michael P. Lee).
- “Alternative Electricity and Natural Gas Procurement Strategies for U.S. Department of Defense Installations,” prepared for the U.S. Department of Defense, Defense Logistics Agency, Defense Energy Support Center, July 2001 (with Richard A. Galligan).
- “Electricity in Maryland Fact Book,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, January 2001.
- “Steam Supply Options Analysis for the Savannah River Site,” prepared for the U.S. Department of Energy, March 2000.
- “The Feasibility of a Renewables Portfolio Standard in Maryland,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration, January 2000.
- “Undergrounding Electric Utility Lines in Maryland,” prepared for the Maryland Energy Administration and the Power Plant Research Program, Maryland Department of Natural Resources for the Governor’s Task Force on Utility Preparedness, December 1999.
- “Nevada Test Site Utility Options Study,” prepared for the U.S. Department of Energy, June 1999.
- “Spallation Neutron Source Electrical Facilities Study,” prepared for the U.S. Department of Energy, April 1999.
- “Forecasted Electric Power Demands for the Delmarva Power and Light Company,” prepared for the Power Plant Research Program, Maryland Department of Natural Resources, December 1998 (with Andrés Escalante).
- “Assessment of DOD Electric Power Supply Options, Strategies, and Costs under Retail Open Access,” prepared for the U.S. Department of Defense, Office of the Deputy Under Secretary of Defense, February 1998.
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Expert Testimony

Before the Pennsylvania Public Utility Commission in Docket No. P-2018-3002709, Pike County Light and Power Company, 2018, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Maryland Senate Finance Committee, 2018, for the Maryland Department of Natural Resources. Testified on renewable energy resources and the Maryland Renewable Energy Portfolio Standard.

Before the Pennsylvania Public Utility Commission in Docket Nos. P-2017-2637855, P-2017-2637857, P-2017-2637858, and P-2017-2637866, Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, 2018, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Pennsylvania Public Utility Commission in Docket No. M-2016-2578051, PPL Electric Utilities Corporation, 2017, for the Pennsylvania Office of Consumer Advocate. Testified on Time-of-Use Rates.

Before the Public Service Commission of Maryland in Case No. 9411, Application of Mills Branch Solar, LLC for a Certificate of Public Convenience and Necessity to Construct a 60-MW Solar Photovoltaic Generating Facility in Kent County, Maryland, 2016, for the Power Plant Research Program, Maryland Department of Natural Resources. Testified on economic impacts.

Before the Pennsylvania Public Utility Commission in Docket No. P-2015-2490141, Pike County Light & Power Company, 2015, for the Pennsylvania Office of Consumer Advocate. Testified on default service issues.

Before the Pennsylvania Public Utility Commission in Docket No. C-2014-2438640, Respond Power, LLC, 2015, for the Pennsylvania Office of Attorney General and the Office of Consumer Advocate. Testified on electric power market pricing issues.

Before the Pennsylvania Public Utility Commission in Docket No. C-2014-2427657, IDT Energy, Inc., 2015, for the Pennsylvania Office of Attorney General and the Office of Consumer Advocate. Testified on electric power market pricing issues.

Before the Public Service Commission of Maryland in Case No. 9361, Exelon Corporation/Pepco Holdings, Inc. merger application, 2015, for the State of Maryland and the Maryland Energy Administration. Testified on power supply reliability issues.

Before the Public Service Commission of Maryland in Case No. 9318, Application of Dominion Cove Point LNG for a Certificate of Public Convenience and Necessity to Construct a Nominal 130 MW Generating Facility in Calvert County, Maryland, 2014, for the Power Plant Research Program, Maryland Department of Natural Resources. Testified on economic costs and benefits.

Before the Pennsylvania Public Utility Commission in Docket No. P-2014-2418242, Duquesne Light Company, 2014, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Pennsylvania Public Utility Commission in Docket Nos. P-2013-2391368, P-2013-2391372, P-2013-2391375, and P-2013-2391378, Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, 2014, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Public Utility Commission of Ohio in Case No. 11-5201-EL-RDR, Ohio Edison Company, Cleveland Electric Illuminating Company, and Toledo Edison Company, 2013, for the Public Utility Commission of Ohio Staff. Testified on renewable energy procurement issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-2012-2301664, Duquesne Light Company, 2012, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Pennsylvania Public Utility Commission in Docket Nos. P-2009-2135496 and G-2009-2135510, UGI Utilities, Inc., 2010, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-2009-2094494, PECO Energy Company, 2009, for the Pennsylvania Office of Consumer Advocate. Testified on acquisition of solar energy credits.

Before the Pennsylvania Public Utility Commission in Docket No. P-2008-2022931, UGI Utilities, Inc., 2008, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Maryland Public Service Commission in Case No. 9117, Investigation of Investor-Owned Electric Companies' Standard Offer Service for Residential and Small Commercial Customers in Maryland, 2008, for the Maryland Energy Administration. Testified on Standard Offer Service issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-0072305, Pennsylvania Power Company, 2007, for the Pennsylvania Office of Consumer Advocate. Testified on Default Service issues.

Before the Maryland Public Service Commission in Case No. 9099, Baltimore Gas and Electric Company, 2007, for the Maryland Department of Natural Resources. Testified on market-related issues, Standard Offer Service prices, and Standard Offer Service Procurement Issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-00662227, PPL Electric Utilities Corporation, 2006, for the Pennsylvania Office of Consumer Advocate. Testified of Provider of Last Resort service.

Before the Maryland Public Service Commission in Case No. 9063, Investigation into the Optimal Structure of the Electric Utility Industry in Maryland, 2006, for the Power Plant Research Program, Maryland Department of Natural Resources and the Maryland Energy Administration. Testified on standard offer service issues, customer choice, demand-side management and energy efficiency, and market-related issues.

Before the Pennsylvania Public Utility Commission in Docket No. P-00052188, Pennsylvania Power Company, 2005, for the Pennsylvania Office of Consumer Advocate. Testified on Provider of Last Resort service.

Before the Maryland Public Service Commission in Case No. 9018, Potomac Edison Company, 2005, for the Maryland Department of Natural Resources, Power Plant Research Program. Testified on jurisdictional cost impacts of proposed transmission and distribution facilities.

Before the Maine Public Utilities Commission in Docket No. 2004-339, Central Maine Power Company, 2004, for the Maine Public Advocate. Testified on sales forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2002-770, Central Maine Power Company, 2003, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2001-239, Bangor Hydro Electric Company, 2001, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Maine Public Utilities Commission in Docket No. 2001-232, Central Maine Power Company, 2001, for the Maine Public Advocate. Testified on load forecasting issues.

Before the Kentucky Public Service Commission in Case No. 99-070, Western Kentucky Gas Company, 1999, for the Office of Rate Intervention of the Attorney General. Testified on functionalization of distribution system costs.

Before the Kentucky Public Service Commission in Case No. 99-176, Delta Natural Gas Company, Inc., 1999, for the Office of Rate Intervention of the Attorney General. Testified on functionalization of distribution system costs.

Before the Maine Public Utilities Commission in Docket No. 97-580, Central Maine Power Company, 1998, for the MPUC Staff. Testified on generation-related administrative and general expenses.

Before the Maine Public Utilities Commission in Docket No. 96-116, Bangor Hydro Electric Company, 1997, for the MPUC Staff. Testified on load forecasting issues.

Before the New Mexico Public Service Commission, El Paso Electric Company, 1996, for the U.S. Air Force. Testified on rate design issues.

Before the State of Rhode Island and Providence Plantation Public Utilities Commission in Docket No. 2290, Narragansett Electric Company, 1995, for the Division of Public Utilities and Carriers. Testified on load forecasting issues.

Before the Illinois Commerce Commission in Docket No. 94-0065, Commonwealth Edison Company, June 1994, for the U.S. Department of Energy. Testified on load forecasting.

Before the Federal Energy Regulatory Commission in Docket No. RP91-203, et al., Tennessee Gas Pipeline Company, May 1994, for the Tennessee Rate Design Customer Group. Testified on issues related to econometric analysis.

Before the Public Service Commission of the District of Columbia in Formal Case No. 926, Chesapeake and Potomac Telephone Company, September 1993, for the Office of People's Counsel. Testified on issues related to finance and statistical analysis.

Before the Public Service Commission of the District of Columbia in Formal Case No. 814, Phase III, Chesapeake and Potomac Telephone Company, October 1992, for the Office of People's Counsel. Testified on issues related to competition in the telecommunications industry.

Before the Maine Public Utilities Commission in Docket No. 92-101, Maine Public Service Company, September 1992, for the Commission Staff. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8413, Potomac Electric Power Company, March 1992, for the Maryland Power Plant Research Division. Testified on load forecasting.

Before the State of New Jersey Board of Regulatory Commissioners in Docket No. GF91081393J, New Jersey Natural Gas Company, March 1992, for the Division of Rate Counsel. Testified on weather normalization.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission in Docket 2019, Narragansett Electric Company, November 1991, for the Division of Public Utilities and Carriers. Testified on load forecasting.

Before the Maine Public Utilities Commission in Docket No. 91-010, Bangor Hydro-Electric Company, June 1991, for the Maine Public Advocate. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8241, Phase II, Baltimore Gas and Electric Company, May 1991, for the Maryland Power Plant and Environmental Review Division. Testified on load forecasting.

Before the State of Rhode Island and Providence Plantations Public Utilities Commission in Docket 1976, Narragansett Electric Company, October 1990, for the Revision of Public Utilities and Carriers. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8201, Delmarva Power and Light Company, October 1990, for the Maryland Power Plant and Environmental Review Division. Testified on load forecasting.

Before the Maine Public Utilities Commission in Docket No. 90-076, Central Maine Power Company, September 1990, for the Maine Public Advocate. Testified on load forecasting.

Before the Public Service Commission of the District of Columbia in Formal Case No. 890, District of Columbia Natural Gas, February 1990, for the Office of People's Counsel of the District of Columbia. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8102, Southern Maryland Cooperative, July 1988, for the Maryland Power Plant Research Program. Testified on load forecasting.

Before the Maryland Public Service Commission in Case No. 8063 Phase II, Potomac Electric Power Company, July 1988, for the Maryland Power Plant Research Program. Testified on load forecasting.

Before the U.S. District Court for the Eastern District of Pennsylvania in Civil Action No. 87-0805, March 1988, for Pittcon Industries, Inc. Testified on economic damages.

Before the Sacramento Municipal Utility District Board, September 1987, for the U.S. Air Force. Testified on the applicability and appropriate calculation of a special surcharge.

Before the Sacramento Municipal Utility District Board, September 1987, for the U.S. Air Force. Testified on cost estimation and cost allocation.

Before the Sacramento Municipal Utility District Board, February 1987, for the U.S. Air Force. Testified on rate design and cogeneration.

Before the Vermont Public Service Board in Docket No. 4661, Green Mountain Power Corporation, November 1982, for the Vermont Department of Public Service. Testified on production planning, fuel costs, and maintenance scheduling for nuclear plant on behalf of the Vermont Public Service Board.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

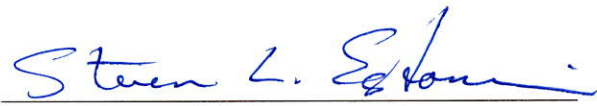
Petition of PECO Energy Company for Approval :
of a Default Service Program for the Period of : Docket No. P-2020-3019290
June 1, 2021 through May 31, 2025 :

VERIFICATION

I, Steven L. Estomin, hereby state that the facts 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 16, 2020

*290043

Signature: 

Steven L. Estomin

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