BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PECO ENERGY COMPANY
FOR APPROVAL OF ITS
DEFAULT SERVICE PROGRAM
FOR THE PERIOD FROM
JUNE 1, 2017 THROUGH MAY 31, 2019

DOCKET NO. P-2016-______________

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DIRECT TESTIMONY

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WITNESS: SCOTT G. FISHER

SUBJECT: DEFAULT SERVICE PROCUREMENT

DATED: MARCH 17, 2016
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DIRECT TESTIMONY
OF
SCOTT G. FISHER

I. INTRODUCTION AND PURPOSE OF TESTIMONY

1. Q. Please state your full name and business address.
   A. My name is Scott G. Fisher. My business address is 30 Monument Square, Suite 105, Concord, Massachusetts 01742.

2. Q. What is your current position?
   A. I am a Principal with The NorthBridge Group (“NorthBridge”), an economic and strategic consulting firm serving the electric and natural gas industries.

3. Q. On whose behalf are you submitting testimony?
   A. I am submitting direct testimony on behalf of PECO Energy Company (“PECO”).

4. Q. Please summarize your professional and academic background.
   A. Since joining NorthBridge in 1998, I have advised companies in the electric industry on decisions related to risk management, asset valuation and portfolio management, product pricing, contract negotiations, regulatory affairs, supply procurement, rate design, and overall corporate strategy. I also have served as an expert witness on several of these topics, particularly with respect to default service supply procurement and ratemaking, in state public utility commission proceedings. Before joining NorthBridge, I was a consultant at Strategic Decisions Group, a management consulting firm serving a variety of industries. I received an A.B. from Dartmouth College and a B.E. from the Thayer School of Engineering at Dartmouth College,
with high honors. In addition, I received an M.S. in Engineering-Economic Systems
from Stanford University and an M.B.A. from the Tuck School of Business at
Dartmouth College, with high honors. I presently serve as a guest lecturer at the
Tuck School of Business on energy industry matters.

5. Q. Have you testified previously before this Commission?
   A. Yes, I testified in Docket No. P-2008-2062739, Petition of PECO Energy Company
      for Approval of its Default Service Program and Rate Mitigation Plan (“DSP I”),¹
      Docket No. P-2012-2283641, Petition of PECO Energy Company for Approval of its
      Default Service Program (“DSP II”),² and Docket No. P-2014-2409362, Petition of
      PECO Energy Company for Approval of its Default Service Program for the Period
      from June 1, 2015 through May 31, 2017 (“DSP III”).³ I also testified in Docket No.
      P-2012-2301664, Petition of Duquesne Light Company for Approval of a Default
      Service Program and Procurement Plan for the Period June 1, 2013 through May 31,
      2015.⁴

6. Q. What is the purpose of your direct testimony?
   A. The purpose of my direct testimony is to evaluate PECO’s proposed default service

¹ See Petition of PECO Energy Company for Approval of Its Default Service Program and Rate Mitigation Plan, Docket No. P-2008-2062739 (Order entered June 2, 2009) (“DSP I Order”).
plan (the “Default Service Plan” or “Plan” or “DSP IV”) to procure supply for default
service customers for the period beginning June 1, 2017 and ending May 31, 2019.

My testimony is divided into two parts. First, I briefly review PECO’s first three
default service plans, DSP I, DSP II, and DSP III, and identify several lessons
learned. This discussion includes an analysis of the “residual compensation”
incorporated in the prices of the residential full requirements contracts procured by
PECO in accordance with these plans. Second, I evaluate PECO’s DSP IV with
respect to Act 129’s (the “Act”) requirement that the plan include a “prudent mix” of
contracts designed to ensure the least cost to customers over time.\(^5\)

7. Q. Please summarize your conclusions.

A. First, with regard to the lessons learned from PECO’s earlier DSP plans (DSP I, DSP
II, and DSP III), I conclude the following:

- The participation by multiple suppliers in PECO’s open solicitations for
  fixed-price full requirements (“FPFR”) default service supply products,
  combined with my quantitative analysis of the results of these
  solicitations, indicate that the resulting contract prices obtained by PECO
  have been reasonable, considering the costs and risks that the suppliers
  under these contracts assume to the benefit of customers.

- The mix of one-year and two-year FPFR products in PECO’s residential
default service supply portfolio, and the semi-annual overlapping of their

\(^5\) 66 Pa.C.S. § 2807(e)(3.4).
delivery periods, provide price stability benefits for residential customers, as evidenced by events related to the Polar Vortex and cold spells during the winter of 2014.

- The basic default service model used by PECO has supported the competitive retail electricity market. In fact, 92 alternative electric generation suppliers (“EGS” or “competitive retail supplier”) currently serve PECO customers, which is roughly triple the number since the DSP I period began.6

Second, with regard to PECO’s proposed DSP IV, I conclude the following:

- DSP IV incorporates a prudent mix of contracts designed to ensure least cost to customers over time, taking into account the benefits of price stability, and includes prudent steps necessary to obtain least cost generation supply contracts on a long-term, short-term and spot market basis, as required by Section 2807(e)(3.4) and Section 2807(e)(3.7) of the Act.

- PECO’s Default Service Plan is designed to support the competitive retail electricity market in PECO’s service area while providing price stability benefits for small customers.

Each of these findings is discussed further below.

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6 Source: PECO. Data is for the month ending February 23, 2016.
II. REVIEW OF EARLIER DSPS AND THE LESSONS LEARNED

8. Q. Please provide a brief overview of the mix of products procured under DSP I and DSP II.

A. Under PECO’s DSP I, a unique and tailored portfolio of supply products was procured for each of four different customer classes at different points in time. The portfolio consisted of a mix of 1-year and 2-year FPFR products and varying levels of spot-priced purchases by customer class. 25% of the Residential class portfolio was served through a “block-and-spot” approach in which PECO made forward purchases of energy blocks (of 1-year, 2-year, 5-year, and seasonal delivery periods that were targeted to supply 20% of Residential default service load), and the spot market transactions were made to cover the mismatches between the fixed quantities of block energy supply purchased and the 25% portion of the actual hourly load requirement.

Under DSP II, PECO began to phase out the block-and-spot aspect of the supply portfolio for the Residential class and replace these products with FPFR products. For smaller customers, DSP II also included more frequent replacements of the supply products, as supply product delivery periods were timed to expire every six months rather than every year. Finally, DSP II involved generally shorter product delivery periods and shorter times between product procurement and the start of

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7 Some of the initial delivery periods of the full requirements supply products procured in DSP I included an extra five months (from January 1, 2011 to May 31, 2011) to align the delivery periods of subsequent products with the commencement of the annual planning period of PJM Interconnection, L.L.C. (“PJM”), the regional transmission organization in which PECO participates.

8 Unlike full requirements products, deliveries under block products do not scale with changes in default service load, so the percentages of default service load served by the block products often deviated from the targeted percentage.
9. **Q. Please provide a brief overview of the mix of products procured under DSP III.**

A. PECO’s DSP III, the plan currently in effect, continues the basic procurement strategy that was established in DSP II, which includes procurement of a prudent mix of products from competitive wholesale suppliers and has supported retail market competition.

- For the Large Commercial and Industrial customers (peak demands greater than 500 kW), PECO continues to obtain default service supply based on spot market prices.

- For the Medium Commercial class, PECO initially continued to maintain a supply portfolio comprised entirely of six-month FPFR products, all of which were replaced every six months. PECO agreed to replace these six-month FPFR products with hourly priced default service for the Medium Commercial class after the necessary metering, billing and data management system changes have been completed. This transition to hourly pricing is scheduled to occur on June 1, 2016, and in no event later than December 1, 2016.

- For the Small Commercial class, PECO continues the procurement design established in DSP II. Specifically, the default service supply portfolio

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9 The solicitation for any given product is held approximately two months before delivery of the product begins.
consists of one-year FPFR products in which half of the products are replaced every six months. The solicitation for any given product is held approximately two months before delivery of the product begins.

• The supply portfolio for the Residential class continues the procurement design established in DSP II consisting of 40% one-year FPFR products and 60% two-year FPFR products, with delivery periods that overlap on a semi-annual basis. During the DSP III period, approximately 96% of the supply portfolio transitions to this product arrangement. The remaining 4% of the overall default service supply portfolio for the Residential class consists of a mix of 17-month FPFR products (approximately 3% of Residential default service load) and spot purchases (approximately 1% of Residential default service load) directly from the energy markets operated by PJM. Each of the FPFR default service supply products for the Residential class is procured approximately two months before delivery of the product begins.

The following chart provides a summary of the DSP III portfolio for each customer class:
### Residential
- 96% of the load is supplied by a mix of products representing a transition to:
  - 40% 1-year FPFR products with delivery periods that overlap on a semi-annual basis
  - 60% 2-year FPFR products with delivery periods that overlap on a semi-annual basis
- The other 4% of the load initially is supplied by the pre-existing five-year block energy product purchased in DSP I and associated spot purchases; this block product expired on December 31, 2015, at which time the supply for this portion of the load was replaced by FPFR products spanning seventeen months (approximately 3% of the supply) and spot purchases (approximately 1% of the supply)
- All products are procured approximately two months before delivery of the product begins

### Small Commercial
- 100% 1-year FPFR products
- Delivery periods overlap on a semi-annual basis
- All products are procured approximately two months before delivery of the product begins

### Medium Commercial
- 100% 6-month FPFR products
- No overlapping delivery periods
- All products are procured approximately two months before delivery of the product begins
- Transition to 100% spot-priced FR products scheduled for June 1, 2016, and in no event later than December 1, 2016

### Large Commercial and Industrial
- 100% spot-priced FR products with 1-year delivery periods
- All products are procured approximately two months before delivery of the product begins

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10. **Q.** Mr. Fisher, you have testified that the majority of default service supply for the Residential, Small Commercial, and Medium Commercial classes was procured in the form of FPFR products in DSP I, DSP II and DSP III. Please describe the characteristics of a FPFR product.

**A.** A FPFR default service supply product obligates the seller of the product to satisfy a specified percentage of all of the default service customers’ supply requirements in every hour of the delivery period, regardless of the default service customers’ instantaneous changes in energy consumption, regardless of how frequently customers switch to or from default service, and regardless of how the seller’s cost to
satisfy its supply obligation may change. The seller is paid a predetermined price per megawatt-hour for this service. The full requirements products that PECO has procured under DSP I, DSP II, and DSP III include the generation components required to supply PECO’s default service customers, including energy, capacity, and ancillary services, as well as alternative energy credits required for compliance with Pennsylvania's Alternative Energy Portfolio Standards (“AEPS”) Act. In PECO’s solicitations for FPFR products, qualified bidders compete with one another by submitting the prices at which they are willing to provide the full requirements default service supply, and the suppliers with the lowest prices are selected upon approval of the procurement by the Commission.

11. **Q.** Have PECO’s solicitations for FPFR supply products attracted many qualified suppliers?

   **A.** Yes. Between 9 and 13 suppliers participated in each of the FPFR product solicitations in DSP I, DSP II, and DSP III. Furthermore, the Commission has approved the bid results for approximately 99% of the FPFR default service supply product tranches that have been solicited to date. These facts indicate that many

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11 Source: http://www.pecoprocurement.com/index.cfm?s=background&p=previousResults. To date, 481 FPFR default service supply product tranches have been solicited by PECO. (The number increases to 501 if the 12-month 2011 “opt-in” fixed-price products for the Large Commercial and Industrial class are included.) The Commission has approved the bid results for all but seven of these tranches. On a related note, insufficient bids were received for some of the spot-priced full requirements products solicited in 2010 for the Large Commercial and Industrial class.
suppliers understand the products being solicited and are willing to compete to
provide those products. This is beneficial for customers and helps to ensure that the
winning prices are the lowest possible for the products being solicited. When bidders
are faced with a high likelihood that other bidders are also competing on the basis of
price for the same product, they have the incentive to submit their lowest possible
price in order to avoid being underpriced by another bidder.

12. Q. Do the bidders in FPFR product solicitations require compensation in the prices
that they offer to help them cover the associated costs and risks of their
obligation, to the benefit of customers?
A. Yes. As in any market, participants require compensation for the costs and risks
which they bear by providing a product.

13. Q. Have you performed a quantitative analysis of the results of PECO’s DSP I, DSP
II, and DSP III solicitations for FPFR default service supply products, in order
to better understand the compensation that is required by suppliers?
A. Yes. I have performed an analysis of the residential supply product pricing.

14. Q. What was the basic approach that you adopted in your analysis?
A. For each of the FPFR product solicitations that PECO completed, I calculated the
values of the individual cost components that can be quantified in a fairly simple way,

Commercial and Industrial class. (See Fall 2010 Solicitation Approval Secretarial Letter (9/22/2010)). Spot-
priced full requirements products are quite different from FPFR products, as spot-priced full requirements
products do not offer the opportunity to potential suppliers to manage all of the costs and risks of full
requirements supply at a fixed price on behalf of customers.
and deducted them from the winning bid prices. Then, by examining whether the
difference (i.e., the “residual compensation” required by suppliers to cover the other
costs and risks that I did not individually quantify) represents a relatively small or
large portion of the winning bid prices, I determine whether this “residual compensation” is reasonable, considering the costs and risks assumed by FPFR product suppliers to the benefit of customers.

15. Q. Please identify the cost components of full requirements service that you inducedly quantified.

A. For each solicitation, I used market price information and load data available at the
time of the solicitation to quantify cost components related to energy (including the
effect of load shape), capacity, ancillary services, and various credits.  

16. Q. How did you quantify each of these cost components?

A. For energy, I relied on forward block energy prices as reported by the New York
Mercantile Exchange (“NYMEX”). I then added a load shaping adjustment to
account for the fact that market prices are generally higher during hours in which

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12 For all solicitations except the March 2015 solicitation, I only used market price information and load data available at the time of the solicitation to quantify costs. At the time of the March 2015 solicitation, PJM had filed its Capacity Performance Proposal with the Federal Energy Regulatory Commission (“FERC”), and it was widely recognized that approval of this proposal would increase the costs of capacity for June 2016 and beyond. As such, for the March 2015 solicitation, the price used for capacity for deliveries starting in June 2016 and the corresponding Zonal UCAP Obligation are based on the actual results of the Capacity Performance Transition Incremental Auction, which incorporate the Capacity Performance Resources in PJM’s Capacity Performance Proposal.

13 For any solicitation in which sufficient PECO Zone forward prices were not available, NYMEX forward block energy prices for PJM Western Hub were used and a basis adjustment was applied. The basis adjustment was calculated based on historical market price data available as of the time of the respective solicitation. NYMEX prices were provided by Ventyx / Energy Velocity.
customer loads are higher. The load shaping was performed using actual PECO hourly loads and prices.

For capacity, I applied PJM-published capacity prices to megawatt quantities of required capacity, and divided the products by the commensurate megawatt-hour loads in order to express capacity costs in terms of dollars per megawatt-hour. The capacity quantities were calculated based on the reported peak load contribution (“PLC”) values for the appropriate classes of customers, and the corresponding megawatt-hour load values were calculated from publicly available load values as of the times of the solicitations.

The other cost components that I individually quantified include ancillary services costs, alternative energy credits (“AECs”), Auction Revenue Rights (“ARR”) credits, and marginal loss credits. These values tend to be much smaller than the cost of energy and capacity and, therefore, they have a much smaller effect on the results of my analysis.

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14 The calculation of this load shaping adjustment involved applying actual historical percentage differences between load-weighted hourly energy prices and straight-average hourly energy prices.

15 The ancillary services costs that I used were based on PECO’s historical ancillary services costs.

16 The costs of AECs were calculated using AEC prices as of the time of the solicitation and the volume requirements of the winning suppliers.

17 Auction Revenue Rights (“ARR”) credits were calculated by dividing zonal ARR credit allocations published by PJM by zonal loads calculated from PJM zonal load forecasts.

18 Marginal loss credits were calculated using actual credit data provided by PJM.

19 The values of both the ARR credits and the marginal loss credits were netted from the values of the other cost components that I calculated (i.e., these credit values effectively act as cost components with negative values), because a positive value for these credits equates to a positive dollar value allocated to the winning bidders in the solicitations.
For each solicitation, I quantified these cost components and then deducted the resulting values from the winning bid price to determine how much was left over—the “residual compensation” for all other cost and risk items that were not individually quantified. The following illustrative chart graphically portrays this approach:

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**Q.** Do the residual compensation values that you calculated represent the expected “profit margins” or “premiums” for the winning bidders?

**A.** No, these residual compensation values do not represent the expected profit margins for winning bidders. While it is reasonable for winning bidders to expect some level of profit in order to assume the full requirements obligations, there clearly are costs and risks that were not quantified and deducted from the winning bid prices; suppliers require the residual compensation to cover these costs and risks. Therefore, the residual compensation that I calculated simply represents what is left over after
deducting the values of cost components that I individually quantified, and does not represent the expected supplier profit or premium.

18. Q. What are some of the other costs and risks that this “residual compensation” is intended to cover?

A. The residual compensation must cover a wide range of other costs and risks, including:

- **Customer migration** – the financial costs and risks associated with the uncertainty regarding customer switching and its effect on the default service volumes to be supplied.

- **Usage and price uncertainty** – various costs and risks due to unexpected events that affect usage and price levels.\(^{20}\)

- **Unexpected congestion** – various costs and risks associated with the possibility that differences in prices between a given trading hub and the delivery location will be higher than expected values.

- **Adverse selection** – the costs and risks associated with the likelihood that high cost-to-serve customers (e.g., with less attractive load shapes) will disproportionately remain on default service due to competitive retail

\(^{20}\) These include extreme weather patterns, changes in customer usage patterns, plant outages or transmission line outages (which also affect congestion costs), fuel price shocks, and unexpected economic growth levels. Furthermore, the general positive correlation between loads and prices (e.g., a heat wave drives up both prices and loads) compounds the potential costs associated with this uncertainty.
suppliers’ lack of interest in marketing to such customers.

- Adverse developments in energy markets during the time a bid is held open – even for a few days, while the bids are evaluated and considered for approval by the applicable regulatory body.

- Potential changes in laws and regulations – such changes could impact supplier costs during the contract period.

- Administrative and legal costs.

- Credit-related costs (e.g., costs associated with posting collateral).

Again, my analysis does not include a quantification and deduction of these costs and risks from the winning bid prices. Therefore, winning bidders in the FPFR solicitations would need to cover these costs and risks in the residual compensation values that I calculated.

19. Q. What residual compensation values did you calculate when you deducted the values of the individually quantified cost components from the winning bid prices?

A. As the following exhibit shows, the residual compensation values generally range between about $2 per megawatt-hour and about $5 per megawatt-hour (about 4% to 8% of the winning supply bid price). Some higher values were witnessed in the January 2014 and September 2014 solicitations, but the residual compensation values in the solicitations since then have been lower. Residual compensation values in
PECO’s most recent (September 2015) solicitation were 4%-5% of the winning supply bid price.

### Breakdowns of Winning Bid Prices

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<th>Residual Compensation $/MWH</th>
<th>Individually Quantified Costs</th>
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<tr>
<td></td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Jun 2009 Combined</td>
<td>4.9</td>
<td>75.8</td>
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<tr>
<td>Sep 2009 Combined</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>May 2010 Combined</td>
<td>4.5</td>
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</tr>
<tr>
<td>Sep 2010 Combined</td>
<td>5.0</td>
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<td>Sep 2011 12-Mo</td>
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<td>Sep 2011 24-Mo</td>
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<td>Nov 2012 6-Mo</td>
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<tr>
<td>Nov 2012 12-Mo</td>
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<tr>
<td>Nov 2012 18-Mo</td>
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<td>Sep 2015 24-Mo</td>
<td>2.8</td>
<td>58.7</td>
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20. **Q.** Why do you believe that some of the residual compensation values were higher in the January 2014 and September 2014 solicitations?

**A.** As I noted in testimony filed in PECO’s DSP III, the higher residual compensation value for the January 2014 solicitation likely was largely due to unprecedented short-term factors that I believe caused potential default service bidders to divert their
attention and resources to urgent matters other than PECO’s solicitation.\textsuperscript{21} Factors contributing to the higher residual compensation values in the September 2014 solicitation likely included (1) the risk borne by winning bidders to the benefit of customers that winter price volatility for the foreseeable future may be higher than previously believed, given the price volatility witnessed during the winter of 2013-2014, and (2) the high likelihood at the time of the solicitation of imminent PJM capacity market reforms and the associated potential for increased capacity costs for load serving entities such as default service suppliers.\textsuperscript{22}

\textbf{21. Q. Do you believe that the residual compensation values that you calculated are reasonable, considering the costs and risks assumed by the winning bidders in}

\textsuperscript{21} During the weeks leading up to PECO’s January 2014 solicitation, the regional energy market was in the throes of a prolonged, record-breaking, cold spell. All conventional forms of generation were challenged. As a result, hourly wholesale energy market prices were very volatile during January 2014. It is likely that potential default service bidders needed to divert resources to urgent portfolio management issues precipitated by the extreme market conditions at the time of PECO’s January 2014 default service supply solicitation, resulting in low bidder participation. In addition, in light of the urgencies caused by the weather-related turbulence in the markets, both PJM and the neighboring New York Independent System Operator, Inc., ("NYISO") submitted filings shortly before bids in PECO’s default service supply solicitation were due, intervenors were required to file their comments on these filings within one week after the filings were made, and numerous parties dedicated resources to developing and submitting comments in these proceedings in the short periods of time allotted. Furthermore, bids were due in multiple other default service supply solicitations on the same day or within one day of PECO’s January 2014 solicitation’s bid due date. Given the issues related to the market-related events that I have described, potential bidders may have had abnormally limited resources available to fully compete in multiple default service supply solicitations at that time, and some may have chosen to focus on solicitations other than PECO’s. (PECO Energy Statement No. 3 (Direct Testimony of Scott G. Fisher) in Docket No. P-2014-2409362. \textit{Petition of PECO Energy Company for Approval of Its Default Service Program for the Period from June 1, 2015 through May 31, 2017}, pp. 18-21.)

\textsuperscript{22} At a meeting of the PJM Markets and Reliability Committee in late July 2014, PJM CEO Terry Boston described the “need to refine the definition of capacity” by incorporating fuel security, strengthening incentives and penalties for performance, and cracking down on what PJM viewed as “poor performance” during the preceding winter. (“PJM May Expand Capacity Market Rules: A Handout to Fossil Fuels, or a Needed Reliability Boost?” Greentech Media, August 13, 2014.) On August 20, 2014, just two weeks before bids were due in PECO’s September 2014 default service supply solicitation, PJM issued a capacity market reform proposal to address concerns about system reliability, recognizing that the solutions detailed in the proposal would be adapted through discussions with stakeholders. (“PJM Capacity Performance Proposal,” PJM Staff, August 20, 2014.)
these solicitations to the benefit of customers?
A. Yes. As I explained earlier, the participation by multiple suppliers in these open
solicitations helped to ensure that the winning prices were the lowest possible for the
products being solicited. Furthermore, these residual compensation values represent
only a small portion of the winning bid prices, especially considering the other costs
and risks that I described above, which FPFR suppliers intend to cover through the
residual compensation to the benefit of customers.

22. Q. Do the mix of one-year and two-year FPFR products in PECO’s residential
default service supply portfolio, and the semi-annual overlapping of their
delivery periods, provide price stability benefits for residential customers?
A. Yes, having a majority of two-year FPFR products supplemented almost entirely by
one-year FPFR products, all with semiannually overlapping delivery periods,
provides price stability benefits for residential customers. PECO’s portfolio of
overlapping one-year and two-year products limits the percentage of supply that must
be solicited or replaced at any given time or in any given short period of time, thereby
reducing the likelihood of significant rate changes due to adverse circumstances or
market conditions at any given time. For example, as I explained previously, the
January 2014 solicitation was held at a time in which unprecedented short-term
factors caused potential default service bidders to divert their attention and resources
to urgent matters other than PECO’s solicitation. This resulted in higher residual
compensation values and some unsubscribed tranches. However, PECO’s residential
product mix and overlapping delivery periods restricted the amount of supply that
needed to be solicited in that solicitation to only 27.2% of the overall residential default service supply requirement, thereby limiting the effect on customer rates of the adverse conditions.

23. Q. Has the basic default service model used by PECO supported the competitive retail electricity market?

A. Yes. In fact, since the DSP I period began, competitive retail market activity in PECO’s service area has grown considerably. As the following chart shows, there has been substantial and continuous growth in the number of EGSs competing in PECO’s service area over the DSP I, DSP II, and DSP III periods:  

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Data provided by PECO.
The number of EGSs licensed and certified to serve customers in PECO’s service area has increased substantially since the start of DSP I, with 125 EGSs currently licensed and certified to serve customers.\textsuperscript{24} Similarly, the number of EGSs serving PECO customers has roughly tripled since the DSP I period began, as has the number of EGSs serving PECO residential customers. Currently, 92 EGSs serve PECO customers, and 84 of these EGSs currently serve PECO residential customers.\textsuperscript{25}

Furthermore, 63\% of PECO’s total customer load is currently being served by an EGS, with switching percentages equal to 35\% for the Residential class, 59\% for the Small Commercial class, 84\% for the Medium Commercial class, and 97\% for the Large Commercial and Industrial class.\textsuperscript{26} In contrast, as of October 1, 2010, only a few months before supply deliveries under DSP I began, only 1.7\% of PECO’s total customer load was being served by an EGS.\textsuperscript{27}

Clearly, PECO’s transition from long-term, capped default service rates to default service rates based on competitive market pricing for PECO’s prudent mix of default service supply products has supported a competitive retail market in PECO’s service area.\textsuperscript{28}

\textsuperscript{24} Source: PECO. Data is for the month ending February 23, 2016.
\textsuperscript{25} Source: PECO. Data is for the month ending February 23, 2016.
\textsuperscript{26} Source: PECO. Data is for the month ending February 23, 2016, and includes customers who will be switched to EGSs within 45 days. Percentages of load are based on PLC values.
\textsuperscript{27} Figure is “Percentage of Customers Load (MW) Served By An Alternative Supplier As Of 10/1/2010” as found in “Pennsylvania Electric Shopping Statistics – October 1, 2010” published by the PA Office of Consumer Advocate.
\textsuperscript{28} The successful phase-out of the block-and-spot aspect of the supply portfolio and the greater reliance on FPFR products also has supported retail market development. Specifically, this has decreased the likelihood of
III. EVALUATION OF PECO’S PROPOSED DSP IV

24. Q. Please summarize PECO’s proposed plan for DSP IV.

A. PECO’s proposed DSP IV will continue the basic procurement strategy that was established in DSP III, which includes procurement of a prudent mix of products from competitive wholesale suppliers and has supported retail market competition.

- PECO no longer will separate the Medium Commercial class (peak demands 100 kW to 500 kW) from the Large Commercial and Industrial class (peak demands greater than 500 kW). Instead, PECO will consolidate these two classes into a Large Commercial and Industrial class consisting of customers with peak demands that are equal to or greater than 100 kW. By the end of the DSP III period, both the existing Large Commercial and Industrial class and the existing Medium Commercial class will have transitioned fully to default service supply based on spot market prices, and in DSP IV PECO will continue to offer this type of default service supply to the combined class. In PECO’s service area, the competitive retail market for Large Commercial and Industrial and Medium Commercial customers is very well developed, as 97% and 84% of the load, respectively, has switched to service from competitive retail suppliers.29 As such, neither of these customer classes relies on having material reconciliations between supply costs and retail revenues that can distort default service rates and reduce the transparency of future default service rates, which is important for customers to make informed supply decisions.

29 Source: PECO. Data is for the month ending February 23, 2016, and includes customers who will be switched
price stability in its default service rates, so the continuance of default
service based on spot market prices is reasonable for them.

- For the Small Commercial class, PECO will transition from the current
  supply portfolio composed entirely of one-year FPFR products to a supply
  portfolio consisting of 50% one-year FPFR products and 50% two-year
  FPFR products. PECO will continue the practice of overlapping delivery
  periods on a semi-annual basis and it also will continue the practice of
  procuring each of the FPFR default service products approximately two
  months before delivery of the product begins. The inclusion of the two-
  year products in the supply portfolio is designed to better ensure price
  stability for those small non-residential customers who do not select
  service from a competitive retail supplier. Specifically, the procurement
  approach will transition from the current cycle in which 50% of the supply
  is replaced every six months to a cycle in which 37.5% of the supply is
  replaced every six months, thereby reducing the likelihood of significant
  rate changes due to adverse circumstances or market conditions at any
  given time.

- The supply portfolio for the Residential class will continue the basic
  procurement design established in DSP III, in which 96% of the supply
  consists of a mix of 40% one-year FPFR products and 60% two-year

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to EGSs within 45 days. Percentage of load is based on PLC values.
FPFR products, with delivery periods that overlap on a semi-annual basis. The remaining 4% of the overall default service supply portfolio for the Residential class will consist of two tranches (each supplying 1.6% of the Residential class default service load) of five-year FPFR products (for June 2017 through May 2022 delivery), and the remaining sliver of the supply need will be satisfied through spot purchases. Each of the FPFR default service supply products for the Residential class will be procured approximately two months before delivery of the product begins.

The following chart provides a summary of the DSP IV portfolio for each customer class:

**Proposed DSP IV**

<table>
<thead>
<tr>
<th>Residential</th>
<th>Small Commercial</th>
<th>Large Commercial and Industrial</th>
</tr>
</thead>
</table>
| - 96% of the load is supplied by a mix of products in the following proportions:  
  - 40% 1-year FPFR products with delivery periods that overlap on a semi-annual basis  
  - 60% 2-year FPFR products with delivery periods that overlap on a semi-annual basis  
- The other 4% of the load is supplied by a five-year FPFR product (approximately 3% of the supply) and spot purchases (approximately 1% of the supply)  
- All products are procured approximately two months before delivery of the product begins | Transition to:  
  - 50% 1-year FPFR products  
  - 50% 2-year FPFR products  
  - Delivery periods overlap on a semi-annual basis  
- All products are procured approximately two months before delivery of the product begins | - 100% spot-priced FR products with 1-year delivery periods  
- All products are procured approximately two months before delivery of the product begins |

25. **Q.** Mr. Fisher, the Act requires a default service plan to produce a prudent mix of
contracts, and include prudent steps necessary to obtain least cost generation
supply contracts on a long-term, short-term and spot market basis. What
guidance has the Commission provided in interpreting that standard?

A. On October 4, 2011, the Commission entered its Second Default Service Rulemaking
Order, in which it provided guidance regarding interpretation of the terms “least cost”
and “prudent mix” as follows:

[T]he [“least cost”] standard must give the DSP sufficient latitude to select
contracts that constitute a “prudent mix” which includes a sufficient
variety of products that adequately take into consideration price volatility,
changes in generation supply, customer usage characteristics and the need
to assure safe and reliable service. In implementing default service standards, the Commission must be
concerned about rate stability as well as other considerations such as
ensuring a “prudent mix” of supply and ensuring safe and reliable service.
In our view, a default service plan that meets the “least cost over time”
standard should not have, as its singular focus, the achievement of the
absolute lowest cost over the default service plan time frame but rather a
cost for power that is both relatively stable and also economical relative to
other options.

Price stability benefits are very important to some customer groups, so an
interpretation of “least cost” that mandates subjecting all default service
customers to significant price volatility through general reliance on short
term pricing is inconsistent with Act 129’s objectives.

We agree with the majority of parties that the “prudent mix” of contracts
be interpreted in a flexible fashion which allows the DSPs to design their
own combination of products that meets the various obligations to achieve

\[30\] 66 Pa.C.S. § 2807(e)(3.4), and 66 Pa.C.S. § 2807(e)(3.7).
Default Service Rulemaking Order”), p. 38.
\[32\] Id., p. 40.
\[33\] Id., p. 41.
“least cost to customers over time,” ensure price stability, and maintain adequate and reliable service.34

We do reject the positions of those parties that “prudent mix” be defined to always require a specific mix or percentage of types of contract components in each default service plan or a minimum of two types of products.35

Q. Do you believe that PECO’s proposed DSP IV incorporates a prudent mix of contracts, and includes prudent steps necessary to obtain least cost generation supply contracts on a long-term, short-term and spot market basis, as required by Section 2807(e)(3.4) and Section 2807(e)(3.7) of the Act?

A. Yes, I do. There are several reasons for this conclusion:

1. The procurement process is designed to ensure the least cost to customers by requiring qualified bidders in the supply product solicitations to compete and be selected based on the lowest price. Furthermore, when FPFR products are solicited, default service customers are provided the benefits of competition on all aspects of the full requirements supply obligation, including the portfolio management function.36 It is reasonable to assume that bidders in the FPFR product solicitations will consider the costs and risks associated with all forms of supply available to them to satisfy their fixed-price full requirements obligation, and will reflect in their bid prices the benefits of any

34 Id., p. 60.
35 Id.
36 FPFR product suppliers have the responsibility for continuously satisfying the uncertain and constantly changing supply requirements at the agreed-upon price, and therefore must manage the associated costs and risks through their supply portfolio decisions.
opportunity that they believe is the least cost supply opportunity.

2. PECO’s Plan predominantly relies on FPFR default service supply products, which are well-tested in the marketplace. These products have been successfully procured by PECO in DSP I, DSP II, and DSP III, and are frequently procured by utilities in Pennsylvania and in other jurisdictions.37

3. The types of products relied upon under the Plan have been shown to be reasonably priced. Specifically, the participation in the open solicitations for FPFR products, combined with my quantitative analysis of the prices from PECO’s FPFR residential default service supply solicitations under DSP I, DSP II, and DSP III, indicate that the prices of such products are reasonable, considering the costs and risks assumed by the winning bidders in these solicitations to the benefit of customers.

4. The Commission has recognized the benefits of reliance on full requirements products in a default service portfolio, as it stated in its Second Default Service Rulemaking Order:

The [full requirements] process insulates default supply customers from the volatility associated with wholesale market conditions with the supplier bearing the risks of factors such as customer migration, weather, load variation and economic activity.38

We do express a preference for continued reliance by DSPs on the

37 Examples of specific jurisdictions in which full requirements supply products are procured include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, Ohio, Pennsylvania, Rhode Island, and Washington D.C.

38 Second Default Service Rulemaking Order, p. 54.
[full requirements] approach to the extent this method best suits the DSP’s particular procurement needs.  

The seller of a FPFR product is responsible for assuming, managing, and covering the financial costs and risks associated with electricity supply, while customers are protected against adverse market and/or generation cost outcomes. Sellers of FPFR products must satisfy their obligation, regardless of how much market prices or generation costs may increase during the delivery period and regardless of the default service load level. Yet if market prices decrease after these types of supply contracts are signed, customers may elect service from a lower cost competitive retail supplier.

5. PECO’s Plan continues the use of a standard supply contract, which lets bidders know the terms and requirements of the default service supply obligation well in advance of the bid due date, and therefore allows qualified bidders to submit firm bid prices knowing that these contract terms and conditions will not change. The use of a standard contract also assures qualified bidders that the selection of the winning bidders will be an objective process. Consequently, the use of a standard contract encourages participation in the solicitations from a large number of potential suppliers.

6. PECO’s Plan is also prudent because it includes tailored supply portfolios for different customer classes that take into account any benefits of price stability, the different shopping propensity of each customer class, and the desire to

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39 Id., p. 56.
further develop the competitive retail market in PECO’s service area.

27. Q. Has the Commission supported the use of a tailored supply portfolio for each customer class?

A. Yes. Specifically, in its Second Default Service Rulemaking Order, in its discussion of the “prudent mix” requirement under Act 129, the Commission stated:

The Commission notes there was substantial unanimity on this point and agrees with the parties that the “prudent mix” standard should be interpreted to allow for a class-specific product mix that best matches the needs of each DSP customer class.40

28. Q. Mr. Fisher, does PECO’s proposed DSP IV include a reasonable degree of flexibility to accommodate the possibility of future changes in the default service supply approach and the possibility of new retail market initiatives?

A. Yes. PECO’s proposed DSP IV incorporates this flexibility in several ways. First, the default service supply product portfolio for the Large Commercial and Industrial class does not include any supply products with delivery periods that extend beyond May 31, 2019, the end of the DSP IV period. As a result, the Commission can easily adopt a similar plan or a very different plan for the period starting June 1, 2019, without the need to face situations involving pre-existing default service supply products for this customer class with deliveries that extend beyond the DSP IV period.

Second, with the exception of the two tranches of five-year Residential FPFR

40 Second Default Service Rulemaking Order, p. 69.
products, the solicitations for Residential and Small Commercial supply products
with delivery periods that extend beyond May 31, 2019 (the end of the DSP IV
period) do not occur until September 2017. As a result, there is a significant amount
of time before relatively large commitments to new supply products extending
beyond the DSP IV period are made, should changes need to be made due to
legislative or regulatory developments. In the meantime, these solicitations remain
scheduled because they allow for the option for a fairly seamless continuation of the
laddered procurement cycle as PECO transitions from DSP IV to DSP V,\(^\text{41}\) and they
avoid subjecting Residential and Small Commercial customers to a “hard stop” with
regard to their supply products at the end of the DSP IV period. This is consistent
with the approach approved by the Commission in DSP II and DSP III, and it helps to
avoid the need to replace a large portion of default service supply in a short period of
time at the end of the DSP IV period. Customers could be exposed to magnified risks
and rate instability if a default service plan were to require that a large portion of the
customers’ default service supply must be procured in a short period of time, as
evidenced by the possibility of adverse short-term market conditions like those which
existed during the January 2014 solicitation.

Finally, PECO’s proposed DSP IV provides flexibility because it relies on full
requirements supply products and it does not involve the procurement of any new

\(^{41}\) In its Second Default Service Rulemaking Order, the Commission recognized the importance of “laddering”
contracts in procuring default service supply. Specifically, the Commission stated, “We agree with those
parties that utilizing such practices as laddering contracts, with varying procurement periods and contract
durations over multiple procurements provide definite benefits in terms of minimizing the impacts of market
volatility and decreasing customer risk.” (Second Default Service Rulemaking Order, pp. 62-63.)
fixed-cost supply commitments that do not vary with load, like block energy products. This is especially valuable given ongoing uncertainty about future customer migration.

29. Q. Mr. Fisher, are you familiar with the end state model for default electric service that the Commission proposed in its Default Service End State Order?42

A. Yes. For Residential and Small Commercial and Industrial customers, the Commission proposed a significant shortening of the term lengths of the default service supply products.43 Specifically, the Commission proposed that customers with peak demands below 100 kW, including Residential customers, be served entirely by FPFR products with 90-day delivery periods, procured each quarter. This supply portfolio would consist of substantially shorter-term supply products for small customers than the products currently included in the major Pennsylvania Electric Distribution Companies’ (“EDC”) approved default service plans for these customers, as the current supply portfolios contain many products with one-year and two-year delivery periods.44

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43 Default Service End State Order, p. 41.
30. Q. In the Default Service End State Order, did the Commission recognize that some of its proposed changes may require amendments to existing legislation?

A. Yes, the Commission acknowledged that procuring only a 90-day default service product for Residential and Small Commercial and Industrial customers may require a change to the existing statutory procurement standard, and in any event a legislative change was desirable for a variety of reasons. The Commission therefore determined that it would be “well-served to ensure that the General Assembly is supportive of our overall policy direction on matters as important as the retail market for electricity.” To date, such changes have not been adopted by the General Assembly.

31. Q. Do you believe that there are sufficient reasons to shorten the term lengths of the products in PECO’s DSP IV supply portfolios for its Residential and Small Commercial classes?

A. No. The Commission has explicitly acknowledged that price stability is an important consideration in developing a default service plan:

In implementing default service standards, the Commission must be concerned about rate stability as well as other considerations such as ensuring a “prudent mix” of supply and ensuring safe and reliable service. In our view, a default service plan that meets the “least cost over time” standard should not have, as its singular focus, the achievement of the absolute lowest cost over the default service plan time frame but rather a cost for power that is both relatively stable and also economical relative to

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46 Id., pp. 45-46.
other options.\textsuperscript{47} 

Price stability benefits are very important to some customer groups, so an interpretation of “least cost” that mandates subjecting all default service customers to significant price volatility through general reliance on short term pricing is inconsistent with Act 129’s objectives.\textsuperscript{48}

Accordingly, in assessing the relative merits and drawbacks of a portfolio consisting of generally shorter-term products, it must be recognized that such a portfolio would increase customers’ exposure to significant price volatility. This is an important consideration because small customers generally realize the greatest benefits from default service price stability. Some small customers who need price stability may not have the time, incentive, knowledge, sophistication, or resources to elect an EGS offering that provides the price stability that they seek with competitive pricing. The combinations of one-year and two-year FPFR products in PECO’s Residential and Small Commercial DSP IV default service supply portfolios, and the semi-annual overlapping of those products’ delivery periods, are important to insulate customers from sudden and large price fluctuations. In contrast, supply portfolios with generally shorter-term products would unnecessarily increase customers’ exposure to substantial price fluctuations. Act 129 appears to be consistent with this position, as it requires that a default service plan include a “prudent mix” of contracts that takes into account any benefits of price stability.\textsuperscript{49}

Moreover, there is no convincing evidence that further shortening the term lengths of

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{47} Second Default Service Rulemaking Order, p. 40.
  \item \textsuperscript{48} Id., p. 41.
  \item \textsuperscript{49} 66 Pa.C.S. § 2807(e)(3.4), and Act 129 of 2008 (Preamble).
\end{itemize}
\end{footnotesize}
the default service products would better facilitate the development of the competitive retail market for small customers in Pennsylvania. In fact, PECO’s proposed Residential and Small Commercial supply product portfolios will facilitate retail competition by providing more predictable default service rates, making it easier for EGSs to market savings off of the default service rate, and making it easier for small customers to compare EGS offers with default service rates and more confidently make retail supply decisions.

32. Q. Mr. Fisher, is PECO’s Plan designed to support the competitive retail electricity market?

A. Yes. As in previous PECO default service plans, EGSs will compete against market-based default service rates, as the default service rates will be based on the prices for supply products obtained through competitive solicitations in which multiple bidders compete to sell the products solely on the basis of price. In addition, the use of FPFR supply products for the Residential and Small Commercial classes will allow those classes’ default service rates to closely match the market-based supply costs, reducing the likelihood of significant over- and under-collections from retail customers and enhancing rate transparency for retail supply decisions. Furthermore, the FPFR

50 Over- and under-collections are related to the degree to which actual costs during a given period may vary from the retail rates that were set for that period. If there is significant uncertainty about the all-in dollar-per-megawatt-hour default service supply cost for an upcoming rate period when the default service retail supply rate for that period is set, then the likelihood of significant over- and under-collections is increased. This is the case when a block-and-spot supply component is included in the portfolio, because under the block-and-spot approach the EDC must forecast future default service loads and spot prices, and actual outcomes may deviate significantly from the forecasted values. In PECO’s proposed DSP IV, roughly 99% of the Residential class’ supply portfolio and 100% of the Small Commercial class’ supply portfolio is composed of FPFR products. Consequently, there will be very little uncertainty about the default service supply costs on a dollars-per-megawatt-hour basis for any given upcoming rate period at the time that the default service retail rate for that
supply products and their procurement timing under PECO’s proposed DSP IV will result in a relatively stable and transparent residential price-to-compare benchmark against which residential customers can compare competing retail offers. Finally, as discussed by PECO witnesses Brian Crowe (PECO Statement No. 1) and John McCawley (PECO Statement No. 2), PECO will continue its existing Standard Offer Program through May 31, 2019.

IV. CONCLUSION

33. Q. **Does this conclude your direct testimony?**

A. Yes, it does.