PECO ENERGY COMPANY
STATEMENT NO. 3

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PECO ENERGY COMPANY
FOR APPROVAL OF ITS DEFAULT
SERVICE PROGRAM AND RATE MITIGATION PLAN

DOCKET NO. P-_____

DIRECT TESTIMONY

WITNESS: SCOTT G. FISHER

SUBJECTS: DEFAULT SERVICE PROCUREMENT

DATED: SEPTEMBER 10, 2008

TABLE OF CONTENTS

DIRECT TESTIMONY
OF
SCOTT G. FISHER

I. INTRODUCTION AND PURPOSE OF TESTIMONY

1. Q. Please state your name and business address.

A. 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 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. 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.

5. Q. What is the purpose of your testimony?

A. The purpose of my testimony is to evaluate PECO's proposed post-transition period default service plan (the "Default Service Plan" or "Plan") to procure supply for default service customers.

6. Q. Please summarize your conclusions.

A. My primary conclusion is that PECO's proposed Default Service Plan is reasonable, consistent with sound public policy objectives and, when implemented, should result in the procurement of electricity at competitive, prevailing market prices. This conclusion is supported by the following four findings:

1. PECO's Default Service Plan is tailored appropriately to meet the needs of default service customers, taking into account the different circumstances and competitive opportunities of each customer class.

2. Open solicitations for the types of supply products that PECO is proposing will provide customers with the benefits of competition on all aspects of the default service customers' supply requirements, thereby resulting in acquisition of supply at prevailing market prices, consistent with the Pennsylvania Electricity Generation Customer Choice and Competition Act ("Competition Act"),[1] as well

[1] 66 Pa.C.S. §§ 2801-2812.

as the Commission's Final Rulemaking Order on default service,[2] the Commission's Final Policy Statement on default service,[3] and the associated regulations[4] (the "Commission's Regulations and Guidelines").

3. An analysis of recent fixed-price full requirements default service supply solicitations indicates that the resulting contract prices are reasonable given the costs and the level of risks the suppliers under these contracts assume.

4. Alternative procurement approaches, such as relying on more spot market purchases or active portfolio management, would not be in the best interests of customers at this time.

Each of these findings is described further below.

II. PECO'S PLAN IS TAILORED APPROPRIATELY TO MEET THE NEEDS OF DEFAULT SERVICE CUSTOMERS

7. Q. Briefly summarize PECO's proposed procurement plan for default service customers.

A. In PECO Statement No. 2, Mr. Patterer describes the Default Service Plan in detail. Under the Plan, unique portfolios of supply products are procured for each of four different customer classes at different points in time. The following chart summarizes the supply product portfolio for each customer class:[5,6]

---

2 *Rulemaking Re Electric Distribution Companies' Obligation to Serve Retail Customers at the Conclusion of the Transition Period Pursuant To 66 Pa.C.S. § 2807(e)(2),* Docket No. L-00040169.

3 *Default Service and Retail Electric Markets,* Docket No. M-00072009.

4 *52 Pa. Code §§ 54.181* et seq. and *52 Pa. Code §§ 69.1801* et seq.

5 In PECO's Plan, the term "spot market" references the PJM day-ahead energy markets.

Residential	Small Commercial	Medium Commercial	Large Commercial and Industrial
• 5% spot-price full requirements • 30% 1-year fixed-price full requirements • 65% 3-year laddered fixed-price full requirements	• 10% spot-price full requirements • 50% 1-year fixed-price full requirements • 40% 2-year laddered fixed-price full requirements	• 15% spot-price full requirements • 85% 1-year fixed-price full requirements	Option A (default): • 100% spot-price full requirements Option B: • 100% 1-year fixed-price full requirements

All of the full requirements products will be procured through an open and competitive solicitation process, as described in the testimony of Dr. Chantale LaCasse of NERA (PECO Statement No. 4).

For the Residential and Small Commercial customer classes, the Plan features overlapping, or "laddered," delivery periods for the longer-term (two-year and three-year) fixed-price full requirements products.

The supply portfolio for the Medium Commercial customer class has more spot market-priced purchases and shorter-term contracts than the portfolios for smaller customers do.

The Large Commercial and Industrial customer class will default to a service with hourly rates reflecting spot market prices (Option A). PECO also proposes to conduct

[6] With the exception of Option B for Large Commercial and Industrial customers, the initial delivery period of the full requirements supply products will include an extra five months to align with the PJM planning period.

a solicitation for fixed-price full requirements supply to support a one-year fixed-price option for these customers (Option B).

8. Q. Briefly describe what you mean by a fixed-price full requirements default service product.

A. A fixed-price full requirements default service 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, and regardless of how frequently customers switch to or from default service. The seller is paid a predetermined price per megawatt-hour for this service. The full requirements product that PECO will procure under the Plan includes 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.

9. Q. Do you support PECO's Plan to tailor its default service offering by customer class?

A. Yes. By including tailored and separate supply portfolios for each of the various customer classes, the Plan is consistent with the Commission's Regulations and

Guidelines,[7] reflects the different needs and market situations that various types of customers face, and helps to ensure proper assignment of costs and risks.

A key question for policymakers is how often default service rates should adjust to changes in market prices. Some parties may argue that customers should be provided stable default service rates to protect them from market price volatility and to provide them with assurances, for budgeting and planning purposes, about the prices that they will pay. Other parties may argue that default service rates should reflect short-term price signals in order to encourage more customers to participate in the competitive retail market, and to ensure that significant deviations between default service prices and market prices do not occur due to lags between default service rate adjustments. PECO's Plan balances these considerations by tailoring the supply portfolio for each customer class to that customer class' sophistication about the retail electricity market, its willingness to shop, and the competitive retail supply offerings that are likely to be available to the particular customer class.

Generally speaking, retail competition for residential customers has not developed as quickly as it has for non-residential customers. The majority of utilities with retail access in the United States have more than 90 percent of their residential load remaining on utility default service.[8] This indicates that residential customers still require some protection against volatile market prices. Consequently, the Residential customer default service rates under PECO's Plan will be more stable than those for

---

[7] The Commission's Final Policy Statement at 6 suggests the use of "different procurement strategies for different customer classes, consistent with the level of energy knowledge, financial resources, and opportunity to shop associated with these groups."

[8] Source: state public utility commission websites.

non-residential customers. Under the Plan, default service rate stability for the Residential customer class will be achieved through the use of relatively longer-term fixed-price full requirements supply contracts, a smaller proportion of spot market-priced purchases, and laddering of the delivery periods of the multi-year contracts. This use of laddered delivery periods lowers the percentage of supply that is replaced each year, smoothing the effect on rate changes over time and promoting rate stability.

Like the Residential default service supply portfolio, the default service supply portfolio for Small Commercial customers will involve multi-year fixed-price full requirements contracts with laddered delivery periods.[9] However, the Small Commercial default service supply portfolio includes higher proportions of shorter-term fixed-price full requirements supply contracts and spot market-priced purchases, thereby resulting in somewhat less default service rate stability than that provided to Residential customers. Empirical evidence indicates that small commercial customers are generally somewhat more willing and/or able to access the competitive retail supply market to meet their needs. As a result, these customers do not rely upon utility default service to offer them rate stability to the same degree that residential customers do, and therefore it is appropriate to offer these customers somewhat less stability in their default service rates. Furthermore, offering somewhat less default service rate stability to these customers will encourage more of these customers to access the competitive retail market. The aforementioned evidence that small commercial customers are generally somewhat more willing and/or able to

[9] The Plan involves solicitations for two-year fixed-price full requirements contracts for Small Commercial customers.

access the competitive retail supply market to meet their needs is provided in Exhibit SGF-1. Here, I compare historical switching rates for residential customers with rates for small non-residential customers similar to those in PECO's Small Commercial customer class. The comparisons pertain to customers in three geographical regions: Commonwealth Edison's service area, Maryland, and Massachusetts. There are two reasons why I studied the switching rates in these three particular regions. First, in each of these regions, publicly available historical switching rates are expressed for residential customers, and separately for a non-residential customer class that is comprised of customers with usage levels similar to those for PECO's Small Commercial customers. Second, in recent years in each of these regions, default service supply has been competitively procured in the form of full requirements contracts like those proposed by PECO. As Exhibit SGF-1 shows, in all three regions, the small non-residential customers have consistently exhibited higher switching rates than the residential customers have. This indicates that small non-residential customers with usage levels similar to those for PECO's Small Commercial customer class have a greater propensity to shop for competitive retail supply service, and therefore do not require the same level of default service rate stability that residential customers do.[10]

PECO will rely more heavily on shorter-term and spot market-priced purchases to serve Medium Commercial customers than it will to serve Residential and Small

[10] At some points in time in some of the regions, the mix of fixed-price full requirements product durations comprising the default service supply portfolio may have been different for the residential customers than for the small non-residential customers, and this could have contributed to differences in switching rates between these two types of customers. However, the fact that the small non-residential customers have consistently exhibited higher switching rates than the residential customers throughout time provides reasonable evidence that small non-residential customers have a greater propensity to shop for competitive retail supply service.

Commercial customers. Medium-size customers in the United States generally exhibit somewhat higher switching rates than residential and small non-residential customers, indicating that they are more sophisticated about their service options and have more opportunities to shop. As a result, it is appropriate at this stage of market development to provide PECO's Medium Commercial customers with more exposure to shorter-term changes in market prices.

For Large Commercial and Industrial customers with peak demands greater than 500 kW, PECO will offer a default service based on spot market prices. Large Commercial and Industrial customers have more opportunities to shop for competitive supply and are better prepared to make informed supply decisions than residential and smaller non-residential customers. Furthermore, large customers throughout the United States have relatively high levels of retail shopping as compared to smaller customers. Therefore, it is reasonable that PECO offer Large Commercial and Industrial customers default service based on spot market prices. However, given that some large customers in PECO's service area may not yet be accustomed to shopping, PECO also proposes to conduct a separate supply solicitation to support a one-year fixed-price service option for these customers as they transition to a competitive retail market.[11] PECO's proposal to offer both a spot market-based default service and a fixed-price service is consistent with the

[11] The bids to provide fixed-price supply for these customers will include compensation to cover the costs and risks to the supplier associated with these customers' relatively high propensity to elect this fixed-price service only when it is in the customers' economic interest. PECO has proposed to adopt a limited enrollment window in which customers can elect this service, and has proposed to require customers who elect this service to remain on this service for the full one-year delivery period. This should reduce the compensation required by suppliers, and therefore the rate associated with this service.

Commission's Regulations and Guidelines,[12] is responsive to what several Large Commercial and Industrial customers apparently want,[13] and has been implemented elsewhere in earlier default service plans in Pennsylvania.[14]

10. Q. Please explain in greater detail how PECO's Plan will provide rate stability for Residential and Small Commercial customers.

A. As I mentioned earlier, PECO's Plan features laddered delivery periods for the longer-term fixed-price full requirements products. This laddering of delivery periods lowers the percentage of supply that is replaced each year, smoothing the effect on rate changes over time. In addition, there are many other financial costs and risks (such as those associated with customer migration, transmission congestion, usage patterns, changes in laws and regulations, etc.) associated with electricity supply. By allocating these other costs and risks to the seller through fixed-price full requirements procurement, customers are provided protection against adverse market outcomes. As I describe later in my testimony, procuring standard block energy

---

[12] Policy Statement, § 69.1805(3), states that a default service provider ("DSP") may propose a fixed-price option for the Commission's consideration.

[13] The Industrial Energy Consumers of Pennsylvania ("IECPA") previously requested that default service should include a fixed-rate option arguing that "[p]roviding large C&I customers with a long-term, fixed rate-option is consistent with the Competition Act if the energy is acquired at prevailing market prices and the DSP recovers fully all reasonable costs." Comments of IECPA, Rulemaking Re: Electric Distribution Companies' Obligation to Serve Retail Customers at the Conclusion of the Transition Period, Docket No. L-00040169, March 2, 2007, at 6.

[14] The Commission allowed Duquesne Light Company to offer a fixed-price option in addition to a default service based on spot market prices. The initial fixed-price option was for a seventeen-month delivery period followed by an additional twelve-month fixed-price option. *Petition of Duquesne Light Company for Approval of Plan for Post-Transition Period Provider of Last Resort Service*, Docket No. P-00032071, Opinion and Order, August 23, 2004, at 40; Commission Order on Petition for Reconsideration, Docket No. P-00032071, October 5, 2004, at 23-24. In addition, the Commission has allowed PPL to hold a single solicitation in October 2009 for fixed-price supply to Large Commercial and Industrial customers. In 2010, any Large Commercial and Industrial customer that does not opt-in to the fixed-price service and that does not elect to be served by a competitive retail supplier will receive default service based on spot market prices. *Petition of PPL Electric Utilities Corporation For Approval of a Competitive Bridge Plan*, Docket No. P-00062227, Opinion and Order, May 17, 2007, at 37-41.

products exposes customers to these risks while a fixed-price full requirements product protects customers from these risks. Under PECO's Plan, customers' rates are based on the winning bid prices for fixed-price full requirements supply (with the exception of the portion of supply that is procured through spot market-priced purchases), regardless of how high market prices may increase during the delivery period.[15] Yet if market prices decrease after the full requirements contracts are signed, then customers may elect service from a lower cost competitive retail supplier.

11. Q. As wholesale and retail markets evolve and technologies that allow Residential and Small Commercial customers to respond to hourly market price signals become further developed, might it make sense to increase these customers' exposure to short-term and/or spot price volatility?

A. Yes. The Commission's Default Service Regulations allow for reexamination of these issues periodically. Depending upon future market conditions, it may make sense to alter the contract lengths and/or the proportion of spot market-priced purchases offered to each customer class in future plans. This is consistent with the Commission's Final Policy Statement on default service, which notes that in subsequent programs, the percentage of supply acquired through shorter duration full requirements contracts and spot market purchases should be gradually increased, depending on developments in retail and wholesale energy markets.[16]

---

[15] As discussed in the testimony of Mr. McCawley (PECO Statement No. 5), in the event that suppliers default on their obligations, PECO's Plan includes credit requirements that provide substantial protections for customers.

[16] Policy Statement, § 69.1805 (1).

III. OPEN SOLICITATIONS FOR THE TYPES OF SUPPLY PRODUCTS THAT PECO IS PROPOSING WILL PROVIDE CUSTOMERS WITH THE BENEFITS OF COMPETITION ON ALL ASPECTS OF THE DEFAULT SERVICE CUSTOMERS' SUPPLY REQUIREMENTS, THEREBY RESULTING IN ACQUISITION OF SUPPLY AT PREVAILING MARKET PRICES, CONSISTENT WITH THE COMPETITION ACT AND THE COMMISSION'S REGULATIONS AND GUIDELINES

12. Q. How will PECO's Plan provide customers with the benefits of competition?

A. As the Commission notes in its Final Rulemaking Order, "We find that the plain language of the Competition Act demonstrates a preference for the use of 'competitive market forces' in controlling the cost of electricity."[17] Through an open solicitation for fixed-price full requirements products, default service customers receive the benefits of competition among wholesale bidders, on the basis of price, on all aspects of the default service customers' supply requirements, including the portfolio management function. Bidders' expectations regarding the costs of some of the components of fixed-price full requirements supply may be similar because transparent markets exist for some of the components (e.g., around-the-clock energy and capacity). However, bidders' assessments of other costs and risks (e.g., those associated with customer migration, transmission congestion, usage patterns, changes in laws and regulations, etc.) associated with providing fixed-price full requirements supply may be very different, their judgments regarding the best ways to manage these other costs and risks may be very different, and some bidders may be able to manage these costs and risks in a more cost-effective manner.

[17] Final Rulemaking Order, Docket No. L-00040169, May 10, 2007, at 21.

In a fixed-price full requirements solicitation, bidders compete on the basis of the lowest price to satisfy all aspects of the default service customers' load requirements. Winning bidders commit to manage these costs and risks at the lowest fixed price, thereby providing default service customers with the benefits of competition on all aspects of the full requirements supply obligation. To the extent that competitive retail suppliers are able to develop new value-added or tailored services to meet the needs of individual customers or can assemble a lower-cost supply portfolio and offer customers lower prices, these competitive retail suppliers will be able to attract customers away from PECO's default service.

13. Q. Is PECO's Plan also designed to promote retail competition?

A. Yes. Mr. Webster and Mr. McCawley (in PECO Statement No. 1 and PECO Statement No. 5, respectively) describe aspects of the Plan designed to promote retail competition.

14. Q. How have other utilities typically procured fixed-price full requirements products like the products included in PECO's Plan?

A. Utilities have typically procured these products through open solicitations, such as requests for proposals ("RFP") or auctions, in which bidders competing with one another indicate the prices at which they are willing to provide default service supply.

15. Q. Have there been high levels of participation in these open solicitations for full requirements supply?

A. Yes. The levels of participation in these open solicitations have been high, indicating that many suppliers understand the products being solicited and are willing to compete to sell the supply products. Evidence of this can be observed in recent solicitations in New Jersey, Delaware, Illinois, and Pennsylvania, as described further in Exhibit SGF-2. As this exhibit shows, the most recent default service supply auctions in New Jersey attracted 22 bidders, the most recent RFPs for default service supply in Delaware resulted in bids from 11 different entities, the full requirements default service supply auction in Illinois attracted 21 bidders, and 14 competing bidders participated in the most recent default service supply solicitation held by PPL in March 2008.

16. Q. What does this suggest about the prices resulting from these solicitations?

A. The high levels of participation in these open solicitations suggest that the resulting prices were competitive. Multiple bidders competed to sell the products on the basis of price. In order to be selected, bidders needed to offer a price that did not include unreasonable or excessive compensation for assuming and managing the costs and risks associated with the products. Otherwise, the bidder would be underpriced by another bidder. Consequently, the high levels of participation and competition in these open solicitations suggest that the prices are reflective of the compensation needed to incur the costs and manage the risks associated with fixed-price full requirements default service supply. As Exhibit SGF-2 shows, numerous independent evaluators and state public utility commissions also found that the solicitations were competitive.

17. Q. Briefly summarize the Competition Act's requirements for the post-transition period as they relate to default service.

A. Section 2807 (e)(3) of the Competition Act simply states that the electric distribution company ("EDC") or commission-approved alternative supplier "shall acquire electric energy at prevailing market prices...and shall recover fully all reasonable costs."

18. Q. Does the Competition Act define "prevailing market prices" or "reasonable costs"?

A. No, the Pennsylvania Legislature did not specify a single method or test for establishing "prevailing market prices." I am aware, however, that there has been extensive debate among EDCs, wholesale and retail electric suppliers, consumer groups, and others regarding the proper interpretation of this requirement. In particular, parties have disagreed on the frequency by which retail rates should be reset to market levels. Subsequently, in the Commission's Regulations and Guidelines, the Commission defined "prevailing market prices" as "prices that are available in the wholesale market at particular points in time for electric generation supply"[18] and recommended that a proposed procurement plan include a prudent mix of arrangements (which may include full requirements contracts) procured at different points in time.[19]

[18] Policy Statement, §69.1803.

[19] Policy Statement, §69.1805.

19. Q. Do you believe that open solicitations for fixed-price full requirements products such as those proposed by PECO will produce rates based on prevailing market prices?

A. Yes. There is ample market evidence which indicates that PECO's plan to rely predominantly on open solicitations for full requirements supply contracts will produce rates based on prevailing market prices at the time the contracts are signed. Numerous fixed-price full requirements solicitations have already been conducted in Pennsylvania and in other jurisdictions. These solicitations generally have attracted many bidders willing to provide supply and have been deemed competitive by independent evaluators and regulators alike. Further, an analysis of the winning bid prices in these solicitations also indicates that they represent prevailing market prices.

IV. AN ANALYSIS OF RECENT FIXED-PRICE FULL REQUIREMENTS DEFAULT SERVICE SUPPLY SOLICITATIONS INDICATES THAT THE RESULTING CONTRACT PRICES ARE REASONABLE GIVEN THE COSTS AND THE LEVEL OF RISKS THAT SUPPLIERS UNDER THESE CONTRACTS ASSUME

20. Q. Have you performed a quantitative analysis of the results of open solicitations for fixed-price full requirements default service supply products?

A. Yes, I have.

21. Q. What was the purpose of your analysis?

A. The purpose of my quantitative analysis was to assess whether the compensation required by the winning bidders in fixed-price full requirements solicitations appears reasonable given the obligations that these suppliers must assume. While some full

requirements cost components can be quantified with reasonable accuracy, other costs and risks are more difficult to quantify, largely because they involve more subjective judgment. For several recent full requirements solicitations, my analysis separates the cost components that can be quantified with reasonable accuracy from the costs and risks that require greater subjective judgment to quantify. In particular, I determine whether the compensation for the costs and risks that are more difficult to quantify represents a relatively small or large portion of the winning bid prices in fixed-price full requirements solicitations. Then I consider whether this "residual compensation" is reasonable given the costs and risks assumed by these suppliers.

22. Q. Which full requirements solicitations for residential and small non-residential customer default service supply did you analyze?

A. I analyzed the results of the New Jersey auctions held in February 2008 for default service supply for Atlantic City Electric Company ("ACE"), Jersey Central Power & Light Company ("JCP&L"), Public Service Gas & Electric Company ("PSE&G"), and Rockland Electric Company ("RECO"). Also, I analyzed the results of RFPs conducted by Delmarva Power ("Delmarva") in November 2007 and January 2008. Additionally, I analyzed the results of the RFPs conducted by PPL in March 2008. A brief summary of the solicitations that I analyzed is provided in Exhibit SGF-3.

23. Q. Why did you analyze these particular solicitations?

A. These solicitations satisfy several key criteria. First, these solicitations involve fixed-price full requirements default service supply products to residential and/or small

non-residential customers similar to those being proposed by PECO.[20] Second, these solicitations all involve supply in service areas within PJM, which has certain unique characteristics that affect full requirements pricing. Third, in each of these solicitations, the bids were due at a time after the posting of results of PJM Reliability Pricing Model ("RPM") Base Residual Auctions for capacity pertaining to at least part of the delivery period of the fixed-price full requirements default service supply product being solicited.[21] Consequently, all of the solicitations analyzed are recent, with actual applicable future RPM capacity prices known by the bidders, and I was able to use this information to develop estimates of capacity price expectations at the times of the solicitations. Fourth, there was enough publicly available information to analyze the results of these solicitations.

24. Q. What approach did you use to analyze the results of these solicitations?

A. I started with the actual reported winning bid price(s) achieved in each solicitation. I then adjusted these bid prices for definitional differences across solicitations. For example, the winning bid prices in the New Jersey solicitations include the cost of network integration transmission service, while the other solicitations do not. Therefore, I deducted the cost of network integration transmission service from the winning bid prices in New Jersey. Similarly, the reported winning bid prices in the Delmarva solicitations include the cost of distribution line losses, so the effect of

[20] The prices obtained in solicitations for fixed-price full requirements default service supply products for large non-residential customers are generally driven by the high customer migration costs and risks associated with serving this type of customer. Furthermore, switching rules for large non-residential customers vary across jurisdictions, making prices obtained in solicitations to serve these larger customers more difficult to analyze.

[21] "RPM" refers to PJM's "Reliability Pricing Model," which provides a long-term price signal for capacity resources and load serving entities' unforced capacity obligations. More information about RPM can be found at http://www.pjm.com/markets/rpm/rpm.html.

these line losses on the reported winning bid prices was netted in order to calculate comparable bid prices across solicitations. Finally, the reported winning bid prices in the PPL solicitations include the cost of distribution line losses and gross receipts taxes, so these costs were removed. The adjusted winning bid prices are shown in Exhibit SGF-4, and are similar in definitional terms to the products that PECO has proposed to solicit.

From the adjusted winning bid prices, I then deducted the estimated values of the more quantifiable cost components to calculate the "residual compensation."

25. Q. Please identify the cost components of full requirements service that you individually 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 basic load shape), capacity, ancillary services, and various credits.

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

A. For energy, I relied on forward block energy prices at the closest liquid trading hub as reported by the New York Mercantile Exchange ("NYMEX"). I then adjusted these prices for the basis differentials (i.e., transmission congestion) between the liquid trading hub and the applicable delivery point, based on the most recent two years of historical price data. I then added an hourly basic load shaping adjustment to account for the fact that market prices are generally higher during hours in which customer

loads are higher.[22] The load weighting was performed using loads for customers eligible for the applicable default service offering.

For capacity, I applied 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.[23] The capacity quantities were calculated based on the reported peak load contribution ("PLC") values for the customers who were eligible for the applicable default service offering and on PJM's reported forecast pool requirement, and the megawatt-hour load values were calculated from publicly available load values for the customers who were eligible for the default service offering.

The other cost components that I individually quantified include ancillary services costs,[24] Auction Revenue Rights ("ARR") credits,[25] and marginal loss credits.[26] 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. Both the

---

22 The calculation of this basic load shaping adjustment involved applying actual historical percentage differences, over the most recent two years for which data was available, between load-weighted hourly energy prices and straight-average hourly energy prices.

23 The capacity prices that I used were the Preliminary Net Load Prices that resulted from the PJM RPM Base Residual Auctions applicable to the delivery period of the default service supply product being analyzed. For all default service supply solicitations except those for supply to Delmarva, the results of RPM Base Residual Auctions covering the entire delivery period of the default service supply product were known by the bidders at the time of the solicitation. The Delmarva solicitations involved a default service supply product with a delivery period that spanned June 2008 through May 2011, and at the time of the solicitation the results of RPM Base Residual Auctions for June 2008 – May 2009 and for June 2009 – May 2010 were reported, but the results of the RPM Base Residual Auction for June 2010 – May 2011 were unknown. In my analysis of these solicitations, I assumed that the capacity price expectation for June 2010 – May 2011 was the Preliminary Net Load Price that resulted from the PJM RPM Base Residual Auction for June 2010 – May 2011, even though bidders did not know the results of this RPM auction at the times of these default service product solicitations.

24 The ancillary services costs that I used were based on estimates from the respective utility if available, and were based on estimates made by and for nearby utilities otherwise.

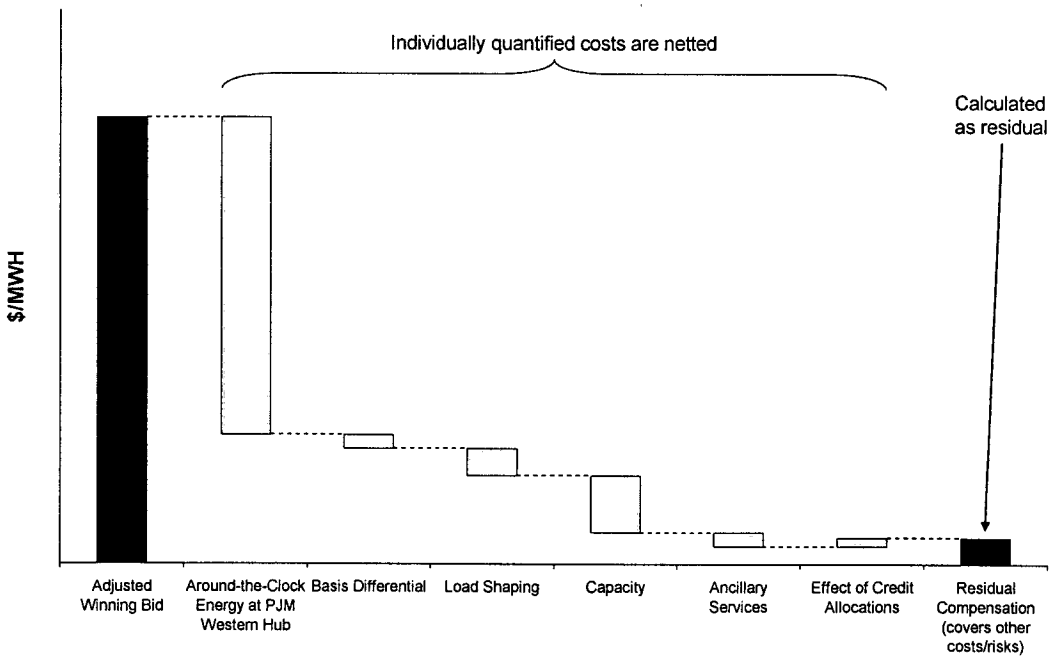
25 Auction Revenue Rights ("ARR") credits were calculated by dividing zonal ARR credit allocations published by PJM by zonal loads calculated from PJM zonal load forecasts.

26 Marginal loss credits were calculated using forecasts for these credits provided by PJM.

ARR credits and the marginal loss credits were netted from the other cost components that I calculated (i.e., they effectively act as cost components with negative values), because these credits represent expected positive dollar values allocated to the winning bidders in the solicitations.

For each solicitation, I quantified these cost components and then deducted the resulting values from the adjusted winning bid prices to determine how much was left over – what I refer to as "residual compensation" for all other cost and risk items that were not individually quantified.[27] The illustrative chart below graphically portrays this approach:

Illustrative Default Service Supply Price Analysis



[27] Less information was available to quantify some of the cost components for the Delmarva RFPs. For example, historical load data was relatively limited, so the basic load shaping adjustment was assumed to be 10% of the around-the-clock energy price.

27. 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 are clearly costs and risks that I did not attempt to quantify. I did not directly estimate the values of these other costs and risks, and deduct them from the winning bid prices because, while these costs and risks are very real, estimating their magnitudes would require a significant amount of subjective judgment. Therefore, the "residual compensation" that I calculated simply represents what is left over after deducting the values of cost components that I was able to individually quantify with reasonable accuracy.

28. Q. What are some of the costs and risks that this "residual compensation" is intended to cover?

A. I highlight eight costs and risks below, but even these eight do not necessarily represent an all-inclusive list.

1. **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. Customers have an incentive to elect service from competitive retail suppliers when the default service rate is higher than market prices, and they have an incentive to elect default service when the rate is lower than market prices.. This customer switching option can be very expensive for the seller of the fixed-price full requirements default service supply product.

2. **Unexpected Congestion** – Costs and risks associated with the possibility that differences in prices between a liquid trading hub and the delivery location are higher than expected or historical values, due to changes in generation or transmission capacity constraints or other market events.[28]

3. **Usage and Price Uncertainty** – Costs and risks due to certain unexpected events that affect usage and price levels. These include extreme weather patterns, changes in customer usage patterns, plant outages or transmission line outages (which also affect the congestion cost, as noted earlier), 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.

4. **Adverse Selection** – The costs and risks associated with the likelihood that high cost-to-serve customers will disproportionately remain on default service due to competitive retail suppliers' ability to target certain groups of customers.[29]

5. **Holding Bids Open** – The costs and risks associated with holding bids open even for a few days while the bids are evaluated and considered for approval by the

---

[28] In PJM, spot market prices for energy vary by location due to differences in supply and demand dynamics at each location during hours in which there are transmission constraints. Sudden problems with generation and/or transmission capacity can occur, significantly driving up the differences between the prices at the liquid trading hub and at other locations. While it may be possible to hedge congestion costs to some extent, this is complicated when default service load is uncertain.

[29] The cost to serve each customer within a given customer class is not the same. As compared to the entire customer class, some customers have consumption patterns that are less costly to serve. For example, customers with electricity requirements that do not vary much from one hour to the next are likely to be less expensive to serve than customers that use significant amounts of electricity for air conditioning purposes. To the extent that the lower-cost-to-serve customers can be offered greater savings from competitive retail suppliers, they are more likely to be served by these suppliers, leaving the higher-cost-to-serve customers to be supplied through default service.

applicable regulatory body. Wholesale electricity market participants, like most entities, prefer to hedge their financial risks, but they cannot hedge their exposure while they wait to see if their binding fixed-price offers to supply electricity will be accepted, at least they cannot without incurring costs.

6. **Potential Changes in Laws and Regulations** – After the supply contracts are signed, suppliers face the possibility that changes in legislation, regulations, or market rules could affect the costs associated with their obligations. Specifically, these changes may affect wholesale electricity market prices, as well as the cost and risk levels associated with the amount of load that sellers under existing contracts must supply.

7. **Administrative and Legal Costs** – The costs and risks associated with administrative and legal requirements to engage in the contracts and meet obligations under the contracts.

8. **Satisfaction of Alternative Energy Portfolio Standards** – The costs and risks associated with satisfying alternative energy portfolio standards that are applicable to the jurisdiction in which the seller is providing supply.

In addition to these eight costs and risks, suppliers also assume counterparty credit risk and incur collateral costs associated with their supply contract obligations. Again, I did not attempt to quantify any of these costs and risks for the solicitations that I analyzed. Therefore, winning bidders in the fixed-price full requirements solicitations would need to cover these costs and risks in the residual compensation values that I calculated. As I will discuss later in my testimony, these costs and risks

are also present under a procurement approach in which the utility manages a portfolio of supply products that are not structured as fixed-price full requirements products, but such an approach would shift many of these costs and risks to customers.

29. Q. What residual compensation values did you calculate when you deducted the values of the more quantifiable cost components from the adjusted winning bid prices?

A. The calculated residual compensation values are found in Exhibit SGF-5. As the exhibit shows, the residual compensation values range from $3.3 per MWH to $8.4 per MWH (3% to 8% of the adjusted winning bid price). Furthermore, the residual compensation values for the customer classes comprised primarily of residential customers generally appear to be lower than the residual compensation values for the customer classes with a greater portion of non-residential customers. This may be due to the fact that customer migration costs and risks associated with residential customers may be lower than that for larger, non-residential customers.[30]

30. Q. Do you believe that the residual compensation values that you calculated are reasonable given the costs and risks assumed by the winning bidders in these solicitations?

A. Yes.

[30] Larger customers are generally expected to have a greater propensity to elect service from competitive retail suppliers when the default service rate is higher than market prices, and elect default service when the rate is lower than market prices.

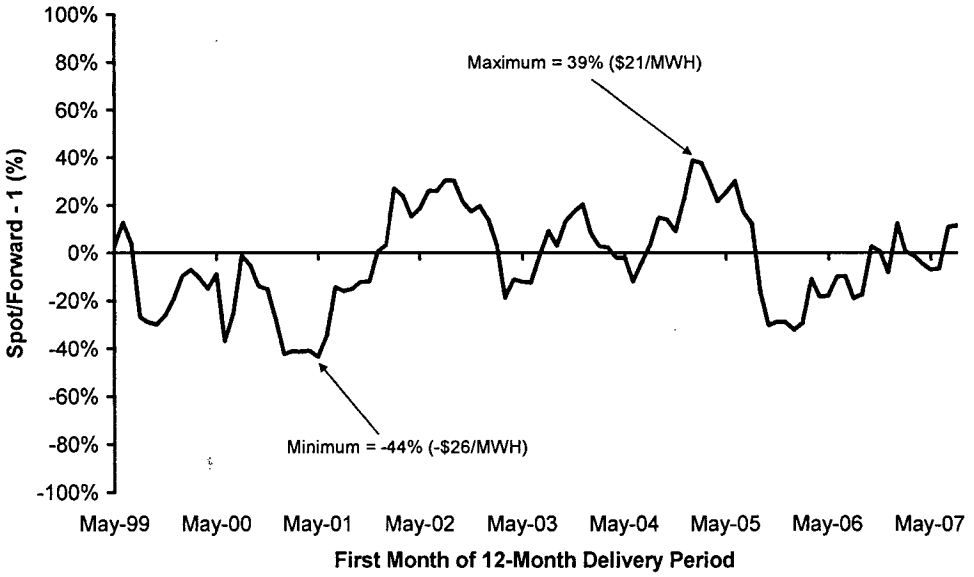
31. Q. What is the basis for your conclusion?

A. As I explained earlier, the high levels of participation in these open solicitations suggest that the resulting prices were competitive. Furthermore, these residual compensation values represent only a small portion of the winning bid prices, especially considering the costs and risks that fixed-price full requirements suppliers intend to cover through the residual compensation. While these costs and risks cannot be quantified easily, there is anecdotal evidence that illustrates potential magnitudes of these costs and risks.

The graph below depicts historical changes in energy prices within one-year periods. Specifically, the graph shows the percentage differences, on a rolling twelve-month basis, between the average real-time hourly spot market price for on-peak energy delivered at PJM Western Hub over a twelve-month delivery period and the forward price for the same delivery period as of a date just before the delivery period began:[31]

[31] Forward prices are those published in Megawatt Daily, a Platts publication. LMP data is PJM data provided in part by Energy Velocity.

PJM Western Hub Rolling 12-Month Spot/Forward Price Comparison
May 1999 - July 2008 On-Peak



As the graph shows, in less than a ten-year period, we have witnessed differences between the closing forward price and the actual average spot market price for the same twelve-month delivery period of approximately 40%. The graph also indicates that future spot prices may ultimately exceed or fall below current forward prices. There clearly is no guarantee that spot market prices will be higher or lower than longer-term contract prices.

32. Q. But couldn't this price risk be hedged through the use of forward "block" contracts (i.e., forward contracts with fixed delivery amounts)?

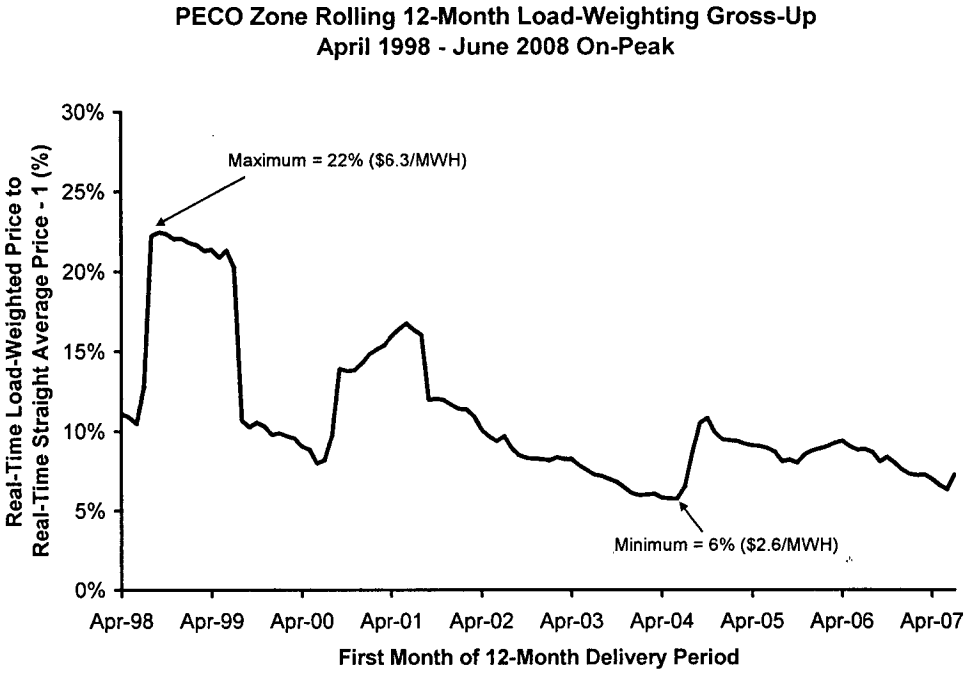
A. If the default service load did not vary from hour to hour, then this price risk could be hedged through forward block contracts,[32] but unfortunately this is not the case. Even if a supplier were to adopt a forward block contract hedging strategy, that supplier would still face risk regarding the actual market cost per megawatt-hour to serve the load, due to hourly variations in prices and customer loads driven by weather, fuel price changes, plant outages, transmission line outages, and other factors. This risk is illustrated in the graph below, which depicts the historical percentage differences between the PECO Zone load-weighted real-time price and the straight average PECO Zone real-time price on a rolling twelve-month basis:[33,34]

---

[32] Even in this scenario, price risk may still remain, depending upon the delivery point of the forward block contracts.

[33] Data is PJM data provided by Energy Velocity.

[34] No comparison of expected load-weighted prices and actual load-weighted prices for given time periods could be made, because no visible market data pertaining to expected load-weighted prices exists. The purpose of the graph is simply to illustrate that there is uncertainty regarding the actual cost to serve captive customer load when products other than fixed-price load following products are purchased, and that the load-weighting gross-up costs can change quickly.



As the graph shows, in only about a ten-year period, we have witnessed load-weighting gross-up costs that range between 6% and 22% of the straight average price. Furthermore, it should be noted that the range of load-weighting gross-up costs for smaller customers could be even higher because these customers generally have lower load factors than larger customers, and because smaller customers' hourly consumption generally exhibits greater correlation with market prices.

In addition to the costs and risks associated with customer usage and market price patterns, fixed-price full requirements default service suppliers assume costs and risks regarding the overall level of the load that must be served. These costs and risks are driven by uncertainty regarding economic activity, conservation, and customer migration between default service and service from competitive retail suppliers. When default service supply is provided through fixed-price full requirements contracts, the sellers of these contracts are allocated the financial costs and risks

associated with the customers' propensity to switch between service offerings, and these costs and risks cannot be hedged through forward block contracts. Customer migration can be very significant, even for small customers. In PECO's service area alone, residential customer load levels have changed by about 25% over only a six-month period,[35] and commercial customer load levels have changed by about 75% over a six-month period,[36] due to customer migration. If a fixed-price full requirements supplier plans for a given level of load, and market prices subsequently change and customer migration occurs, the supplier could be forced into a situation in which it must either sell excess power at a low price or purchase additional power at a high price, and incur significant costs. For example, if prices were to drop by $25 per megawatt-hour, and 25% of the default service load then migrated to competitive retail suppliers, then a fixed-price full requirements default service supplier who used block contracts to satisfy its expected load obligation would incur losses that would total about $8 per megawatt-hour of the remaining default service load.

Furthermore, fixed-price full requirements default service suppliers assume costs and risks associated with the possibility that regulators will enact policies that increase the customers' likelihood to take advantage of market price movements at the expense of the fixed-price full requirements default service suppliers. The Commission's April 20, 2006, decision to institute an opt-out retail aggregation bidding program for customers in Pike County Light & Power Company's ("Pike County") service area

---

[35] As of April 1, 2002, 27.2% of PECO's residential customer load was being served by competitive retail suppliers. As of October 1, 2002, 8.7% of PECO's residential customer load was being served by competitive retail suppliers.

[36] As of January 1, 2001, 46.1% of PECO's commercial customer load was being served by competitive retail suppliers. As of July 1, 2001, 6.0% of PECO's commercial customer load was being served by competitive retail suppliers.

provides a good example.[37] The Commission approved Consolidated Edison Energy, Inc.'s ("ConEd Energy") offers to provide default service supply to Pike County at fixed prices on October 28, 2005. On March 10, 2006, Direct Energy filed a petition to implement an opt-out retail aggregation bidding program, and this program was subsequently approved by the Commission with some modifications, leaving ConEd Energy with very little load to serve. ConEd Energy's actual strategy to hedge the financial risks associated with its supply obligations to Pike County is proprietary, but historical NYMEX futures prices indicate that, had ConEd Energy adopted a strategy of purchasing forward block energy products in a constant quantity across all months, and then sold off some of these products when Direct Energy filed its petition for fear of being stuck with excess purchase contracts when the petition was approved, then ConEd Energy would have lost approximately $10 per megawatt-hour.[38] Furthermore, the losses could have been greater if ConEd Energy had adopted a strategy that involved forward block energy purchases in monthly on-peak and off-peak quantities that more closely resembled expected monthly on-peak and off-peak default service loads.

33. Q. Does the anecdotal evidence that you have presented regarding the costs and risks to be covered by suppliers in the residual compensation represent the extent of the exposure assumed by suppliers?

---

[37] Final Opinion and Order, Docket No. P-00062205, April 20, 2006.

[38] NYMEX futures prices for delivery spanning the June 2006 – December 2007 period were approximately $90 per MWH as of the close of trading on October 28, 2005, and were approximately $80 per MWH as of the close of trading on March 10, 2006. (Source: Energy Velocity)

A. No. I identified eight types of costs and risks earlier in my testimony. This anecdotal evidence simply illustrates how some of these costs and risks could be expensive for the supplier. Nonetheless, the "residual compensation" required by fixed-price full requirements default service suppliers represents only a small portion of the winning bid prices, especially considering the costs and risks that fixed-price full requirements suppliers intend to cover through the residual compensation.

34. Q. Are there reasons why the residual compensation values that you calculated may differ from the results of a solicitation that PECO conducts in the future?

A. Yes. I have presented a range of estimated values and there are several reasons why actual residual compensation values in PECO's service area could be lower or higher than this range suggests. The residual compensation values may be different due to changes in wholesale market conditions. For example, the potential impact of greenhouse gas legislation on wholesale market prices could have a larger effect on suppliers' bid prices in the future. The residual compensation would also be affected by different competitive retail market conditions, as this would affect the customer migration costs and risks assumed by the default service suppliers. On a related note, there are some differences between the customer classes supplied through the solicitations that I analyzed and the customer classes supplied through the solicitations proposed by PECO, and these differences may suggest different residual compensation values. For example, several of the solicitations that I analyzed involved supply for customers that are larger than the customers in PECO's Residential and Small Commercial (i.e., peak demands less than 100 kW) customer classes. Consequently, the customer migration costs and risks that were associated

with the product and priced into the winning bids in these solicitations may be greater than in PECO's proposed solicitations for its Residential and Small Commercial customer classes, all else being equal.[39] Differences in the levels of regulatory risk directly or indirectly associated with the supply contracts would also contribute to differences between the residual compensation values in one solicitation versus another; this underscores the importance of ensuring that any regulatory actions after the results of a given solicitation are approved do not jeopardize PECO's ability to honor the supply contracts.

V. AN ALTERNATIVE PROCUREMENT APPROACH WOULD NOT BE IN THE CUSTOMERS' BEST INTERESTS AT THIS TIME

35. Q. Mr. Fisher, rather than rely predominantly on fixed-price full requirements contracts, could PECO have proposed a different type of procurement approach to supply its default service load?

A. Yes, the utility is allowed a certain amount of discretion under the Commission's Regulations and Guidelines to procure default service supply. For example, PECO could have chosen to rely more heavily on spot market purchases rather than on fixed-price full requirements products. This would involve shifting much of the risk that I described earlier from the winning bidders in the full requirements solicitations to retail customers. However, I do not believe that this is appropriate at this time, while wholesale and retail markets continue to develop. PECO's Plan appropriately tailors its supply portfolio to its different types of customers. Large customers are

[39] For example, the New Jersey auction supply products that were analyzed include supply to customers with peak loads up to 1,000 kW. Similarly, the PPL Small C&I supply product is predominantly for customers with peak loads over 100 kW.

provided shorter-term market price signals while small customers are provided more price stability. Smaller customers should not have greater exposure to shorter-term market price volatility in their default service rates until wholesale and retail markets are more developed.

PECO also could have pursued an active portfolio management ("APM") approach. Under an APM approach, PECO (or a third party) would develop, procure, and manage a portfolio of supply products, such as a mix of block (i.e., fixed quantity) and spot market energy products that comprise full requirements supply.[40] As default service load deviates from forecasted quantities, PECO would either take corrective actions to rebalance its portfolio or rely on the spot market to purchase supply when needed and/or sell excess supply when not needed.

36. Q. Why do you recommend that PECO not implement an APM approach at this time?

A. There are several reasons. First, APM would not provide the full benefits of wholesale competition. Second, APM would expose customers to more risks than procurement based on fixed-price full requirements solicitations would, and APM could result in distorted price scenarios in which default service rates increase as market prices decline. Third, APM could raise issues related to prudence standards and hindsight review.

[40] This testimony does not address approaches that require the utility to make direct investments in new generation or to enter into long-term contracts for new generation. Such approaches would raise a host of other issues that are beyond the scope of this testimony.

37. Q. Please explain why APM would not provide the full benefits of wholesale competition.

A. APM would likely involve competitive bidding for only some products associated with the supply obligation (e.g., block energy products). The assumption and management of other cost components and risks associated with the full requirements supply obligation would not be subject to a competitive bid process, as these would be assigned to PECO. These other costs and risks would be passed on to customers on an ongoing basis. For instance, if PECO or its designated portfolio manager bought too little or too much supply for a given hour, customers would bear the risks of that decision. In contrast, under PECO's Plan, many bidders will compete, on the basis of lowest price, to provide all aspects of full requirements supply, including the portfolio management function. The bidders who offer this service at the lowest price will win the solicitations. Those winning full requirements bidders are free to assemble any type of supply portfolio that they believe will be most cost effective, and customers will receive the benefits of suppliers absorbing the risk that their supply portfolios turn out to be more expensive than their competitive bid prices.

38. Q. Please explain how APM would expose customers to more risks.

A. APM does not make the financial risks associated with full requirements default service disappear. Instead, these risks will exist regardless of the procurement approach that is chosen. But, the choice of procurement approach affects who will bear these risks, and hence who will have the obligation to manage these risks or live with the consequences of not managing them. APM shifts many of the risks from

third party suppliers to customers. For example, suppose PECO procured fixed quantities of supply based on a forecast of default service load and recovered the costs in default service rates. If market prices declined significantly and customers exercised their option to switch to a competitive retail supplier, PECO could be left with excess supply that it would be forced to sell at a loss. These trading losses would be recovered from the remaining default service customers through higher default service rates. This would further encourage customers to switch to competitive retail suppliers, thereby further driving up the default service rates. In this perverse situation, default service rates would tend to increase as market prices decline. This type of risk for customers is magnified to the degree that longer-term fixed-price fixed-quantity products are purchased for default service supply, because such contracts allow more time for market prices to vary from the contract price, thereby increasing the customer migration costs and risks that are levied on the remaining default service customers. Under PECO's Plan, the amount of supply procured and the actual default service load always match. Customers are not exposed to the risks associated with selling excess supply at a loss or purchasing high priced power in times of a shortage.

39. Q. How could APM raise issues related to prudence standards and hindsight review?

A. Whenever adverse outcomes occur, such as a situation in which supply is insufficient at times of high market prices, or there is excess supply when market prices are low, or congestion costs are not effectively hedged, or market prices change significantly for unforeseen reasons, parties may challenge the earlier decisions made by the utility

or its supply portfolio manager. These challenges (which could include litigation) could be very frequent, because electricity markets are uncertain and volatile. If potential suppliers and lenders to the utility believe that the utility is exposed to the possibility of cost under-recovery based on perfect hindsight, then these potential suppliers and lenders will become concerned about the utility's creditworthiness. This will increase the utility's cost of doing business and hence the rates that customers will pay, and could ultimately interfere with the utility's ability to provide reliable service.

40. Q. Is it possible that APM or relying completely on spot market purchases could prove after-the-fact to be less costly over a given period than PECO's proposed fixed-price full requirements contracts?

A. Yes, although the opposite is also true. An APM or spot market purchase strategy could prove after-the-fact to be more expensive than a fixed-price full requirements approach over a given period of time. This is largely due to the unpredictability of the rates that result from APM or spot market purchase strategies. It is important to recognize that APM and spot market purchase strategies allocate costs and risks differently between the default service suppliers and customers than PECO's proposed procurement approach does. Furthermore, under PECO's Plan, if a wholesale supplier believes that the winning bids that would result in the fixed-price full requirements solicitations could provide attractive margins for the winning bidders, then that supplier can compete in the solicitations and place lower bids, and competitive retail suppliers can make offers to retail customers at prices below the default service rates if their costs are less than the default service rates.

VI. CONCLUSIONS

41. Q. Please summarize your conclusions.

A. My primary conclusion is that PECO's proposed Default Service Plan is reasonable, consistent with sound public policy objectives and, when implemented, should result in the procurement of electricity at competitive, prevailing market prices. In this testimony, I have provided the following support for this conclusion:

1. PECO's Default Service Plan is tailored appropriately to meet the needs of default service customers. Each customer class is afforded a unique default service supply portfolio that has been designed to accommodate the circumstances and competitive opportunities of that customer class.

2. Through open solicitations for fixed-price full requirements default service supply products, PECO's proposal provides default service customers with the benefits of competition on all aspects of the full requirements supply obligation. Furthermore, open solicitations for fixed-price full requirements default service supply in other service areas have attracted numerous wholesale suppliers and have been deemed competitive by independent evaluators and regulators alike. As a result, the use of such solicitations, as PECO proposes, should result in acquisition of supply at prevailing market prices.

3. An analysis of recent fixed-price full requirements default service supply solicitations indicates that the resulting contract prices are reasonable given the costs and the level of risks that suppliers under these contracts assume.

4. Alternative procurement approaches, such as relying on more spot market purchases or active portfolio management, would not be in the best interests of customers at this time.

42. Q. Does this conclude your testimony?

A. Yes, it does.