

**PECO ENERGY COMPANY  
STATEMENT NO. 1**

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF PECO ENERGY COMPANY  
FOR APPROVAL OF ITS  
SMART METER TECHNOLOGY PROCUREMENT AND  
INSTALLATION PLAN

DOCKET NO. M-2009-2123944

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DIRECT TESTIMONY  
SUPPORTING PECO'S PETITION FOR APPROVAL OF ITS  
INITIAL DYNAMIC PRICING AND CUSTOMER  
ACCEPTANCE PLAN

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WITNESS: FRANK J. JURUSKA

SUBJECT: OVERVIEW OF INITIAL DYNAMIC  
PRICING AND CUSTOMER  
ACCEPTANCE PLAN

DATED: OCTOBER 28, 2010

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1 I became PECO's Vice President for Customer and Marketing Services in 2002. In  
2 this position, I was responsible for managing PECO's call centers, its billing and  
3 collection efforts, its meter reading, and large-account services.

4 Since 2003, I have been Director of PECO's Energy and Marketing Services  
5 department. I am responsible for PECO's energy efficiency, conservation and  
6 demand-side response programs, PECO's marketing efforts across all of its customer  
7 segments, and customer service for PECO's large commercial and industrial  
8 customers. I manage the customer testing and education aspects of PECO's "Smart  
9 Ideas" suite of energy efficiency programs. In addition, I am responsible for the  
10 development and execution of PECO's Act 129 Energy Efficiency and Conservation  
11 Plan ("EE&C Plan").

12 **3. Q. Mr. Jiruska, have you submitted testimony previously before the Pennsylvania**  
13 **Public Utility Commission (the "Commission")?**

14 A. Yes. Most recently, I submitted direct testimony in PECO's pending electric base  
15 rate proceeding. *See Pennsylvania Public Utility Commission v. PECO Energy*  
16 *Company – Electric Division*, Docket No. R-2010-2161575. I have also submitted  
17 testimony in Company proceedings related to PECO's EE&C Plan,<sup>1</sup> Residential Real-  
18 Time Pricing Program<sup>2</sup> and Default Service Program and Rate Mitigation Plan.<sup>3</sup>

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<sup>1</sup> *Petition of PECO Energy Company for Approval of its Act 129 Energy Efficiency and Conservation Plan and Expedited Approval of its Compact Fluorescent Lamp Program*, Docket No. M-2009-2093215.

<sup>2</sup> *Petition of PECO Energy Company for Approval of Phase I of its Residential Real-Time Pricing Program*, Docket No. P-2008-2032333.

<sup>3</sup> *Petition of PECO Energy Company for Expedited Approval of its Default Service Program and Rate Mitigation Plan*, Docket No. P-2008-2062739.

1 **4. Q. What is the purpose of your direct testimony?**

2 A. The purpose of my direct testimony is to provide an overview of PECO's proposed  
3 Initial Dynamic Pricing and Customer Acceptance Plan ("Dynamic Pricing Plan" or  
4 "Plan"). First, I provide an overview of this filing, including a summary of the  
5 supporting witness testimony. Second, I provide context for the filing, including a  
6 description of PECO's dynamic pricing obligations under Act 129 of 2008 ("Act 129"  
7 or the "Act") and how this filing continues the implementation of PECO's Smart  
8 Meter Technology Procurement and Installation Plan ("Smart Meter Plan"). Third, I  
9 discuss the objectives and key elements of the Dynamic Pricing Plan.

10 **5. Q. Please explain how PECO's filing is organized.**

11 A. PECO's filing consists of the following components:

- 12 1. PECO's Petition for Approval of its Dynamic Pricing Plan;
- 13 2. PECO's Dynamic Pricing Plan; and
- 14 3. Supporting direct testimony and exhibits of expert witnesses.

15 **6. Q. Please identify the other witnesses providing direct testimony on behalf of PECO**  
16 **in this proceeding.**

17 A. In addition to myself, the following witnesses will be responsible for presenting  
18 PECO's case-in-chief:

19 **Dr. Stephen S. George** (PECO Statement No. 2) is Principal Consultant and head of  
20 the energy practice group at Freeman, Sullivan & Co. Dr. George worked with  
21 PECO personnel to develop the Company's Dynamic Pricing Plan. His testimony  
22 provides an explanation of the Plan and its development, as well as the Plan's

1 objectives, proposed rate options, customer acceptance testing, and measurement and  
2 evaluation processes.

3 **Dr. Ahmad Faruqui** (PECO Statement No. 3) is a Principal with The Brattle Group.  
4 Dr. Faruqui worked with PECO personnel to develop the dynamic pricing rates that  
5 PECO will offer as part of its Dynamic Pricing Plan. His testimony describes how  
6 PECO's proposed dynamic pricing rates were selected, how customers in testing  
7 programs conducted by others responded to such rates, and the expected average  
8 customer energy usage impacts and bill savings.

9 **William S. Patterer** (PECO Statement No. 4) is Manager of Regulatory Strategy for  
10 PECO. Mr. Patterer was one of the key architects of PECO's Smart Meter Plan. His  
11 testimony presents PECO's proposed tariff for implementing the initial dynamic  
12 pricing rates, describes PECO's Dynamic Pricing Plan budget and explains how  
13 PECO intends to recover Plan costs.

14 **II. BACKGROUND OF PECO'S PROPOSED DYNAMIC PRICING PLAN**

15 7. **Q. Please explain PECO's obligations with respect to smart meters and dynamic**  
16 **pricing.**

17 A. Act 129 directed electric distribution companies ("EDCs") with greater than 100,000  
18 customers to file with the Commission, by August 14, 2009, a smart meter technology  
19 procurement and installation plan. 66 Pa. C.S. § 2807(f). Each EDC plan must  
20 describe the smart meter technologies the EDC proposes to install upon customer  
21 request at the customer's expense, in new building construction and in accordance  
22 with a depreciation schedule not to exceed 15 years. *Id.* The Act further defines

1 minimum smart meter technology capabilities, including enabling time-of-use rates  
2 and real-time price programs, and provides for recovery of all prudent and reasonable  
3 costs. 66 Pa. C.S. §§ 2807(f), (g).

4 In addition to the deployment of smart meters, the Act requires that specific kinds of  
5 rates be offered to customers who have been provided with smart meter technology.

6 In particular, the Act requires EDCs to submit “one or more proposed time-of-use  
7 rates and real-time price plans” by January 1, 2010, or at the end of the applicable  
8 generation rate cap period, whichever is later.<sup>4</sup> 66 Pa. C.S. §§ 2807(f)(5).<sup>5</sup>

9 **8. Q. Did PECO file a Smart Meter Plan in accordance with Act 129?**

10 A. Yes. The Company filed its proposed Smart Meter Plan on August 14, 2009. The  
11 final Smart Meter Plan was approved by the Commission by Order entered May 6,  
12 2010. *See Petition of PECO Energy Company for Approval of its Smart Meter*  
13 *Technology Procurement and Installation Plan*, Docket No. M-2009-2123944.

14 **9. Q. Please briefly describe PECO’s Smart Meter Plan.**

15 A. PECO’s Smart Meter Plan details the Company’s two-phase strategy for the  
16 deployment of smart meter technology throughout its service territory in accordance  
17 with the requirements of Act 129. The first phase comprises the selection, testing and  
18 validation of the smart meter technology to be deployed; the deployment of the  
19 advanced metering infrastructure communication network; the initial deployment of

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<sup>4</sup> PECO’s generation rate cap period ends on December 31, 2010.

<sup>5</sup> A time-of-use rate is a rate that reflects the costs of serving customers during different time periods, including off-peak and on-peak periods, but not as frequently as each hour. A real-time price is a rate that directly reflects the different cost of energy during each hour. *See* 66 Pa. C.S. § 2806.1(m).

1 up to 600,000 smart meters; and the development of a program to educate customers  
2 and implement initial dynamic pricing options. The second phase will complete the  
3 deployment of smart meters across PECO's service territory.

4 **10. Q. Is this dynamic pricing filing related to PECO's Smart Meter Plan?**

5 A. Yes. This filing is the second of three major filings with the Commission related to  
6 the implementation of PECO's Smart Meter Plan. In the initial filing, made in  
7 August 2009, PECO sought and received Commission approval of its overall Smart  
8 Meter Plan, including plans to procure and install certain smart meter infrastructure,  
9 initially deploy up to 600,000 smart meters, and to implement appropriate cost  
10 recovery mechanisms.

11 In this filing, PECO is seeking approval of its proposed Dynamic Pricing Plan to  
12 allow the Company to make an initial offering of two dynamic rates in order to  
13 comply with Act 129's dynamic rate requirements, as well as test customer  
14 acceptance of these new rate options. In the final major filing, scheduled for 2012,  
15 PECO will seek approval of a universal meter deployment plan to complete the  
16 deployment of smart meters in its service territory.

17 **11. Q. Why is PECO seeking to initially test "customer acceptance" of dynamic rates?**

18 A. Smart meter technology and the dynamic rates it enables can help customers save  
19 money by making more cost-effective decisions about energy use. In order to unlock  
20 those benefits for customers, PECO's dynamic rates must be well designed,  
21 understandable and attractive to customers. The initial deployment and installation of

1 up to 600,000 smart meters presents an opportunity for the Company to test a variety  
2 of dynamic pricing offers with the customers receiving smart meters. Results from  
3 this testing will be used to refine the dynamic pricing offers that will be made  
4 available to PECO's customers on a broader scale.

5 **12. Q. Have stakeholders been involved in the development of the Company's Dynamic**  
6 **Pricing Plan?**

7 A. Yes. PECO initiated a collaborative process with interested statutory advocates,  
8 government entities, meter technology providers and other stakeholders to design a  
9 plan for testing initial dynamic pricing options.<sup>6</sup> Stakeholders invited to participate in  
10 collaborative meetings included the Office of Consumer Advocate, Office of Trial  
11 Staff, Office of Small Business Advocate, Clean Air Council, the Philadelphia  
12 Housing Authority and Pennsylvania Legal Aid Network. During the meetings,  
13 PECO shared information from its plan development process and also solicited  
14 feedback from stakeholders on key plan components. At the August 12, 2010  
15 collaborative meeting, the Company presented and received feedback from  
16 stakeholders on its comprehensive dynamic pricing proposal. At the October 20,  
17 2010 meeting, PECO presented its revised proposal for the Plan. As described in Dr.  
18 Faruqui's direct testimony, stakeholder input was a key factor in selecting the two  
19 proposed initial dynamic rates to be tested. Once the Plan is approved, the Company  
20 will continue to organize stakeholder update and feedback sessions in order to share

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<sup>6</sup> PECO organized meetings on the following dates which focused, at least in part, on dynamic pricing matters: 10/7/09, 11/4/09, 12/3/09, 1/13/10, 2/26/10, 4/27/10, 8/12/10, and 10/20/10.

1 information about the status of Plan implementation as well as results from the test  
2 and learn process.

### 3 **III. OVERVIEW OF THE PROPOSED DYNAMIC PRICING PLAN**

4 **13. Q. Please briefly describe the two initial dynamic rates that PECO is proposing to**  
5 **offer.**

6 A. PECO is proposing to offer two different rate options: (1) Critical Peak Pricing  
7 (“CPP”); and (2) Time-of-Use (“TOU”) pricing. The CPP rate features a discounted  
8 flat rate for all kWh consumed other than on those occasions when a critical day is  
9 called (critical days will be called 15 days per summer). On critical days, during a 4-  
10 hour peak period, customers will pay a premium for all kWh used. With the TOU  
11 rate, each weekday is divided into peak and off-peak periods and customers pay a  
12 discounted rate for off-peak usage and a higher rate for peak period usage relative to  
13 PECO’s standard, non-time varying rate. Dr. Faruqui provides more detailed  
14 descriptions of these rates in his direct testimony.

15 **14. Q. How did PECO select these two proposed rate options?**

16 A. As more fully described by Dr. Faruqui, PECO performed a multi-step evaluation to  
17 select its proposed initial rate options. The first step was to identify the universe of  
18 possible rate options for consideration. Next, criteria were established for evaluating  
19 those options against the objectives of the Plan. Each rate option was screened  
20 against these criteria, and prototypes of the more attractive rate options were  
21 developed and presented at a series of stakeholder meetings. Stakeholder feedback  
22 was incorporated into the analysis, and the rate prototypes were refined to arrive at

1 the final recommendations. PECO ultimately decided to propose the CPP and TOU  
2 rates because they are understandable and send price signals that will incentivize cost  
3 saving consumption changes among PECO's customers.

4 **15. Q. What customer classes will be eligible for the CPP and TOU rates?**

5 A. Residential customers (which make up PECO's Default Service Procurement Class 1)  
6 that are not enrolled in the Company's Customer Assistance Program ("CAP") will be  
7 eligible for both the CPP and TOU rates. Small and medium commercial and  
8 industrial customers ("S/MC&I") (which make up PECO's Default Service  
9 Procurement Classes 2 and 3) also will be eligible for the CPP rate. It is important to  
10 note that only those customers in the "test and learn" population (estimated to be  
11 between 150,000 and 200,000 customers) will be offered proactively the opportunity  
12 to enroll in these options. Nonetheless, any eligible customer that has a smart meter  
13 installed and is not part of the "test and learn" population may request to be placed on  
14 a dynamic rate.

15 **16. Q. Please explain why CAP customers will not be offered the CPP or TOU rate.**

16 A. As explained in the testimony of Dr. Faruqui, the current CAP discounts that CAP-  
17 eligible low income customers receive far exceed any potential savings that they  
18 could achieve under either residential dynamic pricing rate. It is important to note  
19 that, as part of the Plan, PECO will provide in-home displays ("IHDs") and related  
20 educational materials to a random sampling of CAP customers (along with other  
21 samples of residential customers) in order to evaluate the effect of near real time  
22 information feedback on their energy usage. PECO hopes that IHDs can help CAP

1 customers more closely monitor their energy usage and ultimately help them reduce  
2 their energy bills. Moreover, all customers with smart meters, regardless of class or  
3 income, will have their usage data history available for viewing via a web portal. The  
4 data will be displayed on a next-day basis after the information has been verified by  
5 PECO.

6 **17. Q. Please explain why S/MC&I customers will not be offered the TOU rate.**

7 A. PECO decided to offer only the CPP to S/MC&I customers because PECO anticipates  
8 that a relatively small number of these customers will be available for testing  
9 dynamic rates. This result is expected because the number of S/MC&I customers  
10 who will initially receive smart meters is relatively small and many of these  
11 customers are likely to shop (i.e., not take default service from PECO). As such, the  
12 number of options that can be tested among S/MC&I customers is limited. PECO  
13 believes that it is more important to test several promotional strategies on this limited  
14 population rather than test another rate option. Moreover, as discussed in Dr.  
15 George's testimony, with a CPP tariff, load impacts can be estimated without a  
16 control group of different customers while a TOU tariff would require a control  
17 group. A secondary reason that supports the choice of the CPP over the TOU comes  
18 from prior research that suggests that the CPP rate will elicit greater price  
19 responsiveness from S/MC&I customers.

20 **18. Q. Please explain why large commercial and industrial customers will not be**  
21 **offered the CPP or TOU rate.**

1 A. Pursuant to PECO's approved Default Service Plan, large commercial and industrial  
2 customers (those with demand greater than 500 KW, which make up Default Service  
3 Procurement Class 4) will be offered a dynamic rate structure starting January 1,  
4 2011, namely, hourly pricing. *See Petition of PECO Energy Company for Approval*  
5 *Of Its Default Service Program And Rate Mitigation Plan*, Docket No. P-2008-  
6 2062739 (Order entered June 2, 2009). Thus, no additional dynamic pricing options  
7 are being proposed for those customers in this proceeding.

8 **19. Q. Does PECO plan to employ any screening measures to ensure that customers**  
9 **who may not be able to benefit from the CPP and TOU rates will be advised that**  
10 **these rates may not be right for them?**

11 A. Yes. PECO intends to work with stakeholders to develop screening measures which  
12 may include, among other things, scripts to be used during the customer enrollment  
13 process that explain the price risks of the dynamic rates.

14 **20. Q. How will PECO test the customer acceptance of these rates?**

15 A. PECO will employ a systematic "test and learn" approach, described in detail by Dr.  
16 George, to understand and adapt to customer acceptance of, and responses to, the  
17 initial dynamic rates. PECO will package these rates with a variety of technological  
18 and educational materials and will use different promotional and communication  
19 strategies. In the initial two years of the Plan, the offers will be structured so as to  
20 allow for rigorous analysis of customer preferences and the relative effectiveness of  
21 alternative promotional and communication strategies.

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2 **21. Q. Will PECO share the results of its “test and learn” analysis?**

3 A. Yes. PECO will keep stakeholders and the Commission informed regarding Plan  
4 implementation through the periodic meetings described above and annual reporting.  
5 The first interim report will be at the end of 2013 and will present the test and learn  
6 results to date for customer acceptance and demand response. The report will also  
7 indicate how insights gained from the analysis will be applied in the 2014 test and  
8 learn enrollment and customer performance efforts. The second and final report will  
9 summarize key findings regarding customer acceptance and demand response for the  
10 entire test and learn process and provide insight concerning why certain offerings  
11 were more effective than others. Finally, the report will present PECO’s  
12 recommended combinations of rates, technologies, promotional strategies and  
13 customer education efforts to be offered to customers receiving smart meters.

14 **22. Q. How will the costs to implement and administer the Plan be recovered?**

15 A. PECO proposes to recover Dynamic Pricing Plan costs through its Generation Supply  
16 Adjustment (“GSA”) filings. As discussed by Mr. Patterer, this proposal is consistent  
17 with recent Commission orders that identify default service cost recovery  
18 mechanisms as an appropriate means to recover costs associated with dynamic rate  
19 programs.

20 **23. Q. Does PECO’s proposed Dynamic Pricing Plan satisfy Act 129’s requirements**  
21 **regarding dynamic pricing?**

1 A. Yes. As noted earlier, Act 129 requires EDCs to submit “one or more proposed time-  
2 of-use rates and real-time price plans” by January 1, 2010, or at the end of the  
3 applicable generation rate cap period, whichever is later. 66 Pa. C.S. §§ 2807(f)(5).  
4 Consistent with this requirement, PECO’s Plan presents initial CPP and TOU rates  
5 for residential customers and a CPP rate for S/MC&I customers that satisfy the  
6 Commission’s “time-of-use” definition by reflecting the costs of serving customers  
7 during different time periods. In addition, and as I noted earlier, as part of PECO’s  
8 approved Default Service Plan, the Company will offer an hourly pricing service to  
9 its large commercial and industrial customers that satisfies the Commission’s “real-  
10 time price” definition by reflecting the different cost of energy during each hour.

#### 11 IV. CONCLUSION

12 24. Q. Please summarize your testimony.

13 A. After careful analysis and input from stakeholders, PECO has developed a proposed  
14 Dynamic Pricing Program that complies with Act 129 and employs an aggressive and  
15 robust “test and learn” approach to provide PECO with valuable insight into an  
16 effective rate design, technology, promotional plan and educational strategy for its  
17 customers. The lessons learned from this initial testing will allow for the successful  
18 broad scale deployment of dynamic rates throughout the Company’s service territory  
19 as well as add to the general body of knowledge about customer acceptance of  
20 dynamic rates. For these reasons, and those stated before, PECO urges the  
21 Commission to approve its proposed Plan, the proposed cost recovery mechanism,  
22 and related tariffs.

1 25. Q. Does this conclude your direct testimony?

2 A. Yes, it does.