

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF PECO ENERGY COMPANY :
FOR APPROVAL OF ITS SMART METER : DOCKET NO. M-2009-2123944
UNIVERSAL DEPLOYMENT PLAN :**

**PETITION FOR APPROVAL OF
PECO ENERGY COMPANY'S SMART METER UNIVERSAL DEPLOYMENT PLAN**

PECO Energy Company ("PECO" or the "Company") hereby petitions the Pennsylvania Public Utility Commission ("PUC" or the "Commission") to approve the second phase ("Phase Two") of its Smart Meter Technology Procurement and Installation Plan (the "Smart Meter Plan" or "Plan"). As set forth in the accompanying Smart Meter Universal Deployment Plan (PECO Exhibit 1) ("Universal Deployment Plan"), PECO proposes to substantially complete the installation of electric smart meters across its service territory by the end of 2014 at an estimated cost of approximately \$282 million.

PECO has completed, or is on schedule to complete, all of the elements of the first phase of its Commission-approved Smart Meter Plan ("Phase One"). For Phase Two, PECO has developed a Universal Deployment Plan that appropriately balances the costs, benefits and risks associated with installing smart meter technology throughout its service territory. In order to achieve the schedule proposed in PECO's Universal Deployment Plan, it is essential that the Commission grant timely approval of Phase Two of PECO's Smart Meter Plan. For that reason and because the principal components of PECO's Smart Meter Plan, including its cost-recovery mechanism, were reviewed and approved by the Commission less than three years ago, the Company requests that Phase Two of its Plan be considered on a schedule that would support

substantial completion of universal deployment of smart meters in PECO's service territory by the end of 2014.

I. INTRODUCTION

1. PECO is a corporation organized and existing under the laws of the Commonwealth of Pennsylvania with its principal office in Philadelphia, Pennsylvania. PECO provides electric delivery service to approximately 1.6 million customers and natural gas delivery service to approximately 475,000 customers in Pennsylvania.

2. On October 15, 2008, then Governor Edward G. Rendell signed into law Act 129 of 2008 ("Act 129"), which, in relevant part, amended Sections 2806 and 2807 of the Pennsylvania Public Utility Code. On June 24, 2009, the Commission entered an order that established standards and provided guidance for implementing the smart meter requirements of Act 129. *See Smart Meter Procurement and Installation*, Docket No. M-2009-2092655 (Order entered June 24, 2009) ("Implementation Order").

3. Act 129 requires electric distribution companies ("EDCs") with at least 100,000 customers to furnish "smart meter technology," as defined in Section 2807(g), to all of their customers "[i]n accordance with a depreciation schedule not to exceed 15 years." 66 Pa.C.S. § 2807(f)(2). It also requires such EDCs to install smart meters "in new building construction" and to furnish smart meter technology to any customer upon request if the customer agrees to pay the applicable cost. *Id.* Amended Section 2807(f)(3) further mandates EDCs, with customer consent, to enable third parties, such as electric generation suppliers ("EGSs") and vendors of conservation and load management services, to have "direct meter access and electronic access to customer meter data." EDCs were directed to file a plan within nine months of that section's

effective date (i.e., by August 14, 2009), describing how they proposed to satisfy the foregoing smart meter requirements.

4. Act 129 provides that an EDC is entitled to full and current recovery of its reasonable and prudent costs of providing smart meter technology, net of operational and capital cost savings actually realized by the EDC from the use of smart meter technology. 66 Pa.C.S. § 2807(f)(7). Recoverable costs include annual depreciation and capital costs over the life of the smart meter technology and the costs of any system upgrades required to enable the use of the smart meter technology. *Id.* EDCs were authorized to recover their net costs, upon their election, either: (1) on a current basis through a Section 1307 reconcilable surcharge; or (2) in base rates with authority to defer costs incurred between base rate cases. *Id.*

5. The Commission established a 30-month “grace period” after a smart meter plan is approved for EDCs to develop and install smart meter networks. Implementation Order, Slip Op. at 7. In the same order, the Commission also provided detailed plan requirements, including key milestones that should be addressed within the 30-month grace period and smart meter capabilities that an EDC’s smart meter technology must support. *Id.* at 7-8, 15-17. The Implementation Order included guidance on smart meter plan cost recovery and cost allocation. *Id.* at 28-33.

6. On August 14, 2009, PECO filed its initial Smart Meter Plan, which PECO proposed to implement in two phases. Phase One, to span the 30-month grace period, would focus on selecting the smart meter technology to be deployed; implementing a meter data management system (“MDMS”) and other information technology (“IT”) investments; testing and validating the smart meter technology; deploying the advanced metering infrastructure (“AMI”) communication network (“AMI Network”); initially deploying at least 100,000, and

perhaps up to 600,000, smart meters; and developing a program to educate customers and to implement initial dynamic pricing options. Phase Two of the Plan, in turn, would comprise the universal deployment of smart meters throughout PECO's service territory.

7. Concomitant with the filing of PECO's Smart Meter Plan in 2009, PECO also applied for a \$200 million Smart Grid Investment Grant ("SGIG") from the Department of Energy ("DOE") under the American Recovery and Reinvestment Act of 2009 ("ARRA"). In November 2009, DOE informed PECO that it would receive the \$200 million SGIG for which it applied. Approximately \$140 million of the SGIG is being applied to the net costs of PECO's smart meter deployment in Phase One of its Plan¹. As committed in PECO's Smart Meter Plan, PECO has used a substantial portion of those grant funds to expand its initial deployment of smart meters in Phase One from 100,000 to 600,000 meters. Because of its receipt of the SGIG, PECO also committed to universal deployment of smart meters within ten years, rather than fifteen years as permitted by Act 129.

8. PECO's Smart Meter Plan was assigned to the Office of Administrative Law Judge for hearing and an Initial Decision. Numerous parties intervened in the proceeding, submitted comments, conducted discovery, filed written testimony and participated in technical and evidentiary hearings. From that process, a partial settlement was reached resolving all but two issues ("Smart Meter Settlement"), which related to the allocation among, and recovery from, each customer class of certain common costs.

9. On January 28, 2010, presiding Administrative Law Judge Marlane R. Chestnut issued an Initial Decision recommending that the Smart Meter Settlement be approved and that the common costs in question be allocated on the basis of the number of customers in each

¹ The remaining \$60 million of SGIG funds from the DOE are being applied to the costs of PECO's Smart Grid investment.

customer class. By Orders entered May 6, 2010 and June 3, 2010, the Commission approved the Company's proposed Smart Meter Plan, as modified by the Smart Meter Settlement; affirmed Judge Chestnut's recommendations regarding the allocation of costs and design of rates; and directed PECO to work with the Commission's Electronic Data Exchange Working Group to develop appropriate enrollment and electronic data interchange transaction protocols. *Petition of PECO Energy Company for Approval of Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123944 (hereafter, the "Phase One Orders").

10. As previously explained, as part of its initial Smart Meter Plan, PECO proposed to deploy smart meter technology in two phases. That concept, as well as the specific elements of Phase One, were approved in the Phase One Orders. As contemplated by the Company's initial Smart Meter Plan and the Commission's Phase One Orders approving it, PECO has developed, and is submitting with this Petition, its proposals for Phase Two of its Smart Meter Plan. Accordingly, this Petition describes PECO's recommended full-scale deployment of smart meters and explains the net benefits of doing so on the schedule set forth in PECO's Universal Deployment Plan. In further support of its Phase Two filing, PECO is submitting the following statements and exhibits, which are attached hereto and incorporated herein by reference:

- PECO Statement No. 1** – Direct Testimony of Michael Innocenzo, PECO Senior Vice President, Operations
- PECO Statement No. 2** – Direct Testimony of Michael J. Trzaska, Principal Regulatory and Rates Specialist for PECO
 - Exhibit MJT-1 Estimated Cost-Benefit Analysis for Phase Two Smart Meter Deployment
- PECO Statement No. 3** – Direct Testimony of Alan B. Cohn, Manager of Revenue Analysis in the PECO Regulatory Group
 - Exhibit ABC-1 List Of Prior Testimony
 - Exhibit ABC-2 Estimated State Tax Flow-Through Impact from Accelerated AMR Depreciation

II. PHASE ONE OF PECO'S SMART METER PLAN

11. In the period since the Commission approved PECO's Smart Meter Plan, the Company has focused most of its efforts on acquiring and installing the advanced metering infrastructure needed to provide smart meter technology to its customers. As more fully described in PECO Exhibit 1 (pp. 9-15), this effort has included installing and testing the core communications network using tower gateway base stations; system applications and network controllers; the MDMS and enterprise service bus ("Middleware"); and integrating the foregoing components into PECO's billing and "back office" systems.

12. As described by Mr. Innocenzo in PECO Statement No. 1, PECO used a well-designed and carefully-implemented information-gathering process to select its AMI Network vendor. Key AMI Network specifications were derived from Act 129's smart meter requirements. For example, as previously explained, Section 2807(f)(2) requires EDCs to furnish smart meters to customers upon request whether or not the installation of a smart meter at that customer's premises conforms to the EDC's scheduled meter deployment in that area. Of the two possible types of AMI Networks (commonly referred to as "mesh" and "point-to-point"), the Company decided to procure a "point-to-point" network, which can accommodate ad hoc requests for the installation of smart meters better and more cost effectively than a "mesh" system. PECO developed and issued a detailed Request for Proposal ("RFP") and, on the basis of the responses to its RFP, selected Sensus from among three finalists as the preferred vendor to provide a point-to-point AMI Network.

13. Although Sensus was selected to provide PECO's AMI Network, PECO considered and examined the meters offered by multiple suppliers (i.e., Sensus, Landis+Gyr

(“L+G”), Elster Solutions, LLC, and General Electric) in order to reduce the risk of relying on a single supplier and to identify meters that would be compatible with the Sensus AMI System while meeting the functionality requirements imposed by Act 129, the Implementation Order, and the Company. After this examination was completed, PECO decided to obtain its first 600,000 smart meters from two suppliers (Sensus and L+G). However, as explained by Mr. Innocenzo (PECO Statement No. 1), the supply mix for smart meter procurement has changed because of the meter events discussed below.

14. The underlying technologies (AMI System, Communications Network, and IT Systems) were analyzed to ensure they could be successfully integrated and would perform properly. This was done through a sequence of acceptance procedures of escalating rigor in both urban and suburban environments. These efforts focused on ensuring the functionality of installation tools, deployment processes, system interfaces, billing procedures and meter accuracy. Although implementation and functional trials of these technologies were successful, several of these systems will continue to be modified, upgraded or enhanced as Phase One and Phase Two progress to completion.

15. PECO began testing smart meters for functionality at its Berwyn Meter Shop in September 2010. The Berwyn site includes an indoor laboratory for shop testing, first article testing and accuracy testing and an outdoor space for functional testing of the capabilities required by Act 129 (e.g., remote connection and disconnection). In mid to late 2011, PECO expanded its accuracy and functionality testing by deploying a limited number of meters (150) in both suburban and urban test environments. From December 2011 through February of 2012,

PECO installed 1,800 meters on customer and employee premises in order to test the installation and billing processes, network performance and customer acceptance.²

16. Once the AMI system was in place and successfully operated, PECO began to deploy smart meters to customers. In March of 2012, the Company began the full rate of smart meter installation. As the full deployment was underway, however, PECO experienced several meter events involving overheating that raised safety concerns. In response, PECO suspended the installation of smart meters to additional customers while those problems were investigated. As described by Mr. Innocenzo, PECO also initiated corrective actions, including the replacement of all installed Sensus smart meters with L+G meters.

17. As of this filing, PECO has completed the change-out of Sensus meters with L+G meters. On November 19, 2012, PECO resumed full deployment, this time with L+G meters, to customers beyond those that had previously received Sensus meters. As of the date of this filing, PECO has installed more than 300,000 smart meters at customers' premises.

18. Notably, the estimated costs of PECO's Smart Meter Plan, as presented to the Commission in the Company's 2009 filing, have proven to be reasonably accurate. Indeed, as shown on Appendix A to PECO Exhibit 1, PECO projects that its Phase One investment in smart meter technology, including both the underlying infrastructure and the 600,000 smart meters, will approximate \$313 million, or slightly higher than the upper range of estimated costs set forth in the Smart Meter Plan.

19. Consistent with its initial Smart Meter Plan, PECO has also utilized Phase One to develop and begin to implement a dynamic pricing and customer acceptance plan. Thus, on

² In addition to the testing summarized above, PECO participated in a "Performance Evaluation of Integral Disconnect Switches for Single-Phase Revenue Meters" hosted by the National Electric Energy Testing Research and Applications Center ("NEETRAC") in May 2010. This testing is described in Section 3.1 of the Universal Deployment Plan.

October 28, 2010, PECO filed a proposed dynamic pricing pilot program, which was reviewed by the Commission and approved by its Order entered April 15, 2011. *Petition of PECO Energy Company for Approval of its Initial Dynamic Pricing and Customer Acceptance Plan*, Docket No. M-2009-2123944. Thereafter, on April 2, 2012, the Company submitted a supplement to its dynamic pricing plan in which it proposed to use the services of an electric generation supplier (“EGS”) to satisfy its Act 129 requirement to provide time-of-use (“TOU”) rates to customers that had been provided smart meters. *See Petition of PECO Energy Company for Expedited Approval of its Dynamic Pricing Plan Vendor Selection and Dynamic Pricing Plan Supplement*, Docket No. P-2012-2297304.³ The Commission approved PECO’s revised dynamic pricing plan on September 13, 2012 with certain modifications. *See Opinion and Order, Petition of PECO Energy Company for Expedited Approval of its Dynamic Pricing Plan Vendor Selection and Dynamic Pricing Plan Supplement*, Docket No. P-2012-2297304 (Order entered September 26, 2012). PECO is currently working with its selected EGS on implementation planning for its TOU service pursuant to its Commission-approved pilot program.

20. PECO has also begun to systematically assess the security of its smart meter network to ensure the privacy of the data flowing through it. As Mr. Innocenzo explains, PECO has implemented a layered cyber security strategy, incorporating physical, platform network, application and process controls. Although PECO is confident that any privacy concerns have been adequately addressed in the design and construction of its smart meter infrastructure, several issues have surfaced that warrant further investigation and, in the attached Universal

³ PECO made its April 2, 2012 filing in response to the Commission’s recommendation that “EDCs contemplate contracting with an EGS in order to satisfy their [Act 129] TOU requirement.” *See Investigation of Pennsylvania’s Retail Electricity Market*, Docket No. I-2011-2237952 (December 16, 2011) (Order at 47).

Deployment Plan, the Company recommends that the Commission initiate a statewide proceeding to examine such issues (PECO Exhibit 1, pp. 27-29).

21. Finally, in accordance with the Commission's May 6, 2010 Order approving the Smart Meter Settlement, PECO has actively engaged interested parties in a collaborative process to keep stakeholders informed of the Company's progress in implementing Phase One of its Plan and to establish a dialogue to address and resolve issues regarding next steps. In fact, and as detailed in Appendix B of PECO Exhibit 1, PECO has convened fourteen collaborative meetings with stakeholders and, in addition, has held seven separate PUC briefings.

22. In summary, notwithstanding PECO's decision to temporarily suspend the deployment of smart meters and to replace Sensus meters that had already been installed, PECO has completed, or is on schedule to complete, all of the specific tasks designated for Phase One of its Smart Meter Plan. As a consequence, PECO is now positioned to proceed with Phase Two of its Plan, which involves the full-scale deployment of smart meters.

III. PHASE TWO OF PECO'S SMART METER PLAN

23. In Phase Two, PECO will procure and install approximately 1.2 million smart meters between the third quarter of 2013 and the end of 2014 (*see* PECO Statement No. 1). PECO will also continue to expand and upgrade its existing IT infrastructure to provide the necessary capacity to serve the additional demand (PECO Exhibit 1, pp. 20-21). Based on a comprehensive analysis of costs and benefits (*see* PECO Statement No. 2 and PECO Exhibit MJT-1), PECO has determined that customers will obtain a net benefit from moving forward expeditiously with smart meter deployment and, therefore, proposes to substantially complete the universal deployment of smart meters by the end of 2014. Moreover, in addition to the net benefits that have been quantified in PECO's cost-benefit analysis, advancing the deployment of

smart meters will enable customers to realize the benefits envisioned by Act 129 well before the implementation deadlines mandated by Act 129 and the Implementation Order. Although PECO is confident that it will be able to accommodate individual customer requests for smart meters during this period (i.e., from the first quarter of 2013 through 2014), it is seeking the Commission's approval to petition for a waiver of this requirement in the event that such requests reach a level that would negatively impact the synergies associated with the Company's accelerated deployment schedule (PECO Exhibit 1, pp. 29-30)⁴.

24. As previously noted, PECO's Universal Deployment Plan is designed to complete the installation of smart meters for substantially all customers by the end of 2014 because doing so will provide net benefits to customers as compared to the ten-year deployment plan envisioned in PECO's initial Smart Meter Plan. In order to analyze the merits of each approach, the Company compared the costs and benefits of deploying substantially all smart meters proportionately over a ten-year period ending in 2019 to the costs and benefits of deploying substantially all smart meters by the end of 2014. The results of PECO's cost-benefit comparison are set forth in PECO Exhibit MJT-1 and discussed in PECO Statement No. 2. That analysis shows that completing deployment by the end of 2014 will provide a net present value benefit to customers relative to the 2019 deployment scenario of approximately \$58 million when costs and benefits are discounted to 2012. The single largest benefit from early deployment is to enable PECO to cease paying fees to Landis+Gyr for services that company is providing to operate PECO's existing AMR system. The second largest benefit is derived from the lower costs PECO will incur to acquire and install smart meters under the shorter deployment schedule, which will enable PECO to achieve economies of scale in meter procurement, avoid

⁴ Depending on the circumstances, it can be extremely inefficient and create logistical challenges to have to execute an otherwise unscheduled smart meter installation.

future inflation-related increases in the price of meters and capture synergies in the installation of meters generated by a more compressed implementation schedule. The third largest benefit is the greater operational savings PECO will achieve by early deployment of smart meters. In addition to these three major sources of savings, further savings will be achieved in the IT area from shortening the implementation schedule, and greater customer/societal benefits will be achieved from advancing the date when customers can begin to take advantage of smart meter functionality. The elements of the cost-benefit comparison are discussed in greater detail in PECO Statement Nos. 1 and 2.

25. Pursuant to the Commission's Phase One Orders, PECO implemented a Smart Meter Cost Recovery Surcharge ("SMCRS") effective January 1, 2011.⁵ The Company proposes to continue recovering its smart meter costs through the SMCRS and, in accordance with the Smart Meter Settlement, amortizing its unrecovered investment in prematurely retired AMR meters ratably through the year 2020. As explained by Mr. Cohn, PECO's Universal Deployment Plan requires that PECO include two additional elements of revenue requirement in the SMCRS in order to recover fully its investment in existing AMR meters that are being retired and replaced with smart meters. First, PECO must include approximately \$9.8 million in additional depreciation that PECO will record on its books of account in excess of the annual accruals for depreciation associated with PECO's investment in AMR meters that it is recovering in its base rates. Second, PECO must include additional Pennsylvania Corporate Net Income Tax expense in the SMCRS to properly adjust for differences in book-tax timing caused by the early retirement of AMR meters. This additional state income tax liability adds approximately \$900,000 of tax expense to the SMCRS, which, when "grossed-up" for federal and state income

⁵ The SMCRS includes a 10% return on equity as approved by the Commission in PECO's last base rate proceeding (Docket No. R-2010-2161575).

taxes and gross receipts tax, translates to approximately \$1.7 million in increased revenue requirement. These two additional elements total \$11.5 million or an approximate \$1.1 million annual increase in the SMCRS.

26. As set forth in Appendix D to PECO Exhibit 1, PECO projects that smart meter cost recovery will increase an average residential customer's total electric bill from approximately \$1.40 (1.5%) in 2012 to \$2.60 (3.2%) by 2014. After peaking in 2014, the surcharge will decline steadily each year.

IV. COST RECOVERY FOR METER EVENT MITIGATION

27. As discussed by Mr. Innocenzo in PECO Statement No. 1, PECO is deferring certain meter costs associated with the meter events and the subsequent decision to replace Sensus meters during Phase One while it works to resolve issues related to cost recovery with its meter vendor. When a resolution acceptable to PECO has been achieved, PECO will seek Commission approval to fully recover any remaining deferred costs through its currently authorized SMCRS. In any event, PECO will not seek a return on the deferred meter event costs.

V. PROPOSED REVIEW SCHEDULE

28. In order to substantially achieve universal deployment of smart meters by the end of 2014 as proposed in PECO's Universal Deployment Plan, PECO proposes the following schedule for this proceeding:

January 18, 2013	Filing of the Plan
February 26, 2013	Intervention deadline
March 5, 2013	Prehearing Conference
April 26, 2013	Other Parties' Direct Testimony Due
May 16, 2013	Rebuttal Testimony Due
May 24, 2013	Surrebuttal Testimony Due
June 4-5, 2013	Evidentiary Hearings
June 26, 2013	Main Briefs
July 10, 2013	Reply Briefs
August 14, 2013	Initial Decision
October 17, 2013	Commission Order

VI. NOTICE

29. PECO will provide its customers with a bill insert related to this filing which will refer to PECO's website (www.peco.com/technology), where a copy of the entire filing will be maintained.

30. In addition to the above notice, PECO is serving copies of this filing on the Pennsylvania Office of Consumer Advocate, the Pennsylvania Office of Small Business Advocate, the Commission's Bureau of Investigation and Enforcement, and other parties to the Company's prior Smart Meter Plan proceeding.

31. PECO respectfully requests the Commission publish notice of this filing in the *Pennsylvania Bulletin*, with the above proposed deadline of February 26, 2013, as a deadline for intervention in this proceeding in light of PECO's proposed review schedule. Should the Commission conclude that further notice of this filing is appropriate, PECO will provide such additional notice as directed by the Commission.

VII. CONCLUSION

Based on the foregoing, including the accompanying testimony and exhibits, PECO respectfully requests that the Commission grant this Petition and enter an Order: (1) approving Phase Two of the Company's Smart Meter Plan, as set forth in PECO Exhibit 1 hereto; (2) approving PECO's proposed procurement and deployment of approximately 1.2 million additional smart meters to be substantially installed by the end of 2014; and (3) authorizing PECO to continue to recover its smart meter costs in accordance with the terms and conditions of its Smart Meter Cost Recovery Surcharge, including accelerated depreciation costs PECO will incur for existing AMR meters and incremental meter costs associated with PECO's revised supply mix.

Respectfully submitted,

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