



Exelon Business Services Company
Legal Department
2301 Market Street/S23-1
Philadelphia, PA 19103
215 568 3389 Fax
www.exeloncorp.com

April 4, 2013

VIA e-FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

**Re: Petition of PECO Energy Company for Approval of Its
Smart Meter Universal Deployment Plan
Docket No. M-2009-2123944**

Dear Secretary Chiavetta:

Enclosed please find the **Supplement to PECO Energy Company's Smart Meter Deployment Plan Regarding Data Exchange Standards** in the above-referenced matter. Copies have been served on Administrative Law Judge Angela T. Jones, statutory parties and the other persons listed on the attached Certificate of Service.

Should you have any questions regarding this filing, please contact me at 215-841-5974.

Sincerely,

A handwritten signature in blue ink, appearing to read "Craig Williams", is written over a faint, larger version of the same signature.

W. Craig Williams

Enclosures

cc: Per Certificate of Service

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

SUPPLEMENT OF PECO ENERGY :
COMPANY TO ITS SMART METER : **DOCKET NO. M-2009-2123944**
DEPLOYMENT PLAN :

**SUPPLEMENT TO PECO ENERGY COMPANY'S
SMART METER DEPLOYMENT PLAN
REGARDING DATA EXCHANGE STANDARDS**

I. INTRODUCTION

PECO Energy Company (“PECO” or the “Company”) hereby submits this Supplement to the Company’s Smart Meter Deployment Plan (“Supplement”) as directed by the Pennsylvania Public Utility Commission’s (“Commission”) Final Order on Smart Meter Procurement and Installation (“Final Order”) of December 5, 2012. As set forth in the Supplement, PECO meets or will be able substantially to meet the data exchange requirements of the Commission’s Final Order within the prescribed timeframes.

Since the passage of Act 129 of 2008 (“Act 129”), PECO has been working to plan, design and implement the smart meter provisions of Act 129.¹ PECO filed its Smart Meter Technology Procurement and Installation Plan (“Smart Meter Plan”) on August 14, 2009, and the Smart Meter Plan was approved by the Commission with certain modifications on May 6, 2010.² The Plan requires PECO to design and implement an Advanced Metering Infrastructure (“AMI”) Network that enables smart meter functionality, a communications network to support

¹ 66 Pa.C.S. § 2807(f).

² *Petition of PECO Energy Company for Approval of its Smart Meter Technology Procurement and Installation Plan*, Docket No. M-2009-2123944 (approved May 6, 2010).

the AMI Network, a meter data management system (“MDMS”) that serves as a repository for meter data, an extensive information technology (“IT”) infrastructure to support the deployment and ongoing operations of smart meters, and the deployment of smart meters themselves. In support of the smart meter deployment, PECO received a \$200 million grant through the American Recovery and Reinvestment Act of 2009 from the U.S. Department of Energy under its Smart Grid Investment Grant (“SGIG”) program. About \$140 million of the SGIG awarded to PECO is dedicated to the accelerated deployment of 600,000 smart meters during the first phase of PECO’s smart meter deployment. On January 18, 2013, PECO filed a Petition for Approval of PECO Energy Company’s Smart Meter Universal Deployment Plan (“Universal Deployment Plan”), which proposes to install smart meters across PECO’s entire service territory substantially by the end of 2014.³

Since the late 1990s, PECO has been an active participant in the Electronic Data Exchange Working Group (“EDEWG”), the group charged by the Commission with developing technical standards associated with the implementation of retail electric competition in Pennsylvania. The Commission expanded EDEWG’s role, charging it with developing technical standards relating to the implementation of the smart meter provisions of Act 129.⁴ In response, EDEWG submitted a Preliminary Proposal for Development of Smart Meter Data Exchange Standards to the Commission on December 7, 2009 (“Preliminary Proposal”).

The Commission issued a Tentative Order on July 8, 2011 to provide additional direction and clarification about the role of EDEWG in the development of statewide smart meter data

³ *Petition for Approval of PECO Energy Company’s Smart Meter Universal Deployment Plan*, Docket No. M-2009-2123944 (submitted January 18, 2013).

⁴ *See Smart Meter Procurement and Installation Implementation Order*, at 25, Docket No. M-2009-2092655 (June 24, 2009) (the “Implementation Order”).

exchange standards and formats. PECO filed comments on August 22, 2011⁵ and reply comments on September 12, 2011.⁶ On December 5, 2012, the Commission issued the instant Final Order to “facilitate the establishment of a standard electronic format for providing customers and their designated third-party representatives with direct electronic access to the customer’s electric usage and price data, with the customer’s consent.”⁷

II. PROPOSED DATA EXCHANGE STANDARDS FOR CURRENT BUSINESS PROCESSES

A. Real-Time and Time-of-Use Prices

In the Final Order, the Commission determined that Bill Ready and Dual Billing capabilities presented the best path for attaining Real-Time and Time-of-Use pricing capabilities for electric distribution companies (“EDCs”) covered by the smart meter requirements. Therefore, the Commission directed EDCs who have already filed smart meter plans – like PECO – to file an explanation as to how and when the EDC will incorporate these requirements into its smart meter plan.⁸

PECO currently supports both Bill Ready and Dual Billing functionality as part of its Customer Choice program. PECO identified multiple system modifications required to extend those capabilities to customers with smart meters. PECO recognizes that transmitting AMI data to electric generation suppliers (“EGSs”) for all accounts may be excessive as EGSs may only want this data for customers on certain rate offerings, so PECO is implementing changes to allow EGSs to choose interval data on an account-by-account basis. PECO made system modifications

⁵ *Comments of PECO Energy Company to the July 8, 2011 Tentative Order*, Docket No., M-2009-2092655 (August 22, 2011).

⁶ *Reply Comments of PECO Energy Company Regarding the July 8, 2011 Tentative Order*, Docket No. M-2009-2092655 (September 12, 2011).

⁷ *Smart Meter Procurement and Installation Final Order*, at 3, Docket No. M-2009-2092655 (December 5, 2012).

⁸ *Final Order*, at 10.

to connect its billing, Customer Choice, and AMI (MDM) systems to allow EGSs to specify a preference for interval data, for monthly billing purposes, as well as to source and provide that interval data upon election by an EGS. These modifications were within the scope of IT work being performed under Phase I of PECO's Smart Meter plan and are expected to be available by June 30, 2013.

B. Historical Interval Usage

In the Final Order, the Commission addresses pre-smart meter and post-smart meter implementation separately with respect to Historical Interval Usage ("HIU"). Concerning pre-smart meter implementation, the Commission requires each EDC to either outline its current capability to provide a minimum of 12 months of historical account level or meter level interval usage data via EDI, or the EDC shall detail a plan to provide this capability within one year of the Final Order. PECO currently has the capability to exchange HIU data through the EDI 867 transaction at the account level for its "interval-billed" customers. The term "interval-billed" in the context of pre-smart meter implementation refers to customers equipped with and billed using interval data provided by MV90 metering equipment. In the pre-smart meter implementation context, interval-billed customers are receiving interval data through appropriate metering equipment and the EDI 867 transaction. PECO is, therefore, compliant with the Commission's directive in the pre-smart meter context.

Concerning post-smart meter implementation, the Final Order directs that EDEWG initiate a web-portal working group to develop standards for third parties to acquire this data via a secure web-portal by March 1, 2014. The Final Order also requires EDCs to continue offering such data by an EDI transaction until the solution is implemented.

PECO recognizes that complying with the directive to support an EDI-based solution in this interim period requires an expansion of its current HIU capability. Specifically, PECO needs to implement the additional capability of exchanging HIU data through the EDI 867 transaction at the account level for customers with smart meters, while maintaining its pre-existing HIU capabilities for customers with pre-smart metering equipment. PECO interprets the Final Order as requiring implementation of this additional capability no later than December 5, 2013. PECO plans to meet the requirement by expanding its systems to provide interval data for any customer with a smart meter in response to a historical-interval-usage request. This is a change to the original PECO historical-interval-usage transaction that was implemented prior to the installation of smart meters.

Use of an EDI-based solution for historical interval data is costly and PECO estimates at full meter deployment, the incremental annual support costs for the additional HIU enhancements to be in the range of \$2 million.⁹ The Final Order essentially indicates that an EDI-based solution will no longer be a market requirement once the long-term solution leveraging a secure web portal is both standardized and implemented. As such, PECO looks forward to collaborating with the other EDCs and market participants on standards as part of EDEWG's Web Portal Working Group, standards that will serve as a foundation for a solution which should be considered a potential future replacement for costly historical interval usage EDI transactions.

PECO will implement an enhanced HIU capability for all smart meter customers who have smart meters by December 2013, as required by the Final Order. Based on the challenges described in Section IV, PECO is planning a phased stabilization period after December 2013,

⁹ PECO intends to recover incremental costs related to implementation of the requirements through its Smart Meter Surcharge Cost Recovery Mechanism.

where additional system and process improvements can be implemented as PECO completes the remainder of its smart meter deployment.

C. Meter Level Interval Usage Capabilities

The Final Order requires EDCs to make use of a modified EDI 867 Interval Usage (EDI 867 IU) transaction to provide monthly bill-quality interval usage data at the meter level. PECO has identified system modifications for this requirement and plans to permit EGSs to request billed, meter-level-interval usage upon customer enrollment, thus leveraging its existing consolidated billing and dual billing functionality. These modifications are scheduled to be delivered by June 30, 2013 at the level of data precision specified in Section IV.

III. DATA EXCHANGE STANDARDS FOR NEW BUSINESS PROCESSES

In the Final Order, the Commission directs that the covered EDCs propose appropriate standards and encourages active participation by EDCs in the efforts of national standards development organizations, including the North American Energy Standards Board (NAESB) and the National Institute of Standards and Technology (NIST). PECO has been quite active with several of these efforts, including NAESB REQ 18, 21 and 22, and PECO has committed to actively participating in the Green Button initiative. PECO intends to propose the appropriate use of national standards as part of the upcoming EDEWG Web Portal Working Group discussions, while maintaining and leveraging its participation within all of these initiatives.

PECO anticipates that implementation of the standards developed through EDEWG will require an implementation period for the EDCs after the Commission's approval of the EDEWG proposed standards, which might well be after the deadline set for EDEWG in the Final Order to establish standards. Upon implementation of the Web Portal standards, PECO anticipates a proposal to retire costly HIU EDI transactions.

PECO believes that an important objective of the Web Portal Working Group should be developing a recommendation that will foster consumer trust in data collection and dissemination. PECO has learned by involvement in national-standards efforts where the technology landscape is developing rapidly that it is essential to consider technology and policy issues together. A standard like NAESB REQ 22, *Third Party Access to Smart Meter-based Information*, is designed to illustrate best practices which state regulatory bodies might use to develop privacy policy throughout the state. Key issues to be considered by the Web Portal Working Group might be the method of data exchange, access to the data including how authorization to access the data is granted, and how privacy is assured. Each area of concern involves public policy, as well as technical considerations. Historically, the EDEWG group has existed primarily as a technology organization. Per the comments previously offered by the Energy Association of Pennsylvania (EAP) in response to the Commission's July 2011 Tentative Order: "EDEWG is a volunteer organization originally formed by the Commission in the late 1990's to handle EDI transactions in the context of retail choice. Members of this organization are technical analysts not normally tasked with examining policy alternatives." (EAP comments to Tentative Order, August 12, 2011, Page 8)

PECO agrees with the EAP's comments and plans to strongly advocate to Web Portal Working Group leadership that the charter for the upcoming discussions includes a recommendation for policy development together with the technical standards-related discussions, so that the final product appropriately reflects the integration of policy and technical requirements.

PECO also recommends further Commission action after delivery of standards developed by the Web Portal Working Group in the form of review and approval of those standards, as well

as resolution of non-consensus items. The review and approval process may occur after the mandated standards-development deadline for the Web Portal Working Group. PECO also anticipates that the covered EDCs may require additional time following Commission approval of the proposed standards to implement the newly formalized standards.

IV. DATA QUALITY AND PRECISION

To date, PECO has deployed more than 400,000 smart meters, although universal deployment of smart meters to PECO's entire service territory will not be completed until the end of 2014. Several developmental factors may affect the initial quality, completeness and accuracy of smart meter interval data as it begins to become available. These developmental factors include the following:

- There will be limited interval data history for customers who only recently received a smart meter. Many customers who received a smart meter by the December 2013 deadline will have had the meter for less than 12 months, and the data available for those customers necessarily will be less than the 12 months required by the Commission for a period of time.
- An incomplete meter deployment will prevent complete and final network and meter tuning. Tuning of the AMI Network and meters cannot be optimized until a significant saturation of meters in a geographic area is achieved. Until the network and meters are fully tuned, the performance of all smart meter functions, including read rate, will not be optimal. Once an area is saturated with a critical mass of meters and a series of tuning activities are completed, the system will read the meters and their intervals at the highest possible rate. Tuning activities include distributing meters across the available AMI

Network radio frequency spectrum, switching meters to specific transmission settings, including transmit frequency, and allocating meters to utilize “buddy” meters when communication is challenged in a specific area. This overall challenge is a common issue for smart meter deployments, as meter reading rates typically degrade for a period of time until meter deployment is substantially complete.

- Prior to the deployment of smart meters, PECO monitored and processed approximately 240,000 interval reads on a daily basis. Upon complete smart meter deployment, PECO estimates that the number of daily interval reads will be close to 53,000,000. PECO continues to refine its business processes for handling that significantly higher volume of data. Multiple processes have been implemented to date and further adjustments are expected by the business to enable timely, efficient and accurate delivery of interval data to third parties. Since smart meter universal deployment is expected to proceed until at least the end of 2014, PECO expects that these business processes will continue to develop and mature during the deployment period, which includes the December 2013 deadline in the Final Order.
- Estimating routines will continue to be refined in the MDM system as more, actual historical interval data is collected and improved algorithms are identified to avoid the need for manual intervention. Additionally, current estimating algorithms will improve in accuracy as more historical data is received.
- As network and meter tuning progress and business processes are being refined, PECO expects interval data for residential customers will continue at the kilowatt-hour resolution for a time. Larger customers will continue to see interval data at the watt-hour resolution. Further system and network modifications will be necessary to provide watt-

hour interval data resolution for all customers. Such modifications are likely to be in process as of the deadline for historical interval data implementation by way of EDI transaction.

V. COST RECOVERY

PECO intends to recover any additional costs associated with meeting the Company's obligations for Smart Meter Data Exchange Standards, including those developed by EDWEG and approved by the Commission, through its Smart Meter Surcharge Recovery Mechanism.

VI. CONCLUSION

As set forth in the Supplement, PECO will meet or will be able substantially to meet the data exchange requirements of the Commission's Final Order within the prescribed timeframes.

Respectfully submitted,



Romulo L. Diaz, Jr. (Pa. No. 88795)
Anthony E. Gay (Pa. No. 74624)
W. Craig Williams (Pa. No. 306405)
PECO Energy Company
2301 Market Street
P.O. Box 8699
Philadelphia, PA 19101-8699
Phone: 215.841.5974
Fax: 215.568.3389
E-mail: Romulo.Diaz@exeloncorp.com

Thomas P. Gadsden (Pa. No. 28478)
Anthony C. DeCusatis (Pa. No. 25700)
Brooke E. McGlenn (Pa. No. 204918)
Morgan, Lewis & Bockius LLP
1701 Market Street
Philadelphia, PA 19103-2921
Phone: 215.963.5234
Fax: 215.963.5001
E-mail: tgadsden@morganlewis.com

Date: April 4, 2013

Counsel for PECO Energy Company

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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

CERTIFICATE OF SERVICE

I hereby certify and affirm that I have this day served a copy of the **Supplement to PECO Energy Company's Smart Meter Deployment Plan Regarding Data Exchange Standards** upon the following persons in the manner specified in accordance with the requirements of 52 Pa. Code § 1.54:

VIA ELECTRONIC AND FIRST CLASS MAIL

Honorable Angela T. Jones
Administrative Law Judge
Pennsylvania Public Utility Commission
Office of Administrative Law Judge
801 Market Street, Suite 4063
Philadelphia, PA 19107
angeljones@pa.gov

Tanya J. McCloskey
Acting Consumer Advocate
Aron J. Beatty
Assistant Consumer Advocate
Office of Consumer Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101-1923
tmccloskey@paoca.org
abeatty@paoca.org

Johnnie E. Simms
Chief Prosecutor
Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120
josimms@pa.gov

Charis Mincavage
Adeolu E. Bakare
McNees Wallace & Nurick LLC
100 Pine Street
P.O. Box 1166
Harrisburg, PA 17108-1166
cmincavage@mwn.com
abakare@mwn.com

*Counsel for the Philadelphia Area
Industrial Energy Users Group*

Stephen Gray
Acting Small Business Advocate
Elizabeth Rose Triscari
Assistant Small Business Advocate
Office of Small Business Advocate
Suite 1102, Commerce Building
300 North Second Street
Harrisburg, PA 17101
sgray@pa.gov
etriscari@pa.gov

Harry S. Geller
Pennsylvania Utility Law Project
118 Locust Street
Harrisburg, PA 17101-1414
hgellerpulp@palegalaid.net

*Counsel for Pennsylvania Association of
Community Organizations for Reform Now*

Daniel Clearfield
Deanne M. O'Dell
Eckert Seamans Cherin & Mellott, LLC
213 Market Street, 8th Floor
Harrisburg, PA 17108-1248
dclearfield@eckertseamans.com
dodell@eckertseamans.com

Counsel for Direct Energy Services, LLC

David Raphael
Chief Counsel
Commonwealth of Pennsylvania
Department of Environmental Protection
RCSOB, 9th Floor
400 Market Street
Harrisburg, PA 17101-2301
draphael@pa.gov

*Counsel for the Department of Environmental
Protection*

Divesh Gupta
Managing Counsel – Regulatory
Constellation Energy
100 Constellation Way, Suite 500C
Baltimore, MD 21202
divesh.gupta@constellation.com

*Counsel for Constellation NewEnergy, Inc. and
Constellation Energy Commodities Group, Inc.*

Joseph Otis Minott
Clean Air Council
135 S. 19th Street
Suite 300
Philadelphia, PA 19103
joe_minott@cleanair.org

Counsel for Clean Air Council

Scott H. DeBroff
Alicia R. Duke
Rhoads & Sinon LLP
One South Market Square
P.O. Box 1146
Harrisburg, PA 17108-1146
sdebroff@rhoads-sinon.com
aduke@rhoads-sinon.com

Counsel for Sensus Metering Systems



Romulo L. Diaz, Jr.
(Pa. No. 88795)
Anthony E. Gay
(Pa. No. 74624)
W. Craig Williams
(Pa. No. 306405)
PECO Energy Company
2301 Market Street
P.O. Box 8699
Philadelphia, PA 19101-8699
Phone: 215.841.6857
Fax: 215.568.3389
E-mail: Romulo.Diaz@Exeloncorp.com

Thomas P. Gadsden
(Pa. No. 28478)
Anthony C. DeCusatis
(Pa. No. 25700)
Brooke E. McGlenn
(Pa. No. 204918)
Morgan, Lewis & Bockius LLP
1701 Market Street
Philadelphia, PA 19103-2921
Phone: 215.963.5234
Fax: 215.963.5001
E-mail: tgadsden@morganlewis.com

Counsel for PECO Energy Company

Date: April 4, 2013