

OFFICE OF CHIEF COUNSEL
Rachel Carson State Office Building
P. O. Box 8464
Harrisburg, PA 17105-8464

September 25, 2009

Bureau of Regulatory Counsel

Telephone 717-787-7060
Telecopier 717-783-7911

Honorable James McNulty
Secretary, Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265

RE: Petition of PPL Electric Utilities Corporation for
Approval of a Smart Meter Technology Procurement
and Installation Plan
PUC Docket No. M-2009-2123945

Dear Secretary McNulty:

Please find for electronic filing the Comments of the Commonwealth of Pennsylvania, Department of Environmental Protection in the above referenced matter. Copies have been served on all parties listed on the enclosed Certificate of Service.

Sincerely,

/s/ Scott Perry

Scott Perry
Assistant Counsel

cc: Service List

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PPL Electric Utilities Corporation for Approval of a Smart Meter Technology Procurement and Installation Plan :
: **Docket No. M-2009-2123945**
:

**COMMENTS OF THE
COMMONWEALTH OF PENNSYLVANIA,
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Pursuant to the August 29, 2009 *Pennsylvania Bulletin* notice issued in the above-captioned matter, the Commonwealth of Pennsylvania, Department of Environmental Protection (the “Department”) submits the following comments to PPL Electric Utilities Corporation’s (“PPL”) Petition for Approval of a Smart Meter Technology Procurement and Installation Plan (“Smart Meter Plan”).

I. INTRODUCTION

The Department has consistently maintained that early deployment of smart meters and implementation of the time of use rates and real time price plans that smart meters support are necessary to achieving meaningful reductions in both energy consumption and energy prices. Smart meters and time sensitive price plans effectively use market forces to reduce consumption, shift some uses to cheaper times of day, save the consumer money and provide system-wide benefits such as reduced grid congestion and improved grid reliability. In addition, by reducing overall electricity consumption and shifting loads to off peak hours, smart meters necessarily reduce fossil fuel consumption, greenhouse gas emissions and improve air and water quality.

Perhaps the greatest benefit from smart meters and their supporting network is the integration of ratepayers into decisions on energy use. The information provided by these tools allow customers to make informed decisions regarding their energy use and equip them with new advanced tools to assist them in their efforts to reduce energy use. As such, the Department fully supports the Pennsylvania Public Utility Commission's ("Commission") decision to require a smart meter "capable of communicating raw data on at least a near real-time basis to in-home devices installed by the customer or customer designated agent." See the Commission's Smart Meter Procurement and Installation Order ("Implementation Order"), Docket No. M-2009-2092655 at page 27.

Customers who shift their electric use away from times of peak electricity demand not only save money, but also help to reduce prices for everybody. Providing electricity at peak demand periods is very expensive. A one-percent reduction in peak demand during the highest peak demand times can cut the entire market price by ten percent. Reducing peak and overall demand alleviates stress on the electric system and keeps wholesale prices down, which saves everybody money.

The Pennsylvania legislature recognized the clear benefits of smart meters and the benefits of an educated energy consumer when it enacted Act 129 of 2008 and required Electric Distribution Companies to provide smart meters throughout their service territory and offer all customers the option of enrolling in real time or time of use pricing programs. 66 Pa. C.S. § 2806(f). However, and most importantly, none of the benefits that smart meters provide can be realized if the meters and the functions they support are not in the hands of the consumer. For this reason, the Department has also consistently maintained that smart meters that provide the functions required by Act 129 be fully deployed throughout Pennsylvania by 2019.

As demonstrated by the Smart Meter Plans filed by Allegheny Power, PECO and Duquesne Light, system wide deployment of smart meters at a rate faster than the 15 year timeframe permitted by Act 129 is easily achievable. The service territories of these companies are radically different but represent the urban and rural environments that all other EDCs serve. Simply stated, if Allegheny Power, PECO Duquesne Light can develop and implement a Smart Meter Procurement and Implementation Plan that will deploy smart meters on an expedited basis throughout their service territories, the Commission should require the other EDCs to fully deploy smart meters on an expedited basis as well.

II. OVERALL ASSESSMENT OF PPL'S SMART METER PLAN

PPL's Smart Meter Plan fails to improve the functionality of their currently deployed smart meters to meet the requirements of Act 129 and Commission's Implementation Order. PPL asserts that their current meter infrastructure "meets or exceeds all of the minimum requirements for smart meter technology set forth in Act 129 and the Commission's Implementation Order". Plan at 1. The Department disagrees with this assessment and does not support the position that the current system as employed and configured meets the minimum requirements of Act 129 or the Implementation Order.

PPL asserts that some of the listed requirements from the Implementation Order are "required" while the other capabilities are "additional" because the Cost Recovery section of the Order instructs the EDC to provide the incremental cost for each of them. The logical extension of this argument is that a utility may treat any Commission requirement as optional based on cost reporting. The Department argues that pages 16 and 17 of the Implementation order are clear; and that all 14 of the listed capabilities must be supported by the smart meter technology unless otherwise determined by the Commission.

The Implementation Order does reserve the authority to waive any of the Commission imposed requirements subject to cost benefit analysis, but this provision appears to be intended for specific requirements and not as a path to waive the entire project. PPL “does not believe that such a wholesale replacement would provide sufficient expanded functionality to justify its cost” Plan at 11. The Department stresses that much of the expanded functionality would be experienced by ratepayers who would be provided new tools and information to make educated decisions about their energy use and that these benefits do justify the cost.

III. SPECIFIC PLAN COMMENTS

1. PPL’s plan and current technology do not support the required ability to provide customer direct access to consumption and pricing information.

Direct communication with the customer of consumption and pricing information is one of the most important requirements of the technology and central to the efforts to educate the public and allow them to make informed decision regarding their use of electricity. The Department strongly supports the inclusion of technology to directly communicate with the ratepayer in near real time. This capability allows ratepayers to understand the effects of their energy choices and to become an active participant in conservation efforts.

The Department disagrees with the company’s contention that forcing consumers to use its website in order to secure price and consumption information meets the intent of “direct access”. Plan at 7. Relying on this method limits the number of customers who can easily access critical information and completely bypasses customers who do not have or are not comfortable with using internet based communications to secure important information about their home and energy use.

In addition, PPL's system as currently configured, does not support automatic data transfer necessary for in-home networking. Plan at 17. Thus, for the consumer, consumption and pricing information cannot be easily linked to the expanding opportunities offered by new appliances, thermostats, and other equipment.

Smart meter and support networks enable technology for a wide range of new tools for the customer. However, the market for this equipment, software, and networking solutions is not well developed, particularly for smaller customers. Installing meters is not the entire solution, only the gateway to a variety of solutions. The Department fears that many customers will not know where to begin in seeking access to the technology they need in order to take advantage of pricing information. Accordingly, the Department encourages PPL to include a mechanism in their plan to educate consumers regarding the potential uses of smart metering information and to make web-based and other gateways to technology providers available.

2. PPL's plan and current technology do not support the required "ability to provide 15-minute or shorter interval data to customers EGSs, third-parties and the regional transmission organization ("RTO") on a daily basis, consistent with the data availability, transfer and security standards adopted by the RTO"

PPL does meet this requirement for their large power customers, but relies on "pulse data" for the remainder of their customers. Plan at 9. The Department questions whether this data could be reliably generated on a daily basis should a large percentage of customers request it and believe that requiring a customer or a third party to aggregate the data to render it useful will prevent meaningful use of the capability. The Department supports this requirement, because it expands the information available to the ratepayers and their service providers. This functionality allows customers to better understand their energy use and makes more

sophisticated energy cost savings options available. It is also a better base for future network and technology upgrades.

3. PPL’s plan and current technology do not support the required open standards and protocols that comply with nationally recognized non-proprietary standards, such as IEEE 802.15.4

PPL states that Current system “can support open standards and protocols”, but currently does not exercise its use and that “equipment is being made available in the market to incorporate into the Company’s metering infrastructure”. Plan at 9-10. It appears that PPL’s current system could be modified to comply with this requirement, but no commitment is being made to incorporate this functionality into the system. This should be required. In addition, the company should be required to file proposed upgrades to its smart metering system as industry standards advance. These requirements will ensure that the greatest range of additional components and functionality will be available to ratepayers and not limit the selection of additional components.

4. PPL’s plan and current technology do not support the required ability to monitor voltage at each meter and report data in a manner that allows EDC to react to the information.

PPL can collect this data on an individual meter, but does not have the capability to perform this function on an aggregate basis. Plan at 10. This prevents the company from implementing responsive reliability and quality of service measures. The Department supports the requirement to include this technology so that grid reliability can be increased and problems can be identified more rapidly. Both are needed so that components can be repaired or replaced well in advance of an interruption of service to consumers.

5. PPL’s plan and current technology do not support the required ability to communicate outages and restorations.

PPL's current system is useful in the analysis and confirmation of outages and restorations, but the process for outage response described by PPL starts with the receipt of a customer call. Plan at 11. The Department argues that a system that relies on the receipt of a customer call to report an outage does not comply with this requirement.

The Department supports the requirement to include this technology because it will improve reliability and speed the repair and resumption of service following an outage. There are numerous benefits associated with this technology including defining the scale of an outage so that an appropriate amount of resources can be deployed thus speeding restoration of service. In view of existing technology and its capabilities, waiting for the customer to call is no longer an acceptable practice.

6. PPL's plan and current technology do not support the required ability to provide remote programming capability.

PPL asserts that their current meters can support remote changes to daylight savings time and "firmware upgrades in advanced meter infrastructure equipment". Plan at 10. They do not specify whether the advanced equipment is their current system, or specific components that may be deployed in the future. The current system may technically meet the requirement, but if the system were upgraded to meet other requirements, the Commission should require that a higher level of remote reprogramming be implemented.

7. The plan includes pilot programs and technology evaluations to study adding required capability without providing any commitment by the company to provide these required functions to the ratepayers.

PPL's plan incorporates several pilot programs and technology evaluations to be completed. The Department urges that the Commission require that specific metrics and deployment plans be developed to require plan implementation or modification after completion

of the study. For example, the Department supports the pilot program in “Bidirectional Data Communications” and its goal to provide direct access to consumption and pricing information through the use of in-home displays and other home control devices. However, since this pilot is developing capabilities not currently supported by the existing infrastructure, the Department feels that plans to universally deploy this functionality should be developed and included in this plan and subject to modification after the results of the pilot study are known. As currently written, the plan does not commit PPL to do anything more than complete the study.

IV. CONCLUSION

The Department proposes the implementation of necessary functionalities and of data communications that comply with Act 129 and the Commission’s Order. This does not mean that PPL must replace its entire meter network. This can be done through upgrades to the current system or through replacement of infrastructure at several possible levels. PPL asserts that its current system can support many, if not all of the required functionality with required upgrades and technology improvements. It does not offer the plans that will be necessary to accomplish this.

For example, PPL asserts that its current system “can communicate and provide the protocols to end use devices to affect load control and to provide usage to in-home displays and home area networks”, but then goes on to state that “The Company does not expect to conduct specific pilots in this area, but may perform evaluations using in-home displays with home area networks....” Plan at 17. This is an inadequate approach to introducing complex technology that is unfamiliar to consumers.

PPL also states that its current meter infrastructure “can support open standards and protocols...” but “...has not exercised the use of IEEE 802.15.4 standard, but equipment is

being made available in the market....” Plan at 9-10. PPL does include plans to monitor “the progress of Smart Grid Standards as guided by NIST and incorporate those evolving standards into the smart meter and smart grid system.” Surprisingly, no system-wide roll-out plans have been included or promised.

PPL must meet the required functionality and meet the minimum requirements of the Act and the Implementation Order. This cannot be done without definitive steps, thresholds and contingency plans that must be included in a plan that has clear milestones. The Department urges the Commission to ensure that these results are accomplished. The Department requests that the Commission require PPL to file a revised plan that can be reasonably expected to achieve the clear intention of Act 129 and of the Commission’s Order. Finally, the Department requests that the Commission disapprove any request for a waiver of the requirement that a smart meter to be “capable of communicating raw data on at least a near real-time basis to in-home devices installed by the customer or customer designated agent”. Implementation Order at 27.

Respectfully submitted,

/s/ Scott Perry

George Jugovic (Pa. No. 39586)
Assistant Counsel
gjugovic@state.pa.us
Commonwealth of Pennsylvania
Department of Environmental Protection
400 Waterfront Drive
Pittsburgh, PA 1522-4745
412-442-4262
412-442-4274 (Fax)

Scott Perry (Pa. No. 86327)

Assistant Counsel
scperry@state.pa.us

Aspassia V. Staevska (Pa. No. 94739)
Assistant Counsel
astaevska@state.pa.us

Commonwealth of Pennsylvania
Department of Environmental Protection
RCSOB, 9th Floor
400 Market Street
Harrisburg, PA 17101-2301
717-787-7060
717-783-7911 (Fax)

Dated: September 25, 2009

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PPL Electric Utilities :
Corporation for Approval of a Smart : **Docket No. M-2009-2123945**
Meter Technology Procurement and :
Installation Plan :

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document, Comments of the Commonwealth of Pennsylvania, Department of Environmental Protection, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code Section 1.54 (relating to service by a participant), in the manner upon the persons listed below:

SERVICE BY FIRST CLASS MAIL

Wayne L. Weismandel
Administrative Law Judge
P O Box 3265
Harrisburg, PA 17105

Anthony D. Kanagy, Esquire
Post & Schell, P.C.
17 North Second Street, 12th Floor
Harrisburg, PA 17101-1601

David B. MacGregor, Esquire
Post & Schell, P.C.
Four Penn Center
1600 John F. Kennedy Blvd.
Philadelphia, PA 17103-2808

Paul E. Russell, Esquire
PPL Electric Utilities Corporation
Two North Ninth Street
Allentown, PA 18101-1179

James A. Mullins, Esquire
Tanya McCloskey, Esquire
Office of Consumer Advocate
5th Floor Forum Place
555 Walnut Street
Harrisburg, PA 17101-1923

Allison C. Kaster, Esquire
PA PUC Office of Trial Staff
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

William R. Lloyd, Jr., Esquire
Sharon E. Webb, Esquire
Office of Small Business Advocate
1102 Commerce Building
300 North Second Street
Harrisburg, PA 17101

John K. Baillie, Esquire
Citizens for Pennsylvania's Future
Suite 2770
425 Sixth Avenue
Pittsburgh, PA 15219

Harry Geller
John Gerhard
Pennsylvania Utility Law Project
118 Locust Street
Harrisburg, PA 17101

Pamela C. Polacek, Esquire
Shelby A. Linton-Keddie, Esquire
McNees Wallace & Nuick, LLC
100 Pine Street
P O Box 1166
Harrisburg, PA 17108

Respectfully submitted,

/s/ Scott Perry

Scott Perry (Pa. No. 86327)
Assistant Counsel
scperry@state.pa.us

Commonwealth of Pennsylvania
Department of Environmental Protection
RCSOB, 9th Floor
400 Market Street
Harrisburg, PA 17101-2301
717-787-7060
717-783-7911 (Fax)

Dated: September 25, 2009