COMMONWEALTH OF PENNSYLVANIA

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December 2, 2009

James J. McNulty
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 Technology Procurement and Installation Plan
Docket No. M-2009-2123944

Dear Secretary McNulty:

Enclosed for filing is the Main Brief of the Office of Consumer Advocate, in the above-referenced proceeding.

Copies have been served as indicated on the enclosed Certificate of Service.

Respectfully Submitted,

Jennedy S. Johnson
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Enclosures
cc: Honorable Marlane R. Chestnut

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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

MAIN BRIEF
OF THE
OFFICE OF CONSUMER ADVOCATE

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Dated: December 2, 2009

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Administrative Decisions

Statutes

Regulations

I. INTRODUCTION

A. Background

On November 14, 2008, Act 129 of 2008 (Act 129) became effective. Act 129 contained several provisions including provisions requiring the development of Energy Efficiency and Conservation Programs for Electric Distribution Companies (EDCs) with more than 100,000 customers; amending the duties of EDCs in providing default generation service; requiring the filing of Smart Meter Technology Procurement and Installation Plans and Time of Use Rates; detailing additional market power remediation for market misconduct; adding alternative energy sources; and beginning a Carbon Dioxide Sequestration Network. 66 Pa.C.S. § 2806.1 *et seq*. The Act makes a number of significant amendments to the Pennsylvania Public Utility Code, many of which will have a direct impact on the rates and service of the customers of Pennsylvania's EDCs.

Of particular relevance here, Act 129 requires Electric Distribution Companies with at least 100,000 customers to present a Smart Meter Technology Procurement and Installation Plan (Plan) to the Pennsylvania Public Utility Commission (Commission) for approval. 66 Pa.C.S. § 2807(f). Each Plan must describe the smart meter technologies that the EDC plans to install upon customer request or in new building construction and in accordance with a deprecation schedule not to exceed fifteen (15) years. Id. Act 129 also requires that, with customer consent, the EDCs make available direct meter access and electronic access to customer meter data to third parties including electric generation suppliers (EGSs) and providers of conservation and load management services. Id. The Act also defines the minimally acceptable smart meter technology requirements and capabilities. 66 Pa.C.S. § 2807(g). Finally, the Act establishes acceptable cost recovery methods. 66 Pa.C.S. § 2807(7).

On March 30, 2009, the Commission issued a Secretarial Letter seeking comments on a draft staff proposal and additional questions regarding EDC smart meter procurement and installation. Comments were due by April 15, 2009, with reply comments due April 27, 2009. On April 9, 2009, the Commission, at the request of several interested parties, issued a Secretarial Letter extending the comment period to April 20, 2009 and the reply comment period to April 29, 2009. The OCA filed comments on April 20, 2009.

On June 24, 2009, the Commission entered an order detailing the standards and guidelines 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). In that Order, the Commission granted a network development and installation grace period of up to thirty (30) months following plan approval and clarified that the fifteen-year depreciation period should commence upon plan approval (with the thirty month grace period to be treated as part of that timeframe). Id. at 7, 15. The Commission specifically removed support for service-limiting and prepaid service as a minimum capability requirement due to their policy implications and determined to resolve these issues in another proceeding prior to requiring such capability in smart meters. Id. at 18.

As to cost recovery, the Commission allowed each EDC to develop a reconcilable adjustment clause tariff mechanism in accordance with 66 Pa.C.S. § 1307. Implementation Order at 31. Consistent with the statute, however, the Commission declared that the loss of revenues by an EDC due to reduced electricity consumption or shifting energy demand cannot be considered a cost of the smart meter technology that is recoverable under a reconcilable automatic adjustment clause. Id. at 28. As to allocation of costs to customer classes, the Commission required that all measures associated with an EDC's smart metering plan be

financed by the customer class that receives the benefits of such measures. Id. at 32. The Commission stated:

> ...we will require the EDC to allocate those costs to the classes whom derive the benefit from such costs.

Implementation Order at 32. The Commission went on to say:

> Any costs that can be clearly shown to benefit solely one specific class should be assigned wholly to that class. Those costs that provide benefit across multiple classes should be allocated among the appropriate classes using reasonable cost of service practices.

Id.

B. Procedural History

On August 14, 2009, PECO filed its Smart Meter Technology Procurement and Installation Plan (Plan) in accordance with the requirement of Act 129 of 2008, 66 Pa.C.S. § 2807(f)(1). On September 1, 2009, the OCA filed its Notice of Intervention and Public Statement. On August 20, 2009, the Office of Trial Staff (OTS) filed a Notice of Appearance. On September 25, 2009, the Office of Small Business Advocate (OSBA) filed a Notice of Intervention and Notice of Appearance. Petitions to Intervene were filed on September 18, 2009 by the Department of Environmental Protection (DEP); on September 10, 2009 by the Philadelphia Area Industrial Energy Users Group (PAIEUG); on September 25, 2009 by Pennsylvania Association of Community Organizations for Reform Now (ACORN); on September 25, 2009, by Constellation New Energy (Constellation); and on September 23, 2009 by Clean Air Council (Clean Air). On September 25, 2009, Comments were filed by ACORN, DEP, OCA and OTS.

The matter was assigned to the Office of Administrative Law Judge and was further assigned to Administrative Law Judge Marlane R. Chestnut. Pursuant to the Prehearing

Conference Order dated September 2, 2009, Prehearing Memorandums were filed by ACORN, Clean Air, Constellation, DEP, OCA, OSBA, OTS, PAIEUG, and PECO. A prehearing conference was held on September 29, 2009, at which time a procedural schedule was established.

The OCA retained John G. Athas[1], Thomas S. Catlin[2], and Dr. Dale E. Swan[3] who, pursuant to the schedule adopted by the ALJ, submitted written Direct Testimony on October 7, 2009 and written Surrebuttal Testimony on November 6, 2009. On October 7, 2009, Direct Testimony was also filed by ACORN, Constellation, and OTS. On October 27, 2009, Rebuttal Testimony was filed by OSBA, OTS, and PAIEUG. On November 6, 2009, Surrebuttal Testimony was also filed by OTS.

Pursuant to ALJ Chestnut's Prehearing Conference Order, Evidentiary Hearings were held on November 13, 2009 at which time the OCA, by stipulation, entered the testimony of its witnesses. Throughout the proceeding the parties engaged in settlement negotiations which resulted in a partial settlement that was filed with the Commission on November 25, 2009. The Settlement addressed all issues except cost allocation of non-meter costs and the rate design for

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1 Mr. Athas is a Principal Consultant for La Capra Associates who has worked in the electric utility business for over 31 years. Mr. Athas has testified as an expert witness on numerous occasions in several states. Mr. Athas has a Bachelor's of Engineering in Mechanical Engineering, a Master of Science in Mechanical Engineering, and a Master of Business Administration degree. Mr. Athas has held many positions in planning, management and marketing in both regulated and unregulated subsidiaries covering aspects of utility planning, marketing, regulatory activities, and finance.

2 Mr. Catlin is a principal with Exeter Associates, a consulting firm specializing in issues pertaining to public utilities. Mr. Catlin holds a Master of Science degree in Water Resources Engineering and Management from Arizona State University. He has also completed graduate courses in financial and management accounting. Mr. Catlin has over 25 years of experience in the analysis of utility operations with an emphasis on utility rate filings.

3 Dr. Dale E. Swan is a senior economist and principal with Exeter Associates, Inc., a consulting firm specializing in issues pertaining to public utilities. Dr. Swan holds a B.S. degree in Business Administration from Ithaca College. He attended a master's program in economics at Tufts University, and holds a Ph.D. in economics from the University of North Carolina at Chapel Hill. Dr. Swan has over 30 years of experience in long-term electric power supply planning, contract negotiations for large power users, and on electric utility cost allocation and rate design.

recovery of non-meter costs assigned to the commercial class. The OCA's brief will address the issue of cost allocation of the non-meter costs to the customer classes.

C. Summary of PECO's Smart Meter Plan

PECO has proposed a two-phased Plan to achieve its Smart Meter goals. Phase One of the Plan will span the 30-month grace period established by the Commission in its Implementation Order, and Phase Two will begin in 2012 with PECO filing a universal meter deployment plan. PECO Hearing Exh. 1, Petition at 4, 8. Phase One of the Plan focuses on the selection of the smart meter technology to be deployed; the implementation of a meter data management system (MDMS) and other information technology (IT) investments; the testing and validation of the smart meter technology; the deployment of the advanced metering infrastructure (AMI) communication network (AMI Network); the initial deployment (pilot) of smart meters and the development of a program to educate customers and implement initial dynamic pricing options. Id. at 4-5. Phase Two of PECO's Smart Meter Plan will include the universal deployment of smart meters throughout PECO's service territory. Id. at 5.

PECO plans to implement its two-phased approach through three major filings with the Commission, including this Petition. PECO Hearing Exh. 1, Petition at 5. The first filing is the instant Petition whereby PECO seeks to gain approval for the launch of the Phase One procurement processes—including the procurement of a MDMS, an AMI Network and an initial quantity of 600,000 smart meters.[4] Id. In June 2010—during Phase One—PECO plans to make its second major filing with the Commission asking for approval of an initial (test) dynamic pricing and customer acceptance program—including both customer education and data

[4] On August 1, 2009, PECO filed for a Smart Grid Investment Grant pursuant to the American Recovery and Reinvestment Act (ARRA) with the U.S. Department of Energy (DOE) for $200 million to mitigate the net costs of PECO's Phase One smart meter investment costs. PECO Hearing Exh. 1, Petition at 5. PECO was awarded the full $200 million, so PECO expanded its initial meter deployment from 100,000 to 600,000 meters. Id; see also PECO Hearing Exh. 2.

collection components. Id. at 7. PECO intends to employ a collaborative process with interested stakeholders to design and develop this program. Id. The third major filing will be made in 2012 and will detail the specific schedule for deployment of the remaining smart meters—in a time period not to exceed ten (10) years. Id. at 8.

As noted above, PECO's Phase One contains many components. PECO intends to utilize a competitive RFP process to procure the smart meters and the components of the AMI Network and seek Commission approval of such agreements in the first quarter of 2010. PECO Hearing Exh. 1, Petition at 6. PECO anticipates that the MDMS will be operational by summer 2011 and that the AMI Network will be operational by early 2012. Id. Once the MDMS and AMI Networks are operational and the initial dynamic pricing and customer acceptance program (described above) is in place, the Company will deploy the new advanced metering communications network across the PECO service territory and begin the initial installation of smart meters. Id. at 7. As noted above, as PECO received the full ARRA grant, Phase One will include the procurement and deployment of 600,000 meters. Id.

PECO estimates that the cost of its initial deployment will be $290 million, though costs may range from $210 to $300 million depending on equipment, installation and IT development costs and meter and installation costs. PECO Hearing Exh. 1, Petition at 9. The ARRA funding will reduce the PECO-funded portion of the expenditures to $148 million. Id. To the extent that PECO deploys its smart meters sooner than would be required simply to replace failures of its existing meters and meter communication modules, it will incur accelerated depreciation on the existing meters and modules. Id. The estimated accelerated depreciation resulting from the initial deployment of 600,000 meters is $24 million. Id. PECO estimates that its total cost to offer smart meters to all of its customers will range from $500 million to $550

million—an amount that will be reduced by the $200 million PECO received in ARRA grant money. PECO St. 4 at 7.

The Company proposes to recover its Smart Meter Plan costs initially through a non-bypassable Section 1307 cost recovery mechanism (Smart Meter Cost Recovery Charge). PECO Hearing Exh. 1, Petition at 9-10; 66 Pa.C.S. § 2807(f)(7). The Company will project the costs to be recovered each year, track its actual costs, compare those costs to its revenue under the surcharge for the same period and make any adjustments needed to reconcile costs and revenues in subsequent filings. PECO Hearing Exh. 1, Petition at 10. The Smart Meter Cost Recovery Charge will be calculated separately for each rate class. Id. Further, PECO notes that it is considering proposing, in a subsequent base rate case, removal of all meter and meter reading costs from its base rates and recovery of these costs through the Section 1307 mechanism. PECO St. 5 at 4. Once the new smart meter system is fully deployed, the meter and meter reading costs would be rolled back into base rates. Id. at 5.

As was noted above, all issues in the proceeding, except for cost allocation among classes and rate design for the commercial class, were resolved as part of a Joint Petition for Settlement filed with the Commission on November 25, 2009. This brief will only address the OCA's position regarding the allocation of non-meter, network and communication costs among customer classes.

II. COST ALLOCATION

A. Introduction

In its Plan, PECO proposed to directly assign the costs of meters to customer classes. PECO St. 5 at 21. The OCA and other parties to this proceeding have agreed that this direct assignment of the cost of the meters is appropriate, and such direct assignment was

included in the Joint Petition for Partial Settlement. See Settlement, ¶14.e. The cost allocation issue that remains to be briefed addresses other non-meter costs associated with the Plan, such as the meter data management system, the network, and administrative costs. These costs will be referred to, in this Brief, as common costs. PECO has proposed to allocate these common costs based entirely on the number of customers. PECO St. 5 at 21. Since the vast majority of PECO customers (89.9%) are residential customers, this means that residential customers will bear nearly 90% of these common costs, even though it is far from clear that residential customers will receive anything close to 90% of benefits from these costs. See OCA St. 3, Exh. DES-1. The OCA submits that it is inappropriate to allocate common costs based on the number of customers. As indicated in the Implementation Order, smart meter plan costs are appropriately allocated to those customer classes who derive the benefits from such costs. Implementation Order at 32. The number of customers is neither a measure of the benefits derived from the smart meter system nor the causation of the system costs.

The OCA submits that the appropriate basis on which to allocate common costs is on the basis of energy and demand. The preamble to Act 129 states that one of the main goals of the Act is to reduce the cost and price instability of electric energy:

> The General Assembly recognizes the following public policy findings and declares that the following objectives of the Commonwealth are served by this act:
>
> (1) The health, safety and prosperity of all citizens of this Commonwealth are inherently dependent upon the availability of adequate, reliable, affordable, efficient and environmentally sustainable electric service at the least cost, taking into account any benefits of price stability over time and the impact on the environment.

Act 129, 66 Pa.C.S. § 2806.1 *et seq*, pmbl. The purpose of this massive new investment is not simply to count kilowatt hours and provide accurate bills to each individual customer. Rather, it

is to reduce overall demand and energy costs for the benefit of all customers. Allocating these common costs based on energy and demand recognizes the purpose of Act 129 and also recognizes that larger customers (in terms of demand and energy usage) will derive far greater benefits from both the smart meter systems and the enhanced technological capabilities. It is simply inappropriate to allocate the exact same dollar level of these costs to an individual 500 kWh per month residential customer as to the largest industrial or commercial customer on the PECO system.

B. The Commission Should Allocate Common Costs to Customers in the Proportion that They Derive the Benefits of Those Costs

As was noted above, two types of costs were addressed in this proceeding: the cost of the smart meters themselves and the common costs (all other non-meter costs). In its filing, the Company proposed to directly assign the costs of the metering equipment to the classes that use that equipment. PECO St. 5 at 21. As OCA witness Swan explained, this treatment for the meters themselves is appropriate:

> The Company has correctly proposed to directly assign the costs of the metering equipment to the classes that use them. That is appropriate because the Company will know precisely the costs of the meters that are installed for each of the customer classes and because there will be significant differences in the cost of smart meters among the classes. In this way, the Residential group will pay for the costs of the smart meters that are installed to meet their requirements, while the Large C&I group will be required to pay for the costs of the smart meters installed to meet their requirements.

OCA St. 3 at 4. The remaining costs of the Company's smart meter program, however, are common costs and comprise such things as the Network Communication System, IT Application and Support, Management and Internal Labor and Customer Acceptance and Testing Costs. PECO St. 4, Exh. APK-1. These costs are estimated at $198 million and will account for more

than half of the total program costs during the first three years of the Company's Plan. Id. Company witness Cohn proposed to allocate these common costs among the customer classes on the basis of the number of customers. PECO St. 5 at 21-22.

The OCA submits that it is wholly unreasonable to allocate the common costs of PECO's program based on the number of customers. Instead, these common costs should be allocated to customer classes in some reasonable proportion to the benefits received by each class from the planning and implementation of the smart meter system. This treatment is in keeping with the language of Act 129 itself, as well as with the Commission's Implementation Order. As was mentioned above, the preamble to Act 129 makes clear that one of the main goals of the Act is to reduce the cost and price instability of electric energy. Likewise, the Commission clearly evidenced its intention to assign costs to the classes which derive the benefit when it stated:

> ...we will require the EDC to allocate those costs to the classes whom derive the benefit from such costs.

Implementation Order at 32. The Commission went on to say:

> Any costs that can be clearly shown to benefit solely one specific class should be assigned wholly to that class. Those costs that provide benefit across multiple classes should be allocated among the appropriate classes using reasonable cost of service practices.

Id.

As OCA witness Swan explained, the underlying tenet of cost of service studies is to allocate costs among the classes in proportion to the extent to which the classes have caused those costs to be incurred. OCA St. 3 at 3. Dr. Swan explained the application of this principle to the smart meter systems at issue here:

> In the case of a smart metering system, what causes the costs to be incurred are the benefits that are expected to be derived from the

> deployment of such a system. Thus, we need to look carefully at why these costs are being incurred—that is, what benefits are anticipated to be derived from these costs. Then, we need to carefully assess the extent to which the various customer classes will reap these benefits.

Id.

The Company asserts that its current Automated Meter Reading (AMR) system already realizes the benefits associated with the elimination of physical meter reading and also generates savings associated with quicker outage notification and better control on meter tampering and theft. PECO St. 4 at 9. PECO witness Kelly states that customers will benefit from the new metering system through an expanded opportunity to participate in energy efficiency and demand response programs, enabling customers to better understand and manage their energy needs. Id. The Company's American Recovery and Reinvestment Act (ARRA) Application provides greater detail on expected benefits from the smart meter system and indicates that responses to dynamic pricing solutions are expected to generate significant capacity and energy savings. PECO Hearing Exh. 2, Vol. I, Project Plans at 28-33. Further, the Company indicates that it expects to experience important operational efficiency improvements resulting in further reductions in the costs of providing capacity and energy to its customers. Id.

As was mentioned above, however, the Company has proposed to allocate the common costs among the customer classes on the basis of the number of customers, drawing no distinction between a 500 kWh per month customer and a 5,000,000 kWh per month customer. PECO St. 5 at 21. As OCA witness Swan explained, the cost allocation method proposed by the Company would create a glaring disparity between benefit and cost:

> The Company makes a fundamental error in its rationale for allocating all these common costs on the basis of the number of customers. The error is the underlying assumption that all customers will benefit equally from implementation of a smart

> metering program. That is, the Company assumes that a small residential customer, using, say, 500 kWh a month, will receive the same amount of benefit from the smart metering system as will a large industrial customer with a 50 MW load and an 80 percent load factor. That simply is not the case. The logic that these common costs should be allocated based on the number of customers because all customers receive bills could similarly be used to allocate generation or transmission costs on the number of customers. That is the kind of pricing mechanism that the industry used when it was first established over a hundred years ago, but we have come a long way since those simplistic allocation schemes were used.

OCA St. 3 at 5.

As was noted by Ms. Kelly and in the Company's ARRA Application, the major intended benefits in the near term will take the form of improved efficiency of use to the extent that customers respond to time of use and real-time pricing options and cost savings resulting from greater participation in demand response programs. PECO St. 4 at 10; PECO Hearing Exh. 2, Vol. I, Project Plans at 28-33. Dr. Swan explained that participation in these types of programs, although available to everyone, will likely be much higher among Large C&I customers than among residential customers because of the nature of the Large C&I customers. OCA St. 3 at 6. Large C&I customers are much more sophisticated electricity consumers and they often have staff that are dedicated to managing their firm's energy use since the cost of energy to these firms will have significant impacts on the bottom line. Dr. Swan further explained:

> Moreover, the savings to these customers from participation in these programs will be in proportion to their energy use or their peak demands. Even if the participation rates in these programs were the same among all the classes, which they will not be, the average benefit per customer will be significantly higher for the largest C&I customers than for the much smaller residential customers. It is naive to assume that the benefits will be the same for all customers, and it is erroneous to conclude that these common costs should be allocated on the number of customers.

Id.

In his Exhibit DES-1, Dr. Swan provided the number of customers, total revenues and total energy consumed by the three major groups of PECO retail customers: Residential, Small C&I, and Large C&I. For example, while the Large C&I class is responsible for 33% of retail revenues and 44 percent of total energy usage, the Company has proposed to allocate only 0.2 percent of the common costs because the Large C&I class comprises 0.2 percent of total customers. OCA St. 3 at 6. In contrast, residential customers are responsible for 44.3% of retail revenues and 33.9% of energy usage, yet they will bear 89.9% of the total common costs because they represent 89.9% of the Company's number of customers. Id. The OCA submits that it defies logic to suggest that the Large C&I class would receive only 0.2 percent of the benefits of PECO's smart meter system as the savings for customers will be substantially in proportion to the amount of energy and capacity used by those customers.

Dr. Swan also provided information from the Duquesne Light Company's ARRA proposal that included specific initial estimates of benefits accruing to each customer class. OCA St. 3S at 5. For Duquesne's initial meter installation, Large C&I customers are estimated to receive 67 to 69 percent of savings; Medium C&I customers 27 to 28 percent of savings; and residential customers only 2.7 to 5.5 percent of the savings—even though more than half of the meters to be installed by Duquesne in the initial deployment will be for residential customers. Id.

Dr. Swan discussed how these common costs should be allocated among the customer classes:

> The benefits to be realized by the three customer groups identified by Mr. Cohn (Residential, Small C&I and Large C&I) will be in proportion to the amount of energy and capacity utilized by these three groups. The Company's description of these expected benefits in its ARRA application clearly suggests that a significant portion of benefits will take the form of reduced energy costs and,

> to that extent, these common costs of the program should be allocated on energy use at the meter. The Company's description also clearly suggests that a significant portion of the benefits will take the form of avoided PJM system (capacity and transmission) costs. To that extent, the common costs of the program should be allocated among the classes with an allocator that reflects the basis upon which PJM assigns capacity and transmission costs to PECO.

OCA St. 3 at 7. To resolve this cost/benefit disparity, Dr. Swan proposed that, consistent with the established policy of allocating costs based on cost causation, common costs of PECO's smart meter program should be allocated among the classes in a manner that reflects the benefits to each customer class. OCA St. 3 at 7; OCA St. 3S at 7. Specifically, Dr. Swan noted that the best representation of proper cost responsibility at the PECO retail level would be to allocate common costs among the classes on the basis of energy use and demand, as there are both energy-related and demand-related savings expected from the implementation of the smart meter system. OCA St. 3 at 8. Dr. Swan recommended that the allocator be based on the arithmetic average of the percentage shares of each class' energy at the meter and each class' contribution to PECO's annual coincident peak. Id. at 8. In this way, the energy portion of the allocator will reflect class shares of expected energy savings and the peak demand portion will reflect class shares of expected capacity savings.

The OCA's proposal to allocate costs based on the basis of energy and demand will reflect the purpose of Act 129 and is consistent with the Commission's Implementation Order. Additionally, this allocation would provide a cost causation link consistent with cost of service principles. Therefore, the OCA submits that the appropriate basis on which to allocate common system costs is on the basis of energy and demand.

C. OCA Response to the Criticism of the Company and Other Parties

Dr. Swan's testimony was the subject of Rebuttal from Mr. Cohn, on behalf of PECO, Mr. Knecht, on behalf of the OSBA, and Mr. Baudino, on behalf of PAIEUG. Specifically, Mr. Cohn, Mr. Knecht and Mr. Baudino argue that Dr. Swan's proposal was not consistent with the usual standard of "cost causation." See PECO St. 5-R at 6; OSBA St. 1 at 4; PAIEUG St. 1 at 7. Dr. Swan addressed these witnesses' concerns in his Surrebuttal testimony:

> Mr. Cohn and Mr. Baudino conclude that these common costs should be allocated based on the number of customers without asking the fundamental question why these costs are going to be incurred in the first place. As I stated in my direct testimony, the General Assembly made clear that one of the main goals of Act 129 was to reduce the cost and price instability of electric energy for customers. That is, the General Assembly has required that Pennsylvania distribution utilities incur these costs to bring about savings for its customers. That requires that one look beyond mechanical cost allocation approaches to determine the factors that caused these costs to be incurred in the first place. The Commission explicitly recognized this relationship in its June 18, 2009 Implementation Order when it stated that "...we will require the EDC to allocate those costs to the classes whom derive benefit from such costs."

OCA St. 3S at 2-3. Dr. Swan also addressed these witnesses' reliance on language in the Commission's Implementation Order—namely that "[t]hose costs that provide benefit across multiple classes should be allocated among the appropriate classes using reasonable cost of service practices"—to justify their argument that these costs should be allocated based on the number of customers. As Dr. Swan pointed out:

> Mr. Cohn and Mr. Baudino fail to ask what factors caused these costs to be incurred in the first place, which is fundamental in observing reasonable cost of service principles. In so doing, I believe they ignore the dictates of the Commission in requiring that costs be allocated to the classes whom derive benefits from those costs.

OCA St. 3S at 3.

Mr. Cohn, Mr. Knect and Mr. Baudino also argue that a customer benefit standard is not consistent with cost allocation practice. Dr. Swan addressed this allegation in his Surrebuttal:

> The fundamental rule in cost of service studies is to allocate costs based on the cause of the costs. The costs at hand would not be incurred if it were not for the expectation that benefits will be realized from the incurrence of those costs. As the expected benefits are what will cause those costs to be incurred, it is fully consistent with normal cost allocation practice to allocate the costs on the expected distribution of those benefits.

OCA St. 3S at 7. This causal relationship between costs and benefits is an accepted cost of service principle. For example, in the recent case Illinois Commerce Commission v. FERC, hereinafter ICC, the Seventh Circuit stated:

> FERC is not authorized to approve a pricing scheme that requires a group of utilities to pay for facilities from which its members derive no benefits, or benefits that are trivial in relation to the costs sought to be shifted to its member…Not surprisingly, we evaluate compliance with this unremarkable principle by comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.

Illinois Commerce Commission v. FERC, 576 F.3d 470, 476 (Seventh Cir. 2009) (citing KN Energy, Inc. v. FERC, 968 F.2d 1295, 1300, (D.C. Cir. 1992); Transmission Access Policy Study Group v. FERC, 225 F.3d 667, 708 (D.C. Cir. 2000); Pacific Gas & Elec. Co. v. FERC, 373 F.3d 1315, 1320-21 (D.C. Cir. 2004); Midwest ISO Transmission Owners v. FERC, 373 F.3d 1361, 1368 (D.C. Cir. 2004); see also Alcoa Inc. v. FERC, 564 F.3d 1342, 1346-47 (D.C. Cir. 2009); Federal Power Act, 16 U.S.C. § 824d). In ICC, the Court heard an appeal from various Commissions and utilities in PJM regarding the financing of new transmission facilities. 576 F.3d at 474. The PJM-proposed and FERC-approved method at issue would have required all utilities in PJM's region to contribute pro rata for facilities of over 500kV. Id. In overturning

this treatment, the Seventh Circuit noted that not even the roughest estimate of likely benefits to the objecting utilities was presented. Id. at 475. In fact, FERC counsel conceded that Commonwealth Edison would derive only $1 million in expected benefits from the project for which it was being asked to pay $480 million. Id. at 478. The Court specifically stated that the disparity between benefit and costs would be unreasonable. Id.[5]

The Industrials' witness, Mr. Baudino, also alleged that Dr. Swan failed to address how some of the classes would benefit more than others. In response, OCA witness Swan reiterated the two reasons why individual residential customers would benefit significantly less than Large C&I customers:

> First, the customer participation rate in dynamic rate design and demand response programs will be significantly less among residential than large C&I customers. Second, the savings for any participating customers will be directly in proportion to the amount of energy and capacity used by these customers. That clearly will be significantly higher for large C&I customers than for small residential customers. Since the benefits will depend upon the amount of energy and capacity used by the classes, it follows that a reasonable way to allocate these costs is in proportion to the amount of energy and capacity that they use. It is not necessary

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[5] Similarly, the PJM Interconnection and the Midwest Independent Transmission System Operator (MISO) proposed a methodology for allocating the costs of projects built into one regional transmission organization that also provided benefits to another Regional Transmission Operator (RTO). These benefits are referred to as "economic cross-border projects." In its Order addressing this issue, the FERC described the methodology it then approved as follows:

> If a project qualifies as an economic cross-border project, its costs will be allocated to each RTO in proportion to the present value of the RTO's share of the annual benefits that are calculated for the proposed project...
>
> We accept the RTO's proposal as just and reasonable and in compliance with the Commission's directives to revise the JOA [Joint Operating Agreement] to include a methodology to allocate between the RTOs, the costs of economic cross-border transmission projects.
>
> We find that the proposed JOA economic cross-border benefit formula is a just and reasonable method of allocating costs since it is based on criteria that the Commission previously accepted for use by each RTO to measure the benefits of adding new transmission within its footprints.

Order on Cross-Border Facilities Cost Allocation, 129 F.E.R.C. ¶ 61,102 at ¶¶ 9, 26-27 (2009).

> that we know in advance the amount of total savings, only that the savings are likely to be roughly proportional to the amount of energy and capacity used by the different customer groups.

OCA St. 3S at 5.

OSBA witness Knecht took a slightly different approach and suggested that any attempt to recognize benefits in the cost allocation process can lead to a "morass of conflicting interpretations" as to what the benefits are and how they are likely to be distributed among the customer classes. OSBA St. 1 at 4. Dr. Swan addressed Mr. Knecht's concerns:

> One could argue that all of the costs of the smart meter program will confer benefits on all customers because of improvements in the Company's load shape and improvements in reliability. That could even include the cost of the smart meter equipment and installation. However, I recognize that meters will still be required to measure and bill for customer usage and, since Act 129 requires that smart meters be installed for all customers, I believe that it is reasonable to directly assign the costs of the meter equipment and installation used to serve each customer class. There is, however, no similar logic that applies to the common costs of the PECO smart meter program.

OCA St. 3S at 7-8. The General Assembly's language clearly indicates that Act 129 required Pennsylvania distribution utilities to incur these costs because it is expected that these programs will result in energy and capacity savings for customers. Dr. Swan further explained:

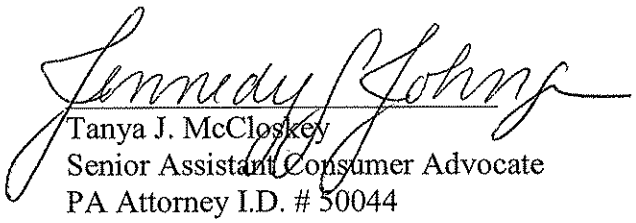
> It is unreasonable to think that the General Assembly is in the business of imposing costs on Pennsylvania ratepayers for no reason. Since the savings achieved will be a function of the amount of capacity and energy used by PECO's customers, there is clearly a relationship between the amount of energy and capacity used by the classes and the incurrence of these costs in the first place.

OCA St. 3S at 6. Mr. Knecht simply failed to look for the fundamental causes for the incurrence of these costs.

III. CONCLUSION

The OCA submits that traditional cost allocation principles, the language of Act 129, and the Commission's Implementation Order, all support a finding that the common costs of the PECO smart meter system cannot reasonably be allocated on the basis of the number of customers. The number of customers is neither a measure of the benefits derived from the smart meter system nor the causation of non-meter system costs. The OCA respectfully requests that the Commission hold that the appropriate basis on which to allocate common smart meter systems costs (other than the meters themselves) is on the basis of energy and demand as provided by OCA witness Dr. Swan.

Respectfully Submitted,



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Dated: December 2, 2009
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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

APPENDICES TO THE MAIN BRIEF OF THE OFFICE OF CONSUMER ADVOCATE

Appendix A- Statement of Questions

Has the Company appropriately allocated common costs to customers?

Suggested Answer: No.

Should the Commission require the Company to allocate common costs to customers in the proportion that they derive the benefits of those costs?

Suggested Answer: Yes.

Appendix B- Proposed Findings of Fact

1. The Company addressed two types of costs in its Plan: (1) costs of the meters themselves and (2) common costs—other non-meter costs associated with the Plan, such as the meter data management system, the network, and administrative costs. PECO St. 5 at 21.

2. The Company proposed to directly assign the costs of the metering equipment to the classes that use that equipment. PECO St. 5 at 21.

3. PECO has proposed to allocate common costs based entirely on the number of customers. PECO St. 5 at 21. The common costs are estimated at $198 million and will account for more than half of the total program costs during the first three years of the Company's Plan. PECO St. 4, Exh. APK-1.

4. Based on the number of customers, PECO allocated 89.9% of the total common costs to residential customers, 9.9% to Small C&I customers, and 0.2% to Large C&I customers. PECO St. 5, Exh. ABC-2 at 6; OCA St. 3 at 6, Exh. DES-1.

5. PECO's Large C&I customers are responsible for 33% of retail revenues and 44% of total energy usage. OCA St. 3 at 6, Exhibit DES-1.

6. PECO's Small C&I Class are responsible for 23.7% of retail revenues and 22.1% of total energy usage. OCA St. 3 at 6, Exhibit DES-1.

7. PECO's residential customers are responsible for 44.3% of retail revenues and 33.9% of energy usage. OCA St. 3 at 6, Exhibit DES-1.

8. The major intended benefit of the smart meter deployment will be improved efficiency of energy use and cost savings resulting from greater participation in demand response programs. OCA St. 3 at 5-6; PECO St. 4 at 10; PECO Hearing Exh. 2, Vol. I, Project Plans at 28-33.

9. Savings from participation in energy efficiency and demand programs will be in proportion to each customer's energy use and capacity. OCA St. 3 at 6-7.

10. PECO's per-customer allocation approach assumes that a residential customer using 500 kWh per month will receive the same amount of benefit from the smart meter system as a large industrial customer with a 50MW load and an 80 percent load factor. OCA St. 3 at 5.

11. PECO's current Automated Meter Reading (AMR) system already realizes the benefits associated with the elimination of physical meter reading and also generates savings associated with quicker outage notification and better control on meter tampering and theft. PECO St. 4 at 9.

12. PECO has not provided any estimation or quantification of the benefits accruing to each customer class under its Plan. OCA St. 3S at 5.

13. OCA witness Swan provided information from the Duquesne Light Company's ARRA proposal that included specific initial estimates of benefits accruing to each customer class. OCA St. 3S at 5. For Duquesne's initial meter installation, Large C&I customers are estimated to receive 67 to 69 percent of savings; Medium C&I customers 27 to 28 percent of savings; and residential customers only 2.7 to 5.5 percent of the savings—even though more than half of the meters to be installed by Duquesne in the initial deployment will be for residential customers. OCA St. 3S at 5.

Appendix C- Proposed Conclusions of Law and Ordering Paragraphs

1. Act 129 has cost reduction and price stability of electric energy as one of its primary goals. Act 129, 66 Pa.C.S. § 2806.1 *et seq*, pmbl.

2. PECO must allocate costs to the classes whom derive the benefit from such costs. Smart Meter Procurement and Installation, Docket No. M-2009-2092655 at 32 (Order entered June 24, 2009).

3. PECO has not met its burden of proof that its proposed allocation methodology for common costs based on the number of customers is reasonable or consistent with Act 129, the Commission's Implementation Order, or cost of service principles.

IT IS HEREBY ORDERED THAT:

1. PECO's proposal to directly assign the cost of the metering equipment to the customer classes is approved.

2. PECO's proposal to allocate the common costs to the customer classes based on number of customers is denied.

3. Common costs shall be allocated to the customer classes based on the energy and capacity benefits associated with the purpose of the smart meter deployment.

4. PECO shall develop an allocator for the common costs based on the arithmetic average of the percentage shares of each class' energy at the meter and each class' contribution to PECO's annual single coincident peak.

5. PECO shall allocate the common costs based on the allocator developed in accordance with this Order.

CERTIFICATE OF SERVICE

Petition of PECO Energy Company for Approval of its Smart Meter Technology Procurement and Installation Plan	: : :	Docket No. M-2009-2123944

I hereby certify that I have this day served a true copy of the foregoing document, the Main Brief of the Office of Consumer Advocate, 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 and upon the persons listed below:

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