

COMMONWEALTH OF PENNSYLVANIA



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December 18, 2009

James J. McNulty  
Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, PA 17120

RE: Petition of West Penn Power Company  
d/b/a Allegheny Power for Expedited  
Approval of its Smart Meter Technology  
Procurement and Installation Plan  
Docket No. M-2009-2123951

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,

A handwritten signature in black ink that reads "Tanya J. McCloskey".

Tanya J. McCloskey  
Senior Assistant Consumer Advocate  
PA Attorney I.D. # 50044

cc: Honorable Mark A. Hoyer

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BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of West Penn Power Company :  
d/b/a Allegheny Power for Expedited : Docket No. M-2009-2123951  
Approval of its Smart Meter Technology :  
Procurement and Installation Plan :

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MAIN BRIEF OF THE  
OFFICE OF CONSUMER ADVOCATE

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Dated: December 18, 2009

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## I. INTRODUCTION

West Penn Power Company d/b/a Allegheny Power (Allegheny Power or the Company) is proposing an extremely aggressive and expedited Smart Meter Plan that will deploy smart meters to all 725,248 of its metered customer by the end of 2014 at an estimated cost of \$580 million to its Pennsylvania ratepayers. Allegheny Power proposes to collect this \$580 million between the date of approval of its Smart Meter Procurement and Installation Plan (SMIP) and the end of 2014 by assessing a surcharge on its customers. The surcharge will increase the rates of its residential customers by \$5.86 per month beginning in February of 2010. The surcharge will increase to \$14.34 per month in June of 2011, further increase to \$15.57 per month in June of 2012, and then increase to \$15.77 per month by June of 2013. By June of 2013, residential customers using 500 kwh per month will see a 34% increase over 2009 rates and customers using 1,000 kwh per month will see an 18% increase, solely to cover the smart meter surcharge. These expected increases will be in addition to the increases in generation rates occasioned by the expiration of the generation rate cap on January 1, 2011 and increases from the recovery of its Energy Efficiency and Conservation (EE&C) Plan costs which begins in 2010. While Company-wide spending will be upwards of \$660 million through 2014, Allegheny Power estimates that customers will realize only \$43 million in benefits related to this expenditure during the five year deployment period, for a five year project estimate of \$620 million. The Pennsylvania portion of this net cost is \$580 million.

Allegheny Power proposes this aggressive deployment because, alone among Pennsylvania EDCs, it has elected to rely on the deployment of Smart Meters to meet the near-term (2011-2013) demand reduction requirements of Act 129. This strategy differs radically from every other EDC in Pennsylvania. And, despite its rush to deploy smart meters throughout

its service territory, again unlike every other EDC in Pennsylvania, Allegheny Power did not file an Application for Phase 1 stimulus grant money under the American Recovery and Reinvestment Act (ARRA) to support its initiative or mitigate the cost impact on its ratepayers. Tr. at 143.

The Commission must reject Allegheny Power's proposal for a hasty transition to the full deployment of smart meters. In recent testimony to the United States Committee on Energy and Natural Resources, New Jersey Commissioner Frederick Butler, serving as President of the National Association of Regulatory Utility Commissioners (NARUC), explained why a thoughtful and gradual transition to full deployment is needed. Commissioner Butler testified:

I know the Smart Grid can change how utilities oversee their networks and improve reliability. I know that, in the end, consumers could have greater control over their usage and have the potential to lower their bills. I also know, however, that if we do not do this correctly, if we move too quickly and promise too much we can endanger our coming close to meeting any of those lofty aspirations.

That is why it is important to remember that old cliché and not put the cart before the horse. The benefits of the Smart Grid are obvious, and we must be sure that we move deliberately and in stages so that the costs of rolling out the necessary infrastructure are borne by those who will benefit. If we expect the horse – i.e. the consumers – to push the cart before it is ready, we may never get the Smart Grid off the ground.

\* \* \*

The concern that many of my colleagues are trying to resolve is that consumers are convinced that the Smart Grid will only raise their rates with no discernable benefits. In a high-priced environment, some or perhaps most consumers see advanced metering rollouts as just one more headache and budget buster and are particularly scared that utilities and vendors will keep raising rates as the technology changes.

\* \* \*

We have to remember that the Smart Grid will only achieve its vast potential if consumers embrace it.

OCA St. 1 at 11, Exh. JRH-2.

Both Act 129 and the Commission have provided for this gradual transition to full deployment. Act 129 specifically provides:

(2) [EDCs] shall furnish smart meter technology as follows:

(i) Upon request from a customer that agrees to pay the cost of the smart meter at the time of the request.

(ii) In new building construction.

(iii) In accordance with a depreciation schedule not to exceed 15 years.

66 Pa.C.S. § 2807(f)(2). The Commission, in its Smart Meter Implementation Order, provided a 30-month grace period to the Electric Distribution Companies (EDCs) so that the EDCs could assess, plan, and design their full meter deployment. As the Commission explained:

The Commission agrees that some flexibility must be provided in the design and installation of a smart meter network, as some EDCs face greater logistical challenges than others do. Therefore, the Commission has established a period of up to 30 months for each EDC to assess its needs, select technology, secure vendors, train personnel, install and test support equipment and establish a detailed meter deployment schedule consistent with the statutory requirements. This grace period will commence upon approval of an EDC's smart meter plan. This will afford each EDC more time and flexibility in the design and development process to ensure that it can meet the demands and challenges unique to each service territory.

Smart Meter Procurement and Installation, Docket No. M-2009-2092655, slip op. at 9 (Order entered June 24, 2009)(Smart Meter Implementation Order).

Despite this strong guidance by the Commission and the parameters of the Act, Allegheny Power has pursued a risky and costly strategy that may tarnish the Commission's

efforts in implementing smart meter technology for years to come. Allegheny Power has not only proposed a rapid deployment of smart meters that will result in about \$24 million in stranded cost on its current meters, it has loaded up its surcharge with long-delayed improvements to its billing systems and work systems for its normal distribution operations and the universal deployment of in-home devices to all residential customers whether they want them or not. The result of its Plan is an installed cost per meter of \$600 as compared to other smart meter deployment plans that have an average installed cost per meter of around \$250. The Plan has a benefit to cost ratio of only 0.19, meaning that the costs of the Plan exceed the benefits by more than five times.

The impacts on customers, particularly residential customers who have been assigned the lion's share of the costs by the Company, are significant. Over the four year and four month period identified in the Company's filing, every Allegheny Power residential customer would pay at least \$641 just to cover the proposed Smart Meter surcharge.<sup>1</sup> AP Exh. 1, SMIP Plan at 98. Again, these increases will be in addition to the generation rate increase that will occur in 2011 when the rate cap expires and the EE&C Plan surcharge increases.

Allegheny Power has declined to utilize the 30-month grace period provided by the Commission to study and develop a more reasonable long-term approach to this complex undertaking. Rather, Allegheny Power has pursued a Plan that is difficult to deploy, costly to implement, and fraught with significant public policy concerns that have not even begun to be addressed. Allegheny Power has proposed this aggressive and costly Smart Meter Plan with insufficient analysis of the cost-effectiveness of the Plan, the technological challenges of the

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<sup>1</sup> This amount will be the minimum that residential customers will pay as it assumes that the surcharge amounts identified are the same for the entire period. During hearings, Allegheny Power witness Valdes clarified that the rates will increase each quarter until they reach the next specified level. This will increase the total amount paid by customers, but without the specific quarterly increases, it cannot now be determined by how much.

Plan, the policy implications of the Plan or the rate impacts of the Plan. The OCA submits that the Allegheny Power's Smart Meter Plan must be rejected in its entirety. Allegheny Power should be directed to use the 30-month grace period provided by the Commission to develop a smart meter deployment plan that is the most cost-effective alternative available to it and reflects a reasonable cost to consumers.

## II. PROCEDURAL HISTORY

### A. Act 129

On November 14, 2008, Act 129 of 2008 (Act 129) became effective. The Act provides for Energy Efficiency and Conservation Programs; Amending the Duties of Electric Distribution Companies' (EDCs) Obligation to Serve; Providing for Smart Meter Technology and Time of Use Rates; Providing Additional Market Power Remediation for Market Misconduct; Providing Additional Alternative Energy Sources; and Providing a Carbon Dioxide Sequestration Network. The Act makes a significant number of amendments to the Pennsylvania Public Utility Code, many of which will have a direct impact on the rates and service of 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 (SMIP or 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 depreciation schedule not to exceed fifteen (15) years. 66 Pa.C.S. § 2807(f)(1) and (f)(2). 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. 66 Pa.C.S. § 2807(f)(3). The Act further defines the requirements for acceptable Smart Meter technology. 66 Pa.C.S. § 2807(g). Finally, the Act established cost recovery alternatives. 66 Pa.C.S. § 2807(f)(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. Smart Meter Procurement and Installation, Docket No. M-2009-2092655 (Order entered June 24, 2009)(Smart Meter 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 for Smart Meters 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 policy implications and determined to resolve these issues in another proceeding prior to requiring such capability in Smart Meters. Smart Meter Implementation Order 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. Smart Meter Implementation Order at 31. However, the Commission also stated that loss of decreased revenues by an EDC due to reduced electricity consumption or shifting energy demand cannot be considered a recoverable cost of the Smart Meter technology 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. For costs that provide benefits across multiple classes, the Commission required that these costs be allocated among the appropriate classes using reasonable cost of service principles. Id.

B. History of the Case

On August 14, 2009, Allegheny Power filed its Smart Meter Procurement and Installation Plan (SMIP or Smart Meter Plan) pursuant to Section 2807(f) of the Public Utility Code and the Smart Meter Implementation Order entered by the Pennsylvania Public Utility Commission on June 24, 2009 at Docket No. M-2009-2092655. The matter was assigned to the Office of Administrative Law Judge and was further assigned to Administrative Law Judge Mark A. Hoyer for investigation. On September 1, 2009, the Office of Consumer Advocate filed its Notice of Intervention and Public Statement in this matter. On September 25, 2009, the OCA filed Comments in response to Allegheny Power's SMIP.

A prehearing conference was held on September 30, 2009, at which time a procedural schedule was established. Allegheny Power proposed an expedited schedule which was denied by ALJ Hoyer. Thereafter, on September 30, 2009, Allegheny filed its Petition for Interlocutory Review and Answer to a Material Question of West Penn Power Company d/b/a Allegheny Power regarding the Company's request for an expedited schedule. On October 13, 2009, Briefs in Opposition to the Material Question were filed. On October 22, 2009, the Commission denied Allegheny Power's request for an expedited schedule. A technical conference was held on October 5, 2009 before Administrative Law Judge Kandace F. Melillo.

The Office of Consumer Advocate (OCA) submitted the testimonies of its expert witnesses, J. Richard Hornby<sup>2</sup>, Nancy Brockway<sup>3</sup>, and Matthew I. Kahal<sup>4</sup> in this matter. On October 16, 2009, the OCA submitted the Direct Testimonies of J. Richard Hornby (OCA St. No. 1) and Nancy Brockway (OCA St. No. 2). On November 3, 2009, the OCA submitted the Surrebuttal Testimonies of J. Richard Hornby (OCA St. No. 1-S); Nancy Brockway (OCA St. No. 2-S); and Matthew I. Kahal (OCA St. No. 3-S). Evidentiary hearings were held on November 16, 2009.

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<sup>2</sup> J. Richard Hornby is a Senior Consultant at Synapse Energy Economics, Inc. and has previously presented expert testimony and provided litigation support in approximately 100 proceedings in over thirty jurisdictions in the United States and Canada, including Pennsylvania. Mr. Hornby's work at Synapse specializes in planning, market structure, ratemaking, and gas supply/fuel procurement in the electric and gas industries. His experience in energy efficiency measures and policies began thirty years ago. OCA St. 1 at 1-2; see also, OCA St. 1 at Exhibit JRH-1.

<sup>3</sup> Nancy Brockway is a principal of NBrockway & Associates, a firm providing consulting services in the areas of energy and utilities. Ms. Brockway has served as a Commissioner on the New Hampshire Public Utilities Commission, an expert witness on consumer and low-income utility issues for the National Consumer Law Center, and as Director of the Multi-Utility Research and Analysis with the National Regulatory Research Institute (NRRI). While at NRRI, Ms. Brockway wrote a study on the impact of advanced metering structure and related options on residential consumers. Ms. Brockway specializes in issues relating to the role of regulation in the protection of consumers and the environment. OCA St. 2 at 1-2; see also, OCA St. 2 at Exhibit NB-1.

<sup>4</sup> Matthew I. Kahal is an independent consultant retained in this case by Exeter Associates, Inc., an economic consulting firm. Mr. Kahal was a co-founder of Exeter Associates, Inc. and for the past 25 years, Mr. Kahal has presented testimony on electric utility integrated planning; plant licensing; environmental issues; mergers; financial issues, including performing cost of capital and financial studies; electric utility restructuring; power supply markets and competition issues in more than 340 separate regulatory cases. His testimony has addressed a variety of subjects including fair rate of return, resource planning, financial assessments, load forecasting, competitive restructuring, rate design, purchased power contracts, merger economics and other regulatory policy issues. OCA St. 3-S at 1-3; see also, OCA St. 3-S at Appendix A.

### III. DESCRIPTION OF WEST PENN'S PLAN

In its Smart Meter Installation Plan, Allegheny Power proposes to replace its existing, functioning meters over a five year period from 2010 through 2014 with Smart Meters and associated infrastructure. At the same time, the Company proposes to install In-Home Displays in every residential premise in its service territory. The Company proposes a Smart Meter architecture consisting of six components including: (1) Home Area Network and In Home Devices to connect and control appliances, thermostats, hybrid vehicles, home generation, etc; (2) Smart Meters which will connect the Home Area Network to the electric system using standard wireless communications and a multi-supplier standard; (3) A Network which connects the Smart Meters to the utility "core systems" using secure collectors, microwave and fiber communications; (4) Core Systems which will collect, store, process and manage information generated by users, the Home Area Networks and Smart Meters and also calculate and issue customer bills; (5) The Customer Interface which provides the ability for customers and authorized third parties to interact and manage electric usage via In Home Devices, an Interactive Voice Response System, or a web portal; and (6) Security which will encompass a set of systems, protocols and processes to allow Allegheny Power to provide secure advanced meter technology. AP Exh. 1, SMIP Plan at 12; AP Exh. 2, Petition at ¶ 8.

Allegheny Power estimates that the total cost for development, deployment, and operation and maintenance, including the stranded costs of existing meters and net of Customer Information System (CIS) and Smart Meter & Infrastructure benefits, will be \$580 million. Allegheny Power St. 4 at 4; See, AP Exh. 1, SMIP Plan, Table 4.1, at 94; See benefit calculation at, SMIP Plan at 14 and Table 4.1 at 94. The Company states that additional benefits of the Smart Meter infrastructure will include an increase in utility energy efficiency and demand

response participation, but it has not quantified these benefits. AP Exh. 2, Petition at ¶ 10. The Company states that its proposed Plan will provide customers with “direct access to pricing and consumption information, enabling time-of-use and real-time price programs, and remote programming capability” and will include bi-directional communications capability; remote disconnection and reconnection; ability to provide 15-minute or shorter interval data to customers; minimum of hourly reads delivered once per day; and the ability to upgrade the minimum capabilities. AP Exh. 2, Petition at ¶ 14.<sup>5</sup>

Allegheny Power is proposing to recover the revenue requirements associated with this investment through a fully reconcilable automatic adjustment Smart Meter Technology (SMT) surcharge under Section 1307 that will be applied in a separate line-item as a monthly customer or meter charge on the bill. Allegheny Power St. 4 at 8. For residential customers, the Company is proposing an additional monthly charge of \$5.86/month in the first year (2010), \$14.34 in the second year and rising to \$15.77 per month in the fourth year (2013).<sup>6</sup> AP Exh. 1, SMIP Plan at 98. These proposed residential surcharges would increase the annual bills of residential customers by at least \$70 in the first year (2010) and by at least \$189 in the fourth year. Over the course of the four year and four month deployment plan, every residential customer would pay a total of \$641 for this initiative. See, AP Exh. 1, SMIP Plan at 98. The Company has reflected total off-setting benefits of \$43 million (of which \$36 million are allocated to Pennsylvania) in distribution system operations during this period but has not projected any further offsetting reductions in the electricity supply cost component of customer bills. Tr. at 231.

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<sup>5</sup> The OCA notes that Allegheny Power has relied upon the proposed Smart Meter infrastructure for nine of its Energy Efficiency and Conservation Plan programs filed in Docket No. M-2009-2093218. The OCA opposed the implementation of these nine programs in that filing due to the Company’s failure to show these programs are cost-effective under the Total Resource Cost test as required by Act 129.

<sup>6</sup> As noted earlier, this amount represents the minimum that residential customers will pay as it assumes the surcharge is in effect for the entire period. The surcharge will increase on a quarterly basis, however, until it reaches the next specified level. Tr. at 240.

Allegheny Power states that it does not require the 30-month grace period that is provided for in the Smart Meter Implementation Order. AP Exh. 2, Petition at ¶ 13; see also, Smart Meter Implementation Order at 7. Rather, the Company has requested that the Commission expedite the approval for the Smart Meter Plan and the activities and expenditures proposed for the initial phase of the Plan, so that it can fully deploy its Smart Meters by 2013. AP Exh. 2, Petition at ¶¶ 20-23.

As noted above, the OCA submits that Allegheny Power's proposed Smart Meter Deployment Plan is unreasonable and must be rejected outright. Allegheny Power's Plan has not been shown to be a cost-effective alternative available and has not been shown to adequately address the many challenges and policy implications related to smart meter deployment. Allegheny Power's proposed aggressive deployment of smart meters places an enormous cost and risk on its ratepayers with no comparable benefit. At a cost of \$600 per installed meter, a price tag of \$580 million, and only \$36 million in identified benefits for Pennsylvania, this Plan must not be allowed to go forward. The Company should be directed to utilize the 30-month grace period provided by the Commission to develop an appropriate full scale deployment plan that is reasonable in cost and scope and addresses the many policy implications of smart meter deployment, including the impacts on low income and otherwise vulnerable customers.

#### IV. SUMMARY OF THE ARGUMENT

Allegheny Power's proposed Smart Meter Procurement and Installation Plan is unreasonable and must be rejected. Allegheny Power has not demonstrated the prudence of, or necessity for, its extremely expedited Smart Meter Plan, and it has failed to show that the Plan is cost-effective. Allegheny Power has also failed to show that the costs included in its Smart Meter Plan are reasonable or properly included in the Smart Meter Technology surcharge mechanism. Allegheny Power's SMIP is unnecessarily and unreasonably burdensome to ratepayers, particularly residential ratepayers, charging them by far the highest smart meter charge in Pennsylvania.

In this Main Brief, the OCA develops recommendations regarding Allegheny Power's SMIP and steps that can be taken to develop a more reasonable and cost-effective full deployment plan. The OCA's key recommendations are:

- Allegheny Power should use the 30-month grace period provided in the Commission's Order to identify ways to reduce the Plan's cost and maximize its benefits to customers in order to develop a more cost-effective means of full deployment. The following should be undertaken in support of this effort:
  - ◆ quantify both the generation service and distribution service benefits of its deployment strategy over a fifteen year period and reflect these benefits in the SMIP
  - ◆ eliminate the universal deployment of IHDs (in-home device/display)
  - ◆ remove the costs of modernizing its Customer Information System from its SMIP
  - ◆ remove certain Information Technology Costs that primarily support normal distribution system operations from its SMIP and provide justification for those IT Costs that remain in the SMIP
  - ◆ conduct customer-focused research to anticipate likely customer responses towards various smart meter initiatives

- ◆ identify the impacts on low income and potentially vulnerable customers and design initiatives to deal with issues faced by such customers under the SMIP Plan
- ◆ develop all necessary procedures for security and privacy
- Allegheny Power should return to the Commission with a modified full deployment Plan that more closely adheres to Act 129 and the Smart Meter Implementation Order, addresses the issues presented by the parties in this proceeding, and can be shown to be a reasonable and cost-effective means of meeting the requirements of Act 129.
- As to its proposed Smart Meter Technology Surcharge, the following modifications are necessary:
  - ◆ A 10.1% Return on Equity should be used in calculating the revenue requirements included in the surcharge
  - ◆ The depreciable life of the meter assets should be 15 years for the purposes of the surcharge
  - ◆ The stranded cost claim of \$24 million should be removed from the Smart Meter Surcharge
  - ◆ The \$98 million in capital cost and the \$8 million in O&M costs associated with the IHDs should be removed from the Surcharge
  - ◆ The portion of the Information Technology costs related to capital and O&M expense for the Enterprise Service Bus, the Work Management System, the Geographic Information System and the Outage Management System should be removed from the surcharge
  - ◆ The PUC assessment fee should be removed from the surcharge
- A cost of service study should be filed with the modified Plan that develops detailed allocation factors for the revenue requirements and for allocation of costs among the corporate affiliates. The joint and common cost allocator within that study should reflect energy and demand usage, as these costs are being incurred to reduce energy usage and peak demand.
- For residential customers, the Smart Meter Technology surcharge should be collected primarily on a volumetric basis

The OCA submits that given the significant problems identified with Allegheny Power's Plan, and the significant cost burden on its ratepayers, the Company's Plan should be rejected in its entirety and the OCA's recommendations should be adopted.

## V. ARGUMENT

### A. Act 129 Requirements

Act 129 made several critical changes to the Public Utility Code in an effort to bring reliable, affordable, efficient and environmentally sustainable electric service to Pennsylvania consumers at the least cost over time. In this proceeding, the Commission will consider the provisions of Act 129 that call for the deployment of smart meter technology as one tool to achieve the overall goals of Act 129. Act 129 requires that EDCs file a smart meter technology procurement and installation plan with the Commission by August 2009, and the plan shall describe the smart meter technologies proposed for installation in accordance with Section 2807(f)(2). Specifically, Section 2807(f)(2) states:

(2) [EDCs] shall furnish smart meter technology as follows:

- (i) Upon request from a customer that agrees to pay the cost of the smart meter at the time of the request.
- (ii) In new building construction.
- (iii) In accordance with a depreciation schedule not to exceed 15 years.

66 Pa.C.S. § 2807(f)(2).

It is important to note that Act 129 provides for the recovery of the reasonable and prudent costs of the smart meter technology. 66 Pa.C.S. § 2807(f)(7). Section 2807(f)(7) provides:

An electric distribution company may recover reasonable and prudent costs of providing smart meter technology under paragraph (2)(ii) and (iii), as determined by the commission. This paragraph includes annual depreciation and capital costs over the life of the smart meter technology and the cost of any system upgrades that the electric distribution company may require to enable the use of the smart meter technology which are incurred after the effective date of this paragraph, less operating and capital cost savings

realized by the electric distribution company from the installation and use of the smart meter technology.

66 Pa.C.S. § 2807(f)(7). At all times, it remains the burden of the Company to prove that its Plan is reasonable and that it will result in just and reasonable rates charged to customers. 66 Pa.C.S. § 315, 332, 1301, 2807(f)(7).

The Smart Meter Implementation Order authorized a 30-month grace period for EDCs to develop their smart meter network following Plan approval. Smart Meter Implementation Order at 7. Specifically the Smart Meter Implementation Order required:

[A]ll covered EDCs to include in their smart meter procurement and installation plan filing a proposal for meeting specific milestones within this 30 month grace period. Each covered EDC must include a justification and its plan for meeting the following milestones:

- Assessment of needs and technological solutions.
- Selection of technologies and vendors.
- Establishment of network designs.
- Establishment of plans for training personnel.
- Establishment of plans for installation, testing and rollout of support equipment and software.
- Installation, testing and rollout of support equipment and software.
- Establishment of plans to design, test and certify EDI transaction capability consistent with this order.
- Establishment of plans for installation of meters consistent with the rollout requirements described below.

Each plan must include a schedule to meet each of these milestones, as well as specific reporting deadlines when the EDC will provide this Commission with reports on the status of its plan.

Smart Meter Implementation Order at 7-8.

The Commission explained the purpose of the grace period as follows:

[T]he Commission has established a period of up to 30 months for each EDC to assess its needs, select technology, secure vendors, train personnel, install and test support equipment and establish a

detailed meter deployment schedule consistent with the statutory requirements. This grace period will commence upon approval of an EDC's smart meter plan. This will afford each EDC more time and flexibility in the design and development process to ensure that it can meet the demands and challenges unique to each service territory.

Smart Meter Implementation Order at 9. The Commission then discussed system-wide deployment:

The Commission believes that it was the intent of the General Assembly to require all covered EDCs to deploy smart meters system-wide when it included a requirement for smart meter deployment "in accordance with a depreciation schedule not to exceed 15 years." It is this system-wide deployment that will provide the foundation for the EDCs' smart meter installation plans. Therefore, it is crucial for the EDCs to develop a plan that will best meet the needs of their service territory, while at the same time operating in a manner that is both cost and time effective.

\* \* \*

It should also be noted that Act 129 uses the language "not to exceed 15 years." An EDC is encouraged to expedite the deployment process if it will provide increased customer benefits in a cost-effective manner. Again, the primary goal of the EDC deployment plan should be to implement a deployment and installation schedule that best balances the overall efficiency and timeliness of the smart meter installations with the costs incurred.

Smart Meter Implementation Order at 14.

The OCA submits that Allegheny Power's proposed SMIP is unreasonable and cannot satisfy the requirements of Act 129, the Commission's Implementation Order or the Public Utility Code. Allegheny Power has failed to demonstrate the prudence or necessity for forcing the full deployment of smart meters on the extremely expedited schedule that it has proposed and it has failed to adequately consider the impact of its Plan on customers. The OCA submits that Allegheny Power's proposed Plan is unnecessarily costly and will result in by far

the highest SMIP surcharge in Pennsylvania. OCA St. 2 at 3. OCA witness Hornby summarized his conclusions regarding the Allegheny Power Plan as follows:

My primary conclusion is that the Company's proposed Smart Meter Plan is not reasonable. The Company has not demonstrated that its proposed Plan is the most cost-effective approach of meeting the goals of Pennsylvania Act 129 with respect to deploying smart meter technology and supporting reductions in peak load and annual energy consumption.

The projected cost of the Company's proposed Smart Meter Plan, on a net present value (NPV) basis, is about six times higher than its projected savings in distribution service and generation costs, for a benefit to cost ratio of less than 0.2. Its projected capital costs are more than twice as high as AMI projects of other utilities, primarily due to higher costs for Information Technology (IT) integration and software as well [as] costs for in-home devices (IHDs) and a Customer Information System (CIS). Allegheny Power is proposing \$100 million, or twenty percent of the total capital cost of the Plan, for IHDs. These are primarily in-home displays it is proposing for every residential premise plus in-home load control devices and remote control devices on each meter. Allegheny Power has included costs for modernizing its Customer Information System (CIS) which is an investment it should make as part of its normal course of business.

OCA St. 1 at 4-5.

As detailed more below, the OCA submits that Allegheny Power's proposed SMIP should be rejected by the Commission. Allegheny Power should be directed to use the 30-month grace period provided in the Commission's Implementation Order to conduct the necessary analysis and research, identify ways to reduce the Plan's cost and maximize its benefits to customers, and return with a revised SMIP with a deployment schedule more consistent with the 15-year depreciation schedule contained in Act 129 and with a more reasonable benefit to cost ratio.

1. Deployment Schedule

a. Company Proposal

The Company proposes a rapid deployment of its smart meters to support its EE&C Plan. The Company proposes to deploy 725,248 smart meters by the end of 2014, with the bulk of the installations being accomplished in 2011 and 2012. AP Exh. 1, SMIP at 28. Allegheny Power's Plan is estimated to cost \$580 million for this deployment.

b. Other Parties' Positions

i. Introduction

Under its SMIP, Allegheny Power is proposing a rapid deployment of smart meters, the accompanying infrastructure, and new billing and information and technology systems. OCA witness Brockway summarized the Allegheny Power Plan and proposed schedule as follows:

Allegheny Power proposes to deploy hourly-read meters with remote disconnect capability, two-way communication networks, a Meter Data Management System (MDMS), and a revamped Customer Information System (CIS). Allegheny Power proposes to begin installation of its MDMS and CIS investments in late 2009. Allegheny Power proposes to commence installation of smart meters in early 2010, and to complete smart meter installation by 2014. The bulk of the meter deployment would take place between 2010 and 2013. See, SMIP at Table 5, and Sections 2.4.4 and 2.4.5.

OCA St. 2 at 6. Allegheny Power proposes to have installed 725,248 of smart meters throughout its service territory by the end of 2014. AP Exh. 1, SMIP at 28, Table 5.

While Act 129 establishes the obligation of each EDC with 100,000 or more customers to furnish smart meters upon request of the customer, in new building construction, or in accordance with a depreciation schedule not to exceed 15 years, it does not call for the deployment in an unreasonable manner without regard to cost-effectiveness and it does not call

for the extremely expedited deployment proposed by Allegheny Power. The Commission recognized this point in its Smart Meter Implementation Order when it stated:

It should also be noted that Act 129 uses the language “not to exceed 15 years.” An EDC is encouraged to expedite the deployment process if it will provide increased customer benefits in a cost-effective manner. Again, the primary goal of the EDC deployment plan should be to implement a deployment and installation schedule that best balances the overall efficiency and timeliness of the smart meter installations with costs the incurred.

Smart Meter Implementation Order at 14. OCA witness Hornby also summarized the task for Allegheny Power under Act 129 as follows:

Allegheny Power and every other EDC has to demonstrate to the Commission that its proposed Smart Meter Plan is the most cost-effective approach for its specific territory. In other words, I believe that Allegheny Power must demonstrate to the Commission that its proposed Smart Meter Plan is the most cost-effective approach for meeting the policy objectives of Act 129 out of the range of possible alternative approaches available to it. Thus, from a policy perspective there is nothing in Act 129 which exempts the Company from bearing the burden of demonstrating to the Pennsylvania Public Utility Commission (PUC) that its specific proposal will satisfy the statutory obligation to provide service at just and reasonable rates.

OCA St. 1 at 11. The record evidence is clear that Allegheny Power has failed to show that its Plan including its accelerated deployment schedule is reasonable or a cost-effective alternative for meeting the requirements of Act 129.

ii. The Rapid Deployment Proposed By Allegheny Power Is Not Cost Effective Or Reasonable

As noted, Allegheny Power has proposed an accelerated deployment of its smart meters, Allegheny Power’s Plan contemplates that installation will begin in early 2010, likely within a month of Commission approval. This would accelerate the commencement of full deployment by as much as two years ahead of the requirement in the Commission’s Smart Meter

Implementation Order and would compress the time for full deployment from the 15 years set forth in the Act and recognized in the Commission's Implementation Order, to only 4 years. OCA St. 2 at 9. As OCA witness Brockway testified, this Plan is not reasonable. Ms. Brockway testified:

[F]ull advanced meter deployment presents many uncertainties, challenges and changes. Allegheny Power's proposal does not allow sufficient time to address these uncertainties and challenges to ensure the most cost-effective deployment plan. From my review and Mr. Hornby's review, I find the plan is not cost-effective, reasonable or prudent.

OCA St. 2 at 9.

Both OCA witness Brockway and OCA witness Hornby testified to the many uncertainties and challenges that will accompany full smart meter deployment. Of particular concern in this case, Allegheny Power has proposed accelerated deployment of smart meter technology at a significant cost to ratepayers, particularly residential ratepayers. The Company's accelerated full deployment of smart meter technology comes before many necessary standards have been fully developed and without any regard to when or how the potential benefits of such technology will develop. With a benefit to cost ratio of 0.2, the Company has simply failed to show that its proposal is a cost-effective alternative.

At this time, there has been little long term experience with the performance and economics of full scale smart meter deployment and the accompanying dynamic pricing programs that can be enabled by such technology. OCA St. 1 at 9. It has only been in the last few years that several utilities in the United States have received regulatory approval to deploy advanced metering infrastructure and dynamic pricing tariffs on their systems on a wide scale basis. OCA St. 1 at 9. Most of those utilities are currently in the process of completing those

deployments. Id. OCA witness Hornby explained the import of the current state of smart meter deployment in the United States as follows:

The absence of robust empirical evidence regarding the performance and economics of AMI and dynamic pricing on a system-wide basis over time results in considerable uncertainty regarding both long-term technical performance and the magnitude of peak load reductions that will actually be sustained in the long-term in response to dynamic pricing approaches such as PTR [peak time rebate] or CPP [critical peak pricing].

Id. At the present time, there is no basis to subject ratepayers to the risks of this rapid deployment when more needs to be done in support of and more needs to be learned about full scale smart meter deployment.

Today there is substantial uncertainty surrounding the appropriate pace of full scale smart meter deployment. Issues and uncertainties remain regarding the evolution of smart grid and smart meter technology, uniform standards for the smart grid and associated smart meters, and the responsiveness of customers, particularly residential customers, to the pricing programs that will be developed, to name a few. See, OCA St. 2 at 3, 15. These uncertainties highlight the importance of the 30-month grace period provided in the Commission's Implementation Order, the 15 year period to support deployment provided in Act 129, and the need for a gradual transition to full deployment of smart meters.

OCA witness Brockway provided a summary of some of the key factors giving rise to the concerns over the Company's expedited deployment:

Below I discuss some of the smart metering infrastructure technology and privacy issues that should be resolved before proceeding with full smart meter infrastructure deployment. I also note that parts of the Allegheny Power SMIP, such as the type, roll-out and usefulness of in-home devices, are still in early phases of determination, and the Plan does not make clear how and when those aspects of the SMIP will be resolved in a detailed way that permits orderly deployment of the plan.

Allegheny Power has hastened its planning, and as a result left some questions opened that could later require amendments to its SMIP, after deployment. In particular, the Company has gathered relatively little customer-focused data on likely responses of its West Penn customers to various SMIP initiatives. In response to OCA II-7, the Company stated that it developed its estimates of the benefits of customer participation in energy efficiency & demand response programs based on “what it can reasonably predict in program performance given the time constraints” and other factors. It did not complete any original market research in its own Pennsylvania service area, OCA I-2, despite the fact that it recognizes that “every customer will respond differently to energy usage and pricing performance.” OCA I-30.

OCA St. 2 at 13-14.

OCA witness Hornby included an Exhibit in his testimony that comprised the testimony of Commissioner Frederick Butler of New Jersey before the United States Senate Committee on Energy and Natural Resources in his role as President of NARUC. Commissioner Butler’s testimony provides important guidance. Of relevance here, Commissioner Butler, after reviewing the experience to date in California with smart meter deployment, commented as follows:

As this experience demonstrates, the way the Smart-Grid is structured and rolled out is absolutely key to its success, and regulators and industry must be flexible to ensure that consumers will not feel inundated or overwhelmed. Depending on how a Smart-Grid program is structured and rolled out will be the key to its success, and Congress, regulators, and industry must be flexible to ensure that consumers will not feel inundated or overwhelmed.

OCA St. 1, Exh. JRH-2 at 9. Commissioner Butler then went on to describe an approach that uses large scale demonstration programs and pilot programs designed to identify how customers will react to the smart grid technology and create a “buzz” about the technology. Commissioner Butler concluded:

This approach lets customers take part by building interest and selling the product amongst themselves, rather than having Congress, utilities, or regulators do it for them. The consumers who want the meters will get the meters, and through word-of-mouth, others will find out how valuable this new system can be, and will be more willing to endure a slight rate increase to pay for it. What concerns me is that under some proposals, millions of people will get these smart meters whether they want them or not. They will be getting a rate increase and new gadgets that they do not know how to use installed in their homes. I am not sure if this will breed anything but hostility among a rate class that is already facing challenging economic times.

OCA St. 1, Exh. JRH-2 at 10.

The OCA submits that Allegheny Power's Plan suffers directly from the concerns raised by Commissioner Butler and identified by the OCA's witnesses. Indeed, in his comments regarding increased costs that must be borne by customers, Commission Butler was concerned about an installed cost per meter of \$150 to \$200. Allegheny Power's proposed SMIP has an installed cost of \$600 per meter.

After review of Allegheny Power's Plan, OCA witness Brockway reached the following conclusions regarding the expedited smart meter deployment:

I conclude that it is unreasonable for Allegheny Power to proceed on its expedited schedule before resolution of a number of issues key to planning a responsible smart meter deployment. These include consideration of alternative means of meeting EE&C/DR goals that do not require rapid deployment of SMIP, consideration of likely customer interest in various proposed offerings, consideration and satisfaction of cyber security and privacy concerns, and consideration of less costly means of achieving its SMIP objective.

OCA St. 2 at 15.

Allegheny Power's proposed SMIP based on accelerated deployment of smart meters between 2010 and 2014 is unreasonable and must be rejected. As explained below, Allegheny Power should be directed to use the 30 month grace period to develop a Plan that is cost-

effective, addresses the many concerns raised in this proceeding, and results in a reasonable deployment of smart meters at a reasonable cost.

iii. Allegheny Power's Asserted Need For Accelerated Deployment Based On Its EE&C Plan Cannot Withstand Scrutiny

Allegheny Power's primary argument in support of its proposed rapid deployment of smart meters throughout its service territory is that it needs the smart meters to support its Energy Efficiency and Conservation (EE&C Plan). Allegheny Power St. 1 at 8-9. This Company, alone among Pennsylvania utilities, chose this strategy for its EE&C Plan. OCA St. 2 at 11. While the Commission recently approved the Company's EE&C Plan, the Commission issued a strong caution on Allegheny's approach and urged Allegheny to develop a back up plan.

The Commission stated:

Allegheny's reliance on the rapid deployment of smart meters and the associated network infrastructure does add an element of increased risk to its [EE&C] Plan. As Allegheny bears the sole risk of significant penalties if it fails to meet the mandated targets, we will not direct Allegheny to eliminate the proposed programs that rely on smart meter deployment, except where otherwise directed in this Opinion and Order. In recognizing this increased risk, the Commission strongly encourages Allegheny to develop an alternate "back-up" plan that is less reliant on smart meter deployment. Such an alternate plan would be a readily available option that can be implemented on short notice, after Commission approval, should any unforeseen circumstances delay or disrupt Allegheny's smart meter deployment. The Commission will closely monitor this element of Allegheny's Plan during the annual plan reviews and its review and monitoring of Allegheny's Smart Meter Procurement and Installation Plan.

Petition of West Penn Power Company d/b/a Allegheny Power for Approval of its Energy Efficiency and Conservation Plan, Docket No. M-2009-2093218, slip op. at 21 (Order entered October 23, 2009)(EE&C Plan Order).

As OCA witnesses Brockway and Hornby testified, Allegheny Power's reliance on its EE&C Plan to support its accelerated smart meter deployment is both overstated and misplaced. Initially, for the residential programs, the smart meter enabled programs account for only about 1% of the energy efficiency or demand reduction goals. OCA St. 2 at 11-12. The greater savings from programs linked to the smart meter deployment by the Company are from the largest commercial and industrial customers. OCA St. 2 at 12. OCA witness Hornby testified that the largest 400 C&I customers are expected to achieve 80% of the reductions in peak load needed to meet the Act 129 EE&C goals. OCA St. 1 at 21-22. The Company's proposed rapid installation of 400,000 smart meters by 2012 yields less than 20% of the remaining peak load reduction. OCA St. 1 at 22, Chart. OCA witness Hornby described an alternative:

Allegheny Power is in fact proposing to install over 400,000 meters by 2012 to achieve a tiny, and uncertain, reduction in peak load. As an alternative, the Company could likely achieve its projected peak reductions with no near-term deployment of SMIP if it enlisted curtailment service providers to enroll more C&I reductions and if it began offering a direct load control program to its residential customers with central air conditioning. Electric utilities in New Jersey are achieving incremental reductions in peak load through both approaches.

OCA St. 1 at 23.

Mr. Hornby further described in his Surrebuttal Testimony why this alternative was a viable approach for Allegheny Power. As Mr. Hornby testified:

Under my suggested alternative Allegheny Power would still obtain the 88 MW of incremental reductions from C&I customers but with little or no deployment of smart meters. Many C&I customers already have the interval meters and communication systems needed for such programs. Further, the Company could deploy smart meters at the sites of C&I customers who do not have interval meters. Allegheny Power could achieve the remaining 24 MW by enlisting curtailment service providers (CSPs) to obtain additional reductions from C&I customers. In addition, Allegheny Power could place its primary emphasis on its Programmable

Controllable Thermostat (PCT) program for residential customers, which it characterizes as a direct load control (DLC) program.

EDCs in New Jersey are placing primary emphasis on these two approaches. In the summer of 2009 CSPs in New Jersey achieved a 75% increase in reductions from C&I customers registered in the PJM ILR DR Program under a program that the Board of Public Utilities approved in December 2008. In fact, Allegheny Power includes this type of approach in its EE&C plan as a Contracted Demand Response Program (EE&C Plan, p. 116). In its October 23 Order the Commission has required that Allegheny Power develop a plan to implement this program "...as a hedge against any risk of delay in implementing its smart meter deployment plan" October Order (Order at 47).

Public Service Electric and Gas and Atlantic City Electric are enrolling residential customers in their DLC programs in a manner designed to allow easy transition to smart meters if, and when, they are deployed. Similarly, in Maryland, Baltimore Gas and Electric and Potomac Electric Company are each offering "smart meter compatible" DLC programs to residential customers, as described in their filings in Cases 9208 and 9207 respectively.

OCA St. 1S at 18-19 (footnotes omitted).

The OCA submits that Allegheny Power's reliance on its EE&C Plan to support the rapid deployment of its smart meters in a manner that is neither cost-effective nor reasonable cannot withstand scrutiny. Allegheny Power has alternatives available to it to meet its Act 129 EE&C goals and should quickly develop the "back-up" plan that the Commission urged it to do rather than pursue the unreasonable deployment strategy contained in its SMIP.

iv. Allegheny Power Should Be Directed To Use The Grace Period To Develop A Reasonable And Cost-Effective Full Deployment Plan

Given the many uncertainties of smart meter deployment, the high cost of Allegheny Power's proposed SMIP, the low benefit to cost ratio of Allegheny Power's Plan, and the need for further analysis identified by the OCA's witnesses, the OCA submits that Allegheny Power's SMIP and its proposed full deployment plan should be rejected. Instead, Allegheny Power

should be directed to use the 30-month grace period to review its Plan, identify ways to reduce the Plan's costs and maximize its benefits to customers, and develop a full deployment plan that is the most cost-effective alternative for the Company and its customers. OCA St. 1 at 5-6; OCA St. 2 at 5. During the grace period, the Company should also undertake the research and analyses discussed in this Brief regarding the issues raised by the OCA as well as other parties. The OCA submits that after undertaking necessary research and analysis, the Company should develop a full deployment plan that is reasonable and cost-effective. The Company should then submit that Plan to the Commission for review.

2. Smart Meter Capabilities and Related Technologies

a. Company Proposal

The Company proposes to install smart meters that meet the capabilities set forth in Act 129 and in the Commission's Implementation Order. AP Exh. 1, SMIP at 5-6. The meters will contain modules at an additional cost of \$40 to \$50 that will support remote disconnection and reconnection of service. Tr. at 149. In addition to the smart meters, the Company plans to universally deploy in-home devices to all residential customers unless the customer chooses to "opt-out." AP Exh. 1, SMIP at 44.

b. Use of In-Home Displays/Devices (IHDs): The Universal Deployment Of In-Home Displays/Devices Must Be Removed From The Company's Plan

Allegheny Power proposes to provide in-home devices<sup>7</sup> to all residential customers as part of its SMIP. The cost of the universal installation of IHDs is \$98 million in capital costs (which includes \$108 per meter for installation of the IHD) and an additional \$8 million in operation and maintenance expense. AP Exh. 1, SMIP at 131; OCA St. 2 at 18. Allegheny Power states that in-home devices "are key to providing information of customers to achieve the

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<sup>7</sup> The acronym IHD is used to refer to both in-home devices and the in-home display.

required changes in consumer behavior to achieve the consumption and Demand Response reductions.” AP Exh. 1, SMIP at 44. The Company has not provided any estimate of the benefits to be realized by individual customers or the system as a result of this universal deployment of IHDs. OCA St. 1 at 17.

OCA witness Brockway describes an in-home device as:

[A]ny one of a number of devices that can be installed in the customer’s home to permit communication with the smart meter or some other connection to a utility network, control the operation of an electricity-using appliance such as a central air conditioner, display information about the customer’s usage, current price (if on a time- or event-sensitive rate), progress in meeting certain efficiency goals and the like.

OCA St. No. 2 at 16.

Allegheny Power proposes to provide two types of in-home devices for residential customers: in-home displays and programmable communicating thermostats (PCT) or load control devices (LCD). Tr. at 144-145. Under its SMIP, all residential customers will receive in-home displays on an “opt-out basis.” In other words, unless the customer affirmatively chooses not to accept the IHD, it will be provided to them. AP Exh. 1, SMIP at 44. At this time, the Company does not have a plan for the deployment and installation of the IHD in each customer’s home. OCA St. 2 at 19; Tr. at 145. Under consideration by the Company are two methods. As set forth in the SMIP, the Company is considering the use of a contractor to install the IHD in the customer’s home. The installation and training on the use of the IHD could be at the time of smart meter installation or at a later follow up visit. AP Exh. 1, SMIP at 44; Tr. at 145-146. The customer would have to be at home to have the IHD delivered and installed and to receive training on the IHD under this method.

The second method relates primarily to in-home displays which constitutes the bulk of the IHD program component. This method would be to provide the in-home display by mail to each customer.<sup>8</sup> The customer will then need to contact a customer service center and “provision” the IHD to the smart meter. OCA St. 2 at 19; Tr. at 146. “Provisioning” allows the in-home display to talk to the smart meter. Tr. at 147. If the In-home display is mailed to the customer, the Company anticipates that it will need to follow up with the customers who do not call to provision the in-home display. Tr. at 147. The Company has testified that it will maintain the displays during the deployment period. The Company is providing the IHDs on a one-time basis as the Company expects the IHDs to be readily available in the market in a few years. OCA St. 2 at 21; Tr. at 148, 157.

The OCA submits that the universal deployment of IHDs must be eliminated. First, Allegheny Power has provided no evidence that the universal deployment of IHDs will provide benefits anywhere near the substantial cost of this initiative. In fact, as OCA witness Brockway discussed, there is no basis for Allegheny Power’s assertions that there will be significant, or sustainable, usage effects from having an IHD in the home. OCA St. 2 at 26-31. OCA witness Brockway reviewed the most recent literature on studies that have tried to analyze the benefits from direct feedback such as that provided by IHDs. As Ms. Brockway testified, the studies do not demonstrate a clear and quantifiable benefit from IHDs. Ms. Brockway testified:

The reviews do not paint a very clear picture of likely responses to in-home displays. Some literature reviews conclude that in-home displays produce measureable reduction in usage. Others are less definitive, or even cautionary.

OCA St. 2 at 27. There are pilot studies under way today in which utilities are trying to determine the benefits that in-home displays give to customers and their impact. Id. At this

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<sup>8</sup> Programmable Controllable Thermostats and Load Control Devices still require installation in the home and would require a home visit. Tr. at 144-147.

time, though, there is no data in the literature, and none provided by Allegheny Power, that supports the universal deployment of IHDs as proposed by Allegheny Power.

In addition, the OCA submits that the universal deployment of IHDs as proposed or contemplated by Allegheny Power will unnecessarily complicate the smart meter deployment and could create significant negative reaction to the smart meter deployment. OCA witness Brockway testified as to the potential impact from Allegheny Power's universal IHD deployment proposal:

Based on my thirty years in consumer representation and utility regulation, I believe consumers would be upset to be asked to make arrangements to miss a half day or more of work to wait for an installer, and to take the time to be educated on a device they did not ask for. Many would be equally upset if they had to install the in-home display themselves, and call the utility to "provision" the in-home display to the particular smart meter at the premises. Many would resent having the utility make follow-up calls, as an intrusion on their privacy.

OCA St. 2 at 23. It is important to note that these IHDs will arrive at the residential customer's premise at the same time that the increased monthly bills arrive to pay for the smart meter initiative.

Allegheny Power need look no further than its affiliate in Maryland or FirstEnergy's experience in Ohio to gauge potential consumer reaction to receiving IHDs without requesting them. Two years ago, Allegheny Power's affiliate in Maryland apologized to its customers for mailing energy efficient bulbs to its 220,000 customers without letting them know they would be footing the bill. OCA St. 2 at 24. Just this year, FirstEnergy in Ohio mailed CFL bulbs to their customers as part of an energy efficiency program. The cost recovery mechanism that showed up on the customers' bills included the cost of this initiative. FirstEnergy customers swamped the offices of FirstEnergy and the Commission with complaints. OCA St. 2 at 24. The initiative

was then suspended as issues regarding the CFL program were further considered. OCA St. 2 at 24.

The OCA submits that the universal deployment of IHDs must be eliminated from Allegheny Power's SMIP. OCA witness Brockway summarized the reasons as follows:

Allegheny Power's proposal to deploy IHDs to all residential customers is costly and not supported. This aspect of the plan has not been shown to be cost-effective and risks significant customer backlash, particularly as customers see their monthly bills increase dramatically as a result of Allegheny Power's proposed substantial SMIP monthly surcharge. Allegheny Power should do additional research as I have described to determine a more reasonable approach to IHDs.

OCA St. 2 at 31. As such, the universal deployment of IHDs should be rejected.

c. Remote Disconnection: Additional Consideration Of Issues

Related To Remote Disconnection, Including The Development Of Reasonable Procedures, Is Necessary

Smart Meters can be installed with modules that permit the utility to disconnect power to a customer's home remotely without sending a technician to disconnect the meter. Today, in order to cut off the power for a customer, the utility must send a technician to the physical premises to perform the disconnection. OCA St. 2 at 44. Allegheny Power has proposed to equip its smart meters with a remote disconnect module but proposes to use this feature for move in and move out situations only at this time. Allegheny Power St. 8-R at 12. The cost of the remote disconnect module is about \$40 to \$50 per meter, leading to an overall cost for the plan of about \$10 million. Tr. at 149; OCA St. 2 at 45. The operational savings of the feature have been reflected in the estimated benefits associated with smart meter deployment but they have not been separately identified. Without such separate identification, it cannot be determined if including the feature as part of the smart meters is cost effective. OCA St. 2 at 45.

The OCA submits that the remote disconnect feature raises significant issues beyond cost effectiveness that must be carefully examined before the remote disconnect feature is included or utilized. In two situations where the feature is used — the voluntary disconnect such as when a customer moves out of a premise and the involuntary disconnect for non-payment – significant issues remain. In both situations, the current procedure that requires a technician to visit the home prior to terminating electric service provides an important protection for both health and safety. OCA St. 2 at 44. If this feature is to be installed and used, the OCA submits that important issues will need to be resolved.

Importantly, Allegheny Power witness Spoljarick testified that the Company will not use the remote disconnect feature for involuntary disconnection that results from non-payment at this time. Ms. Spoljarick testified that the Company will establish a pilot program if it intends to propose an involuntary termination program in the future. Allegheny Power St. 8-R at 12-13. The OCA submits that this commitment should be incorporated in the Commission’s Order regarding any Plan. If the remote disconnect feature is installed in the smart meters that are deployed, Allegheny Power should not be permitted to use the feature for involuntary disconnection based on non-payment until such time as a pilot program is conducted, issues are identified and addressed, and the Company receives approval from the Commission.

As to Allegheny Power’s proposed use of the remote disconnection feature for voluntary move out situations, even in these situations procedures are necessary to ensure that the property is indeed vacant. As OCA witness Brockway testified “[d]isconnecting a property from electric service, sight unseen, even where the disconnection is asserted voluntary or even sought by the customers, is a delicate business, and the actions could have unintended, and adverse consequences.” OCA St. 2 at 45. For example, a voluntary disconnection in multi-tenant

housing could result in property damage or danger to the life and health of tenants still in the apartment building. OCA St. 2 at 45. The previous visit to the premise by a technician could have identified these situations even in the voluntary disconnection. As OCA witness Brockway testified, procedures will be necessary whenever the feature is utilized.

Allegheny Power witness Spoljarick proposed that:  
Prior to remote disconnection, the Company will review the process to ensure the property is vacant and obtain appropriate information from the customer in order to minimize the possibility of disconnections occurring in error.

Allegheny Power St. 8-R at 13.

The Company should be directed to develop the process and procedures to prevent inadvertent disconnection of premises that should be vacant but in fact are actually occupied, or where harm may result from a voluntary disconnection, such as in a multi-family dwelling, if the remote disconnection feature is included with the smart meter and can be cost justified. See, OCA St. 2-S at 20. The process and procedures should be presented to the Commission for review and approval before the feature is used by the Company if the feature is included in the meters.

d. Prepayment Service: The Company's Commitment Regarding The Limitation On The Use Of Any Prepayment Capability Should Be Incorporated In A Commission Order

Smart meters can also be used as a foundation for implementing pre-payment metering or service limiting. The OCA submits that prepayment programs where the electric service is automatically terminated when the prepaid amount is used up raise significant public policy issues, particularly regarding health and safety. These issues need to be thoroughly examined before any such programs are contemplated. OCA St. 2 at 46-49. The Commission has

recognized these concerns and directed a separate proceeding for the consideration of pre-payment and service limiting programs. Smart Meter Implementation Order at 18.

Allegheny Power witness Spoljarick testified that the Company will use the prepayment functionality only for its voluntary EE&C Plan program at this time.<sup>9</sup> Allegheny Power St. 8-R at 14, 16. The OCA submits that this commitment should be embodied in the Commission's Order. In addition, the Company should not be permitted to proceed with any further pre-payment or service limiting programs until the Commission completes the separate proceeding on these types of programs and the Commission reviews a specific program proposal in response to the outcome of its separate proceeding.

3. Smart Meter And Data Access

a. Company Proposal

Allegheny Power intends to develop policies, procedures and protocols related to data access, privacy and security during the five year Plan period. Tr. at 219

b. Customer And 3<sup>rd</sup>-Party Access

The OCA does not have any additional customer and 3<sup>rd</sup> party access concerns other than those expressed below in Section 3(c).

c. Security And Privacy: The Company's Deployment Schedule Does Not Allow Adequate Time For Addressing Critical Security And Privacy Issues

Deploying smart meters is not simply a task of replacing hardware that is outside of a home or business and then continuing with business as usual. New or heightened challenges will be faced in many areas, with critical challenges regarding the security of the system and privacy of customer information. The OCA submits that Allegheny Power has not sufficiently addressed

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<sup>9</sup> The Company has proposed a Pay Ahead Service Rate as part of its EE&C Plan. The Pay Ahead Service Rate does not disconnect electric service when the pre-payment amount is used up.

three key technology issues – interoperability,<sup>10</sup> privacy and cyber-security.<sup>11</sup> With access to data by the utility and third parties, diverse communications systems such as in-home networks, internet connections, radio communications and the utility backbone infrastructure, these areas are deserving of much attention.

OCA witness Brockway identified a number of potential cyber-security vulnerabilities that have been identified: (a) physical tampering with elements of the network; (b) eavesdropping in on or jamming wireless signals that connect Smart Meters to neighborhood collection points; (c) password compromises; (d) unauthorized data collection; (e) suboptimal priority for data transfer over public networks; (f) lack of control of internet paths and reliability; and (g) denial-of-service attacks, where an unauthorized user will generate a huge number of messages to go over the system, leading to communication systems overload and system interruptions. OCA St. 2 at 37-38.

The industry and government entities are only at the early stages of development of standards to address these many issues. OCA St. 2-S at 10-11. The industry continues its work

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<sup>10</sup> Interoperability is defined as:

[T]he ability of any given component of the Smart Grid to communicate with the other components to which it is connected, passing data and commands smoothly, quickly and accurately back and forth. Protocols for data transfer must be compatible, if not identical, for components to be interoperable.

OCA St. 2 at 37.

<sup>11</sup> Cyber-security is defined as:

[S]ecurity of the information passing over the communications networks of the Smart Grid, and to the security of controls over system components, such as circuit breakers and other components of the system essential to the functioning of the grid. It also refers to the security of customer data (privacy). Security may be compromised by equipment or operational faults, as well as intentional breaches by hackers, and unauthorized access to data and controls.

OCA St. 2 at 36.

to develop a comprehensive set of standards to provide guidance for smart meter implementation. Ms. Brockway described the current status of these efforts:

Under the Energy Independence and Security Act (EISA) of 2007, the National Institute of Standards and Technology is taking the lead in promoting comprehensive standards in the area of interoperability. As part of the effort, NIST convened the Cyber Security Coordinating Task Group, and is promoting the development and implementation of associated cyber security standards. As yet, it is not possible to be sure when NIST and the entities developing the standards themselves (i.e. IEEE, NERC) will be able to complete their work. NIST has issued a “roadmap” for the work needed to get from here to standards (the draft NIST Framework and Roadmap for Smart Grid Interoperability Standards on September 24, 2009)(Roadmap), and has set timing goals for release of standards in the most important topic areas by the end of 2010. The roadmap itself, however, is not a set of standards. And the timing goals for standard release are very ambitious.

OCA St. 2 at 39.

Allegheny Power states that they will monitor the development of industry standards and will upgrade the SMIP to take into account these changes and lists the proposed areas where they have developed standards. Allegheny Power St. 3-R at 8-9. With Allegheny Power’s rapid Smart Meter deployment, Allegheny Power will expose itself and its customers to the risk that it will deploy its meters before these still-to-be-developed protocols are in place. The ambitious schedule for the standards targets the end of 2010, when Allegheny Power will already have deployed 91,162 meters and proceeding to deploy 385,458 more in 2011. OCA St. 2 at 41, AP Exh. 1, SMIP at 28. As Ms. Brockway testified:

The fact that some technical standards are still being developed creates a risk that additional costs may need to be incurred if some of the technologies deployed now prove to be incompatible with the standards that are ultimately established in the future.

OCA St. 2 at 42.

NIST has set forth ten high-level principles regarding protecting the privacy of personally identifiable information. NIST recommends that utilities develop specific standards in the areas of: (1) Management, Accountability and Training, (2) Notice and Purpose for PII Use, (3) Choice & Consent to Use PII, Collection of PII, (4) Use and Retention of PII, (5) Individual Access, (6) Disclosure and Limiting Use of PII, (7) Security and Safeguards, (8) Accuracy and Quality of PII, (9) Openness, and (10) Monitoring and Challenging Compliance. See, OCA St. 2 at Exh. NB-3 for NIST Standards. When questioned as to whether the Company had completed its policies and standards in accordance with the recommendation of NIST, the Company stated that it had not yet developed those policies and procedures. Tr. at 219. As OCA witness Brockway testified, the Company has not adequately addressed the risks to consumer privacy.

Ms. Brockway testified:

[W]ith respect to privacy of personally-identifiable information, the fact that the Company has unspecified policies for each of the ten high-level principles outlined by the NIST task force on privacy does not explain how the Company's present policies can comply with NIST-developed privacy standards that do not yet exist, and will not exist until at least next year, if then. Mr. Arthur's assertions regarding the NIST high-level principles are insufficient to assure the Commission that customer privacy can and will be protected at the detailed operational level where actual decisions are made and actions are taken.

OCA St. 2-S at 11.

The Company's accelerated deployment plan places significant risk on the Company and its ratepayers. Ms. Brockway recommended that Allegheny Power not proceed with its accelerated full deployment in light of these risks. Ms. Brockway identified the prudent course of action as follows:

It would be prudent to use the grace period to see if the ambitious national standards-development schedule has been successful. In such a case, Allegheny Power would not have to take all the risks

of an early adopter. In any event, the utility should follow the principles set out by the NIST privacy task force, and set out in Exhibit NB-3.

OCA St. 2 at 43.

The OCA submits that given the developing issues regarding interoperability, cyber security and privacy, Allegheny Power's accelerated full deployment of smart meters should be rejected. Allegheny Power should use the grace period to develop full policy and procedures in accordance with the NIST principles to protect privacy and to design a smart meter deployment that meets the national standards in a cost effective manner.

B. Cost Issues

1. Reasonableness and Prudence

Allegheny Power may recover reasonable and prudent costs of providing Smart Meter Technology under Section 2807(f)(7) of Act 129. 66 Pa.C.S. § 2807(f)(7). The Commission's Smart Meter Implementation Order specifically provides that "[t]he EDC must also provide sufficient support to demonstrate that all such costs are reasonable and prudent with respect to its smart meter plan. Consistent with Section 315(a), the burden of proof shall be on the EDC." Smart Meter Implementation Order at 29. The OCA submits that Allegheny Power's proposed Plan is not reasonable or prudent for the reasons identified in this Brief. Most notably, Allegheny Power has failed to show that its accelerated deployment plan is the most cost-effective alternative available to Allegheny Power to meet the smart meter requirements of Section 2807(f).

With an overall cost for the program estimated to be \$580 million, including any offsets for operational savings, and a cost per installed meter of \$600, the OCA submits that the

Company has failed to show that the cost of this accelerated deployment is prudent and reasonable.

a. Company Position

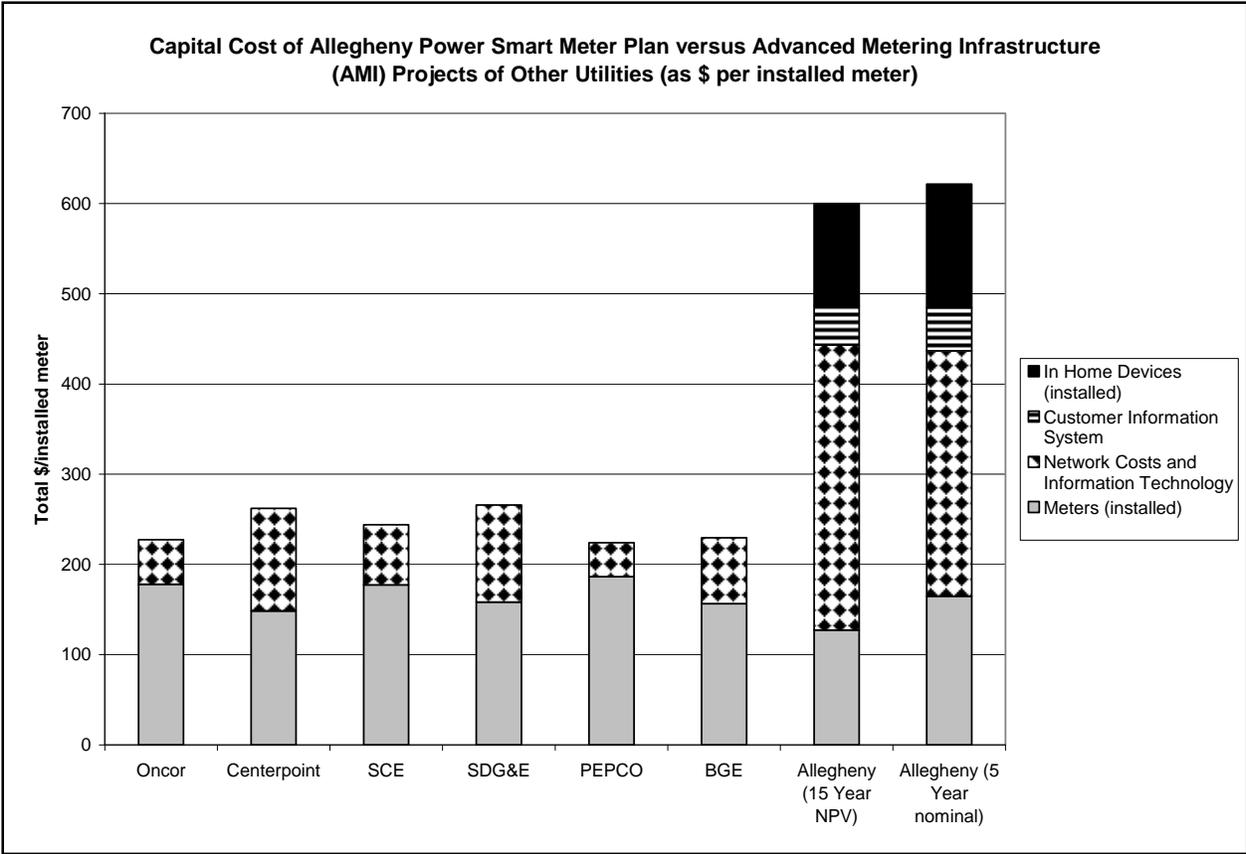
The Company has sought recovery of its estimated smart meter deployment costs of \$580 million through 2014.

b. Total Benefits and Costs

The Company estimates that its SMIP will result in a cost to Pennsylvania customers of \$580 million through 2014. This amount consists of approximately \$444 million in capital expenditures, \$111 in operation and maintenance expenses, and \$24.6 million in stranded cost for existing meters. OCA St. 1 at 15. The total cost of the smart meter deployment is about \$600 per meter installed. Compared to other smart meter installations, the projected costs of this plan are more than twice as high. OCA witness compared Allegheny Power's proposed SMIP to other filings and concluded:

The projected capital costs of the Plan are more than twice as high as AMI filings of other utilities. As indicated in the chart below, attached as Exhibit \_\_\_ (JRH-3), the total capital cost of AMI systems of other utilities, when expressed as total capital invested per meter installed, tends to be around \$250 per meter installed. In contrast, Allegheny Power's proposed capital costs are more than twice that amount, in the order of \$600 per meter installed meter. The Company has not prepared such a comparison (OCA I-40, II-5).

OCA St. 1 at 15. The chart referenced by Mr. Hornby graphically illustrates Mr. Hornby's point.



OCA St. 1 at 16, Exh. JRH-3.

OSBA witness Knecht prepared a similar comparison based on the filings of the Pennsylvania EDCs subject to Act 129. Mr. Knecht’s chart, reproduced below, similarly illustrates the extraordinary cost of Allegheny Power’s Smart Meter Plan.

<b>Table IEc-1</b>			
<b>Comparison of EDC Costs</b>			
	<b>SMIP Cost (\$mm)</b>	<b>Customers (000)</b>	<b>Unit Cost (\$/customer)</b>
West Penn	\$580	715	\$811
PPL	\$ 62	1,400	\$ 44
PECO	\$500-\$550	1,566	\$319-\$351
Duquesne Light	\$152-\$262	579	\$263-\$453
First Energy	\$330-\$400, plus O&M	1,300	\$254-\$308 plus O&M
Sources: WPP – Docket No. M-2009-2123951, Plan at pages 5 and 94, AP Statement No. 4 at page 4. PPL – Docket No. M-2009-2123945, Plan at pages 1, Plan Attachment 2. Note that the reported costs are incremental costs only; PPL has already installed smart meters and is recovering costs in base rates. PECO – Docket No. M-2009-2123944, Plan at page 3 and Exhibit ABC-2. Duquesne Light – Docket No. M-2009-2123948, Plan at pages 1 and 14. First Energy – Docket No. M-2009-2123950, Plan at pages 5 and 9.			

OSBA St. 1 at 2.

While the projected cost of the SMIP are more extraordinarily high compared to other smart meter deployments, the projected benefits of the Smart Meter Plan are modest. Allegheny Power has only reflected distribution operations savings of \$43 million over a five year period in its Plan, of which \$36 million related to Pennsylvania through 2014. AP Exh. 1, SMIP at 94; Tr. at 231. When OCA witness Hornby calculated the distribution system operation benefits over a 15 year period using the Company’s own model, the projected distribution service benefits had a net present value of only \$66 million over the 15 year period. OCA St. 1 at 18.

When the benefits estimated by the Company are compared to the cost of the Smart Meter Plan, the Smart Meter Plan provides a benefit to cost ratio of 0.11. OCA St. 1 at 18. Recognizing that the Company had not performed any calculation of the generation service benefits that are enabled by the proposed Plan, OCA witness Hornby performed a calculation of the demand response and energy efficiency benefits that are expected from the Company’s smart meter based EE&C Plan programs. OCA witness Hornby prepared two estimates of the

generation related savings. The first estimate escalates the savings reflected in the Company's EE&C Plan for a 15 year period by the growth rate used in the Company's EE&C Plan. OCA St. 1 at 18-19. In his second estimate, Mr. Hornby assumed a capacity value of \$40 per kW-yr in the PJM market and escalated the non-capacity portion of the savings as he did in his first estimate. OCA St. 1 at 19. The net present value of these estimates resulted in benefits of \$46 million and \$55 million for the generation savings over the 15 year period. When Mr. Hornby added these generation savings to the distribution service benefits, the benefit to cost ratio increased to only about 0.2.

As OCA witness Hornby testified, and as Company witness Graves' chart shows, AMI Plans approved by regulators in other states have benefit to cost ratios approaching 1 or more. OCA St. 1 at 17; Allegheny Power St. 6-R, Figure FCG-2. The Company's Plan, with a benefit to cost ratio of 0.11 to 0.2 falls far short of other smart meter deployment plans that have been presented. While it is not the OCA's position that a smart meter plan requires a benefit to cost ratio of 1 or better to receive approval, the fact that the Company's Plan falls so far short of the test for cost-effectiveness cannot be overlooked.

While not presented as part of its case in chief in support of its Plan, in Rebuttal testimony, Company witness Graves attempted to quantify the benefits of the Plan and perform a benefit to cost test on the Plan. Allegheny Power St. 6-R. Mr. Graves first asserted that the Company has underestimated the distribution system savings to be expected from the Smart Meter Plan. Allegheny Power St. 6-R at 6. Mr. Graves calculated a higher level of distribution operation savings that are almost double the amount calculated by the Company. OCA St. 1-S at 14. Remarkably, when asked if the Company would include this estimate of savings for its Smart Meter Plan as part of its surcharge recovery at this time, rather than the Company's

original estimate that is included in the surcharge mechanism, Company witness Valdes said no. Tr. at 227; See also, OCA St. 1-S at 14.

Mr. Graves also calculated generation savings assuming higher avoided capacity costs, higher avoided energy costs, and higher estimates of energy and capacity reductions than those in the Company's own EE&C Plan or those used by OCA witness Hornby. Allegheny Power St. 6-R at 9-11; OCA St. 1-S at 14-16. The higher energy and capacity reductions used by Mr. Graves exceed those contained in the Company's own EE&C Plan filing. OCA St. 1S at 15. When complete, Mr. Graves developed a benefit to cost ratio for the Plan ranging from a low case of 0.46 to a high case of 0.74. Allegheny Power St. 6-R, Figure FCG-3.

The OCA was unable to evaluate the myriad of assumptions used in Mr. Graves' rebuttal analysis given the time frame for this case. Significantly, however, not even Mr. Graves' analysis could show a benefit to cost ratio for this Plan that even approaches 1. Moreover, the Company has expressed no intention of including the higher benefits calculated by Mr. Graves in its Plan nor has it expressed an intention of flowing these higher benefits to customers in any way. OCA witness Hornby first described the problem with the Company failing to provide a robust benefit to cost analysis in its case in chief:

Mr. Graves develops those two estimates based upon a variety of assumptions and calculations that he describes in approximately 10 pages of his rebuttal testimony. He makes numerous assumptions regarding additional benefits and calculates the net present value of those benefits based upon his assumptions. Because the Company has sponsored the extensive new material at the rebuttal stage of this expedited proceeding without all supporting calculations and workpapers I have not been able to review and verify that material in detail. It is unfortunate that the Company did not retain Mr. Graves much earlier, to help them develop their EE&C plan as well as their SMIP. Earlier in this proceeding the Company was unable, in response to numerous data requests, to provide the types of assumptions and analyses that Mr. Graves now presents in his rebuttal testimony. The OCA requested those assumptions and

analyses in data requests I-1, I-4, I-11, I-12, I-13, I-15, I-17, I-18, I-19, I-20, II-17, II-19, II-20, IV-2, IV-3, and IV-4.

OCA St. 1-S at 13-14.

As noted, though, even without being able to test the assumptions underlying Mr. Graves' analysis, the benefit to cost ratios that he develops fall far short of showing that the Plan is reasonable or the most cost-effective alternative. Mr. Graves' own chart shows the following:

**Comparison of Benefit to Cost Ratios**  
**From Company Witness Graves' Exh. FCG-2**

Utility	IHDs	Total Cost NPV/Installed Meter	B/C Ratio
<b>Allegheny</b>	<b>Yes</b>	<b>\$806</b>	<b>0.19</b>
<b>SCE</b>	No	\$371	1.06
<b>SDG&amp;E</b>	No	\$253	.87
<b>PG&amp;E</b>	No	\$434	1.02
<b>PECO</b>	No		
<b>Centerpoint</b>	No		0.15
<b>ConEd</b>	No	\$198	1.10
<b>PEPCO MD</b>	No		1.27
<b>PEPCO DC</b>	No		1.44

Source: Allegheny Power St. 6-R, Figure FCG-2, columns, 1, 3, 4, and 5, as corrected at Tr. 166-167.

As can be seen from the chart, all but one company has a benefit to cost ratio far in excess of Allegheny Power's Plan, even under Mr. Graves' assumptions, and no Plan has a cost even approaching the cost per installed meter of Allegheny Power.

OCA witness Hornby explained the importance of the level of benefits compared to costs as follows:

The level of benefits relative to costs is one measure of the cost-effectiveness of the proposed Plan. As noted earlier, there are many different possible approaches to deploying a Smart Meter Plan. Allegheny Power must demonstrate to the Commission that its proposed Smart Meter Plan is the most cost-effective approach for meeting the policy objectives of Act 129 out of the range of possible alternative approaches available to it. At a benefit to cost ratio of less than 0.2, the proposed Plan certainly is much less cost

effective than the AMI Plans of other utilities of which I am aware. Those other AMI plans, which have either been approved or are seeking regulatory approval, have benefit to cost ratios in excess of 1.0 according to their proponents. In contrast, Allegheny Power seems to believe that it can simply rely upon the language of Act 129 as justification for its proposed Plan. (OCA I-1, I-2, I-3, I-4, 2-7).

OCA St. 1 at 19-20.

The OCA submits that the Company has failed to show that it is pursuing a cost effective alternative for its Smart Meter deployment. Indeed, the Company's Plan falls far short, even under the Company's assumptions provided in Rebuttal. The OCA submits that the Company must be directed to use the grace period to identify the most cost-effective smart meter technology deployment strategy and to quantify both the generation savings and distribution service benefits of that strategy over a more reasonable deployment period. See, OCA St. 1 at 25.

c. Individual Plan Components

The OCA submits that the capital costs for Allegheny Power's proposed SMIP are significantly higher than those for the other Electric Distribution Companies in Pennsylvania. The main differences between the projected capital costs of the Company's Plan and those filed by other Pennsylvania EDCs are "primarily due to higher Network and Information Technology (IT) costs, the inclusion of costs for a Customer Information System (CIS) and the inclusion of costs for In Home Devices (IHD)." OCA St. 1-S at 8. As discussed below, each of these costs should be removed from the SMT surcharge recovery. In addition, the Company must remove the PUC assessment fee from its surcharge mechanism.

i. IHDs

As discussed in Section V.A.2.b. above, the OCA submits that the Company's plan for the universal deployment of IHDs to residential customers is not reasonable and must be rejected. The OCA submits that \$98 million in capital costs and the \$8 million in O&M expense associated with the IHDs should not be approved for recovery.

ii. Customer Information System and Network and Information Technology

Allegheny Power has included in its cost projections for recovery as part of its Smart Meter Plan costs related to the replacement of its existing Customer Information System (CIS) and all of the costs for its Network and Information Technology (IT) systems. The CIS replacement includes \$71 million in capital expenditures and \$19 million for O&M. The Pennsylvania share of the CIS upgrade is 48% with the remainder allocated to the Allegheny affiliates in Maryland and West Virginia. OCA St. 1 at 17; see also, AP Exh. 1, SMIP at 94. The Company has also included in its cost projections \$272 million for Network and Information Technology. OCA St. 1 at Exh. JRH-3. Network and Information Technology includes, among other components, capital costs for an Enterprise Service Bus (ESB), Upgrades to Work Management System (WMS), a Geographic Information System (GIS) and an Outage Management System (OMS). Allegheny Power St. 1-R at 4. The OCA submits that expenditures for the CIS and certain of the IT upgrades are costs that the Company would incur in the normal course of business and are not appropriate for recovery through the special surcharge provided for smart meter deployment. The special surcharge provisions are not intended for the recovery of upgrades that reflect normal utility operations. Such costs should be

sought for recovery in a distribution base rate proceeding in accordance with ratemaking principles.

The CIS is the Company's billing system that was installed in the 1970s. Allegheny Power St. 1-R at 5; OCA Cross-Exam Exh. 7, Q. IV-7. The Company has performed upgrades on the system over the years, but has not performed a significant upgrade of the system since 1999.<sup>12</sup> OCA Cross-Exam Exh. 7, Q. IV-7. Allegheny Power now seeks to upgrade this billing system, which is used by all of the Corporation's distribution operating companies. Approximately 52% of the costs will be allocated to the distribution service affiliates in Maryland and West Virginia. As Allegheny Power acknowledges, neither Maryland nor West Virginia is engaged in, or planning, smart meter deployment. Tr. at 222 Allegheny Power also acknowledges that its affiliates in Maryland and West Virginia will seek to recover the costs of the CIS through the normal course of business in a distribution base rate proceeding. OCA St. 1 at 17. There is no reason why these same upgrades should be recovered in Pennsylvania through a special surcharge.

Similarly, several of the upgrades to the IT system are made to support normal distribution system operations. As Company witness Heasley testified, the Company's Network and Information Technology costs are high due to capital costs for the Enterprise Service Bus, Upgrades to the Work Management System, a Geographic Information System and an Outage Management System. Allegheny Power St. 1-R at 4. Company witness Heasley seems to acknowledge that these costs are of the type incurred in the normal course of business but believes that Act 129 would allow for the recovery of these costs through the special surcharge mechanism.

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<sup>12</sup> The Company states that it recommended improvements to the CIS system in 2002 but improvements were not completed due to corporate financial condition. OCA Cross-Exam Exh. 7, Q. IV-7.

The OCA submits that replacement or upgrades of the Customer Information System and certain of the upgrades to the IT system are costs that are incurred in the normal course of business and should be recovered in distribution base rates. As to the CIS, Allegheny Power acknowledges that its current CIS system was initially installed in the 1970s. Allegheny Power St. 1-R at 5. The OCA submits that Allegheny Power's CIS system has been in place for approximately thirty years, and thus with or without the smart metering requirements, Allegheny Power would likely need to replace or upgrade its system in the near future. Allegheny Power witness Heasley acknowledges that other utilities have already made these upgrades outside of Act 129. Allegheny Power St. 1-R at 5. The IT upgrades related to normal distribution system operations also are upgrades that should be undertaken in the normal course of business and not as a result of Act 129. Specifically, upgrades related to the Enterprise Service Bus, Work Management System, the Geographic Information System and Outage Management System support core distribution operations.

The OCA submits that the cost recovery mechanism included in Act 129 was intended to be used to support the development of smart meter technology and infrastructure, not to provide a funding mechanism to support a system upgrade that has been accomplished by other Electric Distribution Companies in the normal course of business. OCA witness Hornby testified regarding the policy impacts of permitting Allegheny Power to recover its CIS and Network and Information Modernization technology costs through the SMT. Mr. Hornby explained why a base rate mechanism is the appropriate recovery mechanism for these types of costs:

From a policy perspective, my position is that a base rate proceeding would be the best forum in which to address the reasonableness of those proposals. In a base rate proceeding all parties would have adequate opportunity to review, in detail, the nature and merits of the various distribution service systems the Company is proposing to upgrade. Parties could examine the

revenue requirements associated with those capital expenditures as well as their allocation among the Company's distribution operations in Pennsylvania, Maryland and West Virginia. This is an important issue since it appears that the Company should be allocating a portion of its proposed Network and Information Technology costs to its operations in Maryland and West Virginia in addition to allocating a portion of its CIS system to those operations (Valdes rebuttal, p. 16). Further, by requiring the Company to recover costs associated with normal investments in operational areas such as CIS, ESB, WMS, GIS and OMS via base rates the Commission places the financial risk associated with the recovery of those costs on the Company, which is consistent with general ratemaking principles. Last, but not least, a general rate case would give all parties the opportunity to examine all components of the Company's revenue requirements. Since the Company has not had a general rate case for almost fifteen years, there may be other areas of its operations in which it has reduced costs that could and should be reflected in new base rates. Reductions in costs in those other areas would help offset the increases in rates resulting from its SMIP.

OCA St. 1-S at 10-11.

The OCA submits that Allegheny Power should not be permitted to expand the definition of what is recoverable under the SMT to include costs incurred for replacements and upgrades that are part of the normal utility business operations. The OCA submits that the costs of the CIS should not be recovered through the SMT surcharge mechanism and IT upgrade costs related to normal business operations, including the Enterprise Service Bus, the Work Management System, the Geographic Information System and the Outage Management System should be removed from recovery through the SMT surcharge. The Company should seek recovery of these costs in a distribution base rate proceeding in accordance with ratemaking principles.

iii. PUC Assessment Fee

Allegheny Power has proposed to include the costs related to the PUC assessment fee in its SMT surcharge. Allegheny Power St. 4 at 13; AP Exh. 1, SMIP Plan at 98. The OCA submits that the PUC assessment fee must be removed from the SMT surcharge. The

Commission has recently rejected the identical claim by Allegheny Power in its EE&C Plan filing at Docket No. M-2009-2093218. In denying the Company's request to include the PUC assessment fee in its surcharge, the Commission stated:

The Commission agrees with the OCA that any increase in PUC assessment fees due to increased revenue from collection of costs related to an EE&C plan are directly incurred or attributable to the provision or management of an EE&C plan. Any increases in these fees cannot be directly attributable to Allegheny's provisioning and management of its EE&C Plan and are affected by many factors totally unrelated to the EE&C Plan...

EE&C Plan Order at 78.

The OCA submits that the PUC assessment fee must be removed from the SMT surcharge mechanism just as the Commission directed for the EE&C Plan surcharge.

d. Low Income Impact: The Company Should Be Required To Conduct Further Analysis And Program Development Regarding The Impacts On Low Income And Otherwise Vulnerable Customers

Allegheny Power's proposed Smart Meter Plan may have a disparate impact on low-income, low use or otherwise vulnerable residential customers. The OCA submits that Allegheny Power has not sufficiently considered the impact of its proposed SMIP on these customers. OCA witness Brockway described vulnerable customers as:

low-use customers, low-income customers, disabled customers, and the socially isolated, among others. Low-use customers tend to use only the electricity they need for essentials, such as lighting and refrigeration. Low-income customers are disproportionately low-use, and in general, low-income customers have tended to reduce loads in response to critical peak tariffs at a lower rate than non-low-income customers. Others who may have difficulty moving or reducing their existing peak loads include low-income shift workers, and parents with small children at home. Disabled customers include residential customers who must have electricity to power medical equipment. Along with socially isolated customers, the especially at-risk group also includes customers

who are not capable of taking initiatives to respond to peak time rebates.

OCA St. 2 at 31-32.

The OCA submits that the Company has failed to adequately consider and address the impacts of its Smart Meter Plan on its low income and otherwise vulnerable customers. The Plan will impose significant costs on customers, with increases starting at \$5.86 per month, quickly increasing to \$15.77 per month. By June of 2013, the increase for a residential customer using 500 kwh per month will be 34% and the increase for a residential customer using 1,000 Kwh per month will be 18% even before the expected increases in generation rates that will occur when the rate cap ends in 2011 and the increases related to the EE&C Plan surcharge beginning in 2010.<sup>13</sup> OCA St. 1, Exh. JRH-6. For many of the low income and otherwise vulnerable customers, there will be no comparable benefit. OCA witness Brockway testified as to the impacts:

These bill impacts will not be trivial, especially in the case of low-income customers. With all their functionalities and the infrastructure investment, the smart meters Allegheny proposes to obtain will cost \$600 apiece. OCA I-40. Altogether, Allegheny Power has estimated by far the largest impact of any Pennsylvania utility for its SMIP. By June 2013, residential customers in the Allegheny Power service territory will be paying at least \$15 more *per month* because of the SMT surcharge and associated taxes. Response to OCA I-36. Not only is this burden excessive, but in order to economize and take advantage of the rebates, low-income and other vulnerable customers may reduce their usage below levels consistent with health and safety.

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<sup>13</sup> It is interesting to note that under the Company's assignment of costs to the classes, the largest commercial and industrial customers pay about the same monthly surcharge as a residential customer. AP Exh. 1, SMIP at 98. With the much higher usage of these large customers, the bill impact is virtually a 0% increase. OCA Cross-Exam Exh. 9; Tr. at 239-240.

OCA St. 2 at 32. For low-income and low-use customers, accelerated deployment of costly, high-functionality meters and in-home devices will come at a high cost without benefits that are sufficient to cover the additional costs that they must bear. Id. at 33.

Allegheny Power has not analyzed the potential impact on its low income and otherwise vulnerable customers and has not identified any specific measures to assist these customers with the cost of and transition to smart meters. OCA witness Brockway described the Company's response to questions regarding their analysis of low income issues:

Allegheny Power states that “due to time and budget constraints” it has not pursued exhaustive research on the potential impacts of all its smart-meter related EE&C/DR programs on low-income customers. OCA I-28. The Company cites a list of the general benefits it asserts its SMIP will provide, and states that low-income customers will be particularly interested in these benefits. The Company states that it has “not singled out or targeted any specific customer subsegment ...” OCA I-28. See also OCA I-17, I-18.

OCA St. 2 at 32-33. As OCA witness Brockway discussed at length in her testimony, however, a “one-size-fits-all” approach is not appropriate or reasonable. In particular, pilot programs and studies where smart meters have been deployed, suggest that low income and low use customers do not respond with sufficient load shifting in response to peak pricing signals to realize benefits commensurate with the costs.<sup>14</sup> OCA St. 2 at 33-34; OCA St. 2-S at 11-14.

OCA witness Brockway testified that the most important step to addressing the problems faced by low income and otherwise vulnerable customers is to keep the costs of deployment down as much as possible. OCA St. 2 at 34. As the OCA has discussed in this Main Brief, Allegheny Power's Plan fails to take this important step. In addition, Ms. Brockway provided two other recommendations. First, Ms. Brockway recommends that the reasonable and prudent

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<sup>14</sup> Company witness Graves also noted that it has been observed that low income customers have little flexibility in their electricity use and that many such customers do not have appliances such as central air conditioning that provide opportunities to respond to prices. Allegheny Power St. 6-R at 26.

costs of the SMIP be recovered from residential customers primarily on a volumetric basis. Second, Ms. Brockway recommended that the Company undertake in-depth research to identify customers who are vulnerable to the adverse effects of SMIP costs and pricing programs, understand why these customers have difficulty moving usage off critical peaks, and then work with community groups to develop targeted outreach to such customers to assist them. OCA St. 2 at 35.

The Company, however, stated in Rebuttal that it will rely upon its low income programs, specifically its Customer Assistance Program (CAP) and its Low Income Usage Reduction Program (LIURP), as well as the customer's opportunity to have access to their energy usage and price information as means of mitigating the impact of the SMIP charge.<sup>15</sup> Allegheny Power St. 8-R at 4-5. The OCA submits, however, that these initiatives do not adequately address the impacts on low income and otherwise vulnerable customers.

As to CAP, as Ms. Brockway noted, the budgets for the CAP program would need to increase substantially to provide the type of assistance contemplated by Company witness Spoljarick. OCA St. 2-S at 17. The average annual bill credits for low income customers are about \$275 currently. These bill credits would have to increase by about \$190, or to \$465 per year just to address the Smart Meter surcharge. This is an increase of 40% over current CAP funding. OCA St. 2-S at 17. The Company has made no showing that such an increase is reasonable or could even be fairly borne by other residential ratepayers who are themselves paying the increased costs of the Smart Meter Plan.

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<sup>15</sup> As discussed, reliance on access to usage and price information is inadequate to assist low income and otherwise vulnerable customers as these customers have not been shown to be able to achieve savings at a level commensurate with the costs, even under programs with more modest deployment costs than contained in Allegheny Power's Plan. OCA St. 2-S at 16; OCA St. 2 at 31-33; Allegheny Power St. 6-R at 26.

The Company's reliance on LIURP is equally misplaced. OCA witness Brockway explained:

At present Allegheny Power only provides LIURP usage reduction assistance to about 2000 customers per year (reference omitted) or about 2% of the roughly 98,000 AP customers estimated to be low-income. *Universal Service Report* at p. 7. Of those customers receiving LIURP assistance, average usage reductions under AP's LIURP program for non-space heat customers range from 37 kWh to 58 kWh per month, or 4% to 6% of the non-space heat customer's usage. *2008 Universal Service Report* at p. 27. Holding the rate per kWh constant, and reflecting only the added SMIP surcharge and the potential decrease in usage through LIURP, LIURP customers would still see an extremely high bill increase as a result of the imposition of the SMIP surcharge. By 2013, such bills would increase by 26%. Without LIURP their bill increases would be 34%. OCA Statement 1, Exh. JRH-6. From this discussion, one can see that, even if the budget for LIURP were doubled or tripled (allowing 4,000 or 6,000 low-income customers to receive LIURP services each year, for example), LIURP savings would not offset the SMIP surcharge for a great many Allegheny Power low-income customers.

OCA St. 2-S at 18.

The OCA submits that the Company has given inadequate attention to the needs of low income and otherwise vulnerable customers in its Smart Meter Plan. The Company should be directed to use the 30-month grace period to develop a Smart Meter Plan that keeps the costs of deployment down as much as possible, recovers the reasonable and prudent costs of the SMIP from residential customers on a primarily volumetric basis and undertakes in-depth research to identify customers who are vulnerable to the adverse effects of SMIP costs and pricing programs and understand why these customers have difficulty moving usage off critical peaks, and work with community groups to develop targeted outreach to such customers to assist them. OCA St. 2 at 35.

2. Cost Allocation

a. Company Proposal

The Company has proposed to assign the costs of the meters directly to the customer classes and to allocate joint and common costs on the basis of number of customers. Allegheny Power St. 4 at 11.

b. Cost of Service Study

Allegheny Power's proposed SMIP contains costs of a magnitude and complexity that are typically addressed through a base rate process. As discussed in this Brief, Allegheny Power seeks recovery through its surcharge not only of the costs of the smart meter, but of numerous other system upgrade costs that are typically incurred in the normal cost of business. To properly analyze these costs, OCA witness Hornby recommended that the Company conduct a cost of service study to assist in the allocation of the costs of this initiative. As OCA witness Hornby testified:

Generally accepted ratemaking principles require that proposed revenue requirements of this magnitude and complexity be allocated among services and rate classes according to the results of a COS [cost of service] study.

OCA St. 1 at 30.

A cost of service study would allow for the development of the allocation factors and would assist in guiding the allocation of the significant revenue requirements both among the Allegheny Power operating companies and then among the rate classes. OCA St. 1-S at 22. As discussed next, the cost of service study should develop and allocator for the joint and common costs on a basis that properly reflects the incurrence of those costs.

c. Allocation of Joint and Common Costs

A dominant and major category of capital costs in Allegheny Power's Plan are the joint and common costs. OCA St. 1 at 16. While Allegheny Power has directly assigned the meter costs to the classes, the Company has allocated the joint and common costs based on the number of customers. OCA witness Hornby explained that Allegheny Power's proposed joint and common cost allocation on the basis of the number of customer meters is unreasonable. Mr. Hornby testified:

The Company also has not demonstrated that the joint and common costs have been allocated in a manner that reflects the benefits of the systems being installed. Allocating based on number of customers does not properly reflect the benefits since many of the benefits identified relate to energy and demand savings. An allocator that captures these benefits would be more appropriate.

OCA St. 1 at 30. The OCA submits that the number of customers is neither a measure of benefits derived from the smart meter system nor the causation of the system costs. To the contrary, the OCA submits that the joint and common costs should be allocated on the basis of energy and peak demand.

In the Smart Meter Implementation Order, the Commission stated that costs incurred that provide a benefit across multiple classes should be allocated among the appropriate classes using reasonable cost of service practices. Smart Meter Implementation Order at 32. The joint and common costs that Allegheny Power will incur will result in the development and construction of a smart meter network designed to drive down peak demands and wholesale costs of power. By the Company's own testimony, the primary reason for its accelerated smart meter deployment is to meet the energy efficiency and demand reduction goals of Act 129. Allegheny Power St. 1 at

8-9. The Company's entire Plan rests on the need for smart meters to meet these energy efficiency and demand reduction goals.

Reasonable cost of service practices require that costs be allocated among rate classes according to cost causation. OCA St. 1 at 30. In addition to the Company's basis for its filing, 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.

66 Pa.C.S. § 2806.1, *et seq.* preamble. 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 joint and common costs based on energy and demand 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.

The OCA submits that it is wholly unreasonable to allocate the common costs of Allegheny Power'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, as well as the Commission's Smart Meter Implementation Order.

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 benefit of such costs.

Smart Meter 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.

OCA witness Hornby addressed the causes of cost incurrence in this proceeding noting that the smart meter costs are being incurred, or “caused,” primarily in anticipation of substantial savings in electricity supply costs. OCA witness Hornby testified:

My position is based upon the view that all of the SMIP costs are in fact being “caused” by Act 129, whose goal is to reduce annual energy consumption and peak load. Therefore all of these costs, at the highest level, do depend on the levels of demand and energy by rate class. Also, the Smart Meter Implementation Order calls for the direct assignment of costs associated with an EDC’s Plan to the customer class that received the benefit of such measures (Smart Meter Implementation Order at 32). However, that Order does not address the appropriate allocation factor for SMIP costs that cannot be directly assigned to specific rate classes. My suggestion for developing allocation factors for joint and common costs based on energy and demand levels is consistent with the Order.

OCA St. 1-S at 23.

The Company’s own testimony fully supports Mr. Hornby’s conclusion. As Company’s Plan and its witnesses also recognized that the smart meter implementation is to impact the levels of energy usage and peak demand of its customers. The Company has stated as follows:

The measures, programs and rate offerings described in Allegheny Power’s EE&C and DR Plan filed on June 30, 2009, rely on Smart Metering Infrastructure (SMI) in helping customers modify their

energy usage with the aim of reducing overall consumption and decreasing peak demand for electricity. (AP Exh. 1, SMIP at 5).

This filing also provides more significant detail into how Allegheny Power will enable customers to monitor and effectuate changes in their usage to manage their energy bills. In turn, the dynamic, customer-driven demand response not only creates economic benefit for the individual customers but also places significant downward pressure on regional electricity wholesale capacity and energy prices creating a larger region-wise economic and social benefits. (AP Exh. 1, SMIP at 6)

The Act specifically contemplates smart meters and real time/time of use rates being instrumental in the Company reaching its energy and peak reduction goals. (Allegheny Power St. 1 at 8).

These statements and others within the Company's Plan and testimony confirm that the cause of Allegheny Power's smart meter deployment is Act 129 and Allegheny Power's initiative to reduce energy usage and peak demand.

An allocation methodology that reflects the relationship between costs and benefits comports with reasonable cost of service principles. 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 members...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. ICC, 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. ICC, 576 F.3d at 478. The Court specifically stated that the disparity between benefit and costs would be unreasonable. Id.<sup>16</sup>

The Commission should ensure that the costs of the smart meter plan are properly allocated to the classes in a manner that reflects the benefits of the smart meter deployment. Importantly, the Commission must recognize that costs are being incurred in this case not for the sake of placing meters in service, but for the benefits that will result from the creation of a fully integrated Smart Meter network and the corresponding reduction in energy and capacity prices. This causal relationship between costs and benefits is an accepted cost of service principle that is

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<sup>16</sup> 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 FERC ¶ 61,102 at ¶¶5, 9, 26-27 (2009).

directly applicable here. Act 129 has caused these costs to be incurred to reduce demand and energy usage. The Company itself has stated that this is the primary purpose of its Smart Meter Plan. Allegheny Power St. 1 at 2. As such, the OCA submits that the joint and common costs should be allocated to the customer classes based on an allocation factor that reflects the energy usage of the classes and the peak demand of the classes.

d. Allocation of Costs to WV and MD

As noted in Section V.B.2.b. above, a cost of service study should be used to guide the allocation of costs among the Allegheny Power affiliates that will be using common systems. Currently, Allegheny Power has allocated 52% of the Customer Information System to its affiliates based on the number of customers. Allegheny Power St. 4 at 12; Tr. at 231. The Company has allocated no other costs to its affiliates but states that it might in the future. During the grace period, the Company should be directed to perform and support an allocation of costs among the affiliated Companies.

3. Rate Design

a. Company Proposal, Including Variable Rate Proposal Regarding Residential Customers

i. Introduction

The Company has proposed an SMT surcharge for residential customers projected to start at \$5.86 per customer per month in 2010 and increase to \$14.34 per month in June 2011, \$15.57 per month in June 2012 and \$15.77 per month in 2013.<sup>17</sup> AP Exh. 1, SMIP at 98; OCA St. 1 at 26. Alternatively, the Company stated in the Rebuttal Testimony of witness Valdes that the Company is willing to modify the design of its SMT for residential customers to recover 21% of

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<sup>17</sup> During hearings, the Company acknowledged that these rates will increase on a quarterly basis and will not be fixed for the entire year. So, for example, the \$5.86 per month for the first year is only for the first three months of the year. It will go up throughout the year.

its SMIP costs via a customer surcharge and 79% via a volumetric surcharge. Allegheny Power St. 4-R at 10; OCA St. 1-S at 23.

OCA witness Hornby calculated the impact of these increases on the annual bills of residential customers using 500 kWh per month and 1,000 kWh per month:

Starting in 2010, the SMT would increase the annual bill of a residential customer by approximately \$70, a 12% increase for a customer using 500 kWh per month. By 2013 that increase would be \$190 per year, a 34% increase for the 500 kWh per month residential customer.

OCA St. 1 at 27, Chart at 27. The OCA submits that the Company's proposals for recovering the SMIP from residential customers should not be adopted.

ii. The Company's Proposed Residential Fixed Customer Charge Should Be Rejected

The Company's original proposal to recover the costs through a fixed customer charge for residential customers should not be adopted. OCA witness Hornby testified that "[t]hose increased customer charges will, in turn, produce particularly large percentage increases in the bills of low usage customers because the customer charge represents a significant portion of the bills of such customers." OCA St. 1 at 26.

Utilizing traditional ratemaking principles, the Commission has limited the costs that can be included for recovery in the customer charge to "basic customer costs" necessary to customer service. See, e.g., Pa. PUC v. West Penn Power Co., 69 PUR4th 470, 521 (1985)(West Penn); Pa. PUC v. West Penn Power Co., 1994 Pa. PUC LEXIS 144, 154 (1994). The Commission has defined "basic customer costs" to include the costs for the meter and service drop, meter reading and billing. West Penn at 521. The Company's proposal would improperly collect all joint and common costs through the fixed customer charge.

In addition to these traditional ratemaking principles regarding customer charges, the collection of all smart metering costs through a fixed customer charge is antithetical to the guiding principles of Act 129. A major purpose of Act 129 is the reduction of energy consumption, both on an annual basis and with regard to peak energy usage. As the Commission is well aware, the use of fixed charges for the recovery of a utility's costs reduce customers' incentives to decrease usage. If all of the smart meter costs are collected through a fixed customer charge, the incentive to reduce usage will decrease to the detriment of the energy efficiency goals of Act 129.

iii. The Company's Residential Alternative Proposal Is Not Adequately Supported

Alternatively, the Company has proposed to modify the design of its SMT to recover 21% of its SMIP costs via a customer surcharge and 79% via a volumetric surcharge. Allegheny Power St. 4-R at 10; OCA St. 1-S at 23. Allegheny Power's alternative proposal is an improvement to the Company's original proposed rate design, but the alternative proposal does not resolve all of the OCA's concerns. OCA witness Hornby testified in his Surrebuttal Testimony that:

[T]he fact remains that the Company is still proposing to ultimately collect over \$15 per month on average from residential customers. The portion it would collect through a customer surcharge would still ultimately increase the customer charge by over \$3, or sixty percent. The Company has not provided a bill analysis to support an increase of that amount.

OCA St. 1-S at 23-24. In addition, there is no support for the Company's selection of 21% of the costs as being the appropriate amount to include in the fixed charge portion.

OCA witness Brockway recommended that the consideration be given to recovering the amount allocated to residential customers primarily on a volumetric basis. OCA St. 2 at 6. As

Ms. Brockway testified, this method would lessen the burden on low use customers who cannot take advantage of the usage reduction programs. OCA St. 2 at 35. While the Company's alternative proposal moves in this direction, the OCA submits that it has not been shown to have reached a reasonable rate design.

b. Cost of Service Study

The Company should use the results of its Cost of Service (COS) study plus an analysis of bill impacts to guide its decisions regarding the portion of the rate class revenue requirement to recover via an increase in the customer charge and the portion to recover via an increase in the delivery and/or demand charge components of each tariff. See, OCA St. 1 at 31; OCA St. 1-S at 23-24.

The OCA submits that the Company should use a Cost of Service study to guide its decisions regarding the bill impacts. OCA witness Hornby recommended that:

[F]undamental ratemaking principles suggest that once the Company has determined the revenues to be collected from each service and rate class, it should use the results of its cost-of-service study plus an analysis of bill impacts to guide its decisions regarding the portion of the rate class revenue requirement to recover via an increase in the customer charge and the portion to recover via increase in the delivery and/or demand charge components of each tariff.

OCA St. 1 at 31.

Allegheny Power has provided no basis or justification for its original proposal to recover these costs via a customer charge or, in the Company's alternative proposal, sufficient basis to support what the proper division between a customer charge and a volumetric charge should be.

OCA St. 1 at 23. OCA witness Hornby testified that:

The capital expenditure on meters is only about 25 percent of the total capital costs. That is the amount that should be the starting point for determining the portion of the surcharge that is a

customer charge. Next, one needs to consider the amount by which the customer charge should be allowed to increase in a given time period. Setting the SMT such that it would increase the existing customer charge dramatically is inconsistent with the ratemaking principle of gradualism. This is particularly important because the SMT as a customer charge is unavoidable and will have a disproportionate impact on low use customers within the residential rate classes. That is why it important to have a COS and bill impact analysis to guide the determination of the portion of the rate class revenue requirement to recover via an increase in the customer charge and the portion to recover via increase in the delivery and/or demand charge components of each tariff.

OCA St. 1 at 31. The OCA submits that Allegheny Power should undertake a Cost of Service study to determine the proper design of the residential surcharge rates.

4. Revenue Requirement

a. Company Proposal

Pursuant to 66 Pa.C.S. § 2807(f)(7), Allegheny Power has proposed a Section 1307 cost recovery mechanism to recover the Smart Meter technology costs on a full and current basis pursuant to Act 129. AP Exh. 1, SMIP Plan at 93; 66 Pa.C.S. § 2807(f)(7). The Company proposes cost recovery through a reconcilable automatic adjustment clause that will be reviewed on an annual basis and will reconcile prior period revenues and costs. Allegheny Power St. 4 at 7-8. The Smart Meter Technology (SMT) surcharge will be calculated separately for each rate class and will appear as a non-bypassable line item on the bill. AP Exh. 1, SMIP Plan at 95-95; Allegheny Power St. 4 at 8.

Similar to a traditional base rate calculation, Allegheny Power's proposed calculation of recoverable costs includes the following components: (1) return of and on capital costs, based on the Company's pre-tax cost of capital; (2) forecasted incremental operation and maintenance (O&M) costs as incurred, which are offset by forecasted savings associated with deployment of the Company's proposed SMIP Plan; and (3) costs associated with the depreciation of Allegheny

Power's existing meters. Allegheny Power St. 4 at 8. Allegheny Power proposes that the SMT will reflect any adjustment associated with the annual reconciliation mechanism, and forecasted capital costs will be depreciated/amortized over the estimated useful book lives of the investment. Id. Changes to the SMT rates will be based "upon a forecasted revenue requirement for the twelve-month period of the upcoming June and running through May of the following year, along with an annual reconciliation mechanism for prior year revenues and costs." Id. at 12-13. As further explained by Allegheny Power witness Valdes:

The forecasted revenue requirement will include a return of and on capital investments, and the net of incremental O&M costs and savings associated with deployment of the Company's SMIP, as adjusted for gross receipts tax and the Commission assessment fee. The annual reconciliation mechanism for prior year revenues and costs will include: (1) actual revenues billed through December of the prior year, as adjusted for removal of gross receipts tax and the Commission assessment fee; (2) actual costs incurred through December of the prior year, which will include actual O&M costs and a corrected capital revenue requirement to reflect actual capital costs, the most recently available pre-tax cost of capital from the prior year, and any changes/updates to depreciation and accumulated deferred income taxes; and (3) the difference between the above two amounts, as adjusted for gross receipts tax and the Commission assessment fee. The exception to the annual reconciliation mechanism will occur for the filing due by January 30, 2011 since this filing will include 2009 costs along with 2010 costs, with capital cost recovery reflective of the pre-tax cost of capital of the corresponding year.

Allegheny Power St. 4 at 13. Once this calculation of recoverable costs is made, Allegheny Power will utilize a non-bypassable charge to collect the costs. This non-bypassable charge would appear as a separate line-item on customer bills. Allegheny Power St. 4 at 8.

The OCA submits that the level of revenue requirement that Allegheny Power is proposing in this Plan is not reasonable for several reasons addressed on this Brief. In this

section, the OCA will discuss certain issues with the surcharge methodology. OCA witness Hornby summarized some of the issues as follows:

Those revenue requirements reflect costs that are much higher than those of other utilities. They also reflect costs for IHDs and modernization of a CIS that are beyond the scope of a Smart Meter Plan. In addition, Allegheny Power is proposing to recover \$24 million in accelerated depreciation of its existing meters over the 5 year deployment period. In addition to that general concern, there are several details of the Company's proposal that are problematic. These are rate of return, asset life and recovery of stranded investment.

OCA St. 1 at 28.

b. Rate of Return: The Company's Proposed Return On Equity Is

Excessive

Allegheny Power witness Valdes proposed to utilize the 11.5% return on equity determined in the Company's last base rate case in 1994 at Docket No. R-942986. Allegheny Power St. 4 at 9. On a going-forward basis for each annual filing, Allegheny Power has proposed to utilize the equity cost rate determined in its last base rate case prior to each annual update filing and its actual capital structure and debt cost rate at the time of each annual filing.

The OCA submits that 11.5% return on equity (ROE) is not the appropriate ROE to be used in Allegheny Power's SMT. The OCA agrees that the allowed return for each EDC should be based on the most recent Commission-approved capital structure and capital cost rates, but only if that proceeding was within the last few years. Allegheny Power's last base rate proceeding was fifteen years ago, when Allegheny Power was a vertically integrated utility. Tr. at 234. The OCA submits that Allegheny Power's proposal does not provide an accurate measure of the markets or of Allegheny Power's risk under the SMT cost recovery mechanism.

In Direct Testimony, OCA witness Hornby objected to Allegheny Power's proposed 11.5% ROE noting that it has been almost fifteen years since Allegheny Power's last base rate

case. OCA St. 1 at 28. Mr. Hornby explained that “it is certainly not clear that the ROE resulting from that case is representative of current market conditions.” Id. Mr. Hornby recommended that:

For now, I recommend that the ROE in the most recent litigated electric distribution case for a Pennsylvania utility be used. It is my understanding that this would be 10.1%. Going forward, I recommend that a procedure be developed so that an equity return based on the most recent “Report on the Quarterly Earnings of Jurisdictional Utilities” (Quarterly Earnings Report) prepared by the Bureau of Fixed Utility Services and released by the Commission could be used when there has not been a base rate case for Allegheny Power in the recent past.

OCA St. No. 1 at 29.

The recent base rate case referenced by OCA witness Hornby was the 2006 Met-Ed/Penelec base rate proceedings which resulted in Commission-determined ROEs of 10.1%. Pa. PUC, et al v. Met-Ed Co., Docket No. R-00061366 and Pa. PUC, et al v. Penelec, Docket No. R-00061367 (Orders entered January 11, 2007). As OCA witness Kahal testified in Surrebuttal testimony, while 2006 is not 2009, the “currently available market data would seem to suggest little change (or no clear evidence of change) in the cost of equity as compared to 2006.” OCA St. 3S at 5. OCA witness Kahal provided additional evidence which supports the reasonableness of 10.1 percent.<sup>18</sup>

Mr. Kahal also proposed two alternative checks on the 10.1% ROE recommendation: (1) the use of prevailing triple-B utility bond yields as the appropriate return on equity for SMT investments; and (2) the use of a recent cost of equity analysis that is specifically tailored to a

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<sup>18</sup> Mr. Kahal attached to his testimony his recent analysis for Narragansett Electric Company in Appendix B. The study included the discounted cash flow (DCF) and the capital asset pricing model (CAPM) methods. The analysis was applied to two proxy groups of electric and gas delivery service companies. OCA St. 3-S at 10-11, Appendix B. The analysis produced cost of capital estimates with midpoints from 8.6% to 10.2%. OCA St. 3-S at 11. Mr. Kahal also included evidence of cost of capital conditions today as compared to both 2006 and 1994 when Allegheny Power was awarded its 11.5% ROE. OCA St. 3-S at 7-8.

delivery service utility. OCA St. 3-S at 8. OCA witness Kahal testified that the first measure is appropriate because of Allegheny Power's proposed low-risk SMT cost recovery mechanism, and the second approach "is more conservative because it reflects utility investment risk essentially under standard regulation, not through a reconcilable surcharge." Id. When these two methods are applied, they result in a range of 7.73% to 10.2% for the ROE. OCA St. 3S at 10-11. These results confirm the reasonableness of the OCA's recommended ROE of 10.1%.

The OCA submits that in calculating the revenue requirement for the SMT surcharge, the Company should use a 10.1% return on equity until such time as it files its next distribution base rate case or the Commission establishes a procedure to utilize the Reports of the Bureau of Fixed Utility Services to establish the ROE for the surcharge calculation.

c. Meter Asset Life: The Company Should Use A Meter Asset Life Of At Least 15 Years

Allegheny Power has proposed to utilize a ten year book life for its smart meters and a shorter asset life (5 to 7 years) for its other Smart Meter system hardware and software investment. Allegheny Power proposes a five year book life for its In-Home Display technologies. AP Exh. 1, SMIP Plan at 94; Allegheny Power St. 4 at 9-10. The OCA submits that the asset lives proposed by Allegheny Power are too short and impose an undue burden on ratepayers.

Act 129 specifically references depreciation over a fifteen year period. 66 Pa. C.S. § 2807(f)(2). OCA witness Hornby recommended that Allegheny Power use a depreciable asset life of fifteen years for smart meters as opposed to the ten years proposed by the Company. Mr. Hornby testified that:

The Company has proposed to utilize an unnecessarily short asset life for the meters of 10 years. Act 129 states that the depreciable

life of smart meter technology shall be furnished in accordance with a depreciation schedule not to exceed 15 years. (Section (f)(6)(iii).) Each of the other EDCs subject to Act 129 has proposed a depreciable life for smart meters of 15 years. (In fact, PPL adopted a 15 year life for its metering equipment when it put its smart meters in several years ago. Response to OCA I-3 in Docket No. M-2009-2123945.)

OCA St. No. 1 at 29.

The OCA submits that the ten year life selected by Allegheny Power would unnecessarily burden ratepayers and is not consistent with Allegheny Power's own estimates of the useful life of the meters. On cross examination, Company witness Heasley acknowledged that the Company expects the smart meters to be functional for at least 15 years. Tr. at 136; OCA Cross Exam Exh. 1. The OCA submits that at a minimum, the Company should be directed to use a 15 year depreciable asset life for the smart meters.

d. Recovery of Stranded Investment: Any Claim For Stranded Investment Should Be Made In A Distribution Rate Case

Allegheny Power is proposing to recover over \$24.6 million of "stranded costs" under its Plan for accelerated depreciation of existing meters.<sup>19</sup> This stranded investment is largely a result of the rapid deployment strategy chosen by the Company. To accommodate this rapid deployment, Allegheny Power is proposing to accelerate the depreciation of its existing meters so that all existing meters are fully depreciated within five years. Allegheny Power St. 4 at 9-10.

Such accelerated depreciation within five years was not the intent of the Smart Meter Implementation Order or Act 129. The Order states that accelerated depreciation shall be done in a manner that will "minimize the stranded costs." Smart Meter Implementation Order at 32. Allegheny Power has done nothing in its proposal to minimize stranded cost.

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<sup>19</sup> The OCA notes that the term "stranded costs" is not referenced as a recoverable cost in the Act.

The OCA submits that ratepayers will be unnecessarily burdened by this proposal to depreciate all existing meters and recover substantially all new Smart Meter costs in a five year period. Additionally, this accelerated depreciation may result in an increase in accumulated depreciation and a reduction in rate base that is not reflected in current base rates. The OCA submits that due to the impact to Allegheny Power's rate base and the fifteen year gap since Allegheny Power's last base rate proceeding, this issue should be dealt with in the Company's next base rate proceeding. OCA witness Hornby recommended that:

[T]his is a major amount that needs to be reviewed, ideally in a base rate proceeding. If the Commission does allow recovery of these costs via the SMT, the annual expense must be reduced each year to account for the return on rate base effect of the increased build-up of accumulated depreciation.

OCA St. 1 at 29.

The OCA submits that Allegheny's proposed accelerated depreciation is contrary to the intent of the Smart Meter Implementation Order and the Act. This claim should be denied.

e. Capital Structure

It is the OCA's position that Allegheny Power's current capital structure, if reasonable, could be utilized in the SMT surcharge along with a properly updated ROE. OCA St. 1 at 29.

f. Cost Rate For Debt And Preferred Stock

The OCA that the current cost rate for debt and preferred stock can be utilized in the SMT surcharge along with a properly updated ROE. OCA St. 1 at 29.

5. Interest

a. Company Proposal

b. Interest For Over- And Under-Collections

c. Applicable Rate And Computation Of Rate

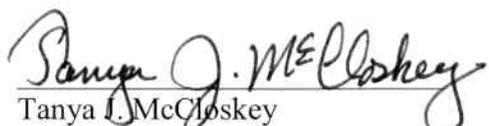
- d. One Directional Interest
- e. Deferral
- 6. Cost Recovery Mechanism Review Process
  - a. Annual Review Schedule Proposed By OTS
  - b. Quarterly Updates Proposed By OTS

The OCA does not have a position on Issues V.B. 5 and V.B.6 at this time.

IV. CONCLUSION

For the reasons set forth in this Main Brief, Allegheny Power's Smart Meter Procurement and Installation Plan must be rejected in its entirety. The Company should be directed to utilize the grace period to design a more reasonable Smart Meter Deployment Plan that allows for a gradual transition to smart meters and meets the requirements of Act 129 in a cost-effective manner.

Respectfully Submitted,



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DATED: December 18, 2009  
120591

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of West Penn Power Company	:	
d/b/a Allegheny Power for Expedited	:	Docket No. M-2009-2123951
Approval of its Smart Meter Technology	:	
Procurement and Installation Plan	:	

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APPENDICES TO THE  
MAIN BRIEF OF THE  
OFFICE OF CONSUMER ADVOCATE

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## Appendix A: Proposed Findings of Fact and Conclusions of Law

### Proposed Findings of Fact

1. On August 14, 2009, Allegheny Power (Company) filed its Smart Meter Procurement and Installation Plan (SMIP or Smart Meter Plan) pursuant to Section 2807(f) of the Public Utility Code and the Smart Meter Implementation Order entered by the Pennsylvania Public Utility Commission (Commission) on June 24, 2009 at Docket No. M-2009-2092655.
2. In its Smart Meter Plan, Allegheny Power proposes to replace its existing, functioning meters over a four year and four month period from 2010 through 2014 with Smart Meters and associated infrastructure. AP Exh. 1, SMIP Plan at 43.
3. During this timeframe, Allegheny proposes to install 640,366 residential customer meters and 99,208 commercial and industrial meters by 2014. AP Exh. 1, SMIP Plan at 43.
4. The Company proposes to install In-Home Devices (IHDs) in every residential premise in its service territory unless a customer opts out. AP Exh. 1, SMIP Plan at 12, 44; AP Exh. 2, Petition at ¶8.
5. Allegheny Power estimates that the total cost of its Smart Meter Plan for its Pennsylvania customers, net of estimated savings, will be \$580 million. AP St. 4 at 4; see, AP Exh. 1, SMIP Plan, Table 4.1, at 94; see, benefit calculation at, AP Exh. 1, SMIP Plan at 14 and Table 4.1 at 94.
6. The Company has reflected total off-setting benefits of \$43 million during the five year period in distribution system operations and has not included in its SMT any further offsetting reductions in the electricity supply cost component of customer bills. AP Exh. 1, SMIP Plan at 14. The Pennsylvania share of these off-setting benefits is \$36 million. Tr. 231.
7. The Company did not apply for Phase 1 stimulus grant funding under the American Recovery and Reinvestment Act (ARRA). Tr. 143.
8. Allegheny Power's Plan has a benefit cost ratio of less than 0.11 as filed and a benefit to cost ratio of 0.19 when generation savings are considered. OCA St. 1 at 17-18; Exh. JRH-4, pg. 2.
9. The Company is incurring the Smart Meter Implementation costs in order to comply with the Smart Meter Plan requirements of Act 129. AP Exh. 1, SMIP Plan at 1-2; Allegheny Power St. 1 at 2.
10. The measures, programs and rate offerings in Allegheny Power's EE&C Plan designed to reduce overall consumption and peak demand are dependent upon its Smart Meters. AP Exh. 1, SMIP Plan at 5.

11. Allegheny Power is proposing to recover the revenue requirements associated with this investment through a fully reconcilable Smart Meter Technology (SMT) surcharge under Section 1307 that will be applied as a separate line-item to the monthly customer charge or meter charge on the bill. Allegheny Power St. 4 at 8.
12. The Company's proposal for the SMT for residential customers is projected to start at \$5.86 per customer per month in 2010 and increase to \$14.34 per month in June 2011, \$15.57 per month in June 2012 and \$15.77 per month in 2013. AP Exh. 1, SMIP Plan at 98; OCA St. 1 at 26.
13. By June 2013, the Company's proposed surcharge will increase the rates of a residential customer using 500 kWh by 34% and of a residential customer using 1,00 kWh by 18%. OCA St. 1, Exh. JRH-6.
14. Allegheny Power has proposed to assign the costs of the meters directly to customer classes and to allocate joint and common costs on the basis of the number of customers. Allegheny Power St. 4 at 11.
15. Allegheny Power has proposed to use a common equity rate of 11.5% based upon its last base rate proceeding in 1994 at Docket No. R-942986. Allegheny Power St. 4 at 9.
16. Allegheny Power has approximately 715,000 customers and 720,000 customer meters. AP Exh. 2, Petition at ¶ 1; AP Exh. 1, SMIP Plan at 10.
17. Allegheny Power has 619,088 residential customers and 95,917 commercial and industrial customers. AP Exh. 1, SMIP Plan at 33.
18. There are an estimated 97,981 low-income customers in Allegheny Power's service territory. AP Exh. 6, 2008 BCS Universal Service Report at 8; OCA St. 2-S at 18.

## Conclusions of Law

1. Allegheny Power's Smart Meter Plan is unreasonable, inconsistent with 66 Pa.C.S. § 2807(f), and will not result in just and reasonable rates.
2. Allegheny Power has not shown that its proposed Plan is a cost-effective approach to meeting the goals of Act 129 with respect to deploying Smart Meter Technology.
3. Allegheny Power has not shown the prudence of, or necessity for, moving ahead with full Smart Meter deployment on the expedited schedule that it has proposed.
4. Allegheny Power's proposal to install In-Home Devices in the home of every residential customer is unsupported and unreasonable.
5. Allegheny Power's SMIP plan is unnecessarily costly and will result in the highest SMIP surcharge in Pennsylvania.
6. The level of revenue requirements the Company claims has not been shown to be reasonable. As such, the resulting rates are not just and reasonable.
7. Allegheny Power must allocate costs to the classes whom derive the benefit from such costs. Smart Meter Implementation Order, Docket No. M-2009-2092655 at 32 (Order entered June 24, 2009).
8. The Company has not met its burden of proof that the proposed allocation methodology for joint and 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.
9. Utilizing traditional ratemaking principles, the Commission has limited the costs that can be included for recovery in the customer charge to "basic customer costs" necessary to customer service. See, e.g., Pa. PUC v. West Penn Power Co., 69 PUR4th 470, 521 (1985)(West Penn); Pa. PUC v. West Penn Power Co., 1994 Pa. PUC LEXIS 144, 154 (1994).
10. Allegheny Power's proposal to recover the Smart Meter costs as a fixed customer charge is not in accord with sound ratemaking principles and is not just and reasonable.

## **Appendix B: Proposed Ordering Paragraphs**

It is ordered that:

1. Allegheny Power's Smart Meter Procurement and Installation Plan is hereby rejected.
2. Allegheny Power shall use the 30-month grace period to develop a modified Smart Meter Procurement and Installation Plan for Commission approval.
3. Allegheny Power shall assess the following in their modified Smart Meter Procurement and Installation Plan: quantification of generation and distribution service benefits, customer response to various Smart Meter initiatives, identification of the impact on low-income and otherwise vulnerable customers, program initiatives to assist low-income and otherwise vulnerable customers, and the necessary policies and procedures related to security and privacy.
4. Allegheny Power shall not include in its Plan the proposed universal installation of In-Home Devices in every residential customer premise and shall remove all costs related to IHDs from its Smart Meter Technology surcharge.
5. Allegheny Power shall remove the costs for modernizing its Customer Information System (CIS) from the Smart Meter Technology surcharge.
6. Allegheny Power shall remove expenditures for the Enterprise Service Bus (ESB), Upgrades to the Work Management System (WMS), Geographic Information System (GIS), and Outage Management System (OMS) from the Smart Meter Technology surcharge and shall demonstrate that its other IT expenditures are directly related to Smart Meter deployment before including those costs in the Smart Meter Technology surcharge.
7. Allegheny Power shall remove the PUC assessment fee from its Smart Meter Technology surcharge.
8. Allegheny Power shall use a return on equity of 10.1 percent in the calculation of its Smart Meter Technology surcharge.
9. Allegheny Power shall use an asset life of fifteen years for Smart Meters for the purposes of depreciation expense.
10. Allegheny Power shall remove any stranded investment claim from the Smart Meter Technology surcharge.
11. Allegheny Power shall file a Cost of Service study with its modified Plan to allocate the costs of the modified Smart Meter Procurement and Installation Plan among Allegheny Power's operating affiliates and then among its customer classes. The allocation factor for joint and common costs shall be developed on the basis of energy and demand.

12. Allegheny Power shall collect its Smart Meter Technology surcharge from residential ratepayers primarily on a volumetric basis.

CERTIFICATE OF SERVICE

Petition of West Penn Power Company :  
d/b/a Allegheny Power for Expedited : Docket No. M-2009-2123951  
Approval of its Smart Meter Technology :  
Procurement and Installation Plan :

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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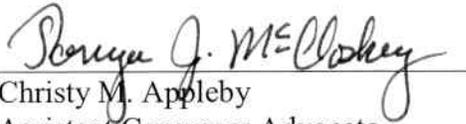
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